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Thermophysical Properties of Oxygen from the Freezing Liquid Line to 600 R for Pressures to 5000 Psia

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Thermophysical Properties of Oxygen from the Freezing Liquid Line to 600 R for Pressures to 5000 Psia

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THERMOPHYSICAL PROPERTIES OF OXYGEN FROM THE FREEZING LIQUID LINE TO 600 R FOR PRESSURES TO 5000 PSIA*

Robert D. McCarty and Lloyd A. Weber

Tables of thermophysical properties of oxygen are presented for temperatures from the melting line to 600 R for pressures to 5000 psia. The tables include, entropy, enthalpy, internal energy, density, volume, speed of sound, specific heat, thermal conductivity, viscosity, thermal diffusivity, Prandtl number and the dielectric constant for 79 isobars. Also included in the isobaric tables are quantities of special utility in heat transfer calculations: $(\partial P/\partial V)_T$, $(\partial P/\partial T)_\rho$, $V(\partial H/\partial V)_P$, $V(\partial P/\partial U)_V$, $-V(\partial P/\partial V)_T$, $1/V(\partial V/\partial T)_P$.

In addition to the isobaric tables, tables for the saturated vapor and liquid are given which include all of the above properties, plus the surface tension. Tables for the P-T of the freezing liquid, index of refraction and the derived Joule-Thomson inversion curve are also presented. The specific heat of the saturated liquid is given in graphical form. A temperature-entropy chart and a Mollier diagram are also included.

Key Words: Density; dielectric constant; enthalpy; entropy; equation of state; fixed points; heat transfer coefficients; index of refraction; Joule-Thomson; latent heat; melting point; Prandtl number; oxygen; specific heat; speed of sound; surface tension; thermal conductivity; thermal diffusivity; vapor pressure; viscosity; volume.

* This work carried out at the National Bureau of Standards, supported by the NASA-MSC contract T-1813A.

1. Introduction

During the last ten years the importance of oxygen in the space program has grown steadily. Along with the growth in application of oxygen has come the need for more data on oxygen of a wider scope and greater variety. The purpose of this document is to assemble,under a single cover, data on many of the properties of oxygen commonly used for engineering calculations, over as wide a temperature and pressure range as possible, and present these data in a form which is convenient to the engineer. All of the data presented here have been critically evaluated and represent the "best values" for that particular property at this time.

Additional tables of properties, like those in appendix E, but with smaller increments of temperature and pressure and tables in SI Units are available in microfiche form. A larger size of the T-S chart and the Mollier diagram on pages 20 and 21 are available. A computer program to calculate the various properties is also available. Inquiries should be addressed to the National Bureau of Standards, Cryogenic Data Center, Boulder, Colorado 80302.

2. Thermodynamic and Related Properties

2.1 P-V-T Surface

The P-V-T surface described by Weber (1970) was used to calculate all the thermodynamic and related properties. The tables given here are essentially the same as those given in an earlier report, Weber (1968), with the exception of the critical region, which has been modified to take advantage of more recent experimental information. The tables given here contain additional properties not tabulated in the earlier report. The P-V-T surface given by Weber has also been extrapolated from 300 K to 340 K. The loss of accuracy due to the extrapolation is estimated to be negligible. For a detailed description of the P-V-T surface, see Weber (1970). Except for the critical region, the uncertainty in tabulated specific volumes is estimated to be less than 0.1%.

2.2 Derived Thermodynamic Properties

The enthalpy (H), speed of sound (W), and the internal energy (U) were calculated directly from the equations taken from Weber (1970) and should be identical to those of Weber when the proper unit conversion is applied. To correct an error in Weber's eariler work a slight adjustment was made to the entropy (S) calculation, i.e., 0.1043 J/g mol-K was added to all values.

2.3 Related Properties

A number of parameters such as the specific heat input $[V(\partial H/\partial V)_P]$ are of use to the engineer. Several of the more useful quantities of this kind have been tabulated here for the convenience of the user. These quantities have been derived from Weber's data in the following manner:

Specific heat input (commonly symbolized by θ)

$$V\left(\frac{\partial H}{\partial V}\right)_P = \rho C_p \left[\left(\frac{\partial P}{\partial \rho}\right)_T \Big/ \left(\frac{\partial P}{\partial T}\right)_V\right] \tag{1}$$

Energy derivative (commonly symbolized by Φ)

$$V\left(\frac{\partial P}{\partial U}\right)_V = \frac{V}{C_v}\left(\frac{\partial P}{\partial T}\right)_V \tag{2}$$

Isothermal bulk modulus (commonly symbolized by α)

$$V\left(\frac{\partial P}{\partial V}\right)_T = -\rho\left(\frac{\partial P}{\partial \rho}\right)_T \tag{3}$$

Volume expansivity (commonly symbolized by β)

$$\frac{1}{V}\left(\frac{\partial V}{\partial T}\right)_P = \frac{1}{\rho}\left(\frac{\partial P}{\partial T}\right)_\rho \Big/ \left(\frac{\partial P}{\partial \rho}\right)_T \tag{4}$$

2.4 Heat Capacities

The heat capacities, C_v, C_p, C_{sat} which appear in this document are taken from Weber (1970). Figure 1 shows heat capacities along the liquid line.

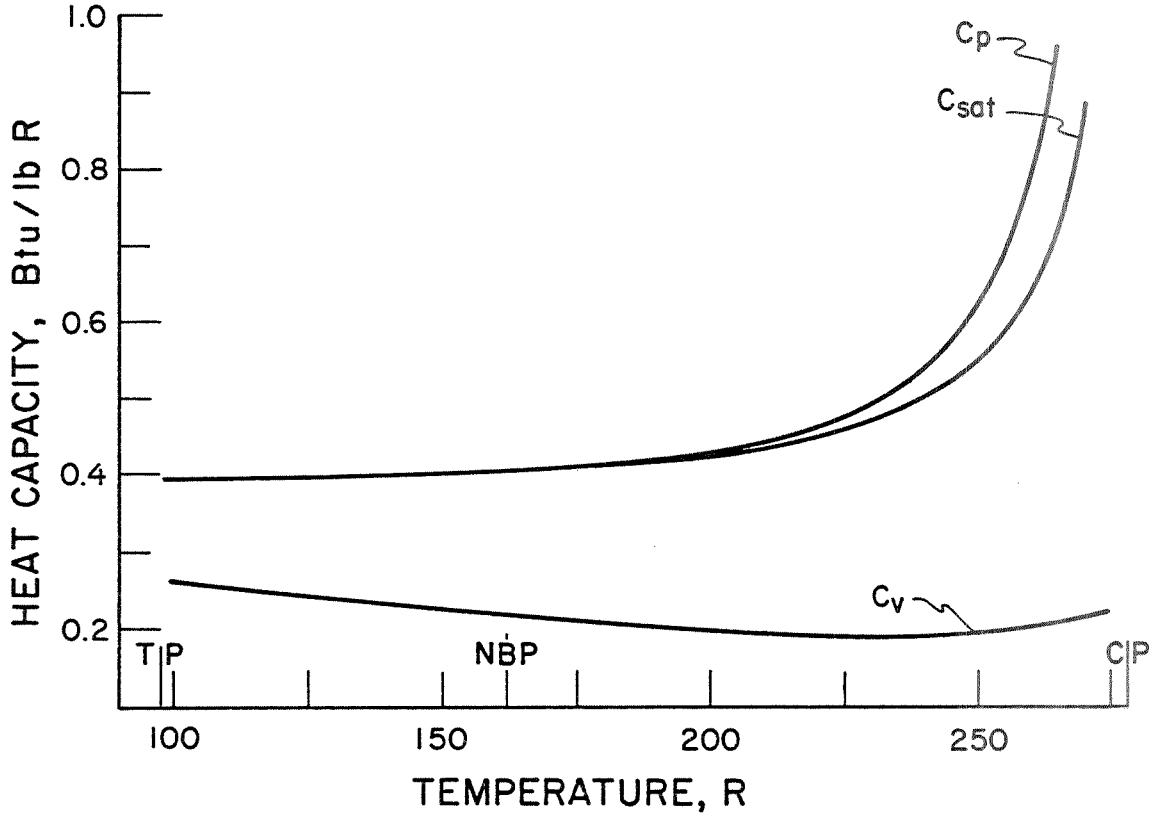

Figure 1. Heat capacities of oxygen along the saturated liquid line.

Except for the critical region, the uncertainty in the tabulated specific heats is estimated to be no greater than 2%. At the critical point, the specific heats are anomalous, therefore no estimate of accuracy may be made.

3. Transport Properties

3.1 Thermal Conductivity

The thermal conductivity of a fluid may be separated into three additive parts,

$$\lambda = \lambda_o(T) + \lambda_E(\rho, T) + \lambda_c(\rho, T) \tag{5}$$

where $\lambda_o(T)$ is the dilute gas contribution, $\lambda_E(\rho, T)$ is the excess or dense gas contribution, and $\lambda_c(\rho, T)$ is the enhancement in the region near the critical point. Hanley (1971) calculated the dilute gas contribution using a potential function. Hanley's values are represented here by

$$\lambda_o(T) = \sum_{i=1}^{9} A_i T^i \tag{6}$$

where λ_o is in W/cm-K, T is in degrees K, and the A_i's were determined by a least squares fit to Hanley's calculated values.

Table 1. Least squares estimates of parameters A_i in equation (6).*

$A_1 = 9.3648096074 \times 10^{-7}$

$A_2 = -4.1398868586 \times 10^{-9}$

$A_3 = 1.0278371325 \times 10^{-10}$

$A_4 = -1.0590730434 \times 10^{-12}$

$A_5 = 5.9317072836 \times 10^{-15}$

$A_6 = -1.9858382126 \times 10^{-17}$

$A_7 = 3.9809422422 \times 10^{-20}$

$A_8 = -4.4173352317 \times 10^{-23}$

$A_9 = 2.0893500738 \times 10^{-26}$

The maximum deviation between Hanley's λ_o values and values calculated from equation (6) over the temperature range of 50 to 400 K is 0.1%, the maximum deviation for temperatures above T_c is 0.01%; however, the uncertainty of the dilute gas values is estimated to be ± 2%. Equation (6) should not be used for temperatures below 50 K or above 400 K.

* The number of digits given for these and other parameters appearing in this technical note are necessary for arithmetic consistency.

The data of Ziebland and Burton (1955) were chosen as the basis for the excess function $\lambda_E(\rho, T)$. The temperature dependence of $\lambda_E(\rho, T)$ is not significant in Ziebland's data; therefore, $\lambda_E(\rho, T)$ was taken to be a function of ρ only and is represented by

$$\lambda_E(\rho, T) \approx \lambda_E(\rho) = \sum_{i=1}^{6} B_i \rho^i \tag{7}$$

where λ_E is in W/cm-K, ρ is in g/cm^3, and the B_i's (given in Table 2) were determined by a least squares fit of Ziebland's data to equation (7). Figure 2 shows the differences between the experimental data and values calculated from equation (7).

Table 2. Least squares estimates of parameters B_i in equation (7).

$$B_1 = 6.2807950678 \times 10^{-4}$$
$$B_2 = -4.9337311644 \times 10^{-4}$$
$$B_3 = 2.5242925212 \times 10^{-3}$$
$$B_4 = -5.1527923868 \times 10^{-3}$$
$$B_5 = 5.4461096782 \times 10^{-3}$$
$$B_6 = -1.8991126599 \times 10^{-3}$$

Deviations between equation (7) and Zebland's data are shown in Figure 2.

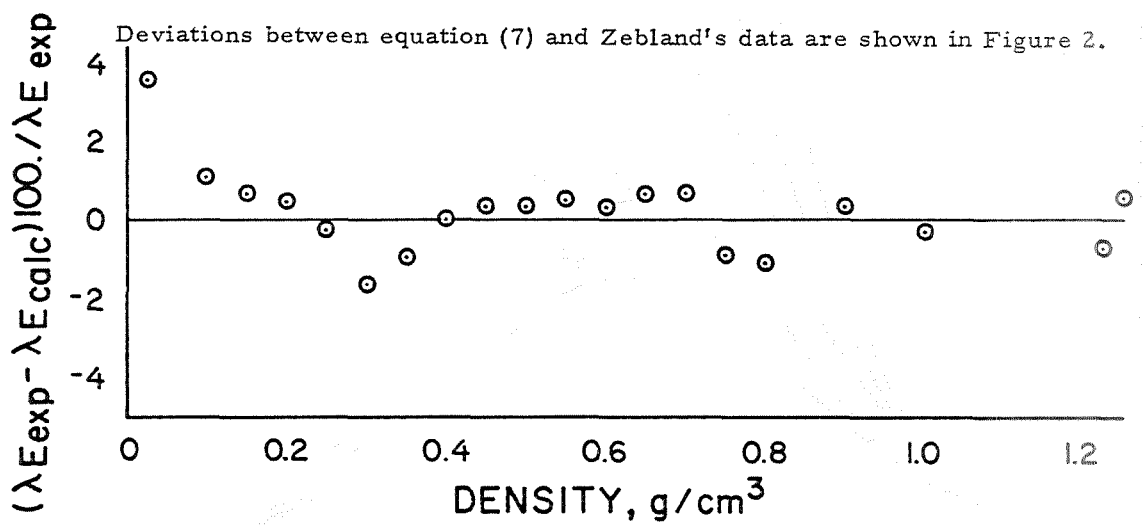

Figure 2. Deviation between thermal conductivity for O_2 from equation (7) and Ziebland and Burton (1955).

A correlation of the "Thermophysical Properties of Liquid Air and its Components", by A. A. Vasserman and V. A. Rabinovich (1968) also uses the "excess function" method of correlating the thermal conductivity and viscosity of oxygen. In the case of thermal conductivity, a comparison of our results with those appearing in the Vasserman correlation shows good agreement between the two "excess functions."

The enhancement of the thermal conductivity in the critical region is injected into the tables in appendices A and B by the $\lambda_c(\rho, T)$ term in equation (5). The anomalous behavior of the thermal conductivity was studied in detail by Sengers (1962) on CO_2 and was confirmed for H_2 by Roder and Diller (1970). The experimental measurements by Ziebland and Burton (1955) were not made close enough to the critical point to exhibit the typical critical behavior. We have estimated the enhancement for oxygen by the technique given in the hydrogen paper; that is, $\lambda_c(\rho, T)$ is made proportional to the rise in a corresponding increment of Cp. The increase is approximately 10% of $\lambda_o(T) + \lambda_E(\rho, T)$ at 1.2 T_c and about 1% of the same sum at 1.6 T_c. The enhancement is taken to be negligible at densities above a density of about 1.7 ρ_c. Very close to the critical point the so-called scaling laws apply. The range of applicability of the scaling laws has been indicated by Sengers and Keyes (1971) for CO_2. We approximate the scaling laws in the vicinity of the critical point by gradually changing the power dependence of the Cp increment from 1.0 to the required 0.6. The nature of the scaled enhancement is shown for several isotherms in figure 3. It depends crucially on the accuracy of the surface of Cp.

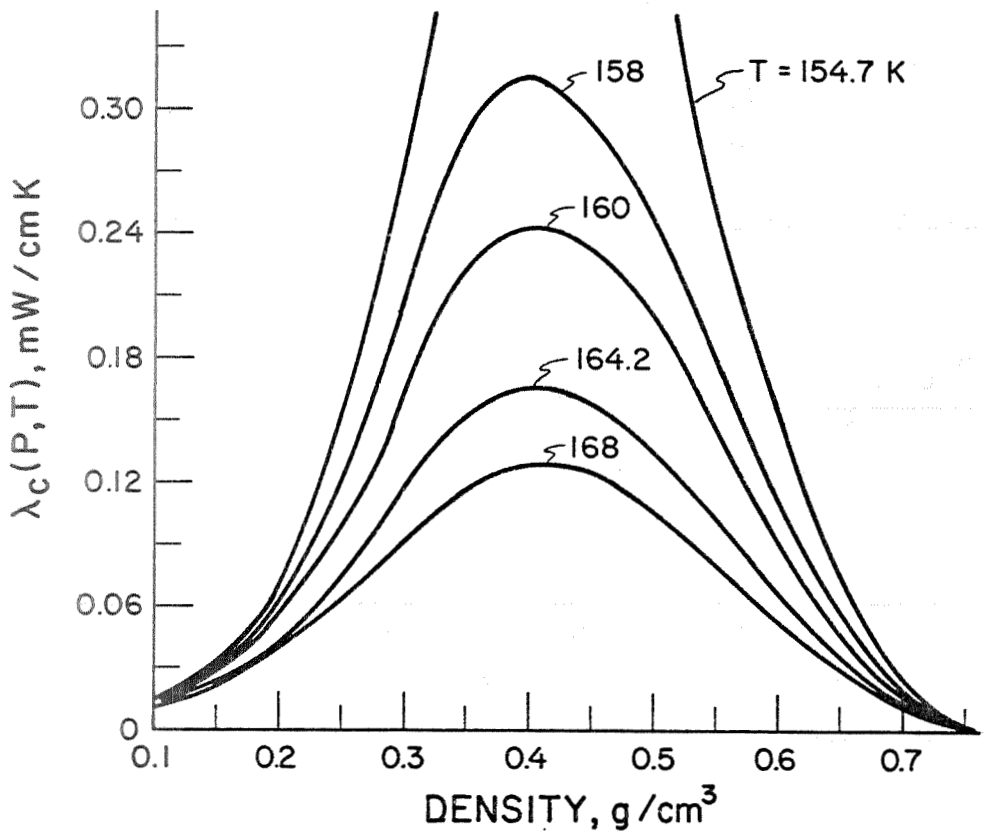

Figure 3. Enhancement of the O_2 thermal conductivity in the critical region

The uncertainty of the thermal conductivity tabulated in appendix E is estimated to be about 5% except in the critical region where the uncertainty could be much greater.

3.2 Viscosity

The viscosity of a fluid may be separated into two distinct parts which are additive,

$$\eta = \eta_0 (T) + \eta_\varepsilon (\rho, T) , \tag{8}$$

where $\eta_0(T)$ is the dilute gas contribution and $\eta_\varepsilon (\rho, T)$ is the excess or dense gas contribution. Unlike thermal conductivity, the viscosity does not exhibit an enhancement in the critical region.

Using a potential function, Hanley (1971) calculated the dilute gas contribution $\eta_0(T)$. Since these calculations are slow in their original form they are represented here by

$$\eta_0 (T) = \sum_{i=1}^{9} C_i T^i \tag{9}$$

where η_0 is in g/cm-s, T is in Kelvin, and the C_i's were determined by a least squares fit to Hanley's values.

Table 3. Least squares estimates of parameters C_i in equation (9).

$$C_1 = 8.3447128902 \times 10^{-7}$$
$$C_2 = -6.4319584704 \times 10^{-9}$$
$$C_3 = 1.3385840412 \times 10^{-10}$$
$$C_4 = -1.3283970709 \times 10^{-12}$$
$$C_5 = 7.4604203289 \times 10^{-15}$$
$$C_6 = -2.5398419748 \times 10^{-17}$$
$$C_7 = 5.2077731498 \times 10^{-20}$$
$$C_8 = -5.9258985472 \times 10^{-23}$$
$$C_9 = 2.8773126492 \times 10^{-26}$$

The maximum deviation between Hanley's η_0 values and values calculated from equation (9) over the temperature range 50 to 400 K is 0.1%. The maximum deviation in η_0 for temperatures from T_c to 400 K is 0.01%; however, the uncertainty in the dilute gas value is estimated to be ± 2%. Equation (9) should not be used for temperatures below 50 K or above 400 K. The temperature dependence of the $\eta_\varepsilon(\rho, T)$ term in equation (8) is not significant and is neglected here. For all the fluids studied to date, the excess function for viscosity exhibits a sharp transition in slope at a density of about two times the critical density. This behavior makes it difficult to represent the entire excess curve by a single mathematical function. For this reason, the excess curve for the viscosity is represented by two functions which are constrained to a common value of η at a density of 0.932 g/cm^3. For densities of 0.932 and above, the excess function is represented by

$$\eta_E(\rho, T) \cong \eta_E(\rho) = [0.65391907848\,\rho + 0.000029886313449\,(e^{9.25\rho} - 1)] \times 10^{-3} \quad (10)$$

where the density (ρ) is in g /cm^3 and η_E is in g /cm-s. For densities of 0.932 g/cm^3 and below the excess function is represented by

$$\eta_E(\rho, T) \cong \eta_E(\rho) = \sum_{i=1}^{3} D_i \rho^i \quad (11)$$

where the density (ρ) is in g /cm^3 and η_E is in g /cm-s.

Table 4. Least squares estimates of parameters D_i in equation (11).

$$D_1 = 4.7293376329 \times 10^{-4}$$
$$D_2 = -1.7410413651 \times 10^{-4}$$
$$D_3 = 5.9995361171 \times 10^{-4}$$

The data of Grevendonk, et al (1968), were used to estimate the parameters for equation (10). No known experimental data for the viscosity of oxygen exist at low densities; therefore, the parameters for the low density range, equation (11), are based on one experimental point at the transition density of 0.932 g/cm^3 and values calculated from the Enskog theory.

Vasserman and Rabinovich (1968) also split the viscosity excess function into a high density range and a low density range using separate functions for each range of density. A comparison of equations (10) and (11) with the Vasserman correlation indicates about a 5% difference in the high density range and about a 20% difference in the low density range. Vasserman and Rabinovich (1968) chose to use a corresponding states approach to generate the needed low density data for the excess function. On the basis of past experience with other fluids, it is believed that the theoretical calculations used here are more accurate than a corresponding states calculation. The uncertainty of the tabulations in appendix E is estimated to be no greater than 10%.

4. Surface Tension

Very little experimental data for the surface tension of oxygen are to be found in the world literature. No experimental data were found for temperatures above 90 K.

The functional form proposed by Guggenheim (1945),

$$\gamma = \gamma_0 (1 - T/T_c)^{11/9}, \tag{12}$$

represents the experimental data satisfactorily, where γ is the surface tension of the saturated liquid in dyne /cm; γ_0 = 38.461 dyne/cm was estimated by a least squares fit of the experimental data of Baly and Donan (1902) and of Reilly and Furukawa (1955); T_c = 154.576 K and T is the temperature in degrees Kelvin.

Using equation (12) as a means of comparing the two experimental sources of data, the two sources of data used in the least squares fit of equation (12) were found to disagree by about 1%. This is probably a good indication of the uncertainty of the data for temperatures below 90 K. At the critical temperature, Equation (12) is constrained to a value of zero. However, between the critical temperature and 90 K, experience with other fluids shows deviations of ± 5%, especially for temperatures above T/T_c = 0.8.

The values of surface tension which appear in Appendix D were calculated from Equation (12).

5. Dielectric Constant

The dielectric constant of a fluid may be calculated from the Clausius-Mossotti equation:

$$\frac{\varepsilon - 1}{\varepsilon + 2} \frac{1}{\rho} = p \tag{13}$$

where ε is the dielectric constant, ρ is the density, and p is the specific polarization, a property of the substance having dimensions of specific volume. Recent measurements of the dielectric constant by Younglove (1971), indicate that for oxygen the specific polarization is a weak function of density and is nearly independent of temperature. For the calculations here, the equation:

$$p = 0.12361 + 0.00032\,\rho - 0.00121\,\rho^2 \tag{14}$$

was used, where p is the specific polarization in cm^3/g and ρ is the density in the units of g/cm^3.

The uncertainty of the tabulated values of dielectric constant is estimated to be 0.01%.

6. Index of Refraction

There is very little experimental data on the index of refraction for oxygen. High precision measurements have been made on the low pressure gas, by Ladenburg and Wolfsohn (1932), and on the saturated liquid at temperatures below the normal boiling point (90.18 K) by Johns and Wilhelm (1937). The interpolation formula and graph

which follows are a result of applying correlation techniques, which have been successful on other fluids, to the existing experimental data on oxygen, Childs and Diller (1970) and Diller (1971).

The refractive index of a non-polar fluid depends mainly on the wavelength of the incident radiation and to a lesser extent on the density of the fluid. The dependence on temperature at fixed densities is usually small enough to be neglected. In addition, the dependence on wavelength can usually be treated independently of the dependence on density. The Cauchy dispersion formula:

$$r_\Lambda(\rho, \Lambda) = r_\infty(\rho) + \theta_1/\Lambda^2 + \theta_2/\Lambda^4 \tag{15}$$

accurately represents the dependence of r_Λ (specific refraction) for many low pressure gases. In the case of oxygen, there are insufficient refractive index data from which to determine the dependence of r_∞ on density. However, making use of measurements of the dielectric constant of oxygen, Younglove (1971), the dependence of r_∞ on density for oxygen is estimated to be

$$r_\infty(\rho) = A_\varepsilon + B_\varepsilon \rho + C_\varepsilon \rho^2 . \tag{16}$$

Except for the units, Equation (16) is in fact the same as Equation (14) from the previous section. The justification for applying the identical equation to predict $r_\infty(\rho)$ is taken from the success of this procedure for hydrogen where data do exist. Truncating Equation (15) and combining it with Equation (16) results in

$$r_\Lambda(\rho, \Lambda) \cong A_\varepsilon + B_\varepsilon \rho + C_\varepsilon \rho^2 + \theta_1/\Lambda^2 \tag{17}$$

where

$$A_\varepsilon = 3.955, \; B_\varepsilon = 0.328, \; C_\varepsilon = -39.6 \text{ and } \theta_1 = 0.0292 \times 10^8 .$$

The specific refraction (r_Λ) is in cm^3/mol, density is in mol/cm^3, and the wavelength (Λ) is in Å. Values of the index of refraction in Table 5 have been calculated from Equations (17) and (18).

$$r_\Lambda = \frac{n^2 - 1}{n^2 + 2} \cdot \frac{1}{\rho} \tag{18}$$

where n is the index of refraction and ρ and r_Λ are the same as in equation (17).

Table 5. Index of refraction of saturated liquid oxygen at three wavelengths.

Wavelength Temperature, K	4358 A m	5461 A n	6939 A n
54.35	1.2631	1.2592	1.2567
60.0	1.2579	1.2541	1.2516
80.0	1.2388	1.2353	1.2330
100.0	1.2181	1.2149	1.2128
110.0	1.2067	1.2037	1.2017
120.0	1.1940	1.1912	1.1894
130.0	1.1794	1.1768	1.1751
140.0	1.1611	1.1588	1.1573
150.0	1.1332	1.1313	1.1300
154.0	1.1074	1.1059	1.1049

Figure 4 shows the estimated variation of r_Λ with wavelength and density.

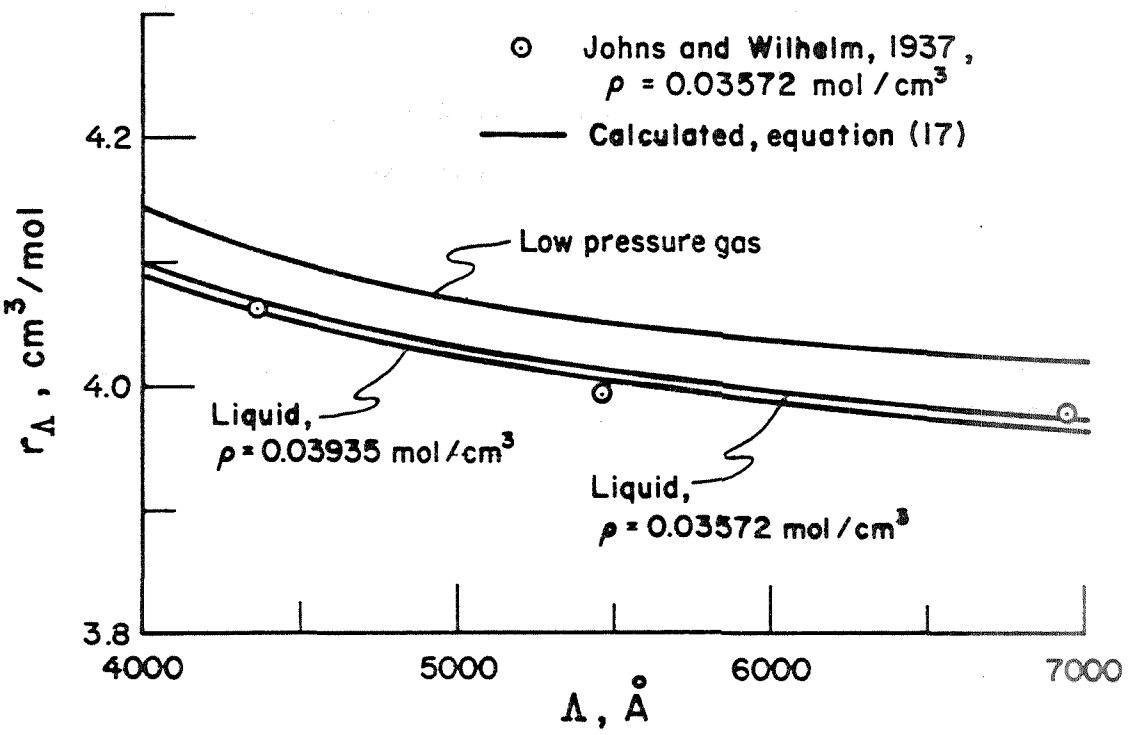

Figure 4. Specific refraction of oxygen as a function of density and wavelength. Points appearing on the graph are experimental points for the liquid.

7. Thermal Diffusivity

The thermal diffusivity of a fluid is defined as

$$\alpha = \lambda/(\rho C_p) \tag{19}$$

where α is the thermal diffusivity, λ is the thermal conductivity, and C_p is the specific heat at constant pressure. The tabulations of thermal diffusivity in appendices D and E have been calculated using the above equation and the ρ, λ and C_p in the tables. The uncertainty of α is estimated to be 5%, except in the critical region.

8. Prandtl Number

The Prandtl number is frequently used in engineering calculations and is defined as:

$$Pr = C_p \eta/\lambda \tag{20}$$

where Pr is the Prandtl number, C_p is the specific heat at constant pressure, η is the viscosity, and λ is the thermal conductivity. The tabulations of the Prandtl number in appendices A and B have been calculated from equation (20) using values of η, λ and C_p from the adjacent entries in the tables. Since Pr is a function of both η and λ, the uncertainty in Pr could be as much as 15%.

9. Joule-Thomson Inversion Curve

The Joule-Thomson coefficient for a fluid is defined as

$$J = (\partial T/\partial P)_H \, . \tag{21}$$

The locus of points where J = 0 is called the Joule-Thomson inversion curve. Weber (1970) calculated the inversion curve, as predicted by his experimental measurements of P-V-T, using the relationship:

$$T\,(\partial P/\partial T)_\rho = \rho\,(\partial P/\partial \rho)_T \, . \tag{22}$$

Table 6. Joule-Thomson inversion curve.

Temperature		Pressure		Density	
K	R	atm	psia	g mol/cm^3	lb/ft^3
125.00	225.00	15.60	229.26	0.02942	58.772
130.00	234.00	52.71	774.63	0.02907	58.073
135.00	243.00	86.45	1270.47	0.02869	57.314
140.00	252.00	119.17	1751.32	0.02835	56.634
145.00	261.00	150.87	2217.19	0.02802	55.975
150.00	270.00	178.30	2620.30	0.02765	55.236
155.00	279.00	204.56	3006.21	0.02729	54.517
160.00	288.00	232.57	3417.85	0.02700	53.937
165.00	297.00	256.29	3766.44	0.02666	53.258
170.00	306.00	278.96	4099.60	0.02633	52.599
175.00	315.00	300.60	4417.62	0.02600	51.940
180.00	324.00	321.28	4721.53	0.02569	51.321
185.00	333.00	340.06	4997.52	0.02537	50.681
190.00	342.00	357.65	5256.02	0.02504	50.002

Based on a 1% uncertainty in the derivatives in equation (22), the uncertainty in the inversion pressure at the highest pressure is 3.8 atmospheres and 1.8 atmospheres at the lowest pressure.

10. The Melting Line

The melting curve of a fluid is often represented by the Simon melting equation.

$$P = P_t + P_o \left[(T/T_t)^c - 1.0\right] \tag{23}$$

Weber (1970) combined his own experimental data with those of Mills and Grilly (1955) and using a triple-point temperature of $T_t = 54.3507$ K and a triple-point vapor pressure of $P_t = 0.00150$, the $c = 1.769$ and $P_o = 2637.2$ atm were determined by a least squares fit. The maximum deviation between calculated and Weber's (1970) experimental pressure is 0.09%. Weber's pressure range is from 13 to 160 atmospheres. The maximum deviation between calculated and experimental pressures from Mills and Grilly (1955) is 9.7%. Mills and Grilly's pressure range is from 370 to 3465 atmospheres.

Table 7. Melting line for oxygen.

Temperature		Pressure	
K	R	atm	psia
55.00	99.00	55.99	822.87
56.00	100.80	143.22	2104.83
57.00	102.60	231.66	3404.51
58.00	104.40	321.30	4721.85
59.00	106.20	412.14	6056.77
60.00	108.00	504.16	7409.21
65.00	117.00	982.02	14431.75
70.00	126.00	1489.01	21882.51
75.00	135.00	2024.65	29754.21
80.00	144.00	2588.47	38040.17

11. Summary

The purpose of the previous sections has been to describe how the calculations are performed in assembling the tables in appendices D and E and to document the references used in preparing this document. Since most of the material is taken from Weber (1970), it seemed unwise to repeat here the equations and formulas given in that document. If the reader is interested in the details of how these calculations are performed, he should consult Weber's original paper, as a much more detailed presentation is given there than would be appropriate here.

In addition, we have tried to assess uncertainties in the data where possible. These assessments are given in the text of each section. Finally, the number of digits in the tables of Appendices D and E should in no way be construed to be indicative of the accuracy of a quantity. Most of the properties in the tabulations range in value over several orders of magnitude, making it necessary to print more digits than is needed at one end of the range.

Acknowledgment

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Appendix A, List of Symbols and Units

The calculation of the tables and properties presented here was performed in many different systems of units, and converted to engineering units at the very end of the calculations; therefore the reader is cautioned to pay particular attention to the units when consulting individual sections of this document. All conversion factors have been taken from the National Aeronautics and Space Administration Report Number SP-7012 (Mechtly 1964).

R = gas constant, 0.335835 ft^3 - psia/lb_m- R

P = pressure, psia

V = molar volume, ft^3/lb_m

T = absolute temperature, degrees Rankine

ρ = density, lb_m/ft^3

C_p = specific heat at constant pressure, BTU/lb_m-R

C_v = specific heat at constant volume, BTU/lb_m-R

C_{sat} = specific heat of the saturated liquid BTU/lb_m-R

S = entropy, BTU/lb_m-R

H = enthalpy, BTU/lb_m

U = internal energy BTU/lb_m

W = speed of sound, ft/s

$(\partial P/\partial T)_\rho$ = isochore derivative, psia/R

$(\partial P/\partial V)_T$ = isotherm derivative, ft^3-psia/lb_m

$V(\partial H/\partial V)_P$ = specific heat input, BTU/lb_m

$V(\partial P/\partial U)_V$ = energy derivative, psia ft^3/BTU

$V(\partial P/\partial V)_T$ = isothermal bulk modulus, psia

$1/V(\partial V/\partial T)_P$ = volume expansivity, 1/R

n = index of refraction, dimensionless

r = specific refraction, ft^3/lb_m

Pr = Prandtl number, dimensionless

p = specific polarizability, ft^3/lb_m

J = Joule-Thomson coefficient

λ = thermal conductivity, BTU/ft-hr-R

η = viscosity, lb_m/ft-s

ε = dielectric constant, dimensionless

γ = surface tension, lb_f/in

Λ = wave length, angstrom

α = thermal diffusivity, ft^2/hr

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Appendix B, Fixed Points

Critical Point

P_c = 731.4 psia (49.77 atm)

ρ_c = 27.23 lb_m/ft^3 (0.01363 g mol/cm^3)

T_c = 278.237 R (154.576 K)

Normal Boiling Point

P = 14.696 psia (1 atm)

T = 162.324 R (90.180 K)

ρ_{gas} = 0.2794 lb_m/ft^3 (0.0001399 g mol/cm^3)

ρ_{liquid} = 71.23 lb_m/ft^3 (0.03566 g mol/cm^3)

Triple Point

T = 97.832R (54.351 K)

P = 0.0220 psia (0.00150 atm)

ρ_{gas} = 6.72×10^{-4} lb_m/ft^3 (3.36×10^{-7} g mol/cm^3)

ρ_{liquid} = 81.57 lb_m/ft^3 (0.04083 g mol/cm^3)

Appendix C, Conversion Factors

Temperature	1.8 R = 1 K
Pressure	14.695949 psia = 1 atm = 1.01325×10^5 N/m^2
Specific Volume	0.0005005957 ft^3/lb_m = 1 cm^3/g mol
Internal Energy, Enthalpy	*0.0134446 BTU/lb_m = 1 J/g mol
Entropy, Specific Heat	0.0074692 BTU/lb_m R = 1 J/g mol-K
Thermal Conductivity	0.0578176 BTU/ft-hr-R = 1 mW/cm-K
Viscosity	0.067196897 lb_m/ft-s = 1 g/cm-s
Speed of Sound	3.2808 ft/s = 1 m/s
Molecular Weight	31.9988
Surface Tension	0.5710147×10^{-5} lb_f/in = 1 dyne/cm (1 dyne = 10^{-5} N)

* Thermochemical BTU, in earlier work Weber (1968) used the International Steam Table BTU.

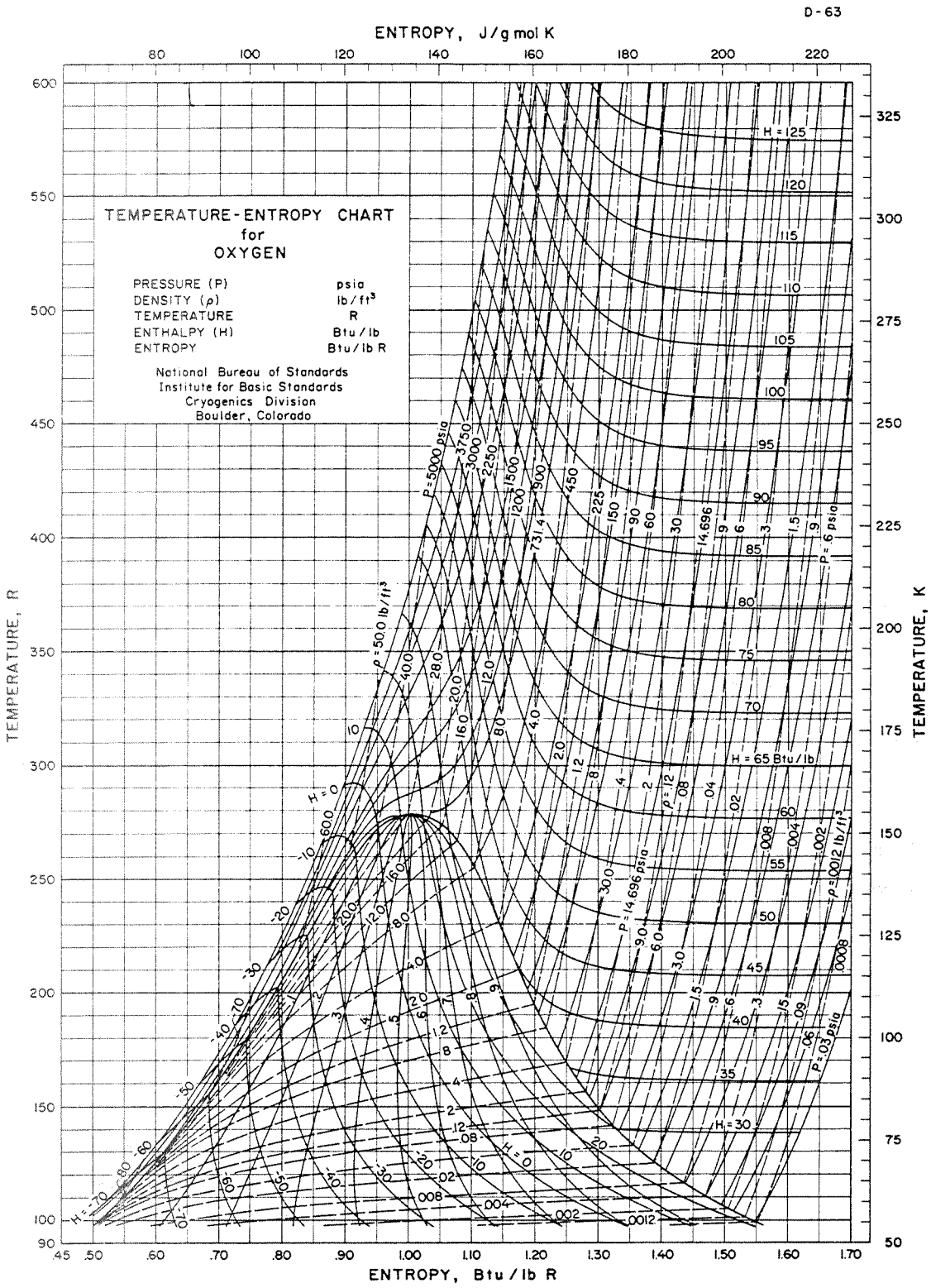

Figure 5. Temperature entropy chart for oxygen.

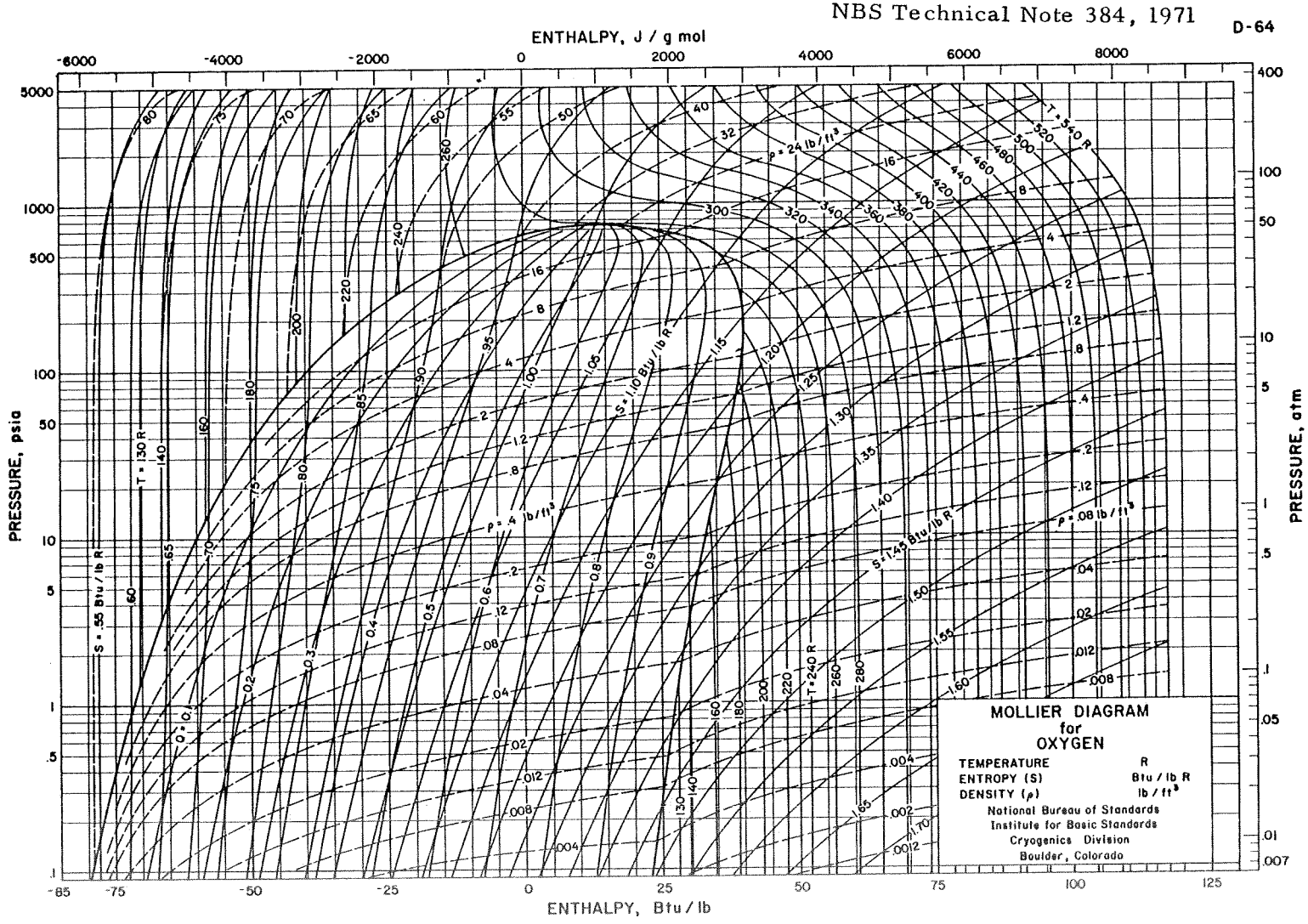

Figure 6. Mollier diagram for oxygen.

THERMODYNAMIC PROPERTIES OF COEXISTING GASEOUS AND LIQUID OXYGEN

TEMP DEG. R	PRESS PSIA	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC	SURFACE TENSION LB/IN X 10^4
97.831	0.022	0.01226	2090.48	317.8	-83.216	-83.216	0.50122	0.256	0.398	3804	1.2933
97.831	0.022	1489.18164	32.80	0.00	15.057	21.132	1.56510	0.155	0.218	461	
98	0.023	0.01226	2087.19	317.4	-83.149	-83.149	0.50191	0.256	0.398	3802	1.2918
98	0.023	1449.59365	32.85	0.00	15.084	21.169	1.56369	0.155	0.218	462	
100	0.032	0.01231	2048.40	312.2	-82.354	-82.353	0.50995	0.254	0.398	3779	1.2743
100	0.032	1060.61898	33.52	0.00	15.394	21.602	1.54742	0.155	0.218	466	
102	0.044	0.01236	2010.04	307.1	-81.558	-81.558	0.51782	0.253	0.398	3756	1.2568
102	0.044	785.65664	34.18	0.00	15.703	22.036	1.53186	0.155	0.218	471	
104	0.059	0.01240	1972.10	302.0	-80.762	-80.762	0.52555	0.251	0.398	3733	1.2394
104	0.059	588.86371	34.85	0.00	16.013	22.469	1.51697	0.155	0.218	475	
106	0.080	0.01245	1934.58	297.0	-79.967	-79.967	0.53313	0.259	0.398	3710	1.2221
106	0.080	446.33940	35.51	0.00	16.322	22.901	1.50271	0.155	0.218	480	
108	0.106	0.01250	1897.47	292.0	-79.171	-79.171	0.54056	0.257	0.398	3686	1.2047
108	0.106	341.94396	36.17	0.00	16.631	23.333	1.48906	0.155	0.218	484	
110	0.139	0.01255	1860.78	287.2	-78.376	-78.375	0.54786	0.256	0.398	3662	1.1875
110	0.139	264.64600	36.82	0.00	16.939	23.764	1.47599	0.155	0.218	489	
112	0.181	0.01260	1824.50	282.3	-77.580	-77.580	0.55503	0.254	0.398	3638	1.1702
112	0.181	206.81780	37.48	0.00	17.247	24.194	1.46347	0.155	0.218	493	
114	0.234	0.01264	1788.62	277.6	-76.785	-76.784	0.56207	0.252	0.398	3614	1.1530
114	0.234	163.12627	38.13	0.00	17.554	24.624	1.45147	0.156	0.218	498	
116	0.299	0.01269	1753.14	272.9	-75.989	-75.988	0.56899	0.251	0.398	3589	1.1359
116	0.299	129.80274	38.77	0.00	17.860	25.052	1.43996	0.156	0.218	502	
118	0.379	0.01274	1718.06	268.2	-75.193	-75.192	0.57579	0.249	0.398	3564	1.1188
118	0.379	104.15669	39.41	0.00	18.166	25.479	1.42893	0.156	0.218	506	
120	0.477	0.01280	1683.37	263.6	-74.397	-74.396	0.58248	0.248	0.398	3539	1.1018
120	0.477	84.24843	40.05	0.00	18.470	25.904	1.41835	0.156	0.218	510	
122	0.594	0.01285	1649.07	259.1	-73.601	-73.599	0.58906	0.246	0.398	3514	1.0848
122	0.594	68.66634	40.67	0.00	18.774	26.328	1.40819	0.156	0.218	514	
124	0.735	0.01290	1615.16	254.7	-72.804	-72.802	0.59553	0.245	0.398	3489	1.0678
124	0.735	56.37380	41.30	0.01	19.076	26.750	1.39843	0.156	0.219	518	
126	0.903	0.01295	1581.63	250.2	-72.008	-72.005	0.60191	0.243	0.398	3463	1.0509
126	0.903	46.60295	41.91	0.01	19.377	27.170	1.38907	0.156	0.219	522	
128	1.102	0.01301	1548.48	245.9	-71.211	-71.208	0.60818	0.242	0.399	3437	1.0341
128	1.102	38.78027	42.52	0.01	19.676	27.587	1.38007	0.156	0.219	526	
130	1.335	0.01306	1515.71	241.6	-70.413	-70.410	0.61436	0.241	0.399	3411	1.0173
130	1.335	32.47392	43.11	0.01	19.974	28.002	1.37141	0.156	0.219	530	
132	1.608	0.01311	1483.30	237.3	-69.616	-69.612	0.62045	0.239	0.399	3385	1.0005
132	1.608	27.35628	43.70	0.01	20.270	28.415	1.36309	0.156	0.220	534	
134	1.925	0.01317	1451.27	233.2	-68.818	-68.813	0.62645	0.238	0.399	3358	0.9838
134	1.925	23.17693	44.27	0.01	20.565	28.825	1.35507	0.156	0.220	538	
136	2.291	0.01323	1419.60	229.0	-68.019	-68.014	0.63236	0.237	0.399	3332	0.9672
136	2.291	19.74310	44.84	0.02	20.857	29.231	1.34736	0.156	0.220	541	
138	2.711	0.01328	1388.29	224.9	-67.221	-67.214	0.63820	0.235	0.400	3305	0.9506
138	2.711	16.90538	45.39	0.02	21.147	29.635	1.33993	0.156	0.221	545	
140	3.192	0.01334	1357.34	220.9	-66.421	-66.413	0.64395	0.234	0.400	3278	0.9340
140	3.192	14.54721	45.93	0.02	21.434	30.034	1.33276	0.156	0.221	548	
142	3.740	0.01340	1326.75	216.9	-65.621	-65.612	0.64962	0.233	0.400	3251	0.9176
142	3.740	12.57709	46.45	0.03	21.720	30.430	1.32585	0.157	0.222	552	
144	4.360	0.01346	1296.51	213.0	-64.821	-64.810	0.65522	0.232	0.401	3223	0.9011
144	4.360	10.92273	46.96	0.03	22.002	30.822	1.31918	0.157	0.222	555	
146	5.061	0.01352	1266.61	209.1	-64.020	-64.007	0.66074	0.230	0.401	3196	0.8847
146	5.061	9.52670	47.45	0.04	22.282	31.209	1.31274	0.157	0.223	559	
148	5.847	0.01358	1237.06	205.3	-63.218	-63.203	0.66620	0.229	0.401	3168	0.8684
148	5.847	8.34312	47.93	0.04	22.558	31.592	1.30652	0.157	0.223	562	
150	6.728	0.01364	1207.86	201.5	-62.415	-62.398	0.67158	0.228	0.402	3140	0.8521
150	6.728	7.33512	48.39	0.05	22.832	31.969	1.30050	0.157	0.224	565	
152	7.709	0.01370	1178.99	197.8	-61.612	-61.592	0.67690	0.227	0.402	3112	0.8359
152	7.709	6.47294	48.82	0.05	23.102	32.342	1.29468	0.158	0.225	568	
154	8.800	0.01377	1150.45	194.1	-60.808	-60.785	0.68216	0.226	0.403	3083	0.8198
154	8.800	5.73241	49.24	0.06	23.368	32.710	1.28905	0.158	0.226	571	

THERMODYNAMIC PROPERTIES OF COEXISTING GASEOUS AND LIQUID OXYGEN

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
97.831	81.56716	213.44	14.634	170514.62	0.0018640	0.11156	41.621	0.00344	1.56868	5.3437
97.831	0.00067	21.27	2.158	0.02	0.0102276	0.00279	0.263	19.10993	1.00000	0.7392
98	81.54150	213.33	14.627	170192.51	0.0018649	0.11151	41.484	0.00344	1.56848	5.3284
98	0.00069	21.31	2.158	0.02	0.0102101	0.00280	0.264	18.63534	1.00000	0.7391
100	81.23702	212.03	14.541	166405.78	0.0018761	0.11092	39.903	0.00343	1.56603	5.1519
100	0.00094	21.74	2.158	0.03	0.0100078	0.00286	0.269	13.92506	1.00001	0.7387
102	80.93185	210.73	14.453	162675.86	0.0018876	0.11032	38.388	0.00343	1.56358	4.9829
102	0.00127	22.17	2.158	0.04	0.0098139	0.00292	0.275	10.53043	1.00001	0.7384
104	80.62596	209.42	14.365	159002.07	0.0018993	0.10971	36.935	0.00342	1.56113	4.8210
104	0.00170	22.60	2.159	0.06	0.0096280	0.00298	0.280	8.05448	1.00001	0.7381
106	80.31932	208.10	14.275	155383.76	0.0019113	0.10908	35.543	0.00341	1.55867	4.6659
106	0.00224	23.04	2.159	0.08	0.0094498	0.00304	0.286	6.22782	1.00001	0.7378
108	80.01191	206.78	14.183	151820.27	0.0019236	0.10844	34.209	0.00341	1.55621	4.5173
108	0.00292	23.46	2.159	0.11	0.0092789	0.00310	0.292	4.86538	1.00002	0.7376
110	79.70369	205.44	14.091	148310.94	0.0019362	0.10778	32.930	0.00340	1.55374	4.3750
110	0.00378	23.89	2.159	0.14	0.0091150	0.00316	0.297	3.83852	1.00002	0.7375
112	79.39465	204.10	13.998	144855.15	0.0019491	0.10712	31.704	0.00339	1.55128	4.2386
112	0.00484	24.32	2.159	0.18	0.0089579	0.00322	0.303	3.05685	1.00003	0.7373
114	79.08474	202.74	13.903	141452.23	0.0019623	0.10644	30.529	0.00338	1.54880	4.1079
114	0.00613	24.74	2.159	0.23	0.0088074	0.00328	0.308	2.45612	1.00004	0.7373
116	78.77394	201.38	13.807	138101.58	0.0019759	0.10576	29.403	0.00337	1.54633	3.9826
116	0.00770	25.17	2.160	0.30	0.0086632	0.00334	0.314	1.99024	1.00005	0.7373
118	78.46222	200.01	13.711	134802.55	0.0019898	0.10506	28.324	0.00336	1.54384	3.8627
118	0.00960	25.59	2.160	0.38	0.0085251	0.00340	0.320	1.62579	1.00006	0.7374
120	78.14954	198.62	13.613	131554.52	0.0020041	0.10435	27.290	0.00335	1.54136	3.7477
120	0.01187	26.01	2.160	0.48	0.0083930	0.00347	0.325	1.33830	1.00007	0.7376
122	77.83586	197.23	13.514	128356.90	0.0020188	0.10363	26.299	0.00334	1.53886	3.6375
122	0.01456	26.42	2.160	0.59	0.0082667	0.00353	0.331	1.10973	1.00009	0.7378
124	77.52115	195.83	13.415	125209.07	0.0020338	0.10291	25.349	0.00333	1.53637	3.5319
124	0.01774	26.84	2.161	0.73	0.0081462	0.00359	0.337	0.92660	1.00011	0.7382
126	77.20538	194.42	13.314	122110.43	0.0020493	0.10217	24.438	0.00332	1.53386	3.4308
126	0.02146	27.25	2.161	0.90	0.0080311	0.00366	0.343	0.77883	1.00013	0.7386
128	76.88850	192.99	13.213	119060.40	0.0020652	0.10142	23.566	0.00331	1.53135	3.3339
128	0.02579	27.65	2.161	1.10	0.0079215	0.00372	0.349	0.65875	1.00015	0.7391
130	76.57048	191.56	13.111	116058.39	0.0020816	0.10067	22.729	0.00330	1.52884	3.2411
130	0.03079	28.05	2.162	1.33	0.0078172	0.00379	0.355	0.56052	1.00018	0.7397
132	76.25126	190.12	13.008	113103.82	0.0020985	0.09991	21.928	0.00328	1.52631	3.1522
132	0.03555	28.45	2.162	1.60	0.0077182	0.00385	0.361	0.47966	1.00022	0.7405
134	75.93082	188.66	12.904	110196.13	0.0021158	0.09914	21.160	0.00327	1.52378	3.0670
134	0.04315	28.85	2.163	1.91	0.0076243	0.00392	0.367	0.41269	1.00026	0.7414
136	75.60910	187.19	12.799	107334.76	0.0021337	0.09836	20.423	0.00326	1.52125	2.9855
136	0.05065	29.23	2.164	2.27	0.0075355	0.00398	0.373	0.35691	1.00030	0.7424
138	75.28606	185.71	12.694	104519.14	0.0021521	0.09758	19.718	0.00324	1.51870	2.9074
138	0.05915	29.62	2.164	2.68	0.0074517	0.00405	0.379	0.31017	1.00035	0.7435
140	74.96164	184.22	12.588	101748.75	0.0021711	0.09679	19.042	0.00323	1.51615	2.8327
140	0.06874	29.99	2.165	3.16	0.0073729	0.00412	0.385	0.27082	1.00041	0.7448
142	74.63580	182.72	12.482	99023.03	0.0021907	0.09599	18.394	0.00321	1.51359	2.7612
142	0.07951	30.36	2.166	3.69	0.0072989	0.00419	0.391	0.23750	1.00047	0.7462
144	74.30849	181.20	12.375	96341.47	0.0022109	0.09519	17.773	0.00320	1.51102	2.6929
144	0.09155	30.73	2.166	4.30	0.0072298	0.00425	0.398	0.20916	1.00054	0.7478
146	73.97964	179.68	12.267	93703.53	0.0022318	0.09438	17.177	0.00318	1.50844	2.6274
146	0.10497	31.09	2.167	4.98	0.0071655	0.00432	0.404	0.18494	1.00062	0.7496
148	73.64921	178.14	12.159	91108.71	0.0022534	0.09356	16.607	0.00316	1.50585	2.5649
148	0.11986	31.44	2.168	5.74	0.0071058	0.00440	0.411	0.16415	1.00071	0.7515
150	73.31714	176.58	12.050	88556.49	0.0022757	0.09274	16.060	0.00315	1.50325	2.5052
150	0.13633	31.78	2.169	6.60	0.0070510	0.00447	0.417	0.14622	1.00081	0.7536
152	72.98335	175.02	11.941	86046.39	0.0022987	0.09192	15.537	0.00313	1.50064	2.4481
152	0.15449	32.12	2.170	7.54	0.0070007	0.00454	0.424	0.13070	1.00092	0.7560
154	72.64780	173.44	11.831	83577.91	0.0023226	0.09109	15.034	0.00311	1.49802	2.3937
154	0.17445	32.45	2.171	8.59	0.0069552	0.00461	0.431	0.11721	1.00104	0.7585

THERMODYNAMIC PROPERTIES OF COEXISTING GASEOUS AND LIQUID OXYGEN

TEMP DEG. R	PRESS PSIA	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC	SURFACE TENSION LB/IN X 10^4
156	10.009	0.01383	1122.25	190.5	-60.003	-59.977	0.66735	0.225	0.403	3055	0.8037
156	10.009	5.09383	49.64	0.07	23.631	33.071	1.28358	0.158	0.227	574	
158	11.343	0.01389	1094.38	186.9	-59.197	-59.167	0.69249	0.224	0.404	3026	0.7876
158	11.343	4.54105	50.02	0.08	23.890	33.427	1.27829	0.158	0.228	577	
160	12.810	0.01396	1066.84	183.4	-58.389	-58.356	0.69757	0.223	0.405	2997	0.7716
160	12.810	4.06078	50.37	0.08	24.144	33.777	1.27315	0.159	0.229	580	
162	14.421	0.01403	1039.62	179.9	-57.581	-57.544	0.70259	0.222	0.405	2968	0.7557
162	14.421	3.64202	50.71	0.09	24.395	34.121	1.26817	0.159	0.230	583	
164	16.183	0.01410	1012.72	176.4	-56.772	-56.730	0.70755	0.221	0.406	2939	0.7399
164	16.183	3.27566	51.01	0.11	24.641	34.457	1.26332	0.159	0.231	585	
166	18.107	0.01417	986.14	173.0	-55.961	-55.914	0.71247	0.220	0.407	2909	0.7241
166	18.107	2.95409	51.30	0.12	24.883	34.787	1.25861	0.160	0.232	588	
168	20.200	0.01424	959.87	169.7	-55.149	-55.096	0.71733	0.219	0.408	2880	0.7083
168	20.200	2.67094	51.55	0.13	25.120	35.110	1.25403	0.160	0.233	590	
170	22.473	0.01431	933.92	166.3	-54.336	-54.276	0.72215	0.218	0.409	2850	0.6926
170	22.473	2.42087	51.79	0.14	25.352	35.426	1.24956	0.160	0.235	593	
172	24.935	0.01438	908.27	163.1	-53.521	-53.455	0.72691	0.217	0.409	2820	0.6770
172	24.935	2.19936	51.99	0.16	25.578	35.734	1.24521	0.161	0.236	595	
174	27.597	0.01446	882.94	159.8	-52.704	-52.631	0.73163	0.216	0.410	2790	0.6615
174	27.597	2.00260	52.17	0.18	25.800	36.034	1.24097	0.161	0.238	597	
176	30.467	0.01453	857.91	156.6	-51.886	-51.804	0.73631	0.215	0.412	2760	0.6460
176	30.467	1.82735	52.31	0.19	26.016	36.326	1.23683	0.162	0.240	599	
178	33.557	0.01461	833.18	153.5	-51.066	-50.976	0.74095	0.214	0.413	2729	0.6306
178	33.557	1.67086	52.43	0.21	26.227	36.609	1.23279	0.162	0.242	601	
180	36.876	0.01469	808.75	150.4	-50.245	-50.144	0.74554	0.213	0.414	2699	0.6153
180	36.876	1.53075	52.52	0.23	26.432	36.884	1.22884	0.163	0.244	603	
182	40.434	0.01477	784.62	147.3	-49.421	-49.310	0.75010	0.212	0.415	2668	0.6000
182	40.434	1.40502	52.58	0.25	26.631	37.151	1.22497	0.163	0.246	605	
184	44.243	0.01485	760.78	144.2	-48.595	-48.473	0.75461	0.211	0.417	2637	0.5848
184	44.243	1.29192	52.60	0.28	26.824	37.408	1.22118	0.164	0.248	607	
186	48.313	0.01493	737.24	141.2	-47.767	-47.633	0.75909	0.210	0.418	2605	0.5696
186	48.313	1.18995	52.60	0.30	27.010	37.656	1.21747	0.165	0.250	608	
188	52.654	0.01502	713.99	138.3	-46.936	-46.790	0.76354	0.210	0.420	2574	0.5546
188	52.654	1.09781	52.56	0.33	27.190	37.894	1.21384	0.165	0.253	610	
190	57.277	0.01510	691.03	135.3	-46.103	-45.943	0.76795	0.209	0.421	2542	0.5396
190	57.277	1.01438	52.49	0.36	27.363	38.122	1.21026	0.166	0.255	611	
192	62.194	0.01519	668.35	132.4	-45.268	-45.093	0.77233	0.208	0.423	2511	0.5247
192	62.194	0.93869	52.39	0.39	27.529	38.340	1.20676	0.167	0.258	613	
194	67.415	0.01528	645.96	129.5	-44.429	-44.238	0.77669	0.207	0.425	2478	0.5098
194	67.415	0.86988	52.25	0.42	27.689	38.548	1.20331	0.167	0.261	614	
196	72.951	0.01538	623.86	126.7	-43.588	-43.380	0.78101	0.206	0.427	2446	0.4951
196	72.951	0.80720	52.07	0.46	27.841	38.745	1.19991	0.168	0.264	615	
198	78.813	0.01547	602.04	123.9	-42.743	-42.517	0.78530	0.206	0.429	2414	0.4804
198	78.813	0.75000	51.86	0.50	27.985	38.930	1.19657	0.169	0.267	616	
200	85.013	0.01557	580.50	121.1	-41.895	-41.650	0.78957	0.205	0.432	2381	0.4658
200	85.013	0.69771	51.61	0.54	28.122	39.105	1.19327	0.170	0.271	617	
202	91.563	0.01567	559.24	118.4	-41.044	-40.778	0.79382	0.204	0.434	2348	0.4513
202	91.563	0.64982	51.33	0.58	28.250	39.268	1.19002	0.171	0.274	618	
204	98.473	0.01577	538.26	115.6	-40.188	-39.901	0.79804	0.203	0.437	2314	0.4369
204	98.473	0.60589	51.00	0.63	28.371	39.419	1.18681	0.172	0.278	619	
206	105.755	0.01587	517.56	113.0	-39.329	-39.018	0.80224	0.203	0.440	2281	0.4225
206	105.755	0.56553	50.64	0.67	28.482	39.557	1.18363	0.173	0.282	619	
208	113.421	0.01598	497.14	110.3	-38.465	-38.130	0.80643	0.202	0.443	2247	0.4083
208	113.421	0.52839	50.24	0.73	28.585	39.683	1.18049	0.173	0.286	620	
210	121.483	0.01609	476.99	107.6	-37.597	-37.235	0.81059	0.201	0.446	2213	0.3941
210	121.483	0.49415	49.80	0.78	28.679	39.795	1.17738	0.174	0.291	620	
212	129.952	0.01621	457.13	105.0	-36.724	-36.334	0.81474	0.201	0.449	2178	0.3800
212	129.952	0.46254	49.32	0.84	28.764	39.894	1.17429	0.175	0.296	621	
214	138.841	0.01633	437.55	102.4	-35.846	-35.426	0.81888	0.200	0.453	2144	0.3661
214	138.841	0.43333	48.80	0.90	28.838	39.979	1.17123	0.177	0.301	621	

THERMODYNAMIC PROPERTIES OF COEXISTING GASEOUS AND LIQUID OXYGEN

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
156	72.31040	171.85	11.720	81150.56	0.0023473	0.09025	14.553	0.00309	1.49539	2.3417
156	0.19632	32.77	2.172	9.75	0.0069143	0.00469	0.438	0.10544	1.00117	0.7612
158	71.97109	170.24	11.610	78763.88	0.0023729	0.08941	14.092	0.00308	1.49275	2.2921
158	0.22021	33.08	2.173	11.01	0.0068780	0.00477	0.445	0.09513	1.00131	0.7642
160	71.62980	168.62	11.499	76417.40	0.0023995	0.08857	13.650	0.00306	1.49009	2.2449
160	0.24626	33.38	2.175	12.41	0.0068463	0.00484	0.452	0.08606	1.00146	0.7674
162	71.28645	166.99	11.387	74110.66	0.0024270	0.08772	13.227	0.00304	1.48742	2.2000
162	0.27457	33.68	2.176	13.92	0.0068193	0.00492	0.459	0.07807	1.00163	0.7709
164	70.94096	165.34	11.275	71843.20	0.0024556	0.08687	12.821	0.00302	1.48474	2.1572
164	0.30528	33.96	2.177	15.57	0.0067969	0.00500	0.466	0.07100	1.00181	0.7746
166	70.59324	163.67	11.163	69614.60	0.0024853	0.08601	12.431	0.00300	1.48204	2.1166
166	0.33851	34.23	2.179	17.36	0.0067791	0.00508	0.474	0.06473	1.00201	0.7786
168	70.24321	162.00	11.051	67424.41	0.0025162	0.08515	12.059	0.00297	1.47933	2.0781
168	0.37440	34.50	2.180	19.30	0.0067660	0.00517	0.481	0.05914	1.00223	0.7828
170	69.89077	160.30	10.938	65272.21	0.0025483	0.08429	11.701	0.00295	1.47661	2.0416
170	0.41308	34.75	2.181	21.39	0.0067576	0.00525	0.489	0.05415	1.00246	0.7874
172	69.53583	158.59	10.825	63157.58	0.0025818	0.08342	11.358	0.00293	1.47387	2.0070
172	0.45468	35.00	2.183	23.64	0.0067540	0.00534	0.497	0.04968	1.00270	0.7922
174	69.17828	156.87	10.711	61080.12	0.0026166	0.08255	11.030	0.00291	1.47111	1.9743
174	0.49935	35.23	2.184	26.05	0.0067552	0.00543	0.505	0.04567	1.00297	0.7974
176	68.81801	155.13	10.597	59039.43	0.0026529	0.08168	10.715	0.00288	1.46833	1.9435
176	0.54724	35.46	2.186	28.63	0.0067612	0.00552	0.513	0.04206	1.00325	0.8029
178	68.45491	153.37	10.483	57035.12	0.0026908	0.08081	10.413	0.00286	1.46554	1.9146
178	0.59850	35.67	2.188	31.38	0.0067722	0.00561	0.522	0.03881	1.00356	0.8088
180	68.08887	151.60	10.369	55066.81	0.0027303	0.07993	10.124	0.00284	1.46272	1.8874
180	0.65327	35.87	2.189	34.31	0.0067883	0.00570	0.530	0.03586	1.00389	0.8150
182	67.71974	149.81	10.254	53134.13	0.0027717	0.07905	9.846	0.00281	1.45989	1.8620
182	0.71173	36.07	2.191	37.42	0.0068095	0.00580	0.539	0.03319	1.00423	0.8217
184	67.34741	148.00	10.139	51236.72	0.0028150	0.07817	9.580	0.00279	1.45703	1.8382
184	0.77404	36.25	2.192	40.72	0.0068359	0.00590	0.548	0.03076	1.00461	0.8287
186	66.97173	146.17	10.024	49374.24	0.0028602	0.07728	9.325	0.00276	1.45416	1.8162
186	0.84037	36.41	2.194	44.20	0.0068678	0.00600	0.557	0.02855	1.00500	0.8362
188	66.59254	144.33	9.908	47546.33	0.0029077	0.07639	9.080	0.00273	1.45126	1.7958
188	0.91090	36.57	2.196	47.88	0.0069052	0.00610	0.567	0.02653	1.00542	0.8440
190	66.20970	142.47	9.793	45752.69	0.0029575	0.07550	8.846	0.00271	1.44833	1.7771
190	0.98582	36.72	2.197	51.75	0.0069484	0.00621	0.576	0.02468	1.00587	0.8524
192	65.82302	140.59	9.676	43992.99	0.0030098	0.07461	8.620	0.00268	1.44538	1.7600
192	1.06531	36.85	2.199	55.81	0.0069975	0.00632	0.586	0.02299	1.00634	0.8613
194	65.43233	138.69	9.560	42266.94	0.0030648	0.07372	8.404	0.00265	1.44241	1.7445
194	1.14959	36.98	2.201	60.06	0.0070528	0.00643	0.596	0.02143	1.00684	0.8707
196	65.03744	136.77	9.443	40574.24	0.0031227	0.07282	8.197	0.00262	1.43940	1.7307
196	1.23886	37.09	2.203	64.51	0.0071146	0.00654	0.606	0.02000	1.00738	0.8806
198	64.63815	134.83	9.325	38914.63	0.0031838	0.07193	7.998	0.00259	1.43637	1.7184
198	1.33334	37.18	2.204	69.15	0.0071831	0.00665	0.617	0.01868	1.00794	0.8911
200	64.23423	132.88	9.208	37287.84	0.0032482	0.07103	7.807	0.00256	1.43331	1.7078
200	1.43327	37.27	2.206	73.97	0.0072587	0.00677	0.627	0.01747	1.00854	0.9022
202	63.82545	130.90	9.089	35693.64	0.0033162	0.07013	7.623	0.00253	1.43021	1.6988
202	1.53889	37.34	2.208	78.99	0.0073418	0.00689	0.638	0.01634	1.00917	0.9140
204	63.41157	128.90	8.970	34131.81	0.0033882	0.06922	7.447	0.00250	1.42708	1.6914
204	1.65046	37.41	2.209	84.18	0.0074327	0.00702	0.650	0.01530	1.00984	0.9265
206	62.99231	126.87	8.851	32602.15	0.0034645	0.06832	7.278	0.00247	1.42392	1.6857
206	1.76825	37.45	2.211	89.55	0.0075320	0.00715	0.661	0.01433	1.01054	0.9398
208	62.56739	124.83	8.731	31104.48	0.0035456	0.06741	7.115	0.00243	1.42071	1.6817
208	1.89256	37.49	2.213	95.08	0.0076402	0.00728	0.673	0.01343	1.01129	0.9538
210	62.13649	122.76	8.610	29638.64	0.0036317	0.06650	6.958	0.00240	1.41747	1.6794
210	2.02368	37.51	2.215	100.78	0.0077579	0.00742	0.686	0.01259	1.01207	0.9688
212	61.69928	120.67	8.488	28204.51	0.0037234	0.06559	6.808	0.00237	1.41418	1.6789
212	2.16196	37.52	2.216	106.62	0.0078858	0.00755	0.698	0.01181	1.01290	0.9846
214	61.25540	118.56	8.365	26802.00	0.0038213	0.06468	6.663	0.00233	1.41085	1.6802
214	2.30773	37.52	2.218	112.61	0.0080246	0.00770	0.711	0.01108	1.01377	1.0015

THERMODYNAMIC PROPERTIES OF COEXISTING GASEOUS AND LIQUID OXYGEN

TEMP DEG. R	PRESS PSIA	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC	SURFACE TENSION LB/IN X 10^{-1}
216	148.162	0.01645	418.24	99.8	-34.962	-34.511	0.82301	0.199	0.457	2108	0.3522
216	148.162	0.40628	48.23	0.97	28.903	40.049	1.16819	0.178	0.307	621	
218	157.926	0.01657	399.22	97.3	-34.073	-33.588	0.82712	0.199	0.461	2073	0.3384
218	157.926	0.38120	47.62	1.0	28.956	40.104	1.16517	0.179	0.312	621	
220	168.146	0.01670	380.49	94.7	-33.177	-32.657	0.83123	0.198	0.466	2037	0.3247
220	168.146	0.35792	46.97	1.1	28.999	40.144	1.16215	0.180	0.319	621	
222	178.834	0.01683	362.05	92.2	-32.275	-31.717	0.83533	0.197	0.471	2001	0.3111
222	178.834	0.33628	46.27	1.2	29.031	40.167	1.15915	0.181	0.325	621	
224	190.002	0.01697	343.90	89.7	-31.365	-30.768	0.83943	0.197	0.476	1964	0.2977
224	190.002	0.31614	45.52	1.3	29.050	40.173	1.15616	0.182	0.333	620	
226	201.664	0.01712	326.05	87.2	-30.448	-29.809	0.84353	0.196	0.482	1926	0.2843
226	201.664	0.29736	44.73	1.4	29.057	40.161	1.15316	0.184	0.340	620	
228	213.832	0.01726	308.51	84.7	-29.523	-28.839	0.84762	0.196	0.489	1889	0.2711
228	213.832	0.27984	43.89	1.5	29.051	40.131	1.15017	0.185	0.349	619	
230	226.518	0.01742	291.29	82.3	-28.589	-27.858	0.85173	0.195	0.496	1850	0.2579
230	226.518	0.26347	43.01	1.6	29.031	40.082	1.14716	0.186	0.358	618	
232	239.735	0.01758	280.48	80.6	-27.647	-26.867	0.85583	0.199	0.507	1818	0.2449
232	239.735	0.24815	42.01	1.7	28.996	40.012	1.14417	0.188	0.367	617	
234	253.498	0.01774	262.92	77.7	-26.685	-25.852	0.86000	0.199	0.512	1771	0.2320
234	253.498	0.23380	41.01	1.8	28.946	39.921	1.14115	0.189	0.378	616	
236	267.818	0.01792	248.20	75.4	-25.712	-24.824	0.86417	0.198	0.520	1736	0.2193
236	267.818	0.22034	39.97	1.9	28.879	39.806	1.13810	0.191	0.389	615	
238	282.709	0.01810	230.92	73.5	-24.727	-23.779	0.86837	0.198	0.536	1702	0.2067
238	282.709	0.20771	38.87	2.1	28.795	39.668	1.13503	0.192	0.402	614	
240	298.186	0.01829	214.14	71.1	-23.729	-22.718	0.87259	0.197	0.548	1660	0.1942
240	298.186	0.19582	37.71	2.2	28.692	39.505	1.13193	0.194	0.416	613	
242	314.262	0.01850	200.20	68.6	-22.717	-21.640	0.87684	0.197	0.557	1621	0.1818
242	314.262	0.18463	36.49	2.4	28.569	39.313	1.12879	0.195	0.431	611	
244	330.951	0.01871	184.70	66.2	-21.690	-20.544	0.88112	0.196	0.571	1577	0.1696
244	330.951	0.17407	35.21	2.5	28.425	39.093	1.12560	0.197	0.448	609	
246	348.270	0.01894	170.49	63.8	-20.648	-19.427	0.88543	0.196	0.586	1535	0.1576
246	348.270	0.16411	33.87	2.7	28.257	38.840	1.12236	0.199	0.468	608	
248	366.233	0.01917	155.74	61.2	-19.589	-18.289	0.88978	0.196	0.603	1488	0.1457
248	366.233	0.15468	32.47	2.9	28.063	38.553	1.11905	0.201	0.489	606	
250	384.857	0.01943	141.83	59.0	-18.511	-17.127	0.89418	0.197	0.625	1445	0.1341
250	384.857	0.14575	30.99	3.1	27.841	38.228	1.11566	0.202	0.514	604	
252	404.159	0.01970	128.97	56.8	-17.411	-15.937	0.89864	0.197	0.650	1404	0.1225
252	404.159	0.13727	29.45	3.4	27.588	37.861	1.11219	0.204	0.542	602	
254	424.156	0.01999	115.04	54.2	-16.286	-14.716	0.90318	0.198	0.677	1352	0.1112
254	424.156	0.12920	27.82	3.6	27.300	37.447	1.10860	0.207	0.576	599	
256	444.870	0.02031	103.62	52.1	-15.134	-13.461	0.90780	0.198	0.709	1311	0.1001
256	444.870	0.12151	26.12	3.9	26.971	36.981	1.10489	0.209	0.615	597	
258	466.319	0.02065	90.37	49.4	-13.949	-12.166	0.91252	0.199	0.750	1256	0.0892
258	466.319	0.11416	24.33	4.2	26.598	36.455	1.10102	0.211	0.662	594	
260	488.528	0.02102	79.37	46.9	-12.728	-10.826	0.91736	0.200	0.789	1204	0.0786
260	488.528	0.10711	22.44	4.5	26.171	35.860	1.09697	0.214	0.720	592	
262	511.521	0.02143	68.52	44.2	-11.463	-9.433	0.92235	0.202	0.836	1147	0.0682
262	511.521	0.10031	20.45	4.9	25.681	35.182	1.09268	0.217	0.792	589	
264	535.324	0.02189	57.38	42.0	-10.145	-7.975	0.92753	0.203	0.923	1099	0.0580
264	535.324	0.09373	18.34	5.3	25.114	34.406	1.08810	0.220	0.887	586	
266	559.968	0.02241	46.89	39.1	-8.762	-6.438	0.93295	0.205	1.011	1035	0.0482
266	559.968	0.08732	16.09	5.8	24.451	33.505	1.08315	0.223	1.015	583	
268	585.486	0.02301	37.64	36.9	-7.294	-4.799	0.93869	0.208	1.157	986	0.0388
268	585.486	0.08099	13.69	6.4	23.662	32.443	1.07768	0.227	1.202	579	
270	611.917	0.02372	29.12	34.5	-5.715	-3.028	0.94485	0.211	1.358	931	0.0297
270	611.917	0.07462	11.62	7.0	22.688	31.143	1.07143	0.232	1.396	570	
272	639.301	0.02459	20.56	31.3	-3.982	-1.071	0.95162	0.217	1.672	856	0.0212
272	639.301	0.06836	8.90	7.8	21.509	29.601	1.06440	0.241	1.851	563	
278.237	731.379	0.03673									0.0000
278.237	731.379	0.03673									

THERMODYNAMIC PROPERTIES OF COEXISTING GASEOUS AND LIQUID OXYGEN

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
216	60.80446	116.42	8.241	25431.04	0.0039259	0.06376	6.523	0.00229	1.40747	1.6834
216	2.46137	37.50	2.220	118.71	0.0081754	0.00784	0.725	0.01040	1.01469	1.0195
218	60.34603	114.26	8.117	24091.60	0.0040380	0.06284	6.389	0.00226	1.40404	1.6886
218	2.62329	37.47	2.222	124.92	0.0083390	0.00800	0.738	0.00976	1.01567	1.0386
220	59.87965	112.07	7.990	22783.73	0.0041583	0.06192	6.259	0.00222	1.40055	1.6959
220	2.79392	37.42	2.223	131.22	0.0085167	0.00815	0.753	0.00916	1.01669	1.0591
222	59.40482	109.86	7.863	21507.48	0.0042877	0.06100	6.134	0.00218	1.39701	1.7054
222	2.97372	37.36	2.225	137.59	0.0087097	0.00831	0.767	0.00859	1.01777	1.0810
224	58.92098	107.62	7.734	20263.01	0.0044273	0.06007	6.013	0.00214	1.39341	1.7171
224	3.16320	37.28	2.227	144.00	0.0089196	0.00850	0.782	0.00808	1.01891	1.1014
226	58.42754	105.36	7.602	19050.50	0.0045782	0.05914	5.897	0.00210	1.38974	1.7314
226	3.36292	37.20	2.229	150.43	0.0091483	0.00872	0.798	0.00762	1.02011	1.1201
228	57.92385	103.07	7.469	17870.27	0.0047418	0.05821	5.797	0.00206	1.38601	1.7522
228	3.57347	37.09	2.231	156.85	0.0093977	0.00896	0.814	0.00719	1.02138	1.1401
230	57.40919	100.76	7.333	16722.69	0.0049196	0.05727	5.709	0.00201	1.38220	1.7789
230	3.79553	36.97	2.233	163.23	0.0096702	0.00920	0.830	0.00678	1.02272	1.1613
232	56.89378	100.32	7.109	15957.39	0.0050519	0.05635	5.622	0.00195	1.37839	1.8205
232	4.02980	36.81	2.234	169.28	0.0099798	0.00946	0.848	0.00639	1.02413	1.1845
234	56.35697	97.62	6.936	14817.10	0.0052417	0.05541	5.533	0.00192	1.37443	1.8397
234	4.27711	36.66	2.236	175.42	0.0103090	0.00974	0.865	0.00603	1.02563	1.2090
236	55.80653	95.45	6.816	13851.45	0.0054430	0.05446	5.444	0.00188	1.37037	1.8696
236	4.53834	36.49	2.238	181.38	0.0106718	0.01003	0.884	0.00567	1.02721	1.2357
238	55.24149	92.95	6.730	12756.39	0.0057624	0.05351	5.353	0.00181	1.36622	1.9291
238	4.81451	36.31	2.240	187.12	0.0110729	0.01034	0.903	0.00534	1.02888	1.2645
240	54.66074	90.26	6.593	11705.24	0.0060718	0.05255	5.261	0.00175	1.36196	1.9753
240	5.10675	36.11	2.243	192.56	0.0115184	0.01067	0.923	0.00502	1.03065	1.2960
242	54.06303	87.91	6.448	10823.37	0.0063389	0.05158	5.167	0.00171	1.35759	2.0099
242	5.41633	35.90	2.245	197.65	0.0120154	0.01102	0.944	0.00472	1.03253	1.3304
244	53.44691	85.25	6.300	9871.72	0.0067022	0.05061	5.073	0.00166	1.35309	2.0619
244	5.74473	35.67	2.248	202.29	0.0125729	0.01139	0.966	0.00442	1.03452	1.3683
246	52.81073	82.72	6.149	9003.70	0.0070809	0.04963	4.977	0.00160	1.34845	2.1148
246	6.09365	35.42	2.250	206.41	0.0132020	0.01180	0.988	0.00414	1.03665	1.4104
248	52.15255	79.97	5.978	8122.34	0.0075392	0.04864	4.880	0.00155	1.34367	2.1777
248	6.46505	35.16	2.253	209.91	0.0139170	0.01224	1.012	0.00387	1.03891	1.4572
250	51.47007	77.39	5.827	7299.81	0.0080805	0.04764	4.781	0.00148	1.33872	2.2593
250	6.86127	34.88	2.256	212.66	0.0147364	0.01271	1.037	0.00360	1.04133	1.5099
252	50.76057	74.93	5.681	6546.84	0.0086785	0.04663	4.680	0.00141	1.33359	2.3496
252	7.28508	34.59	2.259	214.52	0.0156842	0.01323	1.064	0.00335	1.04392	1.5693
254	50.02077	71.93	5.483	5754.44	0.0094159	0.04561	4.577	0.00135	1.32825	2.4467
254	7.73983	34.28	2.262	215.35	0.0167931	0.01381	1.091	0.00310	1.04670	1.6375
256	49.24665	69.54	5.333	5103.03	0.0102011	0.04457	4.471	0.00128	1.32268	2.5620
256	8.22963	33.95	2.265	214.95	0.0181079	0.01446	1.121	0.00286	1.04970	1.7160
258	48.43320	66.39	5.128	4377.03	0.0112956	0.04351	4.363	0.00120	1.31685	2.7070
258	8.75965	33.61	2.268	213.09	0.0196921	0.01519	1.153	0.00262	1.05296	1.8080
260	47.57408	63.55	4.922	3775.80	0.0124110	0.04243	4.251	0.00113	1.31071	2.8446
260	9.33648	33.25	2.272	209.50	0.0216392	0.01604	1.187	0.00239	1.05651	1.9171
262	46.66103	60.51	4.697	3197.03	0.0138138	0.04132	4.135	0.00106	1.30420	3.0109
262	9.96884	32.88	2.275	203.83	0.0240924	0.01704	1.224	0.00216	1.06042	2.0489
264	45.68295	57.62	4.525	2621.33	0.0160226	0.04123	4.014	0.00098	1.29725	3.2361
264	10.66861	32.50	2.279	195.63	0.0272844	0.01825	1.264	0.00193	1.06475	2.2119
266	44.62444	54.13	4.268	2092.60	0.0186792	0.04112	3.887	0.00091	1.28976	3.4413
266	11.45275	32.11	2.282	184.30	0.0316205	0.01978	1.309	0.00170	1.06962	2.4196
268	43.46298	51.33	4.067	1636.14	0.0225452	0.04139	3.752	0.00082	1.28158	3.7764
268	12.34713	31.72	2.285	169.00	0.0378815	0.02182	1.360	0.00147	1.07519	2.6963
270	42.16349	48.39	3.869	1227.79	0.0280698	0.04200	3.606	0.00073	1.27246	4.1988
270	13.40174	31.19	2.246	155.78	0.0447593	0.02395	1.420	0.00128	1.08179	2.9788
272	40.66585	44.61	3.542	836.01	0.0374733	0.04326	3.445	0.00064	1.26201	4.7918
272	14.62827	30.83	2.212	130.17	0.0599397	0.02808	1.489	0.00104	1.08949	3.5349
278.237	27.22756						2.272		1.17082	
278.237	27.22756						2.272		1.17082	

Appendix E, Isobaric Properties

THERMODYNAMIC PROPERTIES OF OXYGEN

1 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.833	0.01226	2090.54	317.8	-83.216	-83.214	0.50123	0.266	0.398	3804
100	0.01231	2048.49	312.2	-82.354	-82.352	0.50994	0.264	0.398	3780
105	0.01243	1953.37	299.5	-80.365	-80.363	0.52935	0.260	0.398	3722
110	0.01255	1860.86	287.2	-78.376	-78.374	0.54786	0.256	0.398	3662
115	0.01267	1770.90	275.2	-76.387	-76.385	0.56554	0.252	0.398	3602
120	0.01280	1683.42	263.6	-74.397	-74.395	0.58248	0.248	0.398	3539
125	0.01293	1598.37	252.4	-72.406	-72.404	0.59873	0.244	0.398	3476
* 127.018	0.01298	1564.72	248.0	-71.602	-71.600	0.60511	0.243	0.398	3450
* 127.018	42.40908	42.22	0.01	19.529	27.382	1.38444	0.156	0.219	524
130	43.41743	43.23	0.01	19.995	28.035	1.38952	0.156	0.219	530
135	45.10684	44.94	0.01	20.776	29.129	1.39778	0.156	0.219	541
140	46.79498	46.64	0.01	21.557	30.222	1.40573	0.156	0.219	551
145	48.48204	48.33	0.01	22.337	31.315	1.41340	0.156	0.218	561
150	50.16814	50.03	0.01	23.117	32.407	1.42080	0.156	0.218	570
155	51.85340	51.72	0.01	23.896	33.498	1.42796	0.156	0.218	580
160	53.53793	53.41	0.01	24.676	34.590	1.43489	0.156	0.218	589
165	55.22181	55.10	0.01	25.455	35.680	1.44160	0.156	0.218	598
170	56.90511	56.79	0.01	26.234	36.771	1.44811	0.156	0.218	607
175	58.58790	58.48	0.01	27.012	37.861	1.45443	0.156	0.218	616
180	60.27023	60.17	0.01	27.791	38.951	1.46058	0.155	0.218	625
185	61.95216	61.86	0.01	28.569	40.041	1.46655	0.155	0.218	634
190	63.63371	63.54	0.01	29.347	41.131	1.47236	0.155	0.218	642
195	65.31493	65.23	0.01	30.126	42.220	1.47802	0.155	0.218	651
200	66.99584	66.91	0.01	30.904	43.309	1.48353	0.155	0.218	659
205	68.67649	68.60	0.00	31.682	44.399	1.48891	0.155	0.218	667
210	70.35688	70.28	0.00	32.459	45.488	1.49416	0.155	0.218	675
215	72.03706	71.97	0.00	33.237	46.577	1.49929	0.155	0.218	683
220	73.71702	73.65	0.00	34.015	47.665	1.50429	0.155	0.218	691
225	75.39680	75.33	0.00	34.793	48.754	1.50919	0.155	0.218	699
230	77.07641	77.01	0.00	35.570	49.843	1.51397	0.155	0.218	707
235	78.75585	78.70	0.00	36.348	50.931	1.51865	0.155	0.218	715
240	80.43516	80.38	0.00	37.125	52.020	1.52324	0.155	0.218	722
245	82.11432	82.06	0.00	37.903	53.108	1.52772	0.155	0.218	730
250	83.79337	83.74	0.00	38.680	54.196	1.53212	0.155	0.218	737
255	85.47230	85.42	0.00	39.457	55.284	1.53643	0.155	0.218	745
260	87.15112	87.10	0.00	40.235	56.373	1.54066	0.155	0.218	752
265	88.82985	88.78	0.00	41.012	57.461	1.54480	0.155	0.218	759
270	90.50848	90.46	0.00	41.789	58.549	1.54887	0.155	0.218	766
275	92.18703	92.14	0.00	42.566	59.637	1.55286	0.155	0.218	773
280	93.86551	93.82	0.00	43.344	60.725	1.55678	0.155	0.218	780
285	95.54390	95.50	0.00	44.121	61.813	1.56064	0.155	0.218	787
290	97.22223	97.18	0.00	44.898	62.901	1.56442	0.155	0.218	794
295	98.90050	98.86	0.00	45.675	63.989	1.56814	0.155	0.218	801
300	100.57871	100.54	0.00	46.453	65.077	1.57180	0.155	0.218	808
310	103.93495	103.90	0.00	48.007	67.253	1.57893	0.155	0.218	821
320	107.29100	107.26	0.00	49.561	69.429	1.58584	0.155	0.218	834
330	110.64688	110.62	0.00	51.116	71.605	1.59253	0.155	0.218	847
340	114.00260	113.97	0.00	52.670	73.781	1.59903	0.155	0.218	860
350	117.35818	117.33	0.00	54.225	75.957	1.60534	0.155	0.218	872
360	120.71363	120.69	0.00	55.780	78.133	1.61147	0.155	0.218	885
370	124.06898	124.05	0.00	57.335	80.309	1.61743	0.156	0.218	897
380	127.42423	127.40	0.00	58.891	82.486	1.62324	0.156	0.218	909
390	130.77938	130.76	0.00	60.446	84.663	1.62889	0.156	0.218	921
400	134.13446	134.11	0.00	62.003	86.841	1.63440	0.156	0.218	932
410	137.48946	137.47	0.00	63.559	89.019	1.63978	0.156	0.218	944
420	140.84439	140.83	0.00	65.117	91.198	1.64503	0.156	0.218	955
430	144.19926	144.18	0.00	66.675	93.377	1.65016	0.156	0.218	967
440	147.55408	147.54	0.00	68.234	95.557	1.65517	0.156	0.218	978
450	150.90884	150.89	0.00	69.794	97.738	1.66007	0.156	0.218	989
460	154.26356	154.25	0.00	71.355	99.920	1.66487	0.156	0.218	1000
470	157.61823	157.61	0.00	72.917	102.103	1.66956	0.156	0.218	1010
480	160.97286	160.96	0.00	74.480	104.288	1.67416	0.156	0.218	1021
490	164.32745	164.32	0.00	76.044	106.473	1.67867	0.157	0.219	1031
500	167.68201	167.67	0.00	77.610	108.660	1.68309	0.157	0.219	1042
510	171.03654	171.03	0.00	79.178	110.849	1.68742	0.157	0.219	1052
520	174.39104	174.38	0.00	80.747	113.039	1.69168	0.157	0.219	1062
530	177.74551	177.74	0.00	82.318	115.232	1.69585	0.157	0.219	1072
540	181.09995	181.09	0.00	83.891	117.426	1.69995	0.157	0.220	1082
550	184.45437	184.45	0.00	85.466	119.622	1.70398	0.158	0.220	1092
560	187.80876	187.80	0.00	87.043	121.820	1.70794	0.158	0.220	1101
570	191.16313	191.16	0.00	88.622	124.021	1.71184	0.158	0.220	1111
580	194.51749	194.51	0.00	90.204	126.224	1.71567	0.158	0.220	1120
590	197.87182	197.87	0.00	91.789	128.429	1.71944	0.159	0.221	1130
600	201.22614	201.22	0.00	93.376	130.637	1.72315	0.159	0.221	1139

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^9	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.833	81.56741	213.44	14.634	170520.12	0.0018640	0.11156	41.622	0.00344	1.56869	5.3438
100	81.23750	212.04	14.541	166413.89	0.0018761	0.11092	39.906	0.00343	1.56603	5.1922
105	80.47321	208.77	14.320	157193.86	0.0019052	0.10939	36.234	0.00342	1.55990	4.7428
110	79.70416	205.45	14.091	148318.24	0.0019361	0.10779	32.932	0.00340	1.55375	4.3751
115	78.92987	202.07	13.855	139776.68	0.0019690	0.10610	29.962	0.00338	1.54757	4.0447
120	78.14985	198.63	13.613	131559.02	0.0020040	0.10435	27.291	0.00335	1.54136	3.7478
125	77.36352	195.13	13.364	123655.23	0.0020415	0.10254	24.889	0.00333	1.53512	3.4809
* 127.018	77.04429	193.69	13.263	120552.46	0.0020574	0.10179	23.990	0.00332	1.53259	3.3810
* 127.018	0.02358	27.45	2.161	1.00	0.0079747	0.00369	0.346	0.71467	1.00014	0.7388
130	0.02303	28.11	2.161	1.00	0.0077854	0.00378	0.354	0.75014	1.00014	0.7382
135	0.02217	29.21	2.161	1.00	0.0074878	0.00393	0.368	0.81160	1.00013	0.7372
140	0.02137	30.30	2.161	1.00	0.0072126	0.00409	0.383	0.87554	1.00013	0.7364
145	0.02063	31.40	2.161	1.00	0.0069575	0.00424	0.397	0.94196	1.00012	0.7357
150	0.01993	32.49	2.160	1.00	0.0067201	0.00440	0.411	1.01086	1.00012	0.7350
155	0.01929	33.59	2.160	1.00	0.0064986	0.00456	0.426	1.08223	1.00011	0.7344
160	0.01868	34.68	2.160	1.00	0.0062916	0.00471	0.440	1.15606	1.00011	0.7339
165	0.01811	35.77	2.160	1.00	0.0060975	0.00487	0.455	1.23234	1.00011	0.7335
170	0.01757	36.87	2.160	1.00	0.0059152	0.00502	0.469	1.31105	1.00010	0.7331
175	0.01707	37.96	2.160	1.00	0.0057437	0.00518	0.484	1.39217	1.00010	0.7327
180	0.01659	39.05	2.160	1.00	0.0055819	0.00534	0.498	1.47569	1.00010	0.7323
185	0.01614	40.14	2.160	1.00	0.0054291	0.00549	0.513	1.56160	1.00010	0.7320
190	0.01571	41.23	2.160	1.00	0.0052846	0.00565	0.527	1.64986	1.00009	0.7317
195	0.01531	42.32	2.160	1.00	0.0051476	0.00581	0.541	1.74046	1.00009	0.7314
200	0.01493	43.42	2.160	1.00	0.0050175	0.00595	0.556	1.83337	1.00009	0.7312
205	0.01456	44.51	2.160	1.00	0.0048940	0.00612	0.570	1.92858	1.00009	0.7309
210	0.01421	45.60	2.160	1.00	0.0047765	0.00627	0.584	2.02606	1.00008	0.7307
215	0.01388	46.69	2.160	1.00	0.0046645	0.00643	0.599	2.12579	1.00008	0.7305
220	0.01357	47.78	2.160	1.00	0.0045576	0.00658	0.613	2.22774	1.00008	0.7303
225	0.01326	48.87	2.160	1.00	0.0044556	0.00673	0.627	2.33190	1.00008	0.7301
230	0.01297	49.95	2.160	1.00	0.0043581	0.00689	0.641	2.43823	1.00008	0.7299
235	0.01270	51.04	2.160	1.00	0.0042648	0.00704	0.655	2.54671	1.00008	0.7297
240	0.01243	52.13	2.160	1.00	0.0041754	0.00719	0.669	2.65733	1.00007	0.7295
245	0.01218	53.22	2.160	1.00	0.0040897	0.00734	0.683	2.77006	1.00007	0.7293
250	0.01193	54.31	2.160	1.00	0.0040074	0.00749	0.697	2.88487	1.00007	0.7291
255	0.01170	55.40	2.159	1.00	0.0039285	0.00764	0.711	3.00178	1.00007	0.7289
260	0.01147	56.49	2.159	1.00	0.0038526	0.00779	0.725	3.12075	1.00007	0.7287
265	0.01126	57.58	2.159	1.00	0.0037795	0.00794	0.739	3.24173	1.00007	0.7285
270	0.01105	58.67	2.159	1.00	0.0037093	0.00809	0.752	3.36470	1.00007	0.7283
275	0.01085	59.76	2.159	1.00	0.0036415	0.00824	0.766	3.48964	1.00006	0.7282
280	0.01065	60.85	2.159	1.00	0.0035763	0.00838	0.779	3.61653	1.00006	0.7280
285	0.01047	61.94	2.159	1.00	0.0035133	0.00853	0.793	3.74536	1.00006	0.7278
290	0.01029	63.02	2.159	1.00	0.0034525	0.00868	0.806	3.87611	1.00006	0.7276
295	0.01011	64.11	2.159	1.00	0.0033938	0.00882	0.819	4.00876	1.00006	0.7275
300	0.00994	65.20	2.159	1.00	0.0033370	0.00896	0.832	4.14329	1.00006	0.7273
310	0.00962	67.38	2.159	1.00	0.0032291	0.00925	0.858	4.41793	1.00006	0.7270
320	0.00932	69.56	2.159	1.00	0.0031279	0.00953	0.884	4.69991	1.00006	0.7267
330	0.00904	71.74	2.159	1.00	0.0030329	0.00981	0.910	4.98908	1.00005	0.7264
340	0.00877	73.92	2.158	1.00	0.0029435	0.01009	0.935	5.28532	1.00005	0.7261
350	0.00852	76.11	2.158	1.00	0.0028592	0.01036	0.960	5.58850	1.00005	0.7259
360	0.00828	78.29	2.158	1.00	0.0027796	0.01063	0.985	5.89849	1.00005	0.7256
370	0.00806	80.48	2.157	1.00	0.0027044	0.01090	1.009	6.21515	1.00005	0.7254
380	0.00785	82.67	2.157	1.00	0.0026331	0.01117	1.034	6.53836	1.00005	0.7252
390	0.00765	84.87	2.156	1.00	0.0025655	0.01143	1.058	6.86797	1.00005	0.7250
400	0.00746	87.07	2.155	1.00	0.0025013	0.01170	1.081	7.20386	1.00004	0.7249
410	0.00727	89.27	2.155	1.00	0.0024402	0.01196	1.105	7.54588	1.00004	0.7247
420	0.00710	91.48	2.154	1.00	0.0023820	0.01221	1.128	7.89388	1.00004	0.7246
430	0.00693	93.69	2.153	1.00	0.0023265	0.01247	1.151	8.24772	1.00004	0.7245
440	0.00678	95.91	2.151	1.00	0.0022736	0.01272	1.174	8.60726	1.00004	0.7245
450	0.00663	98.13	2.150	1.00	0.0022230	0.01297	1.196	8.97234	1.00004	0.7244
460	0.00648	100.36	2.149	1.00	0.0021747	0.01322	1.219	9.34281	1.00004	0.7244
470	0.00634	102.60	2.147	1.00	0.0021283	0.01346	1.241	9.71854	1.00004	0.7245
480	0.00621	104.85	2.145	1.00	0.0020840	0.01371	1.263	10.09937	1.00004	0.7245
490	0.00609	107.10	2.143	1.00	0.0020414	0.01395	1.284	10.48518	1.00004	0.7246
500	0.00596	109.36	2.141	1.00	0.0020005	0.01419	1.306	10.87583	1.00004	0.7248
510	0.00585	111.63	2.139	1.00	0.0019613	0.01443	1.327	11.27117	1.00003	0.7250
520	0.00573	113.92	2.137	1.00	0.0019235	0.01466	1.348	11.67113	1.00003	0.7252
530	0.00563	116.21	2.134	1.00	0.0018872	0.01490	1.369	12.07559	1.00003	0.7254
540	0.00552	118.51	2.131	1.00	0.0018523	0.01513	1.390	12.48443	1.00003	0.7257
550	0.00542	120.82	2.128	1.00	0.0018186	0.01536	1.410	12.89757	1.00003	0.7260
560	0.00532	123.14	2.125	1.00	0.0017861	0.01559	1.430	13.31491	1.00003	0.7264
570	0.00523	125.48	2.122	1.00	0.0017547	0.01582	1.451	13.73638	1.00003	0.7268
580	0.00514	127.82	2.119	1.00	0.0017244	0.01605	1.471	14.16189	1.00003	0.7272
590	0.00505	130.18	2.115	1.00	0.0016952	0.01627	1.491	14.59139	1.00003	0.7277
600	0.00497	132.54	2.112	1.00	0.0016669	0.01650	1.510	15.02479	1.00003	0.7282

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

5 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.838	0.01226	2090.79	317.8	-83.216	-83.204	0.50123	0.266	0.398	3804
100	0.01231	2048.85	312.2	-82.356	-82.344	0.50993	0.264	0.398	3780
105	0.01243	1953.74	299.5	-80.367	-80.355	0.52933	0.260	0.398	3722
110	0.01255	1861.23	287.2	-78.378	-78.367	0.54784	0.256	0.398	3663
115	0.01267	1771.28	275.2	-76.389	-76.377	0.56552	0.252	0.398	3602
120	0.01280	1683.81	263.7	-74.399	-74.388	0.58246	0.248	0.398	3540
125	0.01293	1598.76	252.5	-72.408	-72.397	0.59871	0.244	0.398	3476
130	0.01306	1516.08	241.6	-70.416	-70.404	0.61434	0.241	0.399	3411
135	0.01320	1435.69	231.1	-68.421	-68.409	0.62940	0.237	0.399	3345
140	0.01334	1357.53	220.9	-66.423	-66.410	0.64394	0.234	0.400	3278
145	0.01349	1281.55	211.1	-64.421	-64.408	0.65799	0.231	0.401	3209
* 145.836	0.01351	1269.05	209.4	-64.085	-64.073	0.66029	0.231	0.401	3198
* 145.836	9.63255	47.41	0.04	22.259	31.177	1.31326	0.157	0.223	558
150	9.91981	48.89	0.03	22.919	32.104	1.31953	0.157	0.222	567
155	10.26391	50.65	0.03	23.711	33.214	1.32681	0.157	0.222	577
160	10.60720	52.41	0.03	24.501	34.322	1.33384	0.157	0.221	586
165	10.94978	54.16	0.03	25.290	35.428	1.34065	0.156	0.221	595
170	11.29174	55.90	0.03	26.078	36.533	1.34725	0.156	0.221	605
175	11.63315	57.64	0.03	26.869	37.636	1.35364	0.156	0.220	614
180	11.97407	59.37	0.03	27.651	38.738	1.35985	0.156	0.220	623
185	12.31456	61.10	0.03	28.437	39.838	1.36588	0.156	0.220	632
190	12.65466	62.82	0.03	29.221	40.938	1.37175	0.156	0.220	640
195	12.99441	64.54	0.03	30.005	42.036	1.37745	0.156	0.220	649
200	13.33385	66.26	0.03	30.789	43.134	1.38301	0.156	0.219	657
205	13.67301	67.98	0.02	31.572	44.231	1.38843	0.156	0.219	666
210	14.01191	69.69	0.02	32.355	45.328	1.39371	0.156	0.219	674
215	14.35058	71.40	0.02	33.137	46.423	1.39887	0.156	0.219	682
220	14.68904	73.11	0.02	33.919	47.519	1.40391	0.156	0.219	690
225	15.02730	74.81	0.02	34.700	48.613	1.40883	0.156	0.219	698
230	15.36539	76.52	0.02	35.481	49.708	1.41364	0.156	0.219	706
235	15.70332	78.22	0.02	36.262	50.801	1.41834	0.156	0.219	713
240	16.04110	79.92	0.02	37.043	51.895	1.42294	0.156	0.219	721
245	16.37874	81.62	0.02	37.823	52.988	1.42745	0.156	0.219	729
250	16.71626	83.32	0.02	38.603	54.080	1.43187	0.156	0.219	736
255	17.05366	85.01	0.02	39.383	55.173	1.43619	0.156	0.218	744
260	17.39096	86.71	0.02	40.163	56.265	1.44043	0.156	0.218	751
265	17.72815	88.40	0.02	40.943	57.357	1.44459	0.156	0.218	758
270	18.06525	90.10	0.02	41.722	58.448	1.44867	0.156	0.218	765
275	18.40227	91.79	0.02	42.502	59.540	1.45268	0.156	0.218	772
280	18.73921	93.48	0.02	43.281	60.631	1.45661	0.156	0.218	779
285	19.07607	95.18	0.02	44.060	61.722	1.46047	0.156	0.218	786
290	19.41287	96.87	0.02	44.839	62.813	1.46427	0.156	0.218	793
295	19.74960	98.56	0.02	45.618	63.903	1.46800	0.156	0.218	800
300	20.08627	100.25	0.02	46.397	64.994	1.47166	0.156	0.218	807
310	20.75944	103.63	0.02	47.954	67.175	1.47881	0.156	0.218	820
320	21.43241	107.00	0.02	49.511	69.355	1.48573	0.156	0.218	834
330	22.10521	110.38	0.02	51.068	71.535	1.49244	0.156	0.218	847
340	22.77785	113.75	0.01	52.625	73.714	1.49895	0.156	0.218	859
350	23.45036	117.12	0.01	54.182	75.894	1.50527	0.156	0.218	872
360	24.12274	120.49	0.01	55.739	78.073	1.51141	0.156	0.218	884
370	24.79501	123.86	0.01	57.295	80.252	1.51738	0.156	0.218	897
380	25.46717	127.23	0.01	58.853	82.432	1.52319	0.156	0.218	909
390	26.13925	130.59	0.01	60.410	84.611	1.52885	0.156	0.218	921
400	26.81125	133.96	0.01	61.968	86.791	1.53437	0.156	0.218	932
410	27.48317	137.32	0.01	63.526	88.971	1.53975	0.156	0.218	944
420	28.15502	140.69	0.01	65.084	91.152	1.54501	0.156	0.218	955
430	28.82681	144.05	0.01	66.643	93.333	1.55014	0.156	0.218	966
440	29.49855	147.42	0.01	68.203	95.515	1.55516	0.156	0.218	978
450	30.17023	150.78	0.01	69.764	97.698	1.56006	0.156	0.218	989
460	30.84187	154.14	0.01	71.326	99.881	1.56486	0.156	0.218	999
470	31.51346	157.50	0.01	72.889	102.066	1.56956	0.156	0.219	1010
480	32.18501	160.87	0.01	74.453	104.252	1.57416	0.156	0.219	1021
490	32.85653	164.23	0.01	76.018	106.439	1.57867	0.157	0.219	1031
500	33.52800	167.59	0.01	77.585	108.627	1.58309	0.157	0.219	1042
510	34.19945	170.95	0.01	79.153	110.817	1.58743	0.157	0.219	1052
520	34.87087	174.31	0.01	80.723	113.008	1.59168	0.157	0.219	1062
530	35.54226	177.67	0.01	82.294	115.202	1.59586	0.157	0.219	1072
540	36.21362	181.03	0.01	83.868	117.397	1.59996	0.157	0.220	1082
550	36.88496	184.39	0.01	85.443	119.594	1.60399	0.158	0.220	1092
560	37.55627	187.75	0.01	87.021	121.793	1.60796	0.158	0.220	1101
570	38.22756	191.11	0.01	88.601	123.994	1.61185	0.158	0.220	1111
580	38.89884	194.46	0.01	90.183	126.198	1.61569	0.158	0.221	1120
590	39.57009	197.82	0.01	91.768	128.405	1.61946	0.159	0.221	1130
600	40.24133	201.18	0.01	93.355	130.613	1.62317	0.159	0.221	1139

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

5 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.838	81.56846	213.46	14.634	170542.62	0.0018637	0.11156	41.628	0.00344	1.56869	5.3443
100	81.23945	212.07	14.541	166447.37	0.0018758	0.11093	39.916	0.00343	1.56605	5.1532
105	80.47526	208.80	14.320	157227.54	0.0019049	0.10940	36.243	0.00342	1.55992	4.7438
110	79.70631	205.47	14.091	148352.12	0.0019358	0.10779	32.941	0.00340	1.55377	4.3760
115	78.93213	202.10	13.855	139810.77	0.0019687	0.10611	29.970	0.00338	1.54759	4.0455
120	78.15222	198.66	13.613	131593.33	0.0020037	0.10436	27.299	0.00335	1.54138	3.7485
125	77.36602	195.16	13.365	123689.77	0.0020411	0.10255	24.896	0.00333	1.53514	3.4815
130	76.57289	191.59	13.111	116090.25	0.0020812	0.10068	22.736	0.00330	1.52886	3.2416
135	75.77214	187.95	12.852	108785.07	0.0021243	0.09876	20.792	0.00326	1.52253	3.0262
140	74.96297	184.24	12.588	101764.69	0.0021709	0.09679	19.044	0.00323	1.51616	2.8330
145	74.14449	180.45	12.321	95019.74	0.0022212	0.09478	17.472	0.00319	1.50973	2.6598
* 145.836	74.00665	179.80	12.276	93918.07	0.0022300	0.09445	17.225	0.00318	1.50865	2.6327
* 145.836	0.10381	31.06	2.167	4.92	0.0071705	0.00432	0.404	0.18679	1.00062	0.7494
150	0.10081	32.00	2.166	4.93	0.0069466	0.00445	0.416	0.19846	1.00060	0.7477
155	0.09743	33.12	2.166	4.93	0.0066968	0.00460	0.430	0.21290	1.00058	0.7459
160	0.09428	34.24	2.165	4.94	0.0064658	0.00476	0.444	0.22783	1.00056	0.7443
165	0.09133	35.36	2.165	4.95	0.0062514	0.00491	0.458	0.24323	1.00054	0.7429
170	0.08856	36.48	2.164	4.95	0.0060517	0.00507	0.473	0.25911	1.00053	0.7417
175	0.08596	37.59	2.164	4.95	0.0058653	0.00522	0.487	0.27547	1.00051	0.7405
180	0.08351	38.70	2.164	4.96	0.0056906	0.00538	0.501	0.29230	1.00050	0.7395
185	0.08120	39.81	2.163	4.96	0.0055266	0.00553	0.516	0.30960	1.00048	0.7387
190	0.07902	40.92	2.163	4.96	0.0053723	0.00569	0.530	0.32736	1.00047	0.7378
195	0.07696	42.02	2.163	4.97	0.0052267	0.00584	0.545	0.34559	1.00046	0.7371
200	0.07500	43.13	2.163	4.97	0.0050892	0.00600	0.559	0.36428	1.00045	0.7364
205	0.07314	44.23	2.162	4.97	0.0049590	0.00615	0.573	0.38342	1.00043	0.7358
210	0.07137	45.33	2.162	4.97	0.0048356	0.00630	0.587	0.40300	1.00042	0.7352
215	0.06968	46.43	2.162	4.98	0.0047184	0.00646	0.602	0.42304	1.00041	0.7347
220	0.06808	47.53	2.162	4.98	0.0046070	0.00661	0.616	0.44352	1.00040	0.7342
225	0.06655	48.63	2.162	4.98	0.0045008	0.00676	0.630	0.46443	1.00040	0.7337
230	0.06508	49.73	2.162	4.98	0.0043996	0.00692	0.644	0.48578	1.00039	0.7333
235	0.06368	50.83	2.162	4.98	0.0043029	0.00707	0.658	0.50755	1.00038	0.7329
240	0.06234	51.93	2.162	4.98	0.0042106	0.00722	0.672	0.52975	1.00037	0.7325
245	0.06105	53.02	2.161	4.98	0.0041222	0.00737	0.686	0.55237	1.00036	0.7321
250	0.05982	54.12	2.161	4.98	0.0040375	0.00752	0.700	0.57540	1.00036	0.7318
255	0.05864	55.21	2.161	4.99	0.0039563	0.00767	0.713	0.59888	1.00035	0.7314
260	0.05750	56.31	2.161	4.99	0.0038784	0.00782	0.727	0.62278	1.00034	0.7310
265	0.05641	57.40	2.161	4.99	0.0038035	0.00797	0.741	0.64708	1.00034	0.7307
270	0.05535	58.50	2.161	4.99	0.0037316	0.00812	0.754	0.67176	1.00033	0.7303
275	0.05434	59.59	2.161	4.99	0.0036623	0.00826	0.768	0.69682	1.00032	0.7300
280	0.05336	60.69	2.161	4.99	0.0035957	0.00841	0.781	0.72227	1.00032	0.7297
285	0.05242	61.78	2.161	4.99	0.0035314	0.00856	0.795	0.74811	1.00031	0.7295
290	0.05151	62.88	2.161	4.99	0.0034695	0.00870	0.808	0.77431	1.00031	0.7292
295	0.05063	63.97	2.161	4.99	0.0034097	0.00885	0.821	0.80090	1.00030	0.7290
300	0.04979	65.06	2.161	4.99	0.0033520	0.00899	0.834	0.82786	1.00030	0.7287
310	0.04817	67.25	2.160	4.99	0.0032422	0.00927	0.860	0.88289	1.00029	0.7283
320	0.04666	69.44	2.160	4.99	0.0031396	0.00955	0.886	0.93938	1.00028	0.7278
330	0.04524	71.62	2.160	4.99	0.0030433	0.00983	0.912	0.99730	1.00027	0.7275
340	0.04390	73.81	2.160	4.99	0.0029527	0.01011	0.937	1.05662	1.00026	0.7271
350	0.04264	76.00	2.159	4.99	0.0028675	0.01038	0.962	1.11734	1.00025	0.7268
360	0.04145	78.19	2.159	4.99	0.0027871	0.01065	0.987	1.17941	1.00025	0.7264
370	0.04033	80.38	2.159	5.00	0.0027111	0.01092	1.011	1.24280	1.00024	0.7262
380	0.03927	82.58	2.158	5.00	0.0026392	0.01119	1.035	1.30750	1.00023	0.7259
390	0.03826	84.78	2.157	5.00	0.0025710	0.01145	1.059	1.37348	1.00023	0.7257
400	0.03730	86.98	2.157	5.00	0.0025063	0.01171	1.083	1.44072	1.00022	0.7255
410	0.03639	89.19	2.156	5.00	0.0024447	0.01197	1.106	1.50917	1.00022	0.7253
420	0.03552	91.40	2.155	5.00	0.0023862	0.01223	1.130	1.57883	1.00021	0.7252
430	0.03469	93.61	2.154	5.00	0.0023303	0.01248	1.153	1.64965	1.00021	0.7250
440	0.03390	95.83	2.153	5.00	0.0022771	0.01274	1.175	1.72160	1.00020	0.7250
450	0.03315	98.05	2.151	5.00	0.0022262	0.01299	1.198	1.79467	1.00020	0.7249
460	0.03242	100.29	2.150	5.00	0.0021776	0.01323	1.220	1.86881	1.00019	0.7249
470	0.03173	102.54	2.148	5.00	0.0021311	0.01348	1.242	1.94400	1.00019	0.7249
480	0.03107	104.78	2.146	5.00	0.0020865	0.01372	1.264	2.02021	1.00018	0.7249
490	0.03044	107.04	2.144	5.00	0.0020437	0.01396	1.286	2.09741	1.00018	0.7250
500	0.02983	109.30	2.142	5.00	0.0020027	0.01420	1.307	2.17558	1.00018	0.7251
510	0.02924	111.58	2.140	5.00	0.0019633	0.01444	1.328	2.25467	1.00017	0.7253
520	0.02868	113.86	2.138	5.00	0.0019254	0.01468	1.349	2.33471	1.00017	0.7255
530	0.02814	116.15	2.135	5.00	0.0018890	0.01491	1.370	2.41564	1.00017	0.7257
540	0.02761	118.46	2.132	5.00	0.0018539	0.01514	1.391	2.49745	1.00016	0.7260
550	0.02711	120.77	2.129	5.00	0.0018201	0.01538	1.411	2.58012	1.00016	0.7263
560	0.02663	123.10	2.126	5.00	0.0017875	0.01561	1.432	2.66362	1.00016	0.7266
570	0.02616	125.43	2.123	5.00	0.0017560	0.01583	1.452	2.74796	1.00016	0.7270
580	0.02571	127.78	2.120	5.00	0.0017257	0.01606	1.472	2.83310	1.00015	0.7274
590	0.02527	130.13	2.116	5.00	0.0016963	0.01628	1.492	2.91903	1.00015	0.7279
600	0.02485	132.50	2.113	5.00	0.0016680	0.01651	1.511	3.00574	1.00015	0.7284

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

10 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	Cp	VELOCITY OF SOUND FT/SEC
* 97.845	0.01226	2091.10	317.8	-83.215	-83.192	0.50124	0.266	0.398	3805
100	0.01231	2049.30	312.2	-82.358	-82.335	0.50990	0.264	0.398	3780
105	0.01243	1954.20	299.5	-80.369	-80.346	0.52931	0.260	0.398	3722
110	0.01255	1861.70	287.2	-78.381	-78.357	0.54781	0.256	0.398	3663
115	0.01267	1771.75	275.3	-76.392	-76.368	0.56550	0.252	0.398	3602
120	0.01280	1684.29	263.7	-74.402	-74.379	0.58243	0.248	0.398	3540
125	0.01293	1599.25	252.5	-72.412	-72.388	0.59869	0.244	0.398	3477
130	0.01306	1516.58	241.6	-70.419	-70.395	0.61432	0.241	0.399	3412
135	0.01320	1436.20	231.1	-68.424	-68.400	0.62938	0.237	0.399	3346
140	0.01334	1358.05	220.9	-66.426	-66.402	0.64391	0.234	0.400	3278
145	0.01349	1282.08	211.1	-64.425	-64.400	0.65796	0.231	0.401	3210
150	0.01364	1208.21	201.5	-62.418	-62.393	0.67156	0.228	0.402	3140
155	0.01380	1136.38	192.3	-60.406	-60.380	0.68476	0.225	0.403	3069
* 155.986	0.01383	1122.45	190.5	-60.008	-59.983	0.68732	0.225	0.403	3055
* 155.986	5.09792	49.64	0.07	23.629	33.069	1.28362	0.158	0.227	574
160	5.23914	51.11	0.07	24.275	33.977	1.28937	0.158	0.226	582
165	5.41436	52.94	0.06	25.078	35.104	1.29631	0.158	0.225	592
170	5.58888	54.76	0.06	25.878	36.227	1.30302	0.157	0.224	601
175	5.76281	56.56	0.06	26.677	37.348	1.30951	0.157	0.224	611
180	5.93621	58.35	0.06	27.473	38.465	1.31581	0.157	0.223	620
185	6.10915	60.14	0.06	28.268	39.580	1.32192	0.157	0.223	629
190	6.28168	61.91	0.05	29.061	40.693	1.32785	0.157	0.222	638
195	6.45383	63.68	0.05	29.853	41.803	1.33362	0.157	0.222	647
200	6.62566	65.44	0.05	30.643	42.912	1.33924	0.157	0.222	655
205	6.79719	67.19	0.05	31.433	44.020	1.34470	0.156	0.221	664
210	6.96846	68.94	0.05	32.222	45.126	1.35003	0.156	0.221	672
215	7.13948	70.68	0.05	33.010	46.230	1.35523	0.156	0.221	680
220	7.31029	72.42	0.05	33.797	47.334	1.36031	0.156	0.221	688
225	7.48090	74.16	0.05	34.584	48.436	1.36526	0.156	0.220	696
230	7.65132	75.89	0.04	35.369	49.538	1.37010	0.156	0.220	704
235	7.82158	77.62	0.04	36.155	50.638	1.37484	0.156	0.220	712
240	7.99169	79.34	0.04	36.939	51.738	1.37947	0.156	0.220	720
245	8.16166	81.06	0.04	37.724	52.837	1.38400	0.156	0.220	727
250	8.33150	82.78	0.04	38.507	53.935	1.38844	0.156	0.220	735
255	8.50123	84.50	0.04	39.291	55.033	1.39278	0.156	0.219	742
260	8.67084	86.22	0.04	40.074	56.130	1.39704	0.156	0.219	750
265	8.84036	87.93	0.04	40.856	57.226	1.40122	0.156	0.219	757
270	9.00978	89.64	0.04	41.639	58.322	1.40532	0.156	0.219	764
275	9.17911	91.35	0.04	42.421	59.418	1.40934	0.156	0.219	771
280	9.34836	93.06	0.04	43.202	60.513	1.41329	0.156	0.219	779
285	9.51754	94.77	0.04	43.984	61.608	1.41716	0.156	0.219	786
290	9.68665	96.47	0.03	44.765	62.702	1.42097	0.156	0.219	793
295	9.85569	98.18	0.03	45.546	63.796	1.42471	0.156	0.219	799
300	10.02468	99.88	0.03	46.327	64.890	1.42838	0.156	0.219	806
310	10.36247	103.28	0.03	47.888	67.077	1.43555	0.156	0.219	820
320	10.70007	106.68	0.03	49.449	69.262	1.44249	0.156	0.219	833
330	11.03749	110.07	0.03	51.009	71.447	1.44922	0.156	0.218	846
340	11.37475	113.46	0.03	52.568	73.631	1.45574	0.156	0.218	859
350	11.71187	116.85	0.03	54.128	75.815	1.46207	0.156	0.218	872
360	12.04887	120.24	0.03	55.687	77.998	1.46822	0.156	0.218	884
370	12.38575	123.62	0.03	57.246	80.181	1.47420	0.156	0.218	896
380	12.72254	127.00	0.03	58.805	82.364	1.48002	0.156	0.218	908
390	13.05923	130.38	0.03	60.364	84.546	1.48569	0.156	0.218	920
400	13.39584	133.76	0.03	61.924	86.729	1.49121	0.156	0.218	932
410	13.73238	137.14	0.02	63.483	88.912	1.49660	0.156	0.218	944
420	14.06885	140.52	0.02	65.043	91.095	1.50186	0.156	0.218	955
430	14.40526	143.89	0.02	66.604	93.279	1.50700	0.156	0.218	966
440	14.74161	147.26	0.02	68.165	95.463	1.51202	0.156	0.218	977
450	15.07791	150.63	0.02	69.727	97.647	1.51693	0.156	0.219	988
460	15.41416	154.01	0.02	71.290	99.833	1.52174	0.156	0.219	999
470	15.75037	157.38	0.02	72.854	102.019	1.52644	0.156	0.219	1010
480	16.08654	160.75	0.02	74.419	104.207	1.53104	0.156	0.219	1021
490	16.42266	164.11	0.02	75.985	106.395	1.53556	0.157	0.219	1031
500	16.75876	167.48	0.02	77.552	108.585	1.53998	0.157	0.219	1042
510	17.09482	170.85	0.02	79.121	110.776	1.54432	0.157	0.219	1052
520	17.43085	174.22	0.02	80.692	112.969	1.54858	0.157	0.219	1062
530	17.76686	177.58	0.02	82.264	115.164	1.55276	0.157	0.220	1072
540	18.10283	180.95	0.02	83.839	117.360	1.55686	0.157	0.220	1082
550	18.43879	184.31	0.02	85.415	119.559	1.56090	0.158	0.220	1092
560	18.77472	187.68	0.02	86.993	121.759	1.56486	0.158	0.220	1101
570	19.11062	191.04	0.02	88.574	123.961	1.56876	0.158	0.220	1111
580	19.44651	194.41	0.02	90.157	126.166	1.57259	0.158	0.221	1120
590	19.78238	197.77	0.02	91.742	128.374	1.57637	0.159	0.221	1130
600	20.11823	201.13	0.02	93.330	130.584	1.58008	0.159	0.221	1139

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

10 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.845	81.56977	213.49	14.634	170570.74	0.0018634	0.11156	41.635	0.00344	1.56870	5.3449
100	81.24189	212.10	14.541	166489.22	0.0018755	0.11093	39.928	0.00343	1.56607	5.1544
105	80.47782	208.83	14.320	157269.63	0.0019046	0.10940	36.255	0.00342	1.55994	4.7449
110	79.70899	205.51	14.091	148394.46	0.0019354	0.10780	32.951	0.00340	1.55379	4.3771
115	78.93495	202.13	13.856	139853.38	0.0019682	0.10611	29.980	0.00338	1.54761	4.0469
120	78.15519	198.70	13.613	131636.21	0.0020032	0.10436	27.308	0.00335	1.54140	3.7494
125	77.36915	195.20	13.365	123732.94	0.0020406	0.10255	24.905	0.00333	1.53516	3.4824
130	76.57619	191.63	13.111	116133.72	0.0020806	0.10069	22.744	0.00330	1.52888	3.2424
135	75.77562	187.99	12.852	108828.84	0.0021237	0.09877	20.800	0.00326	1.52256	3.0270
140	74.96665	184.28	12.589	101808.79	0.0021702	0.09680	19.052	0.00323	1.51619	2.8336
145	74.14840	180.49	12.321	95064.18	0.0022205	0.09479	17.479	0.00319	1.50976	2.6604
150	73.31985	176.62	12.050	88585.81	0.0022751	0.09275	16.065	0.00315	1.50327	2.5055
155	72.47987	172.65	11.776	82364.64	0.0023347	0.09067	14.792	0.00310	1.49671	2.3674
* 155.986	72.31273	171.86	11.721	81167.16	0.0023471	0.09026	14.557	0.00309	1.49541	2.3420
* 155.986	0.19616	32.77	2.172	9.74	0.0069145	0.00469	0.438	0.10551	1.00117	0.7612
160	0.19087	33.69	2.171	9.76	0.0067033	0.00481	0.449	0.11162	1.00113	0.7586
165	0.18469	34.84	2.170	9.78	0.0064589	0.00496	0.463	0.11944	1.00110	0.7558
170	0.17893	35.99	2.169	9.80	0.0062344	0.00512	0.477	0.12749	1.00106	0.7533
175	0.17353	37.13	2.169	9.81	0.0060267	0.00527	0.492	0.13577	1.00103	0.7511
180	0.16846	38.26	2.168	9.83	0.0058341	0.00543	0.506	0.14428	1.00100	0.7492
185	0.16369	39.39	2.167	9.84	0.0056546	0.00558	0.520	0.15301	1.00097	0.7475
190	0.15919	40.52	2.167	9.86	0.0054869	0.00573	0.534	0.16198	1.00095	0.7459
195	0.15495	41.64	2.167	9.87	0.0053298	0.00589	0.549	0.17117	1.00092	0.7445
200	0.15093	42.77	2.166	9.88	0.0051821	0.00604	0.563	0.18058	1.00090	0.7433
205	0.14712	43.89	2.166	9.89	0.0050431	0.00619	0.577	0.19022	1.00087	0.7421
210	0.14350	45.00	2.165	9.89	0.0049119	0.00635	0.591	0.20008	1.00085	0.7411
215	0.14007	46.12	2.165	9.90	0.0047878	0.00650	0.605	0.21016	1.00083	0.7402
220	0.13679	47.23	2.165	9.91	0.0046702	0.00665	0.619	0.22045	1.00081	0.7393
225	0.13367	48.34	2.165	9.91	0.0045587	0.00680	0.633	0.23096	1.00079	0.7385
230	0.13070	49.45	2.164	9.92	0.0044526	0.00696	0.547	0.24169	1.00078	0.7377
235	0.12785	50.56	2.164	9.92	0.0043516	0.00711	0.661	0.25263	1.00076	0.7370
240	0.12513	51.67	2.164	9.93	0.0042554	0.00726	0.675	0.26378	1.00074	0.7364
245	0.12252	52.77	2.164	9.93	0.0041635	0.00741	0.689	0.27513	1.00073	0.7358
250	0.12003	53.88	2.164	9.94	0.0040756	0.00756	0.703	0.28670	1.00071	0.7352
255	0.11763	54.98	2.164	9.94	0.0039916	0.00771	0.716	0.29850	1.00070	0.7346
260	0.11533	56.08	2.163	9.94	0.0039111	0.00786	0.730	0.31052	1.00069	0.7339
265	0.11312	57.19	2.163	9.95	0.0038339	0.00800	0.744	0.32273	1.00067	0.7334
270	0.11099	58.29	2.163	9.95	0.0037598	0.00815	0.757	0.33513	1.00066	0.7329
275	0.10894	59.39	2.163	9.95	0.0036886	0.00830	0.771	0.34771	1.00065	0.7324
280	0.10697	60.49	2.163	9.95	0.0036202	0.00844	0.784	0.36048	1.00064	0.7319
285	0.10507	61.59	2.163	9.96	0.0035543	0.00859	0.797	0.37344	1.00062	0.7315
290	0.10323	62.69	2.163	9.96	0.0034909	0.00873	0.811	0.38658	1.00061	0.7312
295	0.10146	63.79	2.163	9.96	0.0034297	0.00888	0.824	0.39991	1.00060	0.7308
300	0.09975	64.89	2.163	9.96	0.0033707	0.00902	0.837	0.41342	1.00059	0.7305
310	0.09650	67.08	2.162	9.97	0.0032588	0.00930	0.863	0.44100	1.00057	0.7299
320	0.09346	69.28	2.162	9.97	0.0031542	0.00958	0.889	0.46930	1.00056	0.7293
330	0.09060	71.47	2.162	9.97	0.0030563	0.00986	0.914	0.49832	1.00054	0.7288
340	0.08791	73.67	2.161	9.98	0.0029644	0.01014	0.939	0.52803	1.00052	0.7283
350	0.08538	75.87	2.161	9.98	0.0028779	0.01041	0.964	0.55844	1.00051	0.7279
360	0.08300	78.06	2.161	9.98	0.0027964	0.01068	0.989	0.58952	1.00049	0.7275
370	0.08074	80.26	2.160	9.98	0.0027195	0.01095	1.013	0.62126	1.00048	0.7271
380	0.07860	82.46	2.160	9.98	0.0026468	0.01121	1.037	0.65364	1.00047	0.7268
390	0.07657	84.67	2.159	9.98	0.0025779	0.01148	1.061	0.68667	1.00045	0.7265
400	0.07465	86.87	2.158	9.99	0.0025125	0.01174	1.085	0.72032	1.00044	0.7263
410	0.07282	89.08	2.157	9.99	0.0024504	0.01200	1.108	0.75458	1.00043	0.7260
420	0.07108	91.30	2.156	9.99	0.0023914	0.01225	1.131	0.78944	1.00042	0.7258
430	0.06942	93.52	2.155	9.99	0.0023351	0.01250	1.154	0.82488	1.00041	0.7257
440	0.06784	95.74	2.154	9.99	0.0022815	0.01276	1.177	0.86089	1.00040	0.7256
450	0.06632	97.97	2.153	9.99	0.0022302	0.01301	1.199	0.89745	1.00039	0.7255
460	0.06488	100.21	2.151	9.99	0.0021813	0.01325	1.222	0.93455	1.00039	0.7254
470	0.06349	102.45	2.149	9.99	0.0021345	0.01350	1.244	0.97218	1.00038	0.7254
480	0.06216	104.71	2.148	9.99	0.0020896	0.01374	1.266	1.01031	1.00037	0.7254
490	0.06089	106.97	2.146	9.99	0.0020466	0.01398	1.287	1.04893	1.00036	0.7255
500	0.05967	109.23	2.143	9.99	0.0020054	0.01422	1.309	1.08805	1.00035	0.7256
510	0.05850	111.51	2.141	9.99	0.0019658	0.01446	1.330	1.12761	1.00035	0.7257
520	0.05737	113.80	2.139	9.99	0.0019277	0.01469	1.351	1.16765	1.00034	0.7259
530	0.05628	116.09	2.136	10.00	0.0018911	0.01493	1.372	1.20815	1.00033	0.7261
540	0.05524	118.40	2.133	10.00	0.0018559	0.01516	1.392	1.24908	1.00033	0.7264
550	0.05423	120.71	2.130	10.00	0.0018219	0.01539	1.413	1.29044	1.00032	0.7266
560	0.05326	123.04	2.127	10.00	0.0017892	0.01562	1.433	1.33221	1.00032	0.7270
570	0.05233	125.38	2.124	10.00	0.0017577	0.01585	1.453	1.37440	1.00031	0.7273
580	0.05142	127.72	2.121	10.00	0.0017272	0.01607	1.473	1.41700	1.00031	0.7278
590	0.05055	130.08	2.117	10.00	0.0016978	0.01630	1.493	1.45998	1.00030	0.7282
600	0.04971	132.45	2.114	10.00	0.0016693	0.01652	1.513	1.50336	1.00030	0.7287

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

14.696 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.852	0.01226	2091.39	317.8	-83.214	-83.181	0.50125	0.266	0.398	3805
100	0.01231	2049.73	312.3	-82.360	-82.326	0.50988	0.264	0.398	3780
105	0.01243	1954.63	299.6	-80.371	-80.338	0.52929	0.260	0.398	3723
110	0.01255	1862.14	287.2	-78.383	-78.349	0.54779	0.256	0.398	3663
115	0.01267	1772.20	275.3	-76.394	-76.360	0.56548	0.252	0.398	3602
120	0.01279	1684.75	263.7	-74.405	-74.370	0.58241	0.248	0.398	3540
125	0.01292	1599.72	252.5	-72.414	-72.379	0.59867	0.244	0.398	3477
130	0.01306	1517.05	241.7	-70.422	-70.387	0.61430	0.241	0.399	3412
135	0.01320	1436.68	231.1	-68.428	-68.392	0.62935	0.237	0.399	3346
140	0.01334	1358.54	221.0	-66.430	-66.394	0.64388	0.234	0.400	3279
145	0.01349	1282.58	211.1	-64.428	-64.392	0.65793	0.231	0.401	3210
150	0.01364	1208.72	201.6	-62.422	-62.385	0.67154	0.228	0.402	3141
155	0.01380	1136.90	192.3	-60.410	-60.373	0.68473	0.225	0.403	3070
160	0.01396	1067.05	183.4	-58.391	-58.353	0.69755	0.223	0.405	2997
* 162.324	0.01404	1035.24	179.3	-57.450	-57.412	0.70339	0.221	0.405	2963
* 162.324	3.57933	50.76	0.10	24.435	34.176	1.26737	0.159	0.230	583
165	3.64450	51.77	0.09	24.872	34.790	1.27113	0.159	0.229	588
170	3.76571	53.66	0.09	25.685	35.933	1.27795	0.158	0.228	598
175	3.88627	55.53	0.09	26.495	37.070	1.28455	0.158	0.227	608
180	4.00626	57.38	0.09	27.301	38.204	1.29093	0.158	0.226	617
185	4.12575	59.22	0.08	28.105	39.333	1.29712	0.158	0.225	626
190	4.24480	61.04	0.08	28.907	40.459	1.30313	0.157	0.225	635
195	4.36347	62.85	0.08	29.707	41.581	1.30896	0.157	0.224	644
200	4.48179	64.65	0.08	30.505	42.701	1.31463	0.157	0.224	653
205	4.59981	66.44	0.07	31.301	43.819	1.32015	0.157	0.223	662
210	4.71754	68.23	0.07	32.096	44.934	1.32552	0.157	0.223	670
215	4.83503	70.00	0.07	32.889	46.047	1.33076	0.157	0.222	678
220	4.95229	71.77	0.07	33.682	47.158	1.33587	0.157	0.222	687
225	5.06935	73.54	0.07	34.473	48.268	1.34086	0.157	0.222	695
230	5.18622	75.30	0.07	35.263	49.377	1.34573	0.156	0.222	703
235	5.30292	77.05	0.06	36.053	50.484	1.35049	0.156	0.221	711
240	5.41946	78.80	0.06	36.841	51.589	1.35515	0.156	0.221	718
245	5.53586	80.54	0.06	37.629	52.694	1.35970	0.156	0.221	726
250	5.65214	82.28	0.06	38.416	53.798	1.36416	0.156	0.221	734
255	5.76829	84.02	0.06	39.203	54.900	1.36853	0.156	0.220	741
260	5.88433	85.75	0.06	39.989	56.002	1.37281	0.156	0.220	749
265	6.00027	87.48	0.06	40.775	57.103	1.37700	0.156	0.220	756
270	6.11612	89.21	0.06	41.560	58.203	1.38112	0.156	0.220	763
275	6.23187	90.94	0.05	42.344	59.303	1.38515	0.156	0.220	771
280	6.34755	92.66	0.05	43.128	60.402	1.38911	0.156	0.220	778
285	6.46315	94.38	0.05	43.912	61.500	1.39300	0.156	0.220	785
290	6.57868	96.10	0.05	44.695	62.598	1.39682	0.156	0.220	792
295	6.69414	97.82	0.05	45.478	63.695	1.40057	0.156	0.219	799
300	6.80954	99.53	0.05	46.261	64.792	1.40426	0.156	0.219	806
310	7.04018	102.96	0.05	47.826	66.984	1.41145	0.156	0.219	819
320	7.27061	106.38	0.05	49.390	69.175	1.41840	0.156	0.219	832
330	7.50086	109.79	0.04	50.953	71.365	1.42514	0.156	0.219	846
340	7.73096	113.20	0.04	52.515	73.553	1.43167	0.156	0.219	858
350	7.96091	116.60	0.04	54.077	75.741	1.43801	0.156	0.219	871
360	8.19075	120.00	0.04	55.638	77.928	1.44417	0.156	0.219	884
370	8.42046	123.40	0.04	57.199	80.114	1.45016	0.156	0.219	896
380	8.65008	126.80	0.04	58.760	82.300	1.45599	0.156	0.219	908
390	8.87961	130.19	0.04	60.321	84.485	1.46167	0.156	0.219	920
400	9.10905	133.58	0.04	61.882	86.671	1.46720	0.156	0.219	932
410	9.33842	136.97	0.04	63.443	88.856	1.47260	0.156	0.219	943
420	9.56772	140.35	0.04	65.005	91.042	1.47786	0.156	0.219	955
430	9.79696	143.74	0.03	66.567	93.227	1.48301	0.156	0.219	966
440	10.02614	147.12	0.03	68.129	95.413	1.48803	0.156	0.219	977
450	10.25527	150.50	0.03	69.692	97.600	1.49295	0.156	0.219	988
460	10.48435	153.88	0.03	71.256	99.787	1.49775	0.156	0.219	999
470	10.71339	157.26	0.03	72.821	101.975	1.50246	0.156	0.219	1010
480	10.94239	160.63	0.03	74.387	104.164	1.50707	0.156	0.219	1021
490	11.17135	164.01	0.03	75.954	106.355	1.51158	0.157	0.219	1031
500	11.40027	167.38	0.03	77.522	108.546	1.51601	0.157	0.219	1041
510	11.62916	170.76	0.03	79.092	110.739	1.52035	0.157	0.219	1052
520	11.85803	174.13	0.03	80.663	112.933	1.52461	0.157	0.219	1062
530	12.08686	177.50	0.03	82.237	115.129	1.52880	0.157	0.220	1072
540	12.31567	180.87	0.03	83.811	117.326	1.53290	0.157	0.220	1082
550	12.54445	184.24	0.03	85.388	119.526	1.53694	0.158	0.220	1092
560	12.77321	187.61	0.03	86.967	121.727	1.54091	0.158	0.220	1101
570	13.00195	190.98	0.03	88.548	123.931	1.54481	0.158	0.220	1111
580	13.23067	194.35	0.03	90.132	126.136	1.54864	0.158	0.221	1120
590	13.45937	197.72	0.02	91.718	128.345	1.55242	0.159	0.221	1130
600	13.68805	201.09	0.02	93.306	130.555	1.55613	0.159	0.221	1139

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

14.696 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.852	81.57099	213.52	14.634	170597.15	0.0018632	0.11156	41.641	0.00344	1.56871	5.3455
100	81.24418	212.13	14.541	166528.52	0.0018752	0.11094	39.940	0.00343	1.56609	5.1555
105	80.48022	208.86	14.320	157309.16	0.0019042	0.10941	36.266	0.00342	1.55996	4.7460
110	79.71151	205.54	14.091	148434.23	0.0019351	0.10780	32.962	0.00340	1.55381	4.3780
115	78.93760	202.17	13.856	139893.39	0.0019678	0.10612	29.990	0.00338	1.54763	4.0474
120	78.15798	198.73	13.613	131676.48	0.0020028	0.10437	27.318	0.00336	1.54142	3.7503
125	77.37208	195.24	13.365	123773.48	0.0020401	0.10256	24.914	0.00333	1.53518	3.4832
130	76.57929	191.67	13.111	116174.53	0.0020801	0.10069	22.752	0.00330	1.52891	3.2432
135	75.77889	188.04	12.852	108869.95	0.0021232	0.09878	20.808	0.00326	1.52259	3.0276
140	74.97011	184.33	12.589	101850.20	0.0021696	0.09681	19.059	0.00323	1.51621	2.8343
145	74.15206	180.54	12.322	95105.91	0.0022198	0.09480	17.486	0.00319	1.50979	2.6610
150	73.32373	176.66	12.050	88627.88	0.0022744	0.09276	16.071	0.00315	1.50330	2.5061
155	72.48400	172.70	11.776	82407.07	0.0023339	0.09068	14.798	0.00310	1.49674	2.3679
160	71.63157	168.64	11.499	76434.59	0.0023991	0.08857	13.652	0.00306	1.49010	2.2451
* 162.324	71.23063	166.72	11.369	73740.67	0.0024316	0.08758	13.160	0.00303	1.48699	2.1929
* 162.324	0.27938	33.72	2.176	14.18	0.0068153	0.00494	0.460	0.07687	1.00166	0.7714
165	0.27439	34.35	2.175	14.20	0.0066711	0.00502	0.468	0.07978	1.00163	0.7691
170	0.26555	35.52	2.174	14.25	0.0064193	0.00517	0.482	0.08534	1.00158	0.7652
175	0.25732	36.69	2.173	14.29	0.0061890	0.00532	0.496	0.09105	1.00153	0.7618
180	0.24961	37.85	2.172	14.32	0.0059772	0.00547	0.510	0.09691	1.00148	0.7589
185	0.24238	39.00	2.171	14.35	0.0057815	0.00562	0.524	0.10292	1.00144	0.7563
190	0.23558	40.15	2.171	14.38	0.0056000	0.00578	0.538	0.10908	1.00140	0.7539
195	0.22918	41.29	2.170	14.40	0.0054309	0.00593	0.552	0.11538	1.00136	0.7519
200	0.22312	42.43	2.169	14.43	0.0052730	0.00608	0.566	0.12184	1.00133	0.7500
205	0.21740	43.56	2.169	14.45	0.0051250	0.00623	0.580	0.12845	1.00129	0.7484
210	0.21197	44.69	2.168	14.46	0.0049859	0.00639	0.595	0.13520	1.00126	0.7468
215	0.20682	45.82	2.168	14.48	0.0048550	0.00654	0.609	0.14210	1.00123	0.7455
220	0.20193	46.95	2.168	14.49	0.0047314	0.00669	0.623	0.14915	1.00120	0.7442
225	0.19726	48.07	2.167	14.51	0.0046144	0.00684	0.637	0.15634	1.00117	0.7431
230	0.19282	49.19	2.167	14.52	0.0045036	0.00699	0.650	0.16367	1.00115	0.7420
235	0.18858	50.31	2.167	14.53	0.0043984	0.00714	0.664	0.17115	1.00112	0.7410
240	0.18452	51.42	2.166	14.54	0.0042983	0.00729	0.678	0.17877	1.00110	0.7401
245	0.18064	52.54	2.166	14.55	0.0042030	0.00744	0.692	0.18653	1.00107	0.7393
250	0.17692	53.65	2.166	14.56	0.0041121	0.00759	0.706	0.19443	1.00105	0.7385
255	0.17336	54.76	2.166	14.57	0.0040253	0.00774	0.719	0.20251	1.00103	0.7376
260	0.16994	55.87	2.166	14.57	0.0039423	0.00789	0.733	0.21073	1.00101	0.7367
265	0.16666	56.98	2.165	14.58	0.0038629	0.00804	0.746	0.21908	1.00099	0.7359
270	0.16350	58.09	2.165	14.59	0.0037867	0.00818	0.760	0.22755	1.00097	0.7353
275	0.16047	59.20	2.165	14.59	0.0037137	0.00833	0.773	0.23615	1.00095	0.7346
280	0.15754	60.30	2.165	14.60	0.0036435	0.00848	0.787	0.24487	1.00094	0.7341
285	0.15472	61.41	2.165	14.60	0.0035761	0.00862	0.800	0.25371	1.00092	0.7335
290	0.15201	62.51	2.165	14.61	0.0035112	0.00876	0.813	0.26267	1.00090	0.7331
295	0.14938	63.62	2.164	14.61	0.0034487	0.00891	0.826	0.27177	1.00089	0.7326
300	0.14685	64.72	2.164	14.62	0.0033886	0.00905	0.839	0.28099	1.00087	0.7322
310	0.14204	66.93	2.164	14.62	0.0032745	0.00933	0.865	0.29979	1.00084	0.7314
320	0.13754	69.13	2.164	14.63	0.0031681	0.00961	0.891	0.31909	1.00082	0.7307
330	0.13332	71.33	2.163	14.64	0.0030686	0.00989	0.916	0.33887	1.00079	0.7300
340	0.12935	73.54	2.163	14.64	0.0029754	0.01016	0.941	0.35912	1.00077	0.7295
350	0.12561	75.74	2.163	14.65	0.0028877	0.01044	0.966	0.37984	1.00075	0.7289
360	0.12209	77.94	2.162	14.65	0.0028053	0.01071	0.991	0.40102	1.00073	0.7284
370	0.11876	80.15	2.162	14.66	0.0027275	0.01097	1.015	0.42254	1.00071	0.7280
380	0.11561	82.35	2.161	14.66	0.0026540	0.01124	1.039	0.44470	1.00069	0.7276
390	0.11262	84.56	2.160	14.66	0.0025844	0.01150	1.063	0.46720	1.00067	0.7273
400	0.10978	86.77	2.160	14.66	0.0025184	0.01176	1.087	0.49012	1.00065	0.7270
410	0.10708	88.99	2.159	14.67	0.0024558	0.01202	1.110	0.51346	1.00064	0.7267
420	0.10452	91.21	2.158	14.67	0.0023963	0.01227	1.133	0.53720	1.00062	0.7265
430	0.10207	93.43	2.156	14.67	0.0023396	0.01252	1.156	0.56133	1.00061	0.7263
440	0.09974	95.66	2.155	14.67	0.0022856	0.01278	1.179	0.58586	1.00059	0.7261
450	0.09751	97.89	2.154	14.68	0.0022340	0.01302	1.201	0.61075	1.00058	0.7260
460	0.09538	100.13	2.152	14.68	0.0021848	0.01327	1.223	0.63602	1.00057	0.7259
470	0.09334	102.38	2.151	14.68	0.0021377	0.01352	1.245	0.66164	1.00055	0.7259
480	0.09139	104.63	2.149	14.68	0.0020926	0.01376	1.267	0.68760	1.00054	0.7259
490	0.08951	106.89	2.147	14.68	0.0020494	0.01400	1.289	0.71390	1.00053	0.7259
500	0.08772	109.17	2.145	14.68	0.0020079	0.01424	1.310	0.74053	1.00052	0.7260
510	0.08599	111.44	2.142	14.68	0.0019681	0.01448	1.331	0.76746	1.00051	0.7261
520	0.08433	113.73	2.140	14.68	0.0019299	0.01471	1.352	0.79473	1.00050	0.7263
530	0.08273	116.03	2.137	14.69	0.0018931	0.01494	1.373	0.82230	1.00049	0.7265
540	0.08120	118.34	2.134	14.69	0.0018578	0.01518	1.393	0.85017	1.00048	0.7267
550	0.07972	120.66	2.132	14.69	0.0018237	0.01541	1.414	0.87833	1.00047	0.7270
560	0.07829	122.98	2.128	14.69	0.0017909	0.01564	1.434	0.90677	1.00047	0.7273
570	0.07691	125.32	2.125	14.69	0.0017592	0.01586	1.454	0.93549	1.00046	0.7277
580	0.07558	127.67	2.122	14.69	0.0017286	0.01609	1.474	0.96449	1.00045	0.7280
590	0.07430	130.04	2.118	14.69	0.0016991	0.01631	1.494	0.99376	1.00044	0.7285
600	0.07306	132.41	2.115	14.69	0.0016706	0.01654	1.514	1.02329	1.00043	0.7289

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

15 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.853	0.01226	2091.41	317.9	-83.214	-83.180	0.50125	0.266	0.398	3805
100	0.01231	2049.76	312.3	-82.360	-82.326	0.50988	0.264	0.398	3780
105	0.01243	1954.65	299.6	-80.371	-80.337	0.52929	0.260	0.398	3723
110	0.01255	1862.17	287.2	-78.383	-78.348	0.54779	0.256	0.398	3663
115	0.01267	1772.23	275.3	-76.394	-76.359	0.56547	0.252	0.398	3603
120	0.01279	1684.78	263.7	-74.405	-74.370	0.58241	0.248	0.398	3540
125	0.01292	1599.75	252.5	-72.415	-72.379	0.59866	0.244	0.398	3477
130	0.01306	1517.08	241.7	-70.422	-70.386	0.61429	0.241	0.399	3412
135	0.01320	1436.71	231.1	-68.428	-68.391	0.62935	0.237	0.399	3346
140	0.01334	1358.58	221.0	-66.430	-66.393	0.64388	0.234	0.400	3279
145	0.01349	1282.61	211.1	-64.429	-64.391	0.65793	0.231	0.401	3210
150	0.01364	1208.75	201.6	-62.422	-62.385	0.67154	0.228	0.402	3141
155	0.01380	1136.93	192.3	-60.410	-60.372	0.68473	0.225	0.403	3070
160	0.01396	1067.09	183.4	-58.392	-58.353	0.69755	0.223	0.405	2997
* 162.677	0.01405	1030.48	178.7	-57.307	-57.268	0.70427	0.221	0.406	2958
* 162.677	3.51259	50.81	0.10	24.479	34.235	1.26651	0.159	0.230	584
165	3.56809	51.69	0.10	24.858	34.769	1.26977	0.159	0.229	588
170	3.68700	53.59	0.09	25.672	35.913	1.27661	0.159	0.228	598
175	3.80526	55.46	0.09	26.483	37.052	1.28321	0.158	0.227	608
180	3.92294	57.32	0.09	27.290	38.186	1.28960	0.158	0.226	617
185	4.04013	59.16	0.08	28.095	39.317	1.29579	0.158	0.226	626
190	4.15688	60.98	0.08	28.897	40.443	1.30180	0.158	0.225	635
195	4.27324	62.80	0.08	29.697	41.567	1.30764	0.157	0.224	644
200	4.38926	64.60	0.08	30.496	42.687	1.31331	0.157	0.224	653
205	4.50496	66.40	0.08	31.292	43.805	1.31883	0.157	0.223	661
210	4.62039	68.18	0.07	32.088	44.921	1.32421	0.157	0.223	670
215	4.73557	69.96	0.07	32.882	46.035	1.32945	0.157	0.223	678
220	4.85052	71.73	0.07	33.674	47.147	1.33457	0.157	0.222	687
225	4.96526	73.50	0.07	34.466	48.257	1.33956	0.157	0.222	695
230	5.07982	75.26	0.07	35.256	49.366	1.34443	0.157	0.222	703
235	5.19421	77.01	0.07	36.046	50.474	1.34919	0.156	0.221	711
240	5.30845	78.75	0.06	36.835	51.580	1.35385	0.156	0.221	718
245	5.42254	80.51	0.06	37.623	52.685	1.35841	0.156	0.221	726
250	5.53650	82.25	0.06	38.411	53.789	1.36287	0.156	0.221	734
255	5.65034	83.99	0.06	39.197	54.892	1.36724	0.156	0.221	741
260	5.76407	85.72	0.06	39.984	55.994	1.37152	0.156	0.220	749
265	5.87770	87.46	0.06	40.769	57.095	1.37571	0.156	0.220	756
270	5.99123	89.18	0.06	41.554	58.196	1.37983	0.156	0.220	763
275	6.10468	90.91	0.06	42.339	59.295	1.38386	0.156	0.220	771
280	6.21804	92.63	0.05	43.123	60.395	1.38782	0.156	0.220	778
285	6.33133	94.36	0.05	43.907	61.493	1.39171	0.156	0.220	785
290	6.44454	96.08	0.05	44.691	62.591	1.39553	0.156	0.220	792
295	6.55769	97.79	0.05	45.474	63.689	1.39928	0.156	0.219	799
300	6.67078	99.51	0.05	46.257	64.786	1.40297	0.156	0.219	806
310	6.89679	102.94	0.05	47.822	66.978	1.41016	0.156	0.219	819
320	7.12260	106.36	0.05	49.386	69.170	1.41712	0.156	0.219	832
330	7.34823	109.77	0.05	50.949	71.359	1.42386	0.156	0.219	846
340	7.57370	113.18	0.04	52.512	73.548	1.43039	0.156	0.219	858
350	7.79903	116.59	0.04	54.073	75.736	1.43673	0.156	0.219	871
360	8.02424	119.99	0.04	55.635	77.923	1.44289	0.156	0.219	884
370	8.24933	123.39	0.04	57.196	80.110	1.44888	0.156	0.219	896
380	8.47432	126.78	0.04	58.757	82.296	1.45471	0.156	0.219	908
390	8.69923	130.18	0.04	60.318	84.481	1.46039	0.156	0.219	920
400	8.92404	133.57	0.04	61.879	86.667	1.46592	0.156	0.219	932
410	9.14879	136.96	0.04	63.441	88.852	1.47132	0.156	0.219	943
420	9.37346	140.34	0.04	65.002	91.038	1.47659	0.156	0.219	955
430	9.59808	143.73	0.04	66.564	93.224	1.48173	0.156	0.219	966
440	9.82263	147.11	0.03	68.127	95.410	1.48676	0.156	0.219	977
450	10.04714	150.49	0.03	69.690	97.597	1.49167	0.156	0.219	988
460	10.27160	153.87	0.03	71.254	99.784	1.49648	0.156	0.219	999
470	10.49601	157.25	0.03	72.819	101.973	1.50118	0.156	0.219	1010
480	10.72038	160.63	0.03	74.385	104.162	1.50579	0.156	0.219	1021
490	10.94471	164.00	0.03	75.952	106.352	1.51031	0.157	0.219	1031
500	11.16901	167.38	0.03	77.520	108.543	1.51474	0.157	0.219	1041
510	11.39328	170.75	0.03	79.090	110.736	1.51908	0.157	0.219	1052
520	11.61752	174.13	0.03	80.662	112.930	1.52334	0.157	0.220	1062
530	11.84173	177.50	0.03	82.235	115.126	1.52752	0.157	0.220	1072
540	12.06591	180.87	0.03	83.810	117.324	1.53163	0.157	0.220	1082
550	12.29007	184.24	0.03	85.387	119.523	1.53567	0.158	0.220	1092
560	12.51420	187.61	0.03	86.965	121.725	1.53963	0.158	0.220	1101
570	12.73831	190.98	0.03	88.547	123.929	1.54353	0.158	0.220	1111
580	12.96241	194.35	0.03	90.130	126.134	1.54737	0.158	0.221	1120
590	13.18648	197.72	0.03	91.716	128.343	1.55114	0.159	0.221	1130
600	13.41054	201.09	0.03	93.305	130.554	1.55486	0.159	0.221	1139

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

15 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.853	81.57107	213.52	14.634	170598.85	0.0018631	0.11156	41.642	0.00344	1.56871	5.3455
100	81.24433	212.13	14.541	166531.06	0.0018751	0.11094	39.940	0.00343	1.56609	5.1556
105	80.48038	208.87	14.320	157311.72	0.0019042	0.10941	36.267	0.00342	1.55996	4.7460
110	79.71168	205.55	14.091	148436.81	0.0019350	0.10780	32.962	0.00340	1.55381	4.3781
115	78.93777	202.17	13.856	139895.98	0.0019678	0.10612	29.991	0.00338	1.54763	4.0475
120	78.15816	198.74	13.613	131679.09	0.0020027	0.10437	27.318	0.00336	1.54143	3.7503
125	77.37227	195.24	13.365	123776.10	0.0020401	0.10256	24.914	0.00333	1.53519	3.4832
130	76.57949	191.67	13.111	116177.17	0.0020801	0.10069	22.753	0.00330	1.52891	3.2432
135	75.77910	188.04	12.852	108872.61	0.0021231	0.09878	20.808	0.00326	1.52259	3.0277
140	74.97033	184.33	12.589	101852.88	0.0021695	0.09681	19.060	0.00323	1.51622	2.8343
145	74.15229	180.54	12.322	95108.61	0.0022198	0.09481	17.487	0.00319	1.50979	2.6610
150	73.32398	176.67	12.050	88630.61	0.0022743	0.09276	16.072	0.00315	1.50330	2.5061
155	72.48427	172.70	11.776	82409.81	0.0023338	0.09068	14.798	0.00310	1.49675	2.3679
160	71.63186	168.64	11.499	76437.36	0.0023990	0.08857	13.653	0.00306	1.49011	2.2451
* 162.677	71.16378	166.43	11.349	73338.95	0.0024366	0.08743	13.087	0.00303	1.48652	2.1853
* 162.677	0.28469	33.77	2.176	14.47	0.0068112	0.00495	0.461	0.07558	1.00169	0.7721
165	0.28026	34.32	2.176	14.49	0.0066855	0.00502	0.468	0.07807	1.00167	0.7700
170	0.27122	35.49	2.174	14.53	0.0064318	0.00517	0.482	0.08352	1.00161	0.7660
175	0.26279	36.66	2.173	14.57	0.0061999	0.00532	0.496	0.08912	1.00156	0.7626
180	0.25491	37.82	2.172	14.61	0.0059867	0.00548	0.510	0.09486	1.00151	0.7595
185	0.24752	38.97	2.171	14.64	0.0057900	0.00563	0.524	0.10075	1.00147	0.7569
190	0.24056	40.12	2.171	14.67	0.0056075	0.00578	0.538	0.10679	1.00143	0.7545
195	0.23401	41.27	2.170	14.70	0.0054376	0.00593	0.553	0.11298	1.00139	0.7524
200	0.22783	42.41	2.170	14.72	0.0052790	0.00608	0.567	0.11930	1.00135	0.7505
205	0.22198	43.54	2.169	14.74	0.0051304	0.00624	0.581	0.12578	1.00132	0.7488
210	0.21643	44.67	2.169	14.76	0.0049908	0.00639	0.595	0.13240	1.00129	0.7472
215	0.21117	45.80	2.168	14.77	0.0048594	0.00654	0.609	0.13916	1.00125	0.7458
220	0.20616	46.93	2.168	14.79	0.0047354	0.00669	0.623	0.14607	1.00123	0.7445
225	0.20140	48.05	2.167	14.80	0.0046181	0.00684	0.637	0.15312	1.00120	0.7434
230	0.19686	49.17	2.167	14.82	0.0045069	0.00699	0.651	0.16031	1.00117	0.7423
235	0.19252	50.29	2.167	14.83	0.0044014	0.00714	0.665	0.16764	1.00114	0.7413
240	0.18838	51.41	2.167	14.84	0.0043011	0.00729	0.678	0.17510	1.00112	0.7404
245	0.18442	52.52	2.166	14.85	0.0042056	0.00744	0.692	0.18271	1.00110	0.7395
250	0.18062	53.64	2.166	14.86	0.0041145	0.00759	0.706	0.19045	1.00107	0.7387
255	0.17698	54.75	2.166	14.86	0.0040275	0.00774	0.719	0.19837	1.00105	0.7378
260	0.17349	55.86	2.166	14.87	0.0039444	0.00789	0.733	0.20642	1.00103	0.7369
265	0.17013	56.97	2.166	14.88	0.0038647	0.00804	0.747	0.21461	1.00101	0.7361
270	0.16691	58.08	2.165	14.89	0.0037885	0.00819	0.760	0.22291	1.00099	0.7354
275	0.16381	59.19	2.165	14.89	0.0037153	0.00833	0.773	0.23133	1.00097	0.7348
280	0.16082	60.29	2.165	14.90	0.0036450	0.00848	0.787	0.23988	1.00096	0.7342
285	0.15794	61.40	2.165	14.90	0.0035775	0.00862	0.800	0.24854	1.00094	0.7337
290	0.15517	62.50	2.165	14.91	0.0035125	0.00877	0.813	0.25733	1.00092	0.7332
295	0.15249	63.61	2.165	14.91	0.0034500	0.00891	0.826	0.26624	1.00091	0.7327
300	0.14991	64.71	2.164	14.92	0.0033897	0.00905	0.839	0.27527	1.00089	0.7323
310	0.14499	66.92	2.164	14.93	0.0032755	0.00933	0.865	0.29370	1.00086	0.7315
320	0.14040	69.12	2.164	14.93	0.0031690	0.00961	0.891	0.31261	1.00083	0.7308
330	0.13609	71.32	2.164	14.94	0.0030694	0.00989	0.916	0.33198	1.00081	0.7301
340	0.13204	73.53	2.163	14.94	0.0029761	0.01017	0.941	0.35183	1.00078	0.7295
350	0.12822	75.73	2.163	14.95	0.0028884	0.01044	0.966	0.37213	1.00076	0.7290
360	0.12462	77.93	2.162	14.95	0.0028058	0.01071	0.991	0.39289	1.00074	0.7285
370	0.12122	80.14	2.162	14.96	0.0027280	0.01097	1.015	0.41407	1.00072	0.7281
380	0.11800	82.35	2.161	14.96	0.0026544	0.01124	1.039	0.43569	1.00070	0.7277
390	0.11495	84.55	2.160	14.96	0.0025848	0.01150	1.063	0.45773	1.00068	0.7274
400	0.11206	86.77	2.160	14.97	0.0025188	0.01176	1.087	0.48019	1.00067	0.7270
410	0.10930	88.98	2.159	14.97	0.0024562	0.01202	1.110	0.50305	1.00065	0.7268
420	0.10668	91.20	2.158	14.97	0.0023966	0.01227	1.133	0.52631	1.00063	0.7265
430	0.10419	93.42	2.157	14.97	0.0023399	0.01253	1.156	0.54996	1.00062	0.7263
440	0.10181	95.65	2.155	14.98	0.0022858	0.01278	1.179	0.57399	1.00060	0.7262
450	0.09953	97.89	2.154	14.98	0.0022343	0.01303	1.201	0.59838	1.00059	0.7261
460	0.09736	100.13	2.152	14.98	0.0021850	0.01327	1.223	0.62313	1.00058	0.7260
470	0.09527	102.37	2.151	14.98	0.0021379	0.01352	1.245	0.64823	1.00057	0.7259
480	0.09328	104.63	2.149	14.98	0.0020928	0.01376	1.267	0.67367	1.00055	0.7259
490	0.09137	106.89	2.147	14.98	0.0020495	0.01400	1.289	0.69944	1.00054	0.7260
500	0.08953	109.16	2.145	14.99	0.0020081	0.01424	1.310	0.72553	1.00053	0.7260
510	0.08777	111.44	2.142	14.99	0.0019683	0.01448	1.331	0.75192	1.00052	0.7262
520	0.08608	113.73	2.140	14.99	0.0019300	0.01471	1.352	0.77863	1.00051	0.7263
530	0.08445	116.03	2.137	14.99	0.0018933	0.01495	1.373	0.80565	1.00050	0.7265
540	0.08288	118.33	2.135	14.99	0.0018579	0.01518	1.394	0.83295	1.00049	0.7267
550	0.08137	120.65	2.132	14.99	0.0018238	0.01541	1.414	0.86054	1.00048	0.7270
560	0.07991	122.98	2.129	14.99	0.0017910	0.01564	1.434	0.88841	1.00047	0.7273
570	0.07850	125.32	2.125	14.99	0.0017593	0.01586	1.454	0.91655	1.00047	0.7277
580	0.07715	127.67	2.122	14.99	0.0017287	0.01609	1.474	0.94496	1.00046	0.7281
590	0.07584	130.03	2.118	14.99	0.0016992	0.01631	1.494	0.97364	1.00045	0.7285
600	0.07457	132.41	2.115	14.99	0.0016707	0.01654	1.514	1.00257	1.00044	0.7290

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

20 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.860	0.01226	2091.72	317.9	-83.213	-83.168	0.50126	0.266	0.398	3805
100	0.01231	2050.21	312.3	-82.362	-82.316	0.50986	0.264	0.398	3781
105	0.01242	1955.12	299.6	-80.374	-80.328	0.52927	0.260	0.398	3723
110	0.01254	1862.64	287.3	-78.386	-78.339	0.54777	0.256	0.398	3664
115	0.01267	1772.71	275.3	-76.397	-76.350	0.56545	0.252	0.398	3603
120	0.01279	1685.26	263.7	-74.408	-74.361	0.58239	0.248	0.398	3541
125	0.01292	1600.24	252.5	-72.418	-72.370	0.59864	0.244	0.398	3477
130	0.01306	1517.58	241.7	-70.426	-70.377	0.61427	0.241	0.399	3413
135	0.01320	1437.22	231.2	-68.431	-68.382	0.62933	0.237	0.399	3347
140	0.01334	1359.10	221.0	-66.434	-66.384	0.64386	0.234	0.400	3279
145	0.01349	1283.14	211.1	-64.433	-64.383	0.65790	0.231	0.401	3211
150	0.01364	1209.30	201.6	-62.427	-62.376	0.67151	0.228	0.402	3141
155	0.01380	1137.49	192.4	-60.415	-60.364	0.68470	0.225	0.403	3070
160	0.01396	1067.65	183.4	-58.397	-58.345	0.69752	0.223	0.405	2998
165	0.01413	999.72	174.7	-56.370	-56.317	0.71000	0.220	0.406	2925
* 167.816	0.01423	962.27	170.0	-55.224	-55.171	0.71689	0.219	0.408	2883
* 167.816	2.69553	51.53	0.13	25.098	35.081	1.25444	0.160	0.233	590
170	2.73531	52.38	0.13	25.459	35.590	1.25746	0.160	0.233	594
175	2.82586	54.33	0.12	26.283	36.749	1.26418	0.159	0.231	604
180	2.91579	56.26	0.12	27.103	37.901	1.27067	0.159	0.230	614
185	3.00519	58.16	0.11	27.918	39.048	1.27696	0.159	0.229	623
190	3.09412	60.04	0.11	28.730	40.189	1.28305	0.158	0.228	633
195	3.18264	61.91	0.11	29.539	41.326	1.28895	0.158	0.227	642
200	3.27079	63.76	0.10	30.346	42.459	1.29469	0.158	0.226	651
205	3.35862	65.59	0.10	31.150	43.588	1.30026	0.158	0.226	659
210	3.44616	67.42	0.10	31.952	44.714	1.30569	0.157	0.225	668
215	3.53344	69.23	0.10	32.752	45.838	1.31098	0.157	0.224	676
220	3.62049	71.04	0.09	33.550	46.959	1.31613	0.157	0.224	685
225	3.70732	72.83	0.09	34.347	48.077	1.32116	0.157	0.223	693
230	3.79396	74.62	0.09	35.143	49.193	1.32607	0.157	0.223	701
235	3.88043	76.41	0.09	35.937	50.308	1.33086	0.157	0.223	709
240	3.96674	78.18	0.09	36.730	51.421	1.33555	0.157	0.222	717
245	4.05290	79.95	0.08	37.522	52.532	1.34013	0.157	0.222	725
250	4.13893	81.71	0.08	38.313	53.642	1.34461	0.157	0.222	732
255	4.22484	83.47	0.08	39.104	54.750	1.34900	0.156	0.222	740
260	4.31063	85.23	0.08	39.893	55.857	1.35330	0.156	0.221	748
265	4.39632	86.98	0.08	40.682	56.963	1.35752	0.156	0.221	755
270	4.48192	88.73	0.08	41.470	58.068	1.36165	0.156	0.221	762
275	4.56742	90.47	0.07	42.257	59.173	1.36570	0.156	0.221	770
280	4.65284	92.21	0.07	43.044	60.276	1.36967	0.156	0.221	777
285	4.73819	93.95	0.07	43.830	61.378	1.37358	0.156	0.220	784
290	4.82346	95.68	0.07	44.616	62.480	1.37741	0.156	0.220	791
295	4.90867	97.41	0.07	45.402	63.581	1.38117	0.156	0.220	798
300	4.99382	99.14	0.07	46.187	64.681	1.38487	0.156	0.220	805
310	5.16394	102.59	0.07	47.755	66.880	1.39208	0.156	0.220	818
320	5.33386	106.03	0.06	49.323	69.077	1.39905	0.156	0.220	832
330	5.50359	109.47	0.06	50.889	71.272	1.40581	0.156	0.219	845
340	5.67317	112.90	0.06	52.455	73.465	1.41236	0.156	0.219	858
350	5.84261	116.32	0.06	54.019	75.657	1.41871	0.156	0.219	871
360	6.01192	119.74	0.06	55.583	77.848	1.42488	0.156	0.219	883
370	6.18112	123.15	0.05	57.147	80.038	1.43088	0.156	0.219	896
380	6.35022	126.56	0.05	58.710	82.227	1.43672	0.156	0.219	908
390	6.51922	129.97	0.05	60.273	84.416	1.44241	0.156	0.219	920
400	6.68814	133.37	0.05	61.835	86.605	1.44795	0.156	0.219	931
410	6.85699	136.77	0.05	63.398	88.793	1.45335	0.156	0.219	943
420	7.02577	140.17	0.05	64.961	90.981	1.45862	0.156	0.219	955
430	7.19449	143.56	0.05	66.525	93.169	1.46377	0.156	0.219	966
440	7.36315	146.96	0.05	68.089	95.358	1.46880	0.156	0.219	977
450	7.53175	150.35	0.04	69.653	97.547	1.47372	0.156	0.219	988
460	7.70031	153.74	0.04	71.218	99.736	1.47853	0.156	0.219	999
470	7.86883	157.12	0.04	72.784	101.926	1.48324	0.156	0.219	1010
480	8.03731	160.51	0.04	74.351	104.117	1.48786	0.156	0.219	1021
490	8.20574	163.89	0.04	75.919	106.309	1.49238	0.157	0.219	1031
500	8.37414	167.27	0.04	77.488	108.502	1.49681	0.157	0.219	1041
510	8.54251	170.65	0.04	79.059	110.696	1.50115	0.157	0.219	1052
520	8.71085	174.03	0.04	80.631	112.891	1.50542	0.157	0.220	1062
530	8.87916	177.41	0.04	82.205	115.089	1.50960	0.157	0.220	1072
540	9.04745	180.79	0.04	83.781	117.288	1.51371	0.157	0.220	1082
550	9.21571	184.17	0.04	85.358	119.488	1.51775	0.158	0.220	1092
560	9.38395	187.54	0.04	86.938	121.691	1.52172	0.158	0.220	1101
570	9.55216	190.92	0.04	88.520	123.896	1.52562	0.158	0.221	1111
580	9.72036	194.29	0.03	90.104	126.103	1.52946	0.158	0.221	1120
590	9.88853	197.66	0.03	91.690	128.312	1.53323	0.159	0.221	1130
600	10.05669	201.04	0.03	93.279	130.524	1.53695	0.159	0.221	1139

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

20 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.860	81.57238	213.55	14.634	170626.97	0.0018629	0.11157	41.649	0.00344	1.56872	5.3461
100	81.24677	212.16	14.542	166572.91	0.0018748	0.11094	39.953	0.00343	1.56611	5.1568
105	80.48294	208.90	14.320	157353.81	0.0019038	0.10942	36.278	0.00342	1.55998	4.7472
110	79.71436	205.58	14.092	148479.14	0.0019346	0.10781	32.973	0.00340	1.55383	4.3792
115	78.94059	202.21	13.856	139938.59	0.0019674	0.10613	30.001	0.00338	1.54765	4.0485
120	78.16113	198.77	13.614	131721.96	0.0020023	0.10438	27.328	0.00336	1.54145	3.7512
125	77.37540	195.28	13.365	123819.26	0.0020396	0.10257	24.924	0.00333	1.53521	3.4841
130	76.58278	191.71	13.111	116220.63	0.0020795	0.10070	22.761	0.00330	1.52893	3.2440
135	75.78258	188.08	12.853	108916.37	0.0021225	0.09878	20.816	0.00327	1.52261	3.0284
140	74.97401	184.37	12.589	101896.97	0.0021689	0.09682	19.067	0.00323	1.51625	2.8350
145	74.15619	180.59	12.322	95153.04	0.0022190	0.09482	17.494	0.00319	1.50982	2.6617
150	73.32812	176.71	12.051	88675.39	0.0022735	0.09277	16.078	0.00315	1.50334	2.5067
155	72.48867	172.75	11.777	82454.98	0.0023329	0.09069	14.805	0.00310	1.49678	2.3684
160	71.63654	168.70	11.499	76482.92	0.0023980	0.08858	13.659	0.00306	1.49014	2.2456
165	70.77026	164.54	11.220	70750.52	0.0024697	0.08645	12.627	0.00301	1.48342	2.1369
* 167.816	70.27551	162.15	11.061	67624.32	0.0025133	0.08523	12.092	0.00298	1.47956	2.0815
* 167.816	0.37098	34.48	2.180	19.12	0.0067670	0.00516	0.481	0.05963	1.00221	0.7824
170	0.36559	35.00	2.179	19.15	0.0066458	0.00523	0.487	0.06146	1.00217	0.7800
175	0.35387	36.19	2.178	19.23	0.0063859	0.00538	0.501	0.06573	1.00210	0.7750
180	0.34296	37.38	2.176	19.29	0.0061496	0.00553	0.515	0.07010	1.00204	0.7707
185	0.33276	38.56	2.175	19.35	0.0059334	0.00568	0.529	0.07457	1.00198	0.7669
190	0.32319	39.73	2.174	19.40	0.0057345	0.00583	0.543	0.07916	1.00192	0.7636
195	0.31420	40.89	2.174	19.45	0.0055507	0.00598	0.557	0.08384	1.00187	0.7606
200	0.30574	42.04	2.173	19.49	0.0053801	0.00613	0.571	0.08863	1.00182	0.7580
205	0.29774	43.20	2.172	19.53	0.0052211	0.00628	0.585	0.09353	1.00177	0.7557
210	0.29018	44.34	2.172	19.56	0.0050726	0.00643	0.599	0.09853	1.00172	0.7536
215	0.28301	45.49	2.171	19.59	0.0049333	0.00658	0.612	0.10364	1.00168	0.7517
220	0.27621	46.63	2.171	19.62	0.0048025	0.00673	0.626	0.10886	1.00164	0.7500
225	0.26974	47.76	2.170	19.65	0.0046791	0.00688	0.640	0.11418	1.00160	0.7484
230	0.26358	48.89	2.170	19.67	0.0045626	0.00703	0.654	0.11960	1.00157	0.7470
235	0.25770	50.02	2.169	19.69	0.0044524	0.00718	0.668	0.12512	1.00153	0.7456
240	0.25210	51.15	2.169	19.71	0.0043478	0.00733	0.682	0.13075	1.00150	0.7444
245	0.24674	52.27	2.169	19.73	0.0042485	0.00748	0.695	0.13648	1.00147	0.7433
250	0.24161	53.40	2.168	19.74	0.0041541	0.00763	0.709	0.14231	1.00144	0.7423
255	0.23670	54.52	2.168	19.76	0.0040640	0.00778	0.723	0.14829	1.00141	0.7411
260	0.23198	55.64	2.168	19.77	0.0039781	0.00793	0.736	0.15437	1.00138	0.7399
265	0.22746	56.75	2.168	19.78	0.0038960	0.00807	0.749	0.16054	1.00135	0.7389
270	0.22312	57.87	2.167	19.80	0.0038175	0.00822	0.763	0.16679	1.00133	0.7380
275	0.21894	58.98	2.167	19.81	0.0037423	0.00837	0.776	0.17313	1.00130	0.7372
280	0.21492	60.09	2.167	19.82	0.0036702	0.00851	0.790	0.17957	1.00128	0.7365
285	0.21105	61.21	2.167	19.83	0.0036009	0.00866	0.803	0.18609	1.00125	0.7358
290	0.20732	62.32	2.167	19.84	0.0035344	0.00880	0.816	0.19269	1.00123	0.7352
295	0.20372	63.43	2.167	19.84	0.0034704	0.00894	0.829	0.19940	1.00121	0.7346
300	0.20025	64.54	2.166	19.85	0.0034089	0.00908	0.842	0.20619	1.00119	0.7341
310	0.19365	66.75	2.166	19.87	0.0032923	0.00936	0.868	0.22004	1.00115	0.7331
320	0.18748	68.96	2.166	19.88	0.0031839	0.00964	0.893	0.23425	1.00111	0.7323
330	0.18170	71.18	2.165	19.89	0.0030826	0.00992	0.919	0.24882	1.00108	0.7315
340	0.17627	73.39	2.165	19.90	0.0029878	0.01019	0.944	0.26373	1.00105	0.7308
350	0.17116	75.60	2.164	19.91	0.0028989	0.01046	0.968	0.27898	1.00102	0.7301
360	0.16634	77.81	2.164	19.92	0.0028153	0.01073	0.993	0.29457	1.00099	0.7296
370	0.16178	80.02	2.163	19.92	0.0027365	0.01100	1.017	0.31047	1.00096	0.7291
380	0.15747	82.23	2.163	19.93	0.0026621	0.01126	1.041	0.32671	1.00094	0.7286
390	0.15339	84.44	2.162	19.94	0.0025918	0.01152	1.065	0.34326	1.00091	0.7282
400	0.14952	86.65	2.161	19.94	0.0025251	0.01178	1.089	0.36012	1.00089	0.7278
410	0.14584	88.88	2.160	19.95	0.0024619	0.01204	1.112	0.37728	1.00087	0.7275
420	0.14233	91.10	2.159	19.95	0.0024018	0.01229	1.135	0.39474	1.00085	0.7272
430	0.13900	93.33	2.158	19.95	0.0023447	0.01255	1.158	0.41250	1.00083	0.7270
440	0.13581	95.56	2.157	19.96	0.0022902	0.01280	1.180	0.43053	1.00081	0.7268
450	0.13277	97.80	2.155	19.96	0.0022383	0.01305	1.203	0.44884	1.00079	0.7266
460	0.12986	100.04	2.154	19.96	0.0021887	0.01329	1.225	0.46742	1.00077	0.7265
470	0.12708	102.29	2.152	19.97	0.0021413	0.01354	1.247	0.48626	1.00076	0.7264
480	0.12442	104.55	2.150	19.97	0.0020959	0.01378	1.269	0.50535	1.00074	0.7264
490	0.12187	106.82	2.148	19.97	0.0020525	0.01402	1.290	0.52470	1.00072	0.7264
500	0.11942	109.09	2.146	19.98	0.0020108	0.01426	1.312	0.54428	1.00071	0.7265
510	0.11706	111.37	2.144	19.98	0.0019708	0.01449	1.333	0.56407	1.00070	0.7266
520	0.11480	113.66	2.141	19.98	0.0019324	0.01473	1.354	0.58412	1.00068	0.7267
530	0.11262	115.96	2.139	19.98	0.0018954	0.01496	1.374	0.60440	1.00067	0.7269
540	0.11053	118.27	2.136	19.98	0.0018599	0.01519	1.395	0.62489	1.00066	0.7271
550	0.10851	120.59	2.133	19.98	0.0018257	0.01542	1.415	0.64559	1.00064	0.7274
560	0.10656	122.92	2.130	19.99	0.0017927	0.01565	1.436	0.66651	1.00063	0.7277
570	0.10469	125.26	2.126	19.99	0.0017609	0.01588	1.456	0.68762	1.00062	0.7280
580	0.10288	127.62	2.123	19.99	0.0017302	0.01610	1.476	0.70894	1.00061	0.7284
590	0.10113	129.98	2.120	19.99	0.0017006	0.01633	1.495	0.73046	1.00060	0.7288
600	0.09944	132.36	2.116	19.99	0.0016720	0.01655	1.515	0.75217	1.00059	0.7292

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

25 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.867	0.01226	2092.04	317.9	-83.212	-83.156	0.50126	0.266	0.398	3805
100	0.01231	2050.66	312.3	-82.364	-82.307	0.50984	0.264	0.398	3781
105	0.01242	1955.58	299.6	-80.376	-80.319	0.52925	0.260	0.398	3723
110	0.01254	1863.11	287.3	-78.388	-78.330	0.54775	0.256	0.398	3664
115	0.01267	1773.18	275.3	-76.400	-76.341	0.56543	0.252	0.398	3603
120	0.01279	1685.75	263.8	-74.411	-74.352	0.58236	0.248	0.398	3541
125	0.01292	1600.73	252.6	-72.421	-72.361	0.59862	0.244	0.398	3478
130	0.01306	1518.08	241.7	-70.429	-70.368	0.61424	0.241	0.399	3413
135	0.01320	1437.73	231.2	-68.435	-68.374	0.62930	0.237	0.399	3347
140	0.01334	1359.62	221.0	-66.438	-66.376	0.64383	0.234	0.400	3280
145	0.01348	1283.68	211.2	-64.437	-64.374	0.65788	0.231	0.401	3211
150	0.01364	1209.84	201.6	-62.431	-62.368	0.67148	0.228	0.402	3142
155	0.01379	1138.04	192.4	-60.420	-60.356	0.68467	0.225	0.403	3071
160	0.01396	1068.22	183.4	-58.401	-58.337	0.69749	0.223	0.405	2999
165	0.01413	1000.30	174.8	-56.375	-56.310	0.70997	0.220	0.406	2925
170	0.01431	934.22	166.4	-54.339	-54.272	0.72213	0.218	0.408	2850
* 172.051	0.01438	907.63	163.0	-53.500	-53.434	0.72703	0.217	0.409	2819
* 172.051	2.19410	51.99	0.16	25.584	35.741	1.24511	0.161	0.236	595
175	2.23769	53.18	0.16	26.078	36.437	1.24912	0.161	0.235	601
180	2.31106	55.17	0.15	26.910	37.609	1.25572	0.160	0.234	611
185	2.38386	57.14	0.15	27.737	38.773	1.26210	0.160	0.232	620
190	2.45616	59.08	0.14	28.560	39.930	1.26827	0.159	0.231	630
195	2.52802	61.00	0.14	29.378	41.081	1.27425	0.159	0.230	639
200	2.59949	62.90	0.13	30.193	42.227	1.28006	0.159	0.229	648
205	2.67063	64.78	0.13	31.005	43.368	1.28569	0.158	0.228	657
210	2.74146	66.65	0.13	31.814	44.505	1.29117	0.158	0.227	665
215	2.81203	68.50	0.12	32.620	45.638	1.29650	0.158	0.226	674
220	2.88235	70.34	0.12	33.425	46.768	1.30170	0.158	0.226	683
225	2.95245	72.17	0.12	34.227	47.895	1.30676	0.157	0.225	691
230	3.02235	73.98	0.11	35.028	49.019	1.31171	0.157	0.225	699
235	3.09208	75.79	0.11	35.827	50.141	1.31653	0.157	0.224	708
240	3.16164	77.60	0.11	36.624	51.260	1.32124	0.157	0.224	716
245	3.23106	79.39	0.11	37.420	52.378	1.32585	0.157	0.223	723
250	3.30034	81.18	0.10	38.215	53.494	1.33036	0.157	0.223	731
255	3.36949	82.96	0.10	39.009	54.608	1.33477	0.157	0.223	739
260	3.43853	84.73	0.10	39.802	55.720	1.33909	0.157	0.222	746
265	3.50746	86.50	0.10	40.594	56.831	1.34332	0.157	0.222	754
270	3.57630	88.27	0.09	41.385	57.941	1.34747	0.157	0.222	761
275	3.64504	90.03	0.09	42.175	59.049	1.35154	0.156	0.222	769
280	3.71370	91.78	0.09	42.965	60.156	1.35553	0.156	0.221	776
285	3.78228	93.53	0.09	43.753	61.263	1.35945	0.156	0.221	783
290	3.85080	95.28	0.09	44.542	62.368	1.36329	0.156	0.221	790
295	3.91924	97.03	0.09	45.329	63.473	1.36707	0.156	0.221	797
300	3.98762	98.77	0.08	46.116	64.576	1.37078	0.156	0.221	804
310	4.12421	102.24	0.08	47.689	66.781	1.37801	0.156	0.220	818
320	4.26060	105.71	0.08	49.260	68.983	1.38500	0.156	0.220	831
330	4.39680	109.17	0.08	50.829	71.184	1.39177	0.156	0.220	844
340	4.53285	112.61	0.07	52.398	73.382	1.39833	0.156	0.220	857
350	4.66875	116.05	0.07	53.965	75.578	1.40470	0.156	0.220	870
360	4.80453	119.49	0.07	55.531	77.773	1.41088	0.156	0.219	883
370	4.94019	122.92	0.07	57.097	79.967	1.41689	0.156	0.219	895
380	5.07575	126.34	0.07	58.662	82.159	1.42274	0.156	0.219	907
390	5.21122	129.76	0.06	60.227	84.351	1.42843	0.156	0.219	919
400	5.34660	133.18	0.06	61.791	86.542	1.43398	0.156	0.219	931
410	5.48191	136.59	0.06	63.356	88.733	1.43939	0.156	0.219	943
420	5.61716	140.00	0.06	64.920	90.924	1.44467	0.156	0.219	954
430	5.75233	143.40	0.06	66.485	93.115	1.44982	0.156	0.219	966
440	5.88746	146.80	0.06	68.050	95.305	1.45486	0.156	0.219	977
450	6.02253	150.20	0.06	69.616	97.496	1.45978	0.156	0.219	988
460	6.15755	153.60	0.05	71.182	99.687	1.46460	0.156	0.219	999
470	6.29253	157.00	0.05	72.749	101.879	1.46931	0.156	0.219	1010
480	6.42746	160.39	0.05	74.317	104.072	1.47393	0.156	0.219	1020
490	6.56236	163.78	0.05	75.886	106.265	1.47845	0.157	0.219	1031
500	6.69723	167.17	0.05	77.456	108.460	1.48288	0.157	0.220	1041
510	6.83206	170.56	0.05	79.028	110.656	1.48723	0.157	0.220	1052
520	6.96686	173.94	0.05	80.601	112.853	1.49150	0.157	0.220	1062
530	7.10163	177.33	0.05	82.175	115.051	1.49569	0.157	0.220	1072
540	7.23638	180.71	0.05	83.752	117.251	1.49980	0.157	0.220	1082
550	7.37110	184.09	0.05	85.330	119.453	1.50384	0.158	0.220	1092
560	7.50580	187.47	0.04	86.910	121.657	1.50781	0.158	0.220	1101
570	7.64047	190.85	0.04	88.492	123.863	1.51171	0.158	0.221	1111
580	7.77513	194.23	0.04	90.077	126.071	1.51555	0.158	0.221	1120
590	7.90977	197.61	0.04	91.664	128.281	1.51933	0.159	0.221	1130
600	8.04439	200.99	0.04	93.254	130.494	1.52305	0.159	0.221	1139

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

25 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.867	81.57369	213.58	14.634	170655.09	0.0018626	0.11157	41.656	0.00344	1.56874	5.3468
100	81.24921	212.20	14.542	166614.74	0.0018745	0.11095	39.965	0.00343	1.56613	5.1581
105	80.48549	208.93	14.320	157395.89	0.0019035	0.10942	36.290	0.00342	1.56000	4.7483
110	79.71705	205.62	14.092	148521.48	0.0019342	0.10782	32.984	0.00340	1.55385	4.3802
115	78.94341	202.24	13.856	139981.18	0.0019670	0.10614	30.011	0.00338	1.54768	4.0495
120	78.16409	198.81	13.614	131764.83	0.0020018	0.10439	27.337	0.00336	1.54147	3.7521
125	77.37852	195.32	13.365	123862.41	0.0020391	0.10258	24.933	0.00333	1.53524	3.4849
130	76.58608	191.76	13.112	116264.07	0.0020790	0.10071	22.770	0.00330	1.52896	3.2448
135	75.78606	188.12	12.853	108960.13	0.0021219	0.09879	20.824	0.00327	1.52264	3.0291
140	74.97769	184.42	12.590	101941.04	0.0021682	0.09683	19.075	0.00323	1.51627	2.8356
145	74.16009	180.63	12.322	95197.46	0.0022183	0.09483	17.501	0.00319	1.50985	2.6623
150	73.33225	176.76	12.051	88720.16	0.0022727	0.09278	16.085	0.00315	1.50337	2.5072
155	72.49306	172.81	11.777	82500.13	0.0023321	0.09071	14.811	0.00310	1.49681	2.3689
160	71.64122	168.75	11.500	76528.48	0.0023970	0.08860	13.665	0.00306	1.49018	2.2460
165	70.77526	164.60	11.220	70796.51	0.0024686	0.08646	12.633	0.00301	1.48346	2.1373
170	69.89348	160.33	10.938	65295.68	0.0025477	0.08429	11.704	0.00295	1.47663	2.0417
* 172.051	69.52683	158.55	10.822	63104.66	0.0025826	0.08340	11.350	0.00293	1.47380	2.0061
* 172.051	0.45577	35.01	2.183	23.70	0.0067540	0.00534	0.497	0.04958	1.00271	0.7924
175	0.44689	35.72	2.182	23.76	0.0065864	0.00543	0.505	0.05164	1.00266	0.7885
180	0.43270	36.93	2.180	23.87	0.0063237	0.00558	0.519	0.05519	1.00257	0.7826
185	0.41949	38.14	2.179	23.97	0.0060856	0.00573	0.533	0.05883	1.00249	0.7776
190	0.40714	39.33	2.178	24.05	0.0058685	0.00588	0.547	0.06254	1.00242	0.7732
195	0.39557	40.51	2.177	24.13	0.0056693	0.00603	0.561	0.06633	1.00235	0.7693
200	0.38469	41.68	2.176	24.20	0.0054856	0.00618	0.575	0.07020	1.00229	0.7659
205	0.37444	42.85	2.175	24.26	0.0053155	0.00632	0.588	0.07416	1.00223	0.7629
210	0.36477	44.01	2.175	24.31	0.0051574	0.00647	0.602	0.07819	1.00217	0.7602
215	0.35562	45.17	2.174	24.36	0.0050098	0.00662	0.616	0.08231	1.00211	0.7578
220	0.34694	46.32	2.173	24.40	0.0048716	0.00677	0.630	0.08651	1.00206	0.7556
225	0.33870	47.47	2.173	24.44	0.0047419	0.00692	0.644	0.09080	1.00201	0.7536
230	0.33087	48.61	2.172	24.48	0.0046197	0.00707	0.657	0.09516	1.00197	0.7518
235	0.32341	49.75	2.172	24.51	0.0045045	0.00722	0.671	0.09960	1.00192	0.7501
240	0.31629	50.89	2.171	24.54	0.0043956	0.00737	0.685	0.10413	1.00188	0.7486
245	0.30950	52.02	2.171	24.57	0.0042924	0.00751	0.698	0.10873	1.00184	0.7472
250	0.30300	53.16	2.171	24.60	0.0041944	0.00766	0.712	0.11342	1.00180	0.7459
255	0.29678	54.28	2.170	24.62	0.0041012	0.00781	0.726	0.11824	1.00176	0.7444
260	0.29082	55.41	2.170	24.64	0.0040124	0.00796	0.739	0.12313	1.00173	0.7430
265	0.28511	56.54	2.170	24.66	0.0039278	0.00811	0.752	0.12809	1.00169	0.7417
270	0.27962	57.66	2.170	24.68	0.0038469	0.00826	0.766	0.13311	1.00166	0.7406
275	0.27435	58.78	2.169	24.70	0.0037696	0.00840	0.779	0.13821	1.00163	0.7396
280	0.26927	59.90	2.169	24.71	0.0036956	0.00855	0.792	0.14338	1.00160	0.7388
285	0.26439	61.02	2.169	24.73	0.0036246	0.00869	0.805	0.14861	1.00157	0.7380
290	0.25969	62.13	2.169	24.74	0.0035565	0.00883	0.819	0.15391	1.00154	0.7372
295	0.25515	63.25	2.168	24.76	0.0034911	0.00897	0.832	0.15929	1.00152	0.7365
300	0.25078	64.36	2.168	24.77	0.0034282	0.00912	0.844	0.16474	1.00149	0.7359
310	0.24247	66.59	2.168	24.79	0.0033093	0.00940	0.870	0.17585	1.00144	0.7348
320	0.23471	68.81	2.167	24.81	0.0031989	0.00967	0.896	0.18724	1.00139	0.7337
330	0.22744	71.03	2.167	24.83	0.0030959	0.00995	0.921	0.19891	1.00135	0.7328
340	0.22061	73.25	2.167	24.84	0.0029997	0.01022	0.946	0.21086	1.00131	0.7320
350	0.21419	75.46	2.166	24.86	0.0029095	0.01049	0.971	0.22308	1.00127	0.7313
360	0.20814	77.68	2.166	24.87	0.0028248	0.01076	0.995	0.23557	1.00124	0.7306
370	0.20242	79.89	2.165	24.88	0.0027450	0.01102	1.019	0.24831	1.00120	0.7300
380	0.19702	82.11	2.164	24.89	0.0026698	0.01129	1.043	0.26132	1.00117	0.7295
390	0.19189	84.33	2.163	24.90	0.0025987	0.01155	1.067	0.27457	1.00114	0.7290
400	0.18703	86.55	2.163	24.91	0.0025315	0.01181	1.091	0.28807	1.00111	0.7286
410	0.18242	88.78	2.162	24.92	0.0024677	0.01206	1.114	0.30182	1.00108	0.7283
420	0.17803	91.00	2.161	24.92	0.0024071	0.01232	1.137	0.31580	1.00106	0.7279
430	0.17384	93.23	2.159	24.93	0.0023495	0.01257	1.160	0.33002	1.00103	0.7276
440	0.16985	95.47	2.158	24.94	0.0022946	0.01282	1.182	0.34446	1.00101	0.7274
450	0.16604	97.71	2.157	24.94	0.0022423	0.01307	1.205	0.35912	1.00099	0.7272
460	0.16240	99.96	2.155	24.95	0.0021924	0.01331	1.227	0.37399	1.00097	0.7271
470	0.15892	102.21	2.153	24.95	0.0021447	0.01355	1.249	0.38906	1.00094	0.7270
480	0.15558	104.47	2.151	24.95	0.0020991	0.01380	1.270	0.40436	1.00092	0.7269
490	0.15238	106.74	2.149	24.96	0.0020554	0.01404	1.292	0.41985	1.00091	0.7269
500	0.14932	109.02	2.147	24.96	0.0020135	0.01427	1.313	0.43552	1.00089	0.7269
510	0.14637	111.30	2.145	24.96	0.0019733	0.01451	1.334	0.45136	1.00087	0.7270
520	0.14354	113.60	2.142	24.97	0.0019347	0.01474	1.355	0.46742	1.00085	0.7271
530	0.14081	115.90	2.140	24.97	0.0018976	0.01498	1.376	0.48365	1.00084	0.7273
540	0.13819	118.21	2.137	24.97	0.0018619	0.01521	1.396	0.50005	1.00082	0.7275
550	0.13566	120.53	2.134	24.98	0.0018275	0.01544	1.417	0.51662	1.00081	0.7277
560	0.13323	122.87	2.131	24.98	0.0017945	0.01567	1.437	0.53336	1.00079	0.7280
570	0.13088	125.21	2.128	24.98	0.0017625	0.01589	1.457	0.55027	1.00078	0.7283
580	0.12862	127.56	2.124	24.98	0.0017318	0.01612	1.477	0.56733	1.00076	0.7287
590	0.12643	129.93	2.121	24.98	0.0017021	0.01634	1.497	0.58455	1.00075	0.7291
600	0.12431	132.31	2.117	24.98	0.0016734	0.01657	1.516	0.60193	1.00074	0.7295

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

30 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.874	0.01226	2092.35	317.9	-83.212	-83.144	0.50127	0.266	0.398	3805
100	0.01231	2051.12	312.3	-82.366	-82.298	0.50982	0.264	0.398	3781
105	0.01242	1956.04	299.6	-80.378	-80.309	0.52922	0.260	0.398	3724
110	0.01254	1863.58	287.3	-78.391	-78.321	0.54772	0.256	0.398	3664
115	0.01267	1773.66	275.4	-76.402	-76.332	0.56541	0.252	0.398	3604
120	0.01279	1686.23	263.8	-74.414	-74.343	0.58234	0.248	0.398	3541
125	0.01292	1601.23	252.6	-72.424	-72.352	0.59859	0.244	0.398	3478
130	0.01306	1518.59	241.7	-70.432	-70.360	0.61422	0.241	0.399	3413
135	0.01319	1438.24	231.2	-68.438	-68.365	0.62927	0.237	0.399	3347
140	0.01334	1360.14	221.1	-66.441	-66.367	0.64380	0.234	0.400	3280
145	0.01348	1284.21	211.2	-64.441	-64.366	0.65785	0.231	0.401	3212
150	0.01364	1210.38	201.7	-62.435	-62.360	0.67145	0.228	0.402	3142
155	0.01379	1138.60	192.4	-60.424	-60.348	0.68464	0.225	0.403	3071
160	0.01396	1068.78	183.5	-58.406	-58.329	0.69746	0.223	0.404	2999
165	0.01413	1000.88	174.8	-56.380	-56.302	0.70993	0.220	0.406	2926
170	0.01431	934.81	166.4	-54.344	-54.265	0.72209	0.218	0.408	2851
175	0.01449	870.51	158.2	-52.297	-52.216	0.73397	0.215	0.411	2775
* 175.684	0.01452	861.84	157.1	-52.016	-51.935	0.73558	0.215	0.411	2765
* 175.684	1.85369	52.29	0.19	25.983	36.280	1.23748	0.162	0.239	599
180	1.90752	54.07	0.18	26.713	37.309	1.24327	0.161	0.238	608
185	1.96932	56.11	0.18	27.552	38.492	1.24976	0.161	0.236	618
190	2.03058	58.11	0.17	28.386	39.666	1.25602	0.160	0.234	627
195	2.09138	60.08	0.17	29.214	40.832	1.26207	0.160	0.233	637
200	2.15177	62.03	0.16	30.038	41.991	1.26794	0.159	0.231	646
205	2.21181	63.96	0.16	30.858	43.145	1.27364	0.159	0.230	655
210	2.27153	65.87	0.15	31.674	44.293	1.27917	0.159	0.229	664
215	2.33096	67.76	0.15	32.487	45.436	1.28455	0.158	0.228	673
220	2.39015	69.63	0.14	33.298	46.576	1.28979	0.158	0.227	681
225	2.44911	71.49	0.14	34.106	47.711	1.29490	0.158	0.227	690
230	2.50787	73.34	0.14	34.912	48.843	1.29987	0.158	0.226	698
235	2.56645	75.18	0.13	35.715	49.973	1.30473	0.158	0.226	706
240	2.62485	77.01	0.13	36.517	51.099	1.30947	0.157	0.225	714
245	2.68311	78.82	0.13	37.318	52.223	1.31411	0.157	0.225	722
250	2.74123	80.63	0.12	38.117	53.345	1.31864	0.157	0.224	730
255	2.79922	82.44	0.12	38.914	54.464	1.32307	0.157	0.224	738
260	2.85709	84.23	0.12	39.710	55.582	1.32742	0.157	0.223	745
265	2.91485	86.02	0.12	40.505	56.698	1.33167	0.157	0.223	753
270	2.97252	87.80	0.11	41.299	57.812	1.33583	0.157	0.223	760
275	3.03009	89.58	0.11	42.092	58.925	1.33992	0.157	0.222	768
280	3.08758	91.35	0.11	42.885	60.037	1.34392	0.157	0.222	775
285	3.14500	93.12	0.11	43.676	61.147	1.34785	0.157	0.222	782
290	3.20233	94.88	0.11	44.466	62.256	1.35171	0.156	0.222	789
295	3.25960	96.64	0.10	45.256	63.364	1.35550	0.156	0.221	796
300	3.31681	98.40	0.10	46.045	64.471	1.35922	0.156	0.221	803
310	3.43105	101.90	0.10	47.622	66.682	1.36647	0.156	0.221	817
320	3.54509	105.39	0.10	49.196	68.890	1.37348	0.156	0.221	831
330	3.65894	108.86	0.09	50.769	71.095	1.38026	0.156	0.220	844
340	3.77263	112.33	0.09	52.340	73.298	1.38684	0.156	0.220	857
350	3.88617	115.79	0.09	53.910	75.499	1.39322	0.156	0.220	870
360	3.99959	119.24	0.08	55.479	77.698	1.39941	0.156	0.220	882
370	4.11290	122.68	0.08	57.047	79.895	1.40543	0.156	0.220	895
380	4.22610	126.12	0.08	58.614	82.091	1.41129	0.156	0.220	907
390	4.33921	129.56	0.08	60.181	84.286	1.41699	0.156	0.219	919
400	4.45224	132.98	0.08	61.747	86.480	1.42255	0.156	0.219	931
410	4.56520	136.41	0.07	63.313	88.674	1.42796	0.156	0.219	943
420	4.67808	139.83	0.07	64.879	90.867	1.43325	0.156	0.219	954
430	4.79090	143.24	0.07	66.445	93.060	1.43841	0.156	0.219	966
440	4.90366	146.65	0.07	68.012	95.253	1.44345	0.156	0.219	977
450	5.01638	150.06	0.07	69.579	97.446	1.44838	0.156	0.219	988
460	5.12904	153.47	0.07	71.146	99.639	1.45320	0.156	0.219	999
470	5.24166	156.87	0.06	72.714	101.833	1.45792	0.156	0.219	1010
480	5.35424	160.27	0.06	74.283	104.027	1.46254	0.157	0.219	1020
490	5.46678	163.67	0.06	75.853	106.222	1.46706	0.157	0.220	1031
500	5.57928	167.07	0.06	77.424	108.418	1.47150	0.157	0.220	1041
510	5.69175	170.46	0.06	78.996	110.615	1.47585	0.157	0.220	1052
520	5.80420	173.85	0.06	80.570	112.814	1.48012	0.157	0.220	1062
530	5.91661	177.24	0.06	82.146	115.013	1.48431	0.157	0.220	1072
540	6.02900	180.63	0.06	83.723	117.215	1.48842	0.157	0.220	1082
550	6.14136	184.02	0.05	85.302	119.418	1.49247	0.158	0.220	1092
560	6.25370	187.41	0.05	86.882	121.623	1.49644	0.158	0.221	1101
570	6.36602	190.79	0.05	88.465	123.830	1.50034	0.158	0.221	1111
580	6.47832	194.18	0.05	90.051	126.039	1.50419	0.158	0.221	1121
590	6.59059	197.56	0.05	91.638	128.250	1.50797	0.159	0.221	1130
600	6.70286	200.94	0.05	93.228	130.464	1.51169	0.159	0.221	1139

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

30 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.874	81.57499	213.60	14.633	170683.20	0.0018623	0.11157	41.663	0.00344	1.56875	5.3474
100	81.25164	212.23	14.542	166656.58	0.0018741	0.11095	39.978	0.00343	1.56615	5.1593
105	80.48805	208.97	14.321	157437.97	0.0019031	0.10943	36.302	0.00342	1.56002	4.7495
110	79.71973	205.65	14.092	148563.81	0.0019338	0.10782	32.995	0.00340	1.55387	4.3813
115	78.94623	202.28	13.856	140023.77	0.0019665	0.10614	30.022	0.00338	1.54770	4.0504
120	78.16706	198.85	13.614	131807.69	0.0020013	0.10439	27.347	0.00336	1.54150	3.7531
125	77.38165	195.36	13.366	123905.55	0.0020386	0.10258	24.942	0.00333	1.53526	3.4858
130	76.58937	191.80	13.112	116307.51	0.0020784	0.10072	22.778	0.00330	1.52899	3.2456
135	75.78954	188.17	12.853	109003.87	0.0021213	0.09880	20.832	0.00327	1.52267	3.0298
140	74.98137	184.46	12.590	101985.11	0.0021675	0.09684	19.082	0.00323	1.51630	2.8363
145	74.16398	180.68	12.323	95241.87	0.0022176	0.09484	17.508	0.00319	1.50988	2.6629
150	73.33639	176.81	12.052	88764.93	0.0022719	0.09279	16.092	0.00315	1.50340	2.5078
155	72.49745	172.86	11.777	82545.27	0.0023312	0.09072	14.817	0.00311	1.49685	2.3694
160	71.64590	168.81	11.500	76574.02	0.0023960	0.08861	13.671	0.00306	1.49022	2.2465
165	70.78026	164.65	11.221	70842.48	0.0024675	0.08647	12.639	0.00301	1.48349	2.1377
170	69.89883	160.39	10.939	65342.11	0.0025464	0.08431	11.709	0.00295	1.47667	2.0421
175	68.99963	156.01	10.654	60064.54	0.0026343	0.08212	10.872	0.00290	1.46973	1.9588
* 175.684	68.87503	155.40	10.615	59358.96	0.0026471	0.08182	10.764	0.00289	1.46877	1.9483
* 175.684	0.53946	35.42	2.186	28.21	0.0067599	0.00550	0.512	0.04261	1.00321	0.8020
180	0.52424	36.49	2.184	28.34	0.0065102	0.00563	0.524	0.04522	1.00312	0.7956
185	0.50779	37.71	2.183	28.49	0.0062475	0.00578	0.537	0.04829	1.00302	0.7891
190	0.49247	38.93	2.181	28.62	0.0060101	0.00593	0.551	0.05143	1.00293	0.7834
195	0.47815	40.13	2.180	28.73	0.0057939	0.00607	0.565	0.05463	1.00284	0.7785
200	0.46473	41.32	2.179	28.83	0.0055960	0.00622	0.579	0.05789	1.00276	0.7742
205	0.45212	42.51	2.178	28.92	0.0054138	0.00637	0.592	0.06122	1.00269	0.7705
210	0.44023	43.68	2.177	29.00	0.0052453	0.00652	0.606	0.06462	1.00262	0.7671
215	0.42901	44.86	2.177	29.07	0.0050888	0.00667	0.620	0.06808	1.00255	0.7641
220	0.41838	46.02	2.176	29.13	0.0049428	0.00681	0.634	0.07160	1.00249	0.7614
225	0.40831	47.18	2.175	29.19	0.0048064	0.00696	0.647	0.07520	1.00243	0.7589
230	0.39874	48.34	2.175	29.24	0.0046784	0.00711	0.661	0.07886	1.00237	0.7567
235	0.38964	49.49	2.174	29.29	0.0045579	0.00726	0.675	0.08258	1.00232	0.7547
240	0.38097	50.63	2.174	29.34	0.0044444	0.00740	0.688	0.08637	1.00226	0.7529
245	0.37270	51.78	2.173	29.38	0.0043371	0.00755	0.702	0.09023	1.00222	0.7512
250	0.36480	52.92	2.173	29.42	0.0042354	0.00770	0.715	0.09415	1.00217	0.7496
255	0.35724	54.05	2.173	29.45	0.0041390	0.00785	0.729	0.09819	1.00212	0.7478
260	0.35001	55.19	2.172	29.48	0.0040473	0.00800	0.742	0.10230	1.00208	0.7461
265	0.34307	56.32	2.172	29.51	0.0039600	0.00814	0.755	0.10645	1.00204	0.7446
270	0.33641	57.45	2.172	29.54	0.0038768	0.00829	0.769	0.11066	1.00200	0.7433
275	0.33002	58.58	2.171	29.56	0.0037973	0.00844	0.782	0.11492	1.00196	0.7421
280	0.32388	59.70	2.171	29.59	0.0037213	0.00858	0.795	0.11924	1.00193	0.7411
285	0.31797	60.82	2.171	29.61	0.0036486	0.00872	0.808	0.12362	1.00189	0.7401
290	0.31227	61.95	2.171	29.63	0.0035789	0.00887	0.821	0.12805	1.00186	0.7393
295	0.30679	63.07	2.170	29.65	0.0035120	0.00901	0.834	0.13255	1.00182	0.7385
300	0.30149	64.19	2.170	29.67	0.0034477	0.00915	0.847	0.13710	1.00179	0.7377
310	0.29146	66.42	2.170	29.70	0.0033265	0.00943	0.873	0.14638	1.00173	0.7364
320	0.28208	68.65	2.169	29.73	0.0032140	0.00970	0.898	0.15589	1.00168	0.7352
330	0.27330	70.88	2.169	29.75	0.0031093	0.00998	0.923	0.16564	1.00162	0.7342
340	0.26507	73.10	2.168	29.78	0.0030116	0.01025	0.948	0.17562	1.00158	0.7333
350	0.25732	75.33	2.168	29.80	0.0029201	0.01052	0.973	0.18582	1.00153	0.7324
360	0.25003	77.55	2.167	29.81	0.0028343	0.01078	0.997	0.19624	1.00149	0.7317
370	0.24314	79.77	2.166	29.83	0.0027536	0.01105	1.021	0.20687	1.00144	0.7310
380	0.23662	82.00	2.166	29.84	0.0026776	0.01131	1.045	0.21772	1.00141	0.7304
390	0.23046	84.22	2.165	29.86	0.0026057	0.01157	1.069	0.22878	1.00137	0.7299
400	0.22461	86.45	2.164	29.87	0.0025378	0.01183	1.092	0.24004	1.00133	0.7294
410	0.21905	88.67	2.163	29.88	0.0024734	0.01208	1.116	0.25151	1.00130	0.7290
420	0.21376	90.91	2.162	29.89	0.0024124	0.01234	1.139	0.26317	1.00127	0.7286
430	0.20873	93.14	2.161	29.90	0.0023543	0.01259	1.161	0.27503	1.00124	0.7283
440	0.20393	95.38	2.159	29.91	0.0022990	0.01284	1.184	0.28708	1.00121	0.7280
450	0.19935	97.63	2.158	29.91	0.0022464	0.01308	1.206	0.29930	1.00118	0.7278
460	0.19497	99.88	2.156	29.92	0.0021961	0.01333	1.228	0.31171	1.00116	0.7276
470	0.19078	102.13	2.155	29.93	0.0021481	0.01357	1.250	0.32429	1.00113	0.7275
480	0.18677	104.40	2.153	29.93	0.0021022	0.01381	1.272	0.33703	1.00111	0.7274
490	0.18292	106.67	2.151	29.94	0.0020583	0.01405	1.293	0.34995	1.00109	0.7274
500	0.17923	108.95	2.148	29.94	0.0020162	0.01429	1.315	0.36302	1.00107	0.7274
510	0.17569	111.23	2.146	29.95	0.0019758	0.01453	1.336	0.37622	1.00104	0.7275
520	0.17229	113.53	2.144	29.95	0.0019370	0.01476	1.357	0.38961	1.00102	0.7275
530	0.16902	115.83	2.141	29.96	0.0018997	0.01499	1.377	0.40314	1.00100	0.7277
540	0.16587	118.15	2.138	29.96	0.0018639	0.01523	1.398	0.41682	1.00099	0.7278
550	0.16283	120.47	2.135	29.96	0.0018294	0.01545	1.418	0.43064	1.00097	0.7281
560	0.15991	122.81	2.132	29.97	0.0017962	0.01568	1.438	0.44460	1.00095	0.7283
570	0.15708	125.15	2.129	29.97	0.0017642	0.01591	1.458	0.45870	1.00093	0.7286
580	0.15436	127.51	2.125	29.97	0.0017333	0.01613	1.478	0.47292	1.00092	0.7290
590	0.15173	129.88	2.122	29.98	0.0017035	0.01636	1.498	0.48728	1.00090	0.7294
600	0.14919	132.26	2.118	29.98	0.0016747	0.01658	1.518	0.50177	1.00089	0.7298

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

35 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.881	0.01226	2092.66	317.9	-83.211	-83.131	0.50128	0.266	0.398	3806
100	0.01231	2051.57	312.4	-82.368	-82.289	0.50980	0.264	0.398	3782
105	0.01242	1956.50	299.6	-80.381	-80.300	0.52920	0.260	0.398	3724
110	0.01254	1864.04	287.3	-78.393	-78.312	0.54770	0.256	0.398	3665
115	0.01267	1774.14	275.4	-76.405	-76.323	0.56538	0.252	0.398	3604
120	0.01279	1686.71	263.8	-74.416	-74.334	0.58232	0.248	0.398	3542
125	0.01292	1601.72	252.6	-72.427	-72.343	0.59857	0.244	0.398	3478
130	0.01306	1519.09	241.8	-70.435	-70.351	0.61419	0.241	0.399	3414
135	0.01319	1438.76	231.3	-68.442	-68.356	0.62925	0.237	0.399	3348
140	0.01334	1360.66	221.1	-66.445	-66.359	0.64378	0.234	0.400	3281
145	0.01348	1284.74	211.2	-64.445	-64.357	0.65782	0.231	0.401	3212
150	0.01364	1210.92	201.7	-62.440	-62.351	0.67142	0.228	0.402	3143
155	0.01379	1139.15	192.5	-60.429	-60.340	0.68461	0.225	0.403	3072
160	0.01396	1069.35	183.5	-58.411	-58.321	0.69743	0.223	0.404	3000
165	0.01413	1001.46	174.8	-56.386	-56.294	0.70990	0.220	0.406	2926
170	0.01431	935.40	166.4	-54.350	-54.257	0.72206	0.218	0.408	2852
175	0.01449	871.11	158.3	-52.303	-52.209	0.73394	0.215	0.411	2776
* 178.887	0.01464	822.31	152.1	-50.702	-50.607	0.74299	0.213	0.413	2716
* 178.887	1.60682	52.47	0.22	26.319	36.732	1.23103	0.163	0.242	602
180	1.61892	52.94	0.22	26.510	37.002	1.23253	0.162	0.242	604
185	1.67293	55.05	0.21	27.362	38.205	1.23913	0.162	0.239	615
190	1.72635	57.12	0.20	28.208	39.396	1.24548	0.161	0.237	624
195	1.77929	59.15	0.20	29.047	40.578	1.25162	0.161	0.236	634
200	1.83180	61.15	0.19	29.880	41.752	1.25756	0.160	0.234	644
205	1.88393	63.13	0.18	30.708	42.918	1.26332	0.160	0.233	653
210	1.93573	65.08	0.18	31.532	44.078	1.26891	0.159	0.231	662
215	1.98724	67.01	0.17	32.353	45.232	1.27434	0.159	0.230	671
220	2.03849	68.92	0.17	33.169	46.381	1.27963	0.159	0.229	679
225	2.08951	70.81	0.17	33.983	47.526	1.28477	0.158	0.228	688
230	2.14032	72.69	0.16	34.795	48.666	1.28979	0.158	0.228	696
235	2.19093	74.56	0.16	35.603	49.803	1.29468	0.158	0.227	705
240	2.24138	76.42	0.15	36.410	50.936	1.29945	0.158	0.226	713
245	2.29167	78.26	0.15	37.215	52.067	1.30411	0.158	0.226	721
250	2.34182	80.09	0.15	38.017	53.195	1.30867	0.157	0.225	729
255	2.39184	81.92	0.14	38.819	54.320	1.31312	0.157	0.225	736
260	2.44174	83.73	0.14	39.618	55.443	1.31749	0.157	0.224	744
265	2.49154	85.54	0.14	40.417	56.564	1.32176	0.157	0.224	752
270	2.54123	87.34	0.13	41.214	57.683	1.32594	0.157	0.224	759
275	2.59083	89.14	0.13	42.009	58.801	1.33004	0.157	0.223	767
280	2.64034	90.92	0.13	42.804	59.916	1.33406	0.157	0.223	774
285	2.68977	92.71	0.13	43.598	61.031	1.33801	0.157	0.223	781
290	2.73913	94.48	0.12	44.391	62.144	1.34188	0.157	0.222	788
295	2.78842	96.26	0.12	45.183	63.255	1.34568	0.157	0.222	796
300	2.83765	98.03	0.12	45.974	64.365	1.34941	0.156	0.222	803
310	2.93593	101.55	0.12	47.555	66.583	1.35668	0.156	0.222	816
320	3.03400	105.06	0.11	49.133	68.797	1.36371	0.156	0.221	830
330	3.13188	108.56	0.11	50.709	71.007	1.37051	0.156	0.221	843
340	3.22961	112.05	0.10	52.283	73.214	1.37710	0.156	0.221	856
350	3.32719	115.52	0.10	53.856	75.419	1.38349	0.156	0.220	869
360	3.42464	118.99	0.10	55.427	77.622	1.38970	0.156	0.220	882
370	3.52198	122.45	0.10	56.997	79.823	1.39573	0.156	0.220	894
380	3.61921	125.90	0.09	58.566	82.023	1.40159	0.156	0.220	907
390	3.71635	129.35	0.09	60.135	84.221	1.40730	0.156	0.220	919
400	3.81341	132.79	0.09	61.703	86.418	1.41286	0.156	0.220	931
410	3.91040	136.22	0.09	63.271	88.614	1.41829	0.156	0.220	942
420	4.00731	139.65	0.08	64.838	90.810	1.42358	0.156	0.220	954
430	4.10416	143.08	0.08	66.406	93.005	1.42874	0.156	0.220	965
440	4.20096	146.50	0.08	67.973	95.200	1.43379	0.156	0.219	977
450	4.29770	149.92	0.08	69.541	97.395	1.43872	0.156	0.220	988
460	4.39439	153.33	0.08	71.110	99.590	1.44355	0.156	0.220	999
470	4.49104	156.74	0.08	72.679	101.786	1.44827	0.156	0.220	1010
480	4.58765	160.15	0.07	74.249	103.982	1.45289	0.157	0.220	1020
490	4.68422	163.56	0.07	75.820	106.179	1.45742	0.157	0.220	1031
500	4.78075	166.96	0.07	77.392	108.376	1.46186	0.157	0.220	1041
510	4.87725	170.36	0.07	78.965	110.575	1.46621	0.157	0.220	1052
520	4.97372	173.76	0.07	80.540	112.775	1.47049	0.157	0.220	1062
530	5.07017	177.16	0.07	82.116	114.976	1.47468	0.157	0.220	1072
540	5.16658	180.55	0.07	83.694	117.179	1.47880	0.157	0.220	1082
550	5.26298	183.95	0.06	85.273	119.383	1.48284	0.158	0.221	1092
560	5.35935	187.34	0.06	86.855	121.589	1.48682	0.158	0.221	1101
570	5.45569	190.73	0.06	88.438	123.797	1.49072	0.158	0.221	1111
580	5.55202	194.12	0.06	90.024	126.007	1.49457	0.158	0.221	1121
590	5.64833	197.51	0.06	91.612	128.219	1.49835	0.159	0.221	1130
600	5.74462	200.89	0.06	93.203	130.434	1.50207	0.159	0.222	1139

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

35 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.881	81.57630	213.63	14.633	170711.32	0.0018620	0.11158	41.670	0.00344	1.56876	5.3480
100	81.25408	212.26	14.542	166698.41	0.0018738	0.11096	39.990	0.00343	1.56617	5.1805
105	80.49061	209.00	14.321	157480.04	0.0019027	0.10943	36.313	0.00342	1.56004	4.7506
110	79.72241	205.69	14.092	148606.13	0.0019335	0.10783	33.006	0.00340	1.55389	4.3823
115	78.94905	202.32	13.856	140066.36	0.0019661	0.10615	30.032	0.00338	1.54772	4.0514
120	78.17002	198.89	13.614	131850.55	0.0020009	0.10440	27.357	0.00336	1.54152	3.7540
125	77.38477	195.40	13.366	123948.69	0.0020381	0.10259	24.951	0.00333	1.53528	3.4866
130	76.59266	191.84	13.112	116350.95	0.0020779	0.10073	22.787	0.00330	1.52901	3.2463
135	75.79302	188.21	12.853	109047.62	0.0021207	0.09881	20.841	0.00327	1.52270	3.0306
140	74.98504	184.51	12.590	102029.18	0.0021669	0.09685	19.090	0.00323	1.51633	2.8370
145	74.16787	180.73	12.323	95296.27	0.0022168	0.09485	17.515	0.00319	1.50991	2.6635
150	73.34052	176.86	12.052	88809.69	0.0022711	0.09281	16.098	0.00315	1.50343	2.5083
155	72.50184	172.91	11.778	82590.41	0.0023303	0.09073	14.824	0.00311	1.49688	2.3699
160	71.65058	168.86	11.501	76619.56	0.0023951	0.08862	13.677	0.00306	1.49025	2.2469
165	70.78525	164.71	11.221	70888.44	0.0024663	0.08649	12.644	0.00301	1.48353	2.1381
170	69.90417	160.45	10.940	65388.53	0.0025452	0.08432	11.715	0.00295	1.47671	2.0424
175	69.00537	156.08	10.655	60111.45	0.0026328	0.08213	10.877	0.00290	1.46977	1.9590
* 178.887	68.29292	152.59	10.433	56157.66	0.0027081	0.08042	10.283	0.00285	1.46429	1.9023
* 178.887	0.62235	35.76	2.188	32.66	0.0067787	0.00565	0.526	0.03746	1.00370	0.8115
180	0.61769	36.04	2.188	32.70	0.0067105	0.00568	0.529	0.03805	1.00367	0.8095
185	0.59776	37.29	2.186	32.91	0.0064200	0.00583	0.542	0.04074	1.00356	0.8013
190	0.57926	38.52	2.185	33.09	0.0061599	0.00598	0.556	0.04347	1.00344	0.7943
195	0.56202	39.75	2.183	33.24	0.0059251	0.00612	0.569	0.04625	1.00334	0.7883
200	0.54591	40.96	2.182	33.38	0.0057116	0.00627	0.583	0.04908	1.00325	0.7830
205	0.53081	42.16	2.181	33.51	0.0055162	0.00641	0.596	0.05196	1.00316	0.7784
210	0.51660	43.35	2.180	33.62	0.0053365	0.00656	0.610	0.05490	1.00307	0.7743
215	0.50321	44.54	2.179	33.72	0.0051705	0.00671	0.624	0.05789	1.00299	0.7706
220	0.49056	45.72	2.179	33.81	0.0050163	0.00686	0.637	0.06094	1.00292	0.7674
225	0.47858	46.89	2.178	33.89	0.0048727	0.00700	0.651	0.06404	1.00285	0.7644
230	0.46722	48.06	2.177	33.96	0.0047385	0.00715	0.664	0.06720	1.00278	0.7618
235	0.45643	49.22	2.177	34.03	0.0046126	0.00730	0.678	0.07041	1.00271	0.7594
240	0.44615	50.37	2.176	34.09	0.0044943	0.00744	0.691	0.07368	1.00265	0.7572
245	0.43636	51.53	2.176	34.15	0.0043827	0.00759	0.705	0.07700	1.00259	0.7552
250	0.42702	52.68	2.175	34.20	0.0042773	0.00773	0.718	0.08038	1.00254	0.7534
255	0.41809	53.82	2.175	34.25	0.0041774	0.00788	0.732	0.08387	1.00249	0.7512
260	0.40954	54.96	2.175	34.29	0.0040827	0.00803	0.745	0.08741	1.00243	0.7492
265	0.40136	56.10	2.174	34.33	0.0039927	0.00818	0.758	0.09099	1.00239	0.7475
270	0.39351	57.24	2.174	34.37	0.0039071	0.00833	0.772	0.09462	1.00234	0.7460
275	0.38598	58.37	2.173	34.40	0.0038254	0.00847	0.785	0.09829	1.00229	0.7446
280	0.37874	59.50	2.173	34.44	0.0037474	0.00861	0.798	0.10200	1.00225	0.7434
285	0.37178	60.63	2.173	34.47	0.0036728	0.00876	0.811	0.10577	1.00221	0.7424
290	0.36508	61.76	2.173	34.49	0.0036015	0.00890	0.824	0.10958	1.00217	0.7414
295	0.35863	62.89	2.172	34.52	0.0035330	0.00904	0.837	0.11344	1.00213	0.7405
300	0.35240	64.01	2.172	34.55	0.0034674	0.00918	0.850	0.11736	1.00209	0.7396
310	0.34061	66.26	2.172	34.59	0.0033437	0.00946	0.875	0.12533	1.00202	0.7381
320	0.32960	68.50	2.171	34.63	0.0032292	0.00973	0.901	0.13350	1.00196	0.7368
330	0.31930	70.73	2.170	34.66	0.0031228	0.01001	0.926	0.14187	1.00190	0.7356
340	0.30964	72.96	2.170	34.69	0.0030236	0.01028	0.950	0.15044	1.00184	0.7345
350	0.30055	75.19	2.169	34.72	0.0029308	0.01054	0.975	0.15920	1.00179	0.7336
360	0.29200	77.42	2.169	34.75	0.0028439	0.01081	0.999	0.16815	1.00174	0.7327
370	0.28393	79.65	2.168	34.77	0.0027622	0.01107	1.023	0.17727	1.00169	0.7320
380	0.27630	81.88	2.167	34.79	0.0026853	0.01133	1.047	0.18658	1.00164	0.7313
390	0.26908	84.11	2.167	34.81	0.0026128	0.01159	1.071	0.19607	1.00160	0.7307
400	0.26223	86.34	2.166	34.82	0.0025442	0.01185	1.094	0.20574	1.00156	0.7302
410	0.25573	88.57	2.165	34.84	0.0024792	0.01211	1.117	0.21557	1.00152	0.7297
420	0.24954	90.81	2.163	34.85	0.0024176	0.01236	1.140	0.22558	1.00148	0.7293
430	0.24366	93.05	2.162	34.86	0.0023591	0.01261	1.163	0.23575	1.00145	0.7290
440	0.23804	95.29	2.161	34.87	0.0023035	0.01286	1.186	0.24609	1.00141	0.7287
450	0.23268	97.54	2.159	34.88	0.0022504	0.01310	1.208	0.25658	1.00138	0.7284
460	0.22756	99.79	2.158	34.89	0.0021999	0.01335	1.230	0.26722	1.00135	0.7282
470	0.22267	102.05	2.156	34.90	0.0021516	0.01359	1.252	0.27801	1.00132	0.7280
480	0.21798	104.32	2.154	34.91	0.0021054	0.01383	1.273	0.28894	1.00130	0.7279
490	0.21348	106.59	2.152	34.92	0.0020612	0.01407	1.295	0.30002	1.00127	0.7278
500	0.20917	108.87	2.150	34.92	0.0020189	0.01431	1.316	0.31123	1.00124	0.7278
510	0.20503	111.16	2.147	34.93	0.0019783	0.0145[illegible]	1.337	0.32255	1.00122	0.7279
520	0.20106	113.46	2.145	34.94	0.0019393	0.0147[illegible]	1.358	0.33403	1.00119	0.7280
530	0.19723	115.77	2.142	34.94	0.0019019	0.01501	1.379	0.34564	1.00117	0.7281
540	0.19355	118.09	2.139	34.95	0.0018659	0.01524	1.399	0.35737	1.00115	0.7282
550	0.19001	120.41	2.136	34.95	0.0018313	0.01547	1.420	0.36923	1.00113	0.7284
560	0.18659	122.75	2.133	34.96	0.0017979	0.01570	1.440	0.38120	1.00111	0.7287
570	0.18329	125.10	2.130	34.96	0.0017658	0.01592	1.460	0.39329	1.00109	0.7290
580	0.18011	127.46	2.126	34.96	0.0017348	0.01615	1.480	0.40549	1.00107	0.7293
590	0.17704	129.83	2.123	34.97	0.0017049	0.01637	1.499	0.41780	1.00105	0.7297
600	0.17408	132.21	2.119	34.97	0.0016760	0.01660	1.519	0.43023	1.00103	0.7301

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

40 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.888	0.01226	2092.97	317.9	-83.210	-83.119	0.50129	0.266	0.398	3806
100	0.01231	2052.02	312.4	-82.371	-82.279	0.50978	0.264	0.398	3782
105	0.01242	1956.96	299.7	-80.383	-80.291	0.52918	0.260	0.398	3724
110	0.01254	1864.51	287.3	-78.395	-78.303	0.54768	0.256	0.398	3665
115	0.01267	1774.61	275.4	-76.408	-76.314	0.56536	0.252	0.398	3604
120	0.01279	1687.20	263.8	-74.419	-74.325	0.58229	0.248	0.398	3542
125	0.01292	1602.21	252.6	-72.430	-72.334	0.59854	0.244	0.398	3479
130	0.01306	1519.59	241.8	-70.439	-70.342	0.61417	0.241	0.399	3414
135	0.01319	1439.27	231.3	-68.445	-68.347	0.62922	0.237	0.399	3348
140	0.01334	1361.18	221.1	-66.449	-66.350	0.64375	0.234	0.400	3281
145	0.01348	1285.27	211.3	-64.449	-64.349	0.65779	0.231	0.401	3213
150	0.01363	1211.46	201.7	-62.444	-62.343	0.67139	0.228	0.402	3143
155	0.01379	1139.70	192.5	-60.434	-60.331	0.68458	0.225	0.403	3072
160	0.01396	1069.92	183.5	-58.416	-58.313	0.69740	0.223	0.404	3000
165	0.01413	1002.04	174.9	-56.391	-56.286	0.70987	0.220	0.406	2927
170	0.01430	935.99	166.5	-54.356	-54.250	0.72203	0.218	0.408	2852
175	0.01449	871.72	158.3	-52.309	-52.202	0.73390	0.215	0.411	2776
180	0.01469	809.14	150.4	-50.249	-50.140	0.74552	0.213	0.414	2699
* 181.763	0.01476	787.46	147.6	-49.519	-49.409	0.74956	0.212	0.415	2671
* 181.763	1.41922	52.57	0.25	26.607	37.120	1.22542	0.163	0.245	605
185	1.45036	53.97	0.25	27.168	37.911	1.22975	0.163	0.243	611
190	1.49796	56.11	0.24	28.026	39.121	1.23620	0.162	0.241	622
195	1.54504	58.20	0.23	28.876	40.320	1.24243	0.161	0.239	631
200	1.59166	60.26	0.22	29.719	41.509	1.24845	0.161	0.237	641
205	1.63789	62.29	0.21	30.557	42.688	1.25427	0.160	0.235	650
210	1.68378	64.28	0.21	31.389	43.860	1.25992	0.160	0.234	660
215	1.72936	66.25	0.20	32.216	45.025	1.26541	0.160	0.232	669
220	1.77467	68.20	0.20	33.040	46.185	1.27074	0.159	0.231	677
225	1.81974	70.13	0.19	33.860	47.338	1.27592	0.159	0.230	686
230	1.86459	72.04	0.19	34.676	48.487	1.28097	0.159	0.229	695
235	1.90925	73.94	0.18	35.490	49.632	1.28590	0.158	0.229	703
240	1.95373	75.82	0.18	36.302	50.773	1.29070	0.158	0.228	711
245	1.99805	77.69	0.17	37.111	51.910	1.29539	0.158	0.227	719
250	2.04223	79.55	0.17	37.917	53.044	1.29997	0.158	0.227	727
255	2.08628	81.39	0.16	38.722	54.175	1.30445	0.158	0.226	735
260	2.13021	83.23	0.16	39.526	55.304	1.30883	0.157	0.225	743
265	2.17402	85.06	0.16	40.327	56.430	1.31312	0.157	0.225	751
270	2.21774	86.88	0.15	41.127	57.554	1.31733	0.157	0.225	758
275	2.26135	88.69	0.15	41.926	58.676	1.32144	0.157	0.224	766
280	2.30489	90.49	0.15	42.724	59.796	1.32548	0.157	0.224	773
285	2.34834	92.29	0.15	43.520	60.914	1.32944	0.157	0.223	780
290	2.39171	94.09	0.14	44.315	62.031	1.33332	0.157	0.223	788
295	2.43502	95.87	0.14	45.110	63.146	1.33713	0.157	0.223	795
300	2.47827	97.65	0.14	45.903	64.260	1.34088	0.157	0.223	802
310	2.56457	101.20	0.13	47.488	66.483	1.34817	0.157	0.222	816
320	2.65067	104.74	0.13	49.069	68.703	1.35522	0.156	0.222	829
330	2.73659	108.26	0.12	50.649	70.918	1.36203	0.156	0.221	843
340	2.82234	111.76	0.12	52.226	73.130	1.36864	0.156	0.221	856
350	2.90794	115.26	0.12	53.801	75.340	1.37504	0.156	0.221	869
360	2.99342	118.74	0.11	55.375	77.547	1.38126	0.156	0.221	882
370	3.07878	122.22	0.11	56.947	79.751	1.38730	0.156	0.220	894
380	3.16404	125.68	0.11	58.518	81.954	1.39317	0.156	0.220	906
390	3.24921	129.14	0.10	60.089	84.155	1.39889	0.156	0.220	919
400	3.33429	132.59	0.10	61.659	86.355	1.40446	0.156	0.220	930
410	3.41930	136.04	0.10	63.228	88.554	1.40989	0.156	0.220	942
420	3.50424	139.48	0.10	64.797	90.753	1.41519	0.156	0.220	954
430	3.58911	142.92	0.09	66.366	92.950	1.42036	0.156	0.220	965
440	3.67393	146.35	0.09	67.935	95.147	1.42541	0.156	0.220	977
450	3.75869	149.78	0.09	69.504	97.345	1.43035	0.156	0.220	988
460	3.84341	153.20	0.09	71.074	99.542	1.43518	0.156	0.220	999
470	3.92808	156.62	0.09	72.644	101.739	1.43990	0.156	0.220	1010
480	4.01271	160.03	0.08	74.215	103.937	1.44453	0.157	0.220	1020
490	4.09730	163.45	0.08	75.787	106.135	1.44906	0.157	0.220	1031
500	4.18185	166.86	0.08	77.360	108.334	1.45350	0.157	0.220	1041
510	4.26638	170.27	0.08	78.934	110.535	1.45786	0.157	0.220	1052
520	4.35087	173.67	0.08	80.509	112.736	1.46214	0.157	0.220	1062
530	4.43534	177.08	0.08	82.086	114.938	1.46633	0.157	0.220	1072
540	4.51978	180.48	0.07	83.665	117.142	1.47045	0.158	0.220	1082
550	4.60419	183.88	0.07	85.245	119.348	1.47450	0.158	0.221	1092
560	4.68858	187.27	0.07	86.827	121.555	1.47847	0.158	0.221	1101
570	4.77295	190.67	0.07	88.411	123.764	1.48238	0.158	0.221	1111
580	4.85730	194.06	0.07	89.998	125.975	1.48623	0.158	0.221	1121
590	4.94163	197.46	0.07	91.586	128.189	1.49001	0.159	0.221	1130
600	5.02594	200.85	0.07	93.177	130.404	1.49374	0.159	0.222	1139

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

40 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.888	81.57760	213.66	14.633	170739.43	0.0018617	0.11158	41.677	0.00344	1.56877	5.3486
100	81.25652	212.30	14.542	166740.23	0.0018734	0.11096	40.003	0.00343	1.56619	5.1618
105	80.49316	209.04	14.321	157522.11	0.0019024	0.10944	36.325	0.00342	1.56006	4.7517
110	79.72509	205.72	14.092	148648.45	0.0019331	0.10783	33.017	0.00340	1.55392	4.3834
115	78.95187	202.35	13.856	140108.94	0.0019657	0.10616	30.042	0.00338	1.54774	4.0524
120	78.17299	198.93	13.614	131893.40	0.0020004	0.10441	27.366	0.00336	1.54154	3.7549
125	77.38789	195.44	13.366	123991.83	0.0020376	0.10260	24.960	0.00333	1.53531	3.4875
130	76.59595	191.88	13.112	116394.37	0.0020773	0.10074	22.795	0.00330	1.52904	3.2471
135	75.79649	188.25	12.854	109091.35	0.0021201	0.09882	20.849	0.00327	1.52272	3.0313
140	74.98872	184.55	12.590	102073.23	0.0021662	0.09686	19.097	0.00323	1.51636	2.8376
145	74.17177	180.77	12.323	95330.66	0.0022161	0.09486	17.522	0.00319	1.50994	2.6641
150	73.34464	176.91	12.052	88854.44	0.0022703	0.09282	16.105	0.00315	1.50347	2.5089
155	72.50623	172.96	11.778	82635.54	0.0023294	0.09074	14.830	0.00311	1.49692	2.3704
160	71.65525	168.91	11.502	76669.09	0.0023941	0.08863	13.683	0.00306	1.49029	2.2474
165	70.79025	164.77	11.222	70934.39	0.0024652	0.08650	12.650	0.00301	1.48357	2.1385
170	69.90952	160.51	10.940	65434.93	0.0025439	0.08434	11.720	0.00295	1.47675	2.0427
175	69.01111	156.14	10.656	60158.35	0.0026314	0.08215	10.882	0.00290	1.46982	1.9593
180	68.09273	151.64	10.369	55096.44	0.0027293	0.07994	10.127	0.00284	1.46275	1.8875
* 181.763	67.76364	150.02	10.268	53361.24	0.0027667	0.07915	9.879	0.00281	1.46023	1.8649
* 181.763	0.70461	36.04	2.191	37.04	0.0068067	0.00579	0.538	0.03349	1.00419	0.8209
185	0.68948	36.86	2.189	37.21	0.0066042	0.00588	0.547	0.03504	1.00410	0.8145
190	0.66757	38.12	2.188	37.46	0.0063187	0.00603	0.560	0.03747	1.00397	0.8059
195	0.64723	39.37	2.186	37.67	0.0060632	0.00617	0.573	0.03994	1.00385	0.7986
200	0.62827	40.60	2.185	37.86	0.0058326	0.00632	0.587	0.04245	1.00374	0.7922
205	0.61054	41.82	2.184	38.03	0.0056231	0.00646	0.600	0.04501	1.00363	0.7866
210	0.59390	43.02	2.183	38.18	0.0054314	0.00661	0.614	0.04760	1.00353	0.7817
215	0.57825	44.22	2.182	38.31	0.0052551	0.00675	0.627	0.05024	1.00344	0.7774
220	0.56349	45.42	2.181	38.43	0.0050922	0.00690	0.641	0.05293	1.00335	0.7736
225	0.54953	46.60	2.181	38.54	0.0049411	0.00704	0.654	0.05567	1.00327	0.7701
230	0.53631	47.78	2.180	38.64	0.0048003	0.00719	0.668	0.05845	1.00319	0.7670
235	0.52377	48.95	2.179	38.73	0.0046687	0.00733	0.681	0.06128	1.00311	0.7642
240	0.51184	50.12	2.179	38.81	0.0045453	0.00748	0.695	0.06415	1.00304	0.7617
245	0.50049	51.28	2.178	38.88	0.0044292	0.00763	0.708	0.06708	1.00298	0.7594
250	0.48966	52.44	2.178	38.95	0.0043199	0.00777	0.722	0.07005	1.00291	0.7572
255	0.47932	53.59	2.177	39.01	0.0042166	0.00792	0.735	0.07313	1.00285	0.7547
260	0.46944	54.74	2.177	39.07	0.0041188	0.00807	0.748	0.07624	1.00279	0.7524
265	0.45998	55.89	2.176	39.12	0.0040260	0.00822	0.761	0.07939	1.00273	0.7505
270	0.45091	57.03	2.176	39.17	0.0039378	0.00836	0.774	0.08258	1.00268	0.7487
275	0.44221	58.17	2.176	39.22	0.0038538	0.00851	0.788	0.08581	1.00263	0.7472
280	0.43386	59.31	2.175	39.26	0.0037738	0.00865	0.801	0.08907	1.00258	0.7458
285	0.42583	60.44	2.175	39.30	0.0036974	0.00879	0.814	0.09238	1.00253	0.7446
290	0.41811	61.58	2.175	39.34	0.0036243	0.00893	0.827	0.09572	1.00249	0.7435
295	0.41067	62.71	2.174	39.37	0.0035543	0.00907	0.839	0.09911	1.00244	0.7424
300	0.40351	63.84	2.174	39.40	0.0034873	0.00921	0.852	0.10254	1.00240	0.7415
310	0.38993	66.09	2.173	39.46	0.0033612	0.00949	0.878	0.10954	1.00232	0.7398
320	0.37726	68.34	2.173	39.51	0.0032446	0.00976	0.903	0.11671	1.00224	0.7383
330	0.36542	70.58	2.172	39.56	0.0031364	0.01003	0.928	0.12404	1.00217	0.7370
340	0.35432	72.82	2.172	39.60	0.0030356	0.01030	0.953	0.13155	1.00211	0.7358
350	0.34389	75.06	2.171	39.64	0.0029416	0.01057	0.977	0.13923	1.00204	0.7347
360	0.33407	77.30	2.170	39.67	0.0028535	0.01084	1.001	0.14707	1.00199	0.7338
370	0.32480	79.53	2.170	39.70	0.0027709	0.01110	1.025	0.15507	1.00193	0.7330
380	0.31605	81.76	2.169	39.72	0.0026931	0.01136	1.049	0.16322	1.00188	0.7323
390	0.30777	84.00	2.168	39.75	0.0026198	0.01162	1.073	0.17154	1.00183	0.7316
400	0.29991	86.23	2.167	39.77	0.0025506	0.01187	1.096	0.18000	1.00178	0.7310
410	0.29246	88.47	2.166	39.79	0.0024850	0.01213	1.119	0.18862	1.00174	0.7305
420	0.28537	90.71	2.165	39.80	0.0024229	0.01238	1.142	0.19739	1.00170	0.7300
430	0.27862	92.95	2.164	39.82	0.0023639	0.01263	1.165	0.20630	1.00166	0.7296
440	0.27219	95.20	2.162	39.83	0.0023079	0.01288	1.187	0.21534	1.00162	0.7293
450	0.26605	97.45	2.161	39.85	0.0022545	0.01312	1.210	0.22453	1.00158	0.7290
460	0.26019	99.71	2.159	39.86	0.0022036	0.01337	1.232	0.23385	1.00155	0.7287
470	0.25458	101.97	2.157	39.87	0.0021550	0.01361	1.253	0.24330	1.00151	0.7285
480	0.24921	104.24	2.155	39.88	0.0021086	0.01385	1.275	0.25287	1.00148	0.7284
490	0.24406	106.52	2.153	39.89	0.0020641	0.01409	1.296	0.26257	1.00145	0.7283
500	0.23913	108.80	2.151	39.90	0.0020216	0.01433	1.318	0.27239	1.00142	0.7283
510	0.23439	111.10	2.149	39.91	0.0019808	0.01456	1.339	0.28230	1.00139	0.7283
520	0.22984	113.40	2.146	39.92	0.0019417	0.01479	1.359	0.29235	1.00137	0.7284
530	0.22546	115.71	2.143	39.92	0.0019041	0.01503	1.380	0.30252	1.00134	0.7285
540	0.22125	118.03	2.140	39.93	0.0018679	0.01526	1.401	0.31279	1.00131	0.7286
550	0.21719	120.36	2.137	39.94	0.0018332	0.01549	1.421	0.32317	1.00129	0.7288
560	0.21328	122.69	2.134	39.94	0.0017997	0.01571	1.441	0.33365	1.00127	0.7290
570	0.20951	125.04	2.131	39.95	0.0017674	0.01594	1.461	0.34423	1.00125	0.7293
580	0.20588	127.41	2.127	39.95	0.0017363	0.01616	1.481	0.35491	1.00122	0.7296
590	0.20236	129.78	2.124	39.96	0.0017063	0.01639	1.501	0.36570	1.00120	0.7300
600	0.19897	132.16	2.120	39.96	0.0016774	0.01661	1.520	0.37657	1.00118	0.7304

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

45 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.895	0.01226	2093.28	317.9	-83.209	-83.107	0.50130	0.266	0.398	3806
100	0.01231	2052.48	312.4	-82.373	-82.270	0.50976	0.264	0.398	3782
105	0.01242	1957.42	299.7	-80.385	-80.282	0.52916	0.260	0.398	3724
110	0.01254	1864.98	287.4	-78.398	-78.293	0.54766	0.256	0.398	3665
115	0.01267	1775.09	275.4	-76.410	-76.305	0.56534	0.252	0.398	3605
120	0.01279	1687.68	263.9	-74.422	-74.316	0.58227	0.248	0.398	3543
125	0.01292	1602.71	252.7	-72.433	-72.325	0.59852	0.244	0.398	3479
130	0.01305	1520.09	241.8	-70.442	-70.333	0.61414	0.241	0.399	3415
135	0.01319	1439.78	231.3	-68.449	-68.339	0.62920	0.237	0.399	3349
140	0.01333	1361.70	221.1	-66.453	-66.341	0.64372	0.234	0.400	3281
145	0.01348	1285.80	211.3	-64.453	-64.340	0.65776	0.231	0.401	3213
150	0.01363	1212.01	201.8	-62.448	-62.335	0.67136	0.228	0.402	3143
155	0.01379	1140.26	192.5	-60.438	-60.323	0.68455	0.225	0.403	3073
160	0.01395	1070.48	183.6	-58.421	-58.305	0.69737	0.223	0.404	3001
165	0.01413	1002.61	174.9	-56.396	-56.279	0.70984	0.220	0.406	2927
170	0.01430	936.59	166.5	-54.362	-54.242	0.72199	0.218	0.408	2853
175	0.01449	872.33	158.3	-52.315	-52.195	0.73387	0.215	0.411	2777
180	0.01468	809.76	150.4	-50.256	-50.133	0.74548	0.213	0.414	2700
* 184.382	0.01486	756.26	143.7	-48.437	-48.313	0.75547	0.211	0.417	2631
* 184.382	1.27163	52.61	0.28	26.860	37.456	1.22047	0.164	0.248	607
185	1.27700	52.87	0.28	26.968	37.609	1.22131	0.164	0.248	608
190	1.32011	55.08	0.27	27.840	38.840	1.22767	0.163	0.245	619
195	1.36257	57.24	0.26	28.702	40.057	1.23419	0.162	0.242	629
200	1.40475	59.36	0.25	29.556	41.261	1.24029	0.162	0.240	639
205	1.44641	61.43	0.24	30.402	42.455	1.24619	0.161	0.238	648
210	1.48771	63.48	0.24	31.243	43.640	1.25190	0.161	0.236	657
215	1.52869	65.49	0.23	32.078	44.816	1.25744	0.160	0.235	667
220	1.56939	67.48	0.22	32.908	45.986	1.26281	0.160	0.233	676
225	1.60985	69.44	0.22	33.735	47.149	1.26804	0.159	0.232	684
230	1.65008	71.39	0.21	34.557	48.307	1.27313	0.159	0.231	693
235	1.69011	73.31	0.21	35.376	49.460	1.27809	0.159	0.230	701
240	1.72996	75.22	0.20	36.192	50.608	1.28292	0.159	0.229	710
245	1.76965	77.12	0.20	37.006	51.752	1.28764	0.158	0.228	718
250	1.80919	79.00	0.19	37.817	52.892	1.29225	0.158	0.228	726
255	1.84859	80.87	0.19	38.626	54.030	1.29675	0.158	0.227	734
260	1.88788	82.72	0.18	39.432	55.164	1.30116	0.158	0.227	742
265	1.92705	84.57	0.18	40.237	56.295	1.30547	0.158	0.226	750
270	1.96611	86.41	0.17	41.041	57.424	1.30969	0.157	0.226	757
275	2.00508	88.24	0.17	41.842	58.550	1.31382	0.157	0.225	765
280	2.04396	90.06	0.17	42.643	59.675	1.31787	0.157	0.225	772
285	2.08277	91.88	0.16	43.442	60.797	1.32185	0.157	0.224	780
290	2.12149	93.68	0.16	44.240	61.917	1.32574	0.157	0.224	787
295	2.16015	95.49	0.16	45.036	63.036	1.32957	0.157	0.224	794
300	2.19874	97.28	0.16	45.832	64.154	1.33332	0.157	0.223	801
310	2.27574	100.86	0.15	47.420	66.384	1.34064	0.157	0.223	815
320	2.35253	104.41	0.14	49.006	68.609	1.34770	0.157	0.222	829
330	2.42913	107.95	0.14	50.588	70.830	1.35453	0.156	0.222	842
340	2.50557	111.48	0.14	52.168	73.047	1.36115	0.156	0.222	855
350	2.58186	114.99	0.13	53.746	75.260	1.36757	0.156	0.221	868
360	2.65803	118.49	0.13	55.322	77.471	1.37380	0.156	0.221	881
370	2.73408	121.98	0.12	56.897	79.679	1.37985	0.156	0.221	894
380	2.81002	125.46	0.12	58.470	81.886	1.38573	0.156	0.221	906
390	2.88587	128.93	0.12	60.043	84.090	1.39146	0.156	0.220	918
400	2.96164	132.40	0.11	61.614	86.293	1.39704	0.156	0.220	930
410	3.03733	135.86	0.11	63.185	88.495	1.40247	0.156	0.220	942
420	3.11295	139.31	0.11	64.756	90.695	1.40777	0.156	0.220	954
430	3.18851	142.76	0.11	66.326	92.895	1.41295	0.156	0.220	965
440	3.26401	146.20	0.10	67.896	95.095	1.41801	0.156	0.220	976
450	3.33946	149.63	0.10	69.467	97.294	1.42295	0.156	0.220	988
460	3.41486	153.06	0.10	71.038	99.493	1.42778	0.156	0.220	999
470	3.49022	156.49	0.10	72.609	101.692	1.43251	0.156	0.220	1009
480	3.56553	159.92	0.09	74.181	103.892	1.43714	0.157	0.220	1020
490	3.64081	163.34	0.09	75.754	106.092	1.44168	0.157	0.220	1031
500	3.71605	166.76	0.09	77.328	108.293	1.44613	0.157	0.220	1041
510	3.79126	170.17	0.09	78.902	110.494	1.45049	0.157	0.220	1052
520	3.86643	173.58	0.09	80.479	112.697	1.45476	0.157	0.220	1062
530	3.94158	176.99	0.09	82.056	114.901	1.45896	0.157	0.220	1072
540	4.01671	180.40	0.08	83.635	117.106	1.46308	0.158	0.221	1082
550	4.09180	183.80	0.08	85.216	119.313	1.46713	0.158	0.221	1092
560	4.16688	187.21	0.08	86.799	121.521	1.47111	0.158	0.221	1101
570	4.24193	190.61	0.08	88.384	123.731	1.47502	0.158	0.221	1111
580	4.31695	194.01	0.08	89.971	125.943	1.47887	0.158	0.221	1121
590	4.39198	197.40	0.08	91.560	128.158	1.48265	0.159	0.222	1130
600	4.46697	200.80	0.08	93.152	130.374	1.48638	0.159	0.222	1139

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

45 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.895	81.57891	213.69	14.633	170767.54	0.0018614	0.11158	41.684	0.00344	1.56878	5.3493
100	81.25896	212.33	14.542	166782.05	0.0018731	0.11097	40.015	0.00343	1.56621	5.1630
105	80.49571	209.07	14.321	157564.18	0.0019020	0.10944	36.337	0.00342	1.56008	4.7529
110	79.72778	205.76	14.092	148690.77	0.0019327	0.10784	33.028	0.00340	1.55394	4.3845
115	78.95469	202.39	13.857	140151.52	0.0019652	0.10616	30.052	0.00338	1.54777	4.0534
120	78.17595	198.96	13.614	131936.25	0.0020000	0.10442	27.376	0.00336	1.54157	3.7558
125	77.39101	195.48	13.366	124034.96	0.0020370	0.10261	24.969	0.00333	1.53533	3.4883
130	76.59924	191.92	13.113	116437.80	0.0020768	0.10074	22.804	0.00330	1.52906	3.2479
135	75.79996	188.30	12.854	109135.08	0.0021195	0.09883	20.857	0.00327	1.52275	3.0320
140	74.99239	184.60	12.591	102117.28	0.0021656	0.09687	19.105	0.00323	1.51639	2.8383
145	74.17566	180.82	12.324	95375.05	0.0022154	0.09487	17.529	0.00319	1.50997	2.6647
150	73.34877	176.96	12.053	88899.18	0.0022695	0.09283	16.112	0.00315	1.50350	2.5094
155	72.51062	173.01	11.779	82680.65	0.0023285	0.09075	14.837	0.00311	1.49695	2.3709
160	71.65993	168.97	11.502	76710.60	0.0023931	0.08865	13.689	0.00306	1.49033	2.2478
165	70.79523	164.82	11.223	70980.33	0.0024641	0.08651	12.656	0.00301	1.48361	2.1389
170	69.91486	160.57	10.941	65481.33	0.0025426	0.08435	11.725	0.00296	1.47679	2.0431
175	69.01684	156.20	10.657	60205.23	0.0026300	0.08216	10.887	0.00290	1.46986	1.9596
180	68.09890	151.70	10.370	55143.85	0.0027277	0.07995	10.132	0.00284	1.46280	1.8877
* 184.382	67.27593	147.65	10.117	50878.37	0.0028234	0.07800	9.531	0.00278	1.45649	1.8339
* 184.382	0.78639	36.28	2.193	41.37	0.0068416	0.00592	0.550	0.03032	1.00468	0.8301
185	0.78309	36.43	2.192	41.40	0.0068014	0.00594	0.551	0.03059	1.00466	0.8287
190	0.75751	37.72	2.191	41.72	0.0064874	0.00608	0.565	0.03279	1.00451	0.8183
195	0.73385	38.98	2.189	42.01	0.0062090	0.00622	0.578	0.03502	1.00437	0.8095
200	0.71187	40.23	2.188	42.26	0.0059597	0.00636	0.591	0.03728	1.00423	0.8019
205	0.69137	41.47	2.187	42.47	0.0057346	0.00651	0.604	0.03958	1.00411	0.7953
210	0.67217	42.69	2.186	42.67	0.0055300	0.00665	0.618	0.04191	1.00400	0.7895
215	0.65415	43.91	2.185	42.84	0.0053428	0.00680	0.631	0.04428	1.00389	0.7845
220	0.63719	45.11	2.184	43.00	0.0051706	0.00694	0.645	0.04669	1.00379	0.7800
225	0.62118	46.31	2.183	43.14	0.0050114	0.00708	0.658	0.04915	1.00369	0.7760
230	0.60603	47.50	2.182	43.26	0.0048637	0.00723	0.671	0.05164	1.00360	0.7724
235	0.59168	48.68	2.182	43.38	0.0047261	0.00737	0.685	0.05417	1.00352	0.7692
240	0.57805	49.86	2.181	43.48	0.0045974	0.00752	0.698	0.05674	1.00344	0.7663
245	0.56508	51.03	2.180	43.58	0.0044768	0.00766	0.711	0.05935	1.00336	0.7636
250	0.55273	52.20	2.180	43.66	0.0043634	0.00781	0.725	0.06202	1.00329	0.7611
255	0.54095	53.36	2.179	43.75	0.0042564	0.00796	0.738	0.06477	1.00322	0.7588
260	0.52970	54.52	2.179	43.82	0.0041554	0.00811	0.751	0.06755	1.00315	0.7557
265	0.51893	55.67	2.178	43.89	0.0040597	0.00825	0.764	0.07037	1.00309	0.7535
270	0.50862	56.82	2.178	43.95	0.0039689	0.00840	0.777	0.07321	1.00302	0.7515
275	0.49873	57.97	2.178	44.01	0.0038827	0.00854	0.790	0.07609	1.00297	0.7498
280	0.48925	59.11	2.177	44.06	0.0038005	0.00868	0.803	0.07901	1.00291	0.7482
285	0.48013	60.25	2.177	44.11	0.0037222	0.00883	0.816	0.08196	1.00285	0.7468
290	0.47137	61.39	2.177	44.16	0.0036474	0.00897	0.829	0.08494	1.00280	0.7456
295	0.46293	62.53	2.176	44.20	0.0035759	0.00910	0.842	0.08796	1.00275	0.7445
300	0.45481	63.66	2.176	44.24	0.0035074	0.00924	0.855	0.09102	1.00270	0.7434
310	0.43942	65.93	2.175	44.32	0.0033787	0.00952	0.880	0.09726	1.00261	0.7415
320	0.42507	68.18	2.175	44.38	0.0032600	0.00979	0.905	0.10364	1.00253	0.7398
330	0.41167	70.44	2.174	44.44	0.0031500	0.01006	0.930	0.11018	1.00245	0.7384
340	0.39911	72.68	2.173	44.49	0.0030478	0.01033	0.955	0.11686	1.00237	0.7371
350	0.38732	74.93	2.173	44.54	0.0029524	0.01060	0.979	0.12370	1.00230	0.7359
360	0.37622	77.17	2.172	44.58	0.0028632	0.01086	1.004	0.13068	1.00224	0.7349
370	0.36575	79.41	2.171	44.62	0.0027796	0.01112	1.028	0.13780	1.00217	0.7340
380	0.35587	81.65	2.170	44.65	0.0027009	0.01138	1.051	0.14506	1.00212	0.7332
390	0.34652	83.89	2.170	44.68	0.0026269	0.01164	1.075	0.15245	1.00206	0.7325
400	0.33765	86.13	2.169	44.70	0.0025570	0.01190	1.098	0.15999	1.00201	0.7318
410	0.32924	88.37	2.168	44.73	0.0024909	0.01215	1.121	0.16766	1.00196	0.7312
420	0.32124	90.61	2.166	44.75	0.0024282	0.01240	1.144	0.17546	1.00191	0.7307
430	0.31363	92.86	2.165	44.77	0.0023688	0.01265	1.167	0.18338	1.00186	0.7303
440	0.30637	95.11	2.164	44.79	0.0023123	0.01290	1.189	0.19143	1.00182	0.7299
450	0.29945	97.37	2.162	44.81	0.0022585	0.01314	1.211	0.19961	1.00178	0.7296
460	0.29284	99.63	2.160	44.82	0.0022073	0.01339	1.233	0.20790	1.00174	0.7293
470	0.28652	101.89	2.159	44.84	0.0021584	0.01363	1.255	0.21630	1.00170	0.7291
480	0.28046	104.17	2.157	44.85	0.0021117	0.01387	1.277	0.22482	1.00167	0.7289
490	0.27466	106.45	2.154	44.86	0.0020671	0.01411	1.298	0.23344	1.00163	0.7288
500	0.26910	108.73	2.152	44.87	0.0020243	0.01434	1.319	0.24217	1.00160	0.7287
510	0.26376	111.03	2.150	44.88	0.0019833	0.01458	1.340	0.25099	1.00157	0.7288
520	0.25864	113.33	2.147	44.89	0.0019440	0.01481	1.361	0.25993	1.00154	0.7288
530	0.25371	115.64	2.144	44.90	0.0019062	0.01504	1.382	0.26897	1.00151	0.7288
540	0.24896	117.97	2.142	44.91	0.0018699	0.01527	1.402	0.27811	1.00148	0.7290
550	0.24439	120.30	2.139	44.92	0.0018350	0.01550	1.422	0.28734	1.00145	0.7291
560	0.23999	122.64	2.135	44.93	0.0018014	0.01573	1.442	0.29666	1.00143	0.7293
570	0.23574	124.99	2.132	44.93	0.0017691	0.01595	1.462	0.30608	1.00140	0.7296
580	0.23164	127.35	2.129	44.94	0.0017379	0.01618	1.482	0.31558	1.00138	0.7299
590	0.22769	129.73	2.125	44.95	0.0017078	0.01640	1.502	0.32517	1.00135	0.7303
600	0.22387	132.11	2.121	44.95	0.0016787	0.01662	1.521	0.33484	1.00133	0.7307

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

50 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.903	0.01226	2093.59	317.9	-83.209	-83.095	0.50130	0.266	0.398	3806
100	0.01231	2052.93	312.4	-82.375	-82.261	0.50973	0.264	0.398	3783
105	0.01242	1957.88	299.7	-80.388	-80.273	0.52914	0.260	0.398	3725
110	0.01254	1865.45	287.4	-78.400	-78.284	0.54764	0.256	0.398	3666
115	0.01267	1775.56	275.5	-76.413	-76.296	0.56531	0.252	0.398	3605
120	0.01279	1688.17	263.9	-74.425	-74.307	0.58224	0.248	0.398	3543
125	0.01292	1603.20	252.7	-72.436	-72.316	0.59849	0.244	0.398	3480
130	0.01305	1520.59	241.8	-70.445	-70.324	0.61412	0.241	0.399	3415
135	0.01319	1440.29	231.3	-68.452	-68.330	0.62917	0.237	0.399	3349
140	0.01333	1362.22	221.2	-66.456	-66.333	0.64370	0.234	0.400	3282
145	0.01348	1286.33	211.3	-64.457	-64.332	0.65774	0.231	0.401	3214
150	0.01363	1212.55	201.8	-62.453	-62.326	0.67133	0.228	0.402	3144
155	0.01379	1140.81	192.6	-60.443	-60.315	0.68452	0.225	0.403	3073
160	0.01395	1071.05	183.6	-58.426	-58.297	0.69734	0.223	0.404	3001
165	0.01412	1003.19	174.9	-56.402	-56.271	0.70980	0.220	0.406	2928
170	0.01430	937.18	166.5	-54.367	-54.235	0.72196	0.218	0.408	2854
175	0.01449	872.93	158.4	-52.322	-52.187	0.73383	0.215	0.411	2778
180	0.01468	810.38	150.5	-50.262	-50.126	0.74544	0.213	0.414	2700
185	0.01489	749.46	142.8	-48.187	-48.049	0.75683	0.211	0.417	2622
* 186.792	0.01497	727.99	140.0	-47.438	-47.300	0.76086	0.210	0.419	2593
* 186.792	1.15233	52.59	0.31	27.082	37.751	1.21602	0.165	0.251	609
190	1.17764	54.03	0.31	27.649	38.553	1.22029	0.164	0.249	616
195	1.21661	56.26	0.29	28.524	39.788	1.22671	0.163	0.246	626
200	1.25508	58.44	0.28	29.389	41.009	1.23289	0.163	0.243	636
205	1.29311	60.57	0.27	30.246	42.218	1.23886	0.162	0.241	646
210	1.33076	62.66	0.27	31.095	43.416	1.24463	0.161	0.239	655
215	1.36808	64.72	0.26	31.938	44.604	1.25023	0.161	0.237	665
220	1.40511	66.75	0.25	32.775	45.785	1.25565	0.160	0.235	674
225	1.44188	68.75	0.24	33.608	46.958	1.26093	0.160	0.234	683
230	1.47842	70.73	0.24	34.437	48.125	1.26605	0.160	0.233	691
235	1.51475	72.68	0.23	35.261	49.286	1.27105	0.159	0.232	700
240	1.55091	74.62	0.22	36.082	50.442	1.27591	0.159	0.231	708
245	1.58689	76.54	0.22	36.900	51.593	1.28066	0.159	0.230	717
250	1.62272	78.45	0.21	37.716	52.740	1.28530	0.158	0.229	725
255	1.65842	80.34	0.21	38.528	53.883	1.28982	0.158	0.228	733
260	1.69399	82.22	0.20	39.339	55.023	1.29425	0.158	0.228	741
265	1.72944	84.09	0.20	40.147	56.159	1.29858	0.158	0.227	748
270	1.76480	85.94	0.19	40.954	57.293	1.30282	0.158	0.226	756
275	1.80005	87.79	0.19	41.758	58.424	1.30697	0.158	0.226	764
280	1.83521	89.63	0.19	42.561	59.553	1.31104	0.157	0.226	771
285	1.87030	91.46	0.18	43.363	60.679	1.31503	0.157	0.225	779
290	1.90530	93.28	0.18	44.163	61.804	1.31894	0.157	0.225	786
295	1.94024	95.10	0.18	44.962	62.926	1.32277	0.157	0.224	793
300	1.97510	96.91	0.17	45.760	64.047	1.32654	0.157	0.224	800
310	2.04466	100.51	0.17	47.353	66.284	1.33387	0.157	0.223	814
320	2.11401	104.09	0.16	48.942	68.515	1.34096	0.157	0.223	828
330	2.18316	107.65	0.16	50.527	70.741	1.34781	0.157	0.222	842
340	2.25215	111.19	0.15	52.110	72.962	1.35444	0.156	0.222	855
350	2.32100	114.72	0.15	53.691	75.180	1.36087	0.156	0.222	868
360	2.38971	118.24	0.14	55.270	77.395	1.36711	0.156	0.221	881
370	2.45831	121.75	0.14	56.847	79.607	1.37317	0.156	0.221	893
380	2.52680	125.24	0.13	58.422	81.817	1.37906	0.156	0.221	906
390	2.59521	128.73	0.13	59.996	84.025	1.38480	0.156	0.221	918
400	2.66352	132.20	0.13	61.570	86.230	1.39038	0.156	0.221	930
410	2.73176	135.67	0.12	63.142	88.435	1.39582	0.156	0.220	942
420	2.79993	139.14	0.12	64.715	90.638	1.40113	0.156	0.220	953
430	2.86804	142.59	0.12	66.286	92.841	1.40632	0.156	0.220	965
440	2.93609	146.04	0.12	67.858	95.042	1.41138	0.156	0.220	976
450	3.00408	149.49	0.11	69.430	97.244	1.41632	0.156	0.220	987
460	3.07203	152.93	0.11	71.002	99.445	1.42116	0.156	0.220	998
470	3.13993	156.37	0.11	72.574	101.646	1.42590	0.157	0.220	1009
480	3.20779	159.80	0.11	74.147	103.847	1.43053	0.157	0.220	1020
490	3.27562	163.23	0.10	75.721	106.049	1.43507	0.157	0.220	1031
500	3.34340	166.65	0.10	77.295	108.251	1.43952	0.157	0.220	1041
510	3.41116	170.07	0.10	78.871	110.454	1.44388	0.157	0.220	1052
520	3.47888	173.49	0.10	80.448	112.658	1.44816	0.157	0.220	1062
530	3.54658	176.91	0.10	82.026	114.863	1.45236	0.157	0.221	1072
540	3.61425	180.32	0.09	83.606	117.070	1.45649	0.158	0.221	1082
550	3.68189	183.73	0.09	85.188	119.277	1.46054	0.158	0.221	1092
560	3.74952	187.14	0.09	86.771	121.487	1.46452	0.158	0.221	1102
570	3.81712	190.55	0.09	88.357	123.698	1.46843	0.158	0.221	1111
580	3.88470	193.95	0.09	89.945	125.912	1.47228	0.158	0.221	1121
590	3.95226	197.35	0.09	91.534	128.127	1.47607	0.159	0.222	1130
600	4.01980	200.75	0.08	93.127	130.345	1.47979	0.159	0.222	1140

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

50 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.903	81.58022	213.71	14.633	170795.65	0.0018611	0.11159	41.691	0.00344	1.56879	5.3499
100	81.26139	212.36	14.542	166823.87	0.0018728	0.11097	40.028	0.00343	1.56623	5.1642
105	80.49827	209.10	14.321	157606.24	0.0019016	0.10945	36.348	0.00342	1.56010	4.7540
110	79.73046	205.79	14.093	148733.08	0.0019323	0.10785	33.039	0.00340	1.55396	4.3855
115	78.95750	202.43	13.857	140194.09	0.0019648	0.10617	30.063	0.00338	1.54779	4.0544
120	78.17891	199.00	13.615	131979.09	0.0019995	0.10442	27.386	0.00336	1.54159	3.7567
125	77.39413	195.52	13.366	124078.08	0.0020365	0.10262	24.978	0.00333	1.53536	3.4891
130	76.60253	191.96	13.113	116481.21	0.0020762	0.10075	22.812	0.00330	1.52909	3.2487
135	75.80344	188.34	12.854	109178.80	0.0021189	0.09884	20.865	0.00327	1.52278	3.0327
140	74.99606	184.64	12.591	102161.33	0.0021649	0.09688	19.113	0.00323	1.51642	2.8390
145	74.17954	180.87	12.324	95419.43	0.0022147	0.09488	17.537	0.00319	1.51001	2.6653
150	73.35289	177.01	12.053	88943.92	0.0022687	0.09284	16.119	0.00315	1.50353	2.5100
155	72.51500	173.06	11.779	82725.76	0.0023276	0.09076	14.843	0.00311	1.49698	2.3714
160	71.66460	169.02	11.503	76756.11	0.0023921	0.08866	13.695	0.00306	1.49036	2.2483
165	70.80022	164.88	11.223	71026.26	0.0024630	0.08653	12.661	0.00301	1.48365	2.1393
170	69.92019	160.63	10.942	65527.71	0.0025414	0.08436	11.731	0.00296	1.47684	2.0434
175	69.02257	156.26	10.658	60252.10	0.0026286	0.08218	10.892	0.00290	1.46991	1.9599
180	68.10508	151.77	10.371	55191.25	0.0027261	0.07997	10.137	0.00284	1.46285	1.8880
185	67.16501	147.14	10.083	50337.16	0.0028359	0.07774	9.455	0.00277	1.45564	1.8271
* 186.792	66.82191	145.45	9.978	48645.83	0.0028788	0.07693	9.227	0.00275	1.45301	1.8079
* 186.792	0.86781	36.48	2.195	45.64	0.0068819	0.00604	0.561	0.02772	1.00516	0.8392
190	0.84916	37.31	2.193	45.88	0.0066670	0.00613	0.569	0.02902	1.00505	0.8315
195	0.82195	38.60	2.192	46.25	0.0063631	0.00627	0.582	0.03106	1.00489	0.8210
200	0.79676	39.87	2.190	46.56	0.0060932	0.00641	0.595	0.03313	1.00474	0.8121
205	0.77333	41.12	2.189	46.84	0.0058512	0.00655	0.609	0.03522	1.00460	0.8044
210	0.75145	42.36	2.188	47.09	0.0056326	0.00670	0.622	0.03735	1.00447	0.7977
215	0.73095	43.59	2.187	47.31	0.0054336	0.00684	0.635	0.03951	1.00435	0.7918
220	0.71169	44.81	2.186	47.50	0.0052515	0.00698	0.648	0.04170	1.00423	0.7866
225	0.69354	46.02	2.185	47.68	0.0050839	0.00713	0.662	0.04392	1.00413	0.7821
230	0.67640	47.22	2.185	47.84	0.0049289	0.00727	0.675	0.04618	1.00402	0.7780
235	0.66017	48.41	2.184	47.98	0.0047850	0.00741	0.688	0.04847	1.00393	0.7743
240	0.64478	49.60	2.183	48.11	0.0046508	0.00756	0.701	0.05080	1.00384	0.7710
245	0.63016	50.78	2.183	48.23	0.0045254	0.00770	0.715	0.05317	1.00375	0.7680
250	0.61625	51.96	2.182	48.34	0.0044077	0.00784	0.728	0.05558	1.00367	0.7651
255	0.60298	53.13	2.182	48.44	0.0042970	0.00799	0.741	0.05808	1.00359	0.7618
260	0.59032	54.29	2.181	48.54	0.0041926	0.00814	0.754	0.06060	1.00351	0.7590
265	0.57822	55.45	2.181	48.62	0.0040940	0.00829	0.767	0.06315	1.00344	0.7565
270	0.56664	56.61	2.180	48.70	0.0040005	0.00843	0.780	0.06572	1.00337	0.7543
275	0.55554	57.77	2.180	48.77	0.0039119	0.00858	0.793	0.06832	1.00330	0.7524
280	0.54490	58.92	2.179	48.84	0.0038276	0.00872	0.806	0.07096	1.00324	0.7507
285	0.53467	60.06	2.179	48.90	0.0037473	0.00886	0.819	0.07362	1.00318	0.7491
290	0.52485	61.21	2.178	48.96	0.0036707	0.00900	0.832	0.07631	1.00312	0.7478
295	0.51540	62.35	2.178	49.01	0.0035976	0.00914	0.845	0.07904	1.00306	0.7465
300	0.50630	63.49	2.178	49.07	0.0035277	0.00928	0.857	0.08180	1.00301	0.7453
310	0.48908	65.76	2.177	49.16	0.0033965	0.00955	0.883	0.08743	1.00291	0.7432
320	0.47304	68.03	2.176	49.24	0.0032756	0.00982	0.908	0.09319	1.00281	0.7414
330	0.45805	70.29	2.176	49.31	0.0031638	0.01009	0.933	0.09908	1.00272	0.7398
340	0.44402	72.54	2.175	49.37	0.0030600	0.01036	0.957	0.10511	1.00264	0.7383
350	0.43085	74.79	2.174	49.43	0.0029633	0.01063	0.982	0.11127	1.00256	0.7371
360	0.41846	77.04	2.174	49.48	0.0028729	0.01089	1.006	0.11757	1.00249	0.7359
370	0.40678	79.29	2.173	49.52	0.0027883	0.01115	1.030	0.12398	1.00242	0.7350
380	0.39576	81.53	2.172	49.57	0.0027088	0.01141	1.053	0.13052	1.00235	0.7341
390	0.38533	83.78	2.171	49.60	0.0026340	0.01166	1.077	0.13719	1.00229	0.7333
400	0.37544	86.02	2.170	49.64	0.0025634	0.01192	1.100	0.14398	1.00223	0.7326
410	0.36606	88.27	2.169	49.67	0.0024967	0.01217	1.123	0.15088	1.00218	0.7320
420	0.35715	90.52	2.168	49.69	0.0024335	0.01242	1.146	0.15791	1.00212	0.7315
430	0.34867	92.77	2.166	49.72	0.0023736	0.01267	1.168	0.16505	1.00207	0.7310
440	0.34059	95.02	2.165	49.74	0.0023167	0.01292	1.191	0.17230	1.00202	0.7305
450	0.33288	97.28	2.163	49.76	0.0022626	0.01316	1.213	0.17966	1.00198	0.7302
460	0.32552	99.54	2.162	49.78	0.0022111	0.01341	1.235	0.18713	1.00193	0.7299
470	0.31848	101.81	2.160	49.80	0.0021619	0.01365	1.257	0.19470	1.00189	0.7296
480	0.31174	104.09	2.158	49.82	0.0021149	0.01389	1.278	0.20237	1.00185	0.7294
490	0.30529	106.37	2.156	49.83	0.0020700	0.01413	1.300	0.21014	1.00181	0.7293
500	0.29910	108.66	2.153	49.85	0.0020270	0.01436	1.321	0.21801	1.00178	0.7292
510	0.29316	110.96	2.151	49.86	0.0019858	0.01459	1.342	0.22594	1.00174	0.7292
520	0.28745	113.27	2.148	49.87	0.0019463	0.01483	1.362	0.23400	1.00171	0.7292
530	0.28196	115.58	2.146	49.88	0.0019084	0.01506	1.383	0.24214	1.00168	0.7292
540	0.27668	117.90	2.143	49.89	0.0018720	0.01529	1.403	0.25037	1.00164	0.7293
550	0.27160	120.24	2.140	49.90	0.0018369	0.01552	1.424	0.25868	1.00161	0.7295
560	0.26670	122.58	2.137	49.91	0.0018032	0.01574	1.444	0.26708	1.00159	0.7297
570	0.26198	124.94	2.133	49.92	0.0017707	0.01597	1.464	0.27555	1.00156	0.7299
580	0.25742	127.30	2.130	49.93	0.0017394	0.01619	1.483	0.28411	1.00153	0.7302
590	0.25302	129.68	2.126	49.93	0.0017092	0.01642	1.503	0.29274	1.00150	0.7306
600	0.24877	132.06	2.122	49.94	0.0016800	0.01664	1.523	0.30145	1.00148	0.7310

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

100 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 97.974	0.01226	2096.70	317.9	-83.201	-82.974	0.50138	0.266	0.398	3809
100	0.01230	2057.46	312.6	-82.396	-82.168	0.50952	0.264	0.398	3786
105	0.01242	1962.48	299.9	-80.410	-80.180	0.52892	0.260	0.398	3728
110	0.01254	1870.12	287.6	-78.425	-78.193	0.54741	0.256	0.398	3669
115	0.01266	1780.32	275.7	-76.439	-76.205	0.56508	0.252	0.398	3608
120	0.01279	1693.00	264.1	-74.453	-74.217	0.58201	0.248	0.398	3547
125	0.01292	1608.12	252.9	-72.466	-72.227	0.59825	0.244	0.398	3483
130	0.01305	1525.60	242.1	-70.478	-70.236	0.61387	0.241	0.398	3419
135	0.01319	1445.39	231.6	-68.487	-68.243	0.62891	0.238	0.399	3353
140	0.01333	1367.42	221.4	-66.494	-66.247	0.64343	0.234	0.399	3286
145	0.01347	1291.63	211.6	-64.497	-64.247	0.65746	0.231	0.400	3218
150	0.01363	1217.96	202.1	-62.495	-62.243	0.67105	0.228	0.401	3149
155	0.01378	1146.33	192.9	-60.489	-60.233	0.68423	0.225	0.402	3078
160	0.01394	1076.69	183.9	-58.475	-58.217	0.69703	0.223	0.404	3007
165	0.01411	1008.96	175.3	-56.454	-56.193	0.70948	0.220	0.406	2934
170	0.01429	943.09	166.9	-54.424	-54.160	0.72162	0.218	0.408	2860
175	0.01448	878.99	158.7	-52.383	-52.115	0.73348	0.215	0.410	2784
180	0.01467	816.59	150.8	-50.328	-50.057	0.74507	0.213	0.413	2708
185	0.01487	755.84	143.2	-48.259	-47.983	0.75644	0.211	0.416	2629
190	0.01509	696.64	135.7	-46.170	-45.891	0.76760	0.209	0.421	2549
195	0.01532	638.91	128.4	-44.060	-43.776	0.77859	0.207	0.425	2468
200	0.01556	582.59	121.3	-41.923	-41.635	0.78943	0.205	0.431	2384
* 204.428	0.01579	533.80	115.1	-40.005	-39.712	0.79894	0.203	0.437	2307
* 204.428	0.59696	50.93	0.64	28.395	39.449	1.18613	0.172	0.279	619
205	0.59951	51.22	0.63	28.507	39.609	1.18692	0.172	0.278	620
210	0.62139	53.93	0.60	29.474	40.981	1.19353	0.170	0.271	632
215	0.64274	56.53	0.58	30.420	42.322	1.19984	0.168	0.265	643
220	0.66364	59.04	0.56	31.347	43.636	1.20589	0.167	0.261	653
225	0.68417	61.47	0.53	32.260	44.929	1.21170	0.166	0.257	664
230	0.70438	63.84	0.52	33.160	46.203	1.21730	0.165	0.253	674
235	0.72431	66.15	0.50	34.048	47.461	1.22271	0.164	0.250	684
240	0.74400	68.41	0.48	34.928	48.705	1.22794	0.163	0.247	693
245	0.76347	70.62	0.47	35.799	49.936	1.23302	0.163	0.245	702
250	0.78276	72.80	0.46	36.662	51.157	1.23795	0.162	0.243	711
255	0.80187	74.94	0.44	37.519	52.368	1.24275	0.162	0.241	720
260	0.82083	77.05	0.43	38.370	53.570	1.24742	0.161	0.240	729
265	0.83966	79.14	0.42	39.216	54.765	1.25197	0.161	0.238	737
270	0.85836	81.20	0.41	40.058	55.952	1.25641	0.160	0.237	746
275	0.87695	83.23	0.40	40.895	57.134	1.26075	0.160	0.236	754
280	0.89543	85.25	0.39	41.728	58.309	1.26498	0.160	0.235	762
285	0.91383	87.25	0.38	42.558	59.480	1.26913	0.159	0.234	770
290	0.93213	89.23	0.38	43.385	60.646	1.27318	0.159	0.233	778
295	0.95036	91.20	0.37	44.209	61.807	1.27715	0.159	0.232	785
300	0.96852	93.15	0.36	45.030	62.965	1.28104	0.159	0.231	793
310	1.00463	97.01	0.35	46.666	65.269	1.28860	0.158	0.230	808
320	1.04051	100.83	0.33	48.293	67.561	1.29587	0.158	0.229	822
330	1.07619	104.61	0.32	49.913	69.841	1.30289	0.158	0.228	836
340	1.11169	108.35	0.31	51.527	72.113	1.30967	0.157	0.227	850
350	1.14703	112.06	0.30	53.136	74.376	1.31623	0.157	0.226	864
360	1.18224	115.75	0.29	54.740	76.632	1.32259	0.157	0.225	877
370	1.21733	119.41	0.28	56.341	78.882	1.32875	0.157	0.225	890
380	1.25231	123.05	0.27	57.938	81.127	1.33474	0.157	0.224	903
390	1.28719	126.67	0.27	59.532	83.367	1.34056	0.157	0.224	915
400	1.32198	130.27	0.26	61.123	85.603	1.34622	0.157	0.223	928
410	1.35669	133.86	0.25	62.712	87.835	1.35173	0.157	0.223	940
420	1.39134	137.43	0.25	64.300	90.064	1.35710	0.157	0.223	952
430	1.42591	140.99	0.24	65.886	92.290	1.36234	0.157	0.223	963
440	1.46043	144.54	0.23	67.471	94.515	1.36745	0.157	0.222	975
450	1.49489	148.08	0.23	69.056	96.737	1.37245	0.157	0.222	986
460	1.52931	151.61	0.22	70.639	98.958	1.37733	0.157	0.222	998
470	1.56367	155.12	0.22	72.223	101.178	1.38210	0.157	0.222	1009
480	1.59800	158.63	0.21	73.806	103.397	1.38678	0.157	0.222	1020
490	1.63229	162.14	0.21	75.389	105.615	1.39135	0.157	0.222	1030
500	1.66654	165.63	0.20	76.973	107.833	1.39583	0.157	0.222	1041
510	1.70076	169.12	0.20	78.557	110.051	1.40022	0.157	0.222	1051
520	1.73494	172.61	0.20	80.142	112.269	1.40453	0.157	0.222	1062
530	1.76910	176.08	0.19	81.728	114.487	1.40875	0.158	0.222	1072
540	1.80323	179.55	0.19	83.315	116.706	1.41290	0.158	0.222	1082
550	1.83734	183.02	0.18	84.904	118.926	1.41698	0.158	0.222	1092
560	1.87142	186.48	0.18	86.494	121.148	1.42098	0.158	0.222	1102
570	1.90549	189.94	0.18	88.085	123.370	1.42491	0.158	0.222	1112
580	1.93953	193.40	0.17	89.679	125.594	1.42878	0.159	0.222	1121
590	1.97355	196.85	0.17	91.274	127.819	1.43258	0.159	0.223	1131
600	2.00755	200.29	0.17	92.872	130.046	1.43633	0.159	0.223	1140

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

100 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 97.974	81.59326	213.99	14.631	171076.65	0.0018582	0.11161	41.761	0.00344	1.56889	5.3561
100	81.28572	212.69	14.544	167241.85	0.0018694	0.11102	40.152	0.00344	1.56642	5.1765
105	80.52378	209.44	14.323	158026.63	0.0018980	0.10951	36.465	0.00342	1.56031	4.7654
110	79.75723	206.14	14.094	149155.97	0.0019283	0.10791	33.149	0.00340	1.55417	4.3961
115	78.98563	202.79	13.858	140619.56	0.0019606	0.10624	30.166	0.00338	1.54801	4.0642
120	78.20849	199.38	13.616	132407.24	0.0019949	0.10450	27.483	0.00336	1.54183	3.7659
125	77.42527	195.91	13.368	124509.02	0.0020315	0.10269	25.069	0.00333	1.53561	3.4976
130	76.63536	192.37	13.115	116915.06	0.0020708	0.10084	22.898	0.00330	1.52935	3.2565
135	75.83809	188.77	12.857	109615.68	0.0021129	0.09893	20.945	0.00327	1.52305	3.0400
140	75.03270	185.09	12.594	102601.37	0.0021583	0.09698	19.188	0.00324	1.51671	2.8456
145	74.21833	181.33	12.327	95862.81	0.0022074	0.09498	17.608	0.00320	1.51031	2.6714
150	73.39404	177.50	12.057	89390.80	0.0022607	0.09295	16.186	0.00316	1.50385	2.5156
155	72.55872	173.57	11.784	83176.35	0.0023187	0.09088	14.907	0.00311	1.49733	2.3765
160	71.71116	169.55	11.508	77210.62	0.0023822	0.08878	13.755	0.00307	1.49072	2.2528
165	70.84992	165.44	11.229	71484.95	0.0024519	0.08666	12.718	0.00302	1.48403	2.1432
170	69.97338	161.22	10.949	65990.86	0.0025289	0.08450	11.785	0.00296	1.47725	2.0469
175	69.07965	156.88	10.666	60720.04	0.0026144	0.08233	10.943	0.00291	1.47035	1.9627
180	68.16654	152.42	10.381	55664.38	0.0027099	0.08013	10.185	0.00285	1.46332	1.8902
185	67.23144	147.83	10.094	50815.91	0.0028174	0.07790	9.501	0.00278	1.45615	1.8286
190	66.27127	143.09	9.804	46166.90	0.0029391	0.07566	8.883	0.00271	1.44880	1.7778
195	65.28230	138.20	9.511	41709.79	0.0030783	0.07339	8.325	0.00264	1.44127	1.7373
200	64.26000	133.12	9.213	37437.22	0.0032392	0.07109	7.819	0.00257	1.43350	1.7075
* 204.428	63.32227	128.47	8.945	33801.63	0.0034042	0.06903	7.410	0.00249	1.42641	1.6901
* 204.428	1.67514	37.42	2.210	85.31	0.0074533	0.00705	0.652	0.01508	1.00998	0.9293
205	1.66804	37.57	2.209	85.43	0.0074001	0.00706	0.654	0.01523	1.00994	0.9265
210	1.60931	39.00	2.209	86.79	0.0069520	0.00718	0.665	0.01646	1.00959	0.9035
215	1.55585	40.39	2.208	87.96	0.0065707	0.00731	0.677	0.01770	1.00927	0.8846
220	1.50683	41.76	2.207	88.97	0.0062410	0.00743	0.688	0.01893	1.00898	0.8688
225	1.46162	43.10	2.207	89.85	0.0059524	0.00756	0.700	0.02017	1.00871	0.8554
230	1.41968	44.43	2.206	90.63	0.0056967	0.00769	0.712	0.02141	1.00846	0.8438
235	1.38062	45.73	2.205	91.32	0.0054682	0.00782	0.725	0.02266	1.00822	0.8338
240	1.34408	47.03	2.205	91.94	0.0052622	0.00795	0.737	0.02391	1.00801	0.8251
245	1.30980	48.30	2.204	92.50	0.0050752	0.00809	0.749	0.02519	1.00780	0.8173
250	1.27754	49.57	2.203	93.00	0.0049045	0.00824	0.761	0.02652	1.00761	0.8088
255	1.24708	50.82	2.202	93.46	0.0047476	0.00838	0.774	0.02786	1.00743	0.8015
260	1.21828	52.07	2.202	93.87	0.0046029	0.00853	0.786	0.02921	1.00725	0.7951
265	1.19096	53.31	2.201	94.25	0.0044688	0.00867	0.798	0.03056	1.00709	0.7896
270	1.16501	54.53	2.200	94.59	0.0043440	0.00881	0.810	0.03191	1.00694	0.7848
275	1.14032	55.75	2.200	94.91	0.0042275	0.00894	0.823	0.03328	1.00679	0.7806
280	1.11678	56.97	2.199	95.20	0.0041183	0.00908	0.835	0.03465	1.00665	0.7769
285	1.09430	58.17	2.199	95.48	0.0040158	0.00921	0.847	0.03603	1.00651	0.7736
290	1.07281	59.38	2.198	95.73	0.0039193	0.00934	0.860	0.03743	1.00639	0.7707
295	1.05223	60.57	2.197	95.96	0.0038281	0.00948	0.872	0.03884	1.00626	0.7680
300	1.03251	61.76	2.197	96.17	0.0037419	0.00961	0.884	0.04026	1.00615	0.7655
310	0.99539	64.13	2.196	96.56	0.0035825	0.00987	0.908	0.04315	1.00592	0.7613
320	0.96107	66.49	2.194	96.90	0.0034381	0.01013	0.932	0.04610	1.00572	0.7576
330	0.92921	68.83	2.193	97.20	0.0033066	0.01039	0.956	0.04911	1.00553	0.7544
340	0.89953	71.16	2.192	97.46	0.0031862	0.01064	0.980	0.05219	1.00535	0.7517
350	0.87181	73.47	2.191	97.70	0.0030753	0.01090	1.004	0.05533	1.00519	0.7492
360	0.84585	75.79	2.190	97.90	0.0029728	0.01115	1.027	0.05853	1.00503	0.7471
370	0.82147	78.09	2.189	98.09	0.0028776	0.01140	1.051	0.06178	1.00489	0.7453
380	0.79853	80.39	2.188	98.26	0.0027891	0.01165	1.074	0.06509	1.00475	0.7437
390	0.77689	82.69	2.187	98.41	0.0027063	0.01190	1.097	0.06847	1.00462	0.7422
400	0.75644	84.98	2.185	98.54	0.0026288	0.01215	1.119	0.07190	1.00450	0.7409
410	0.73709	87.27	2.184	98.66	0.0025560	0.01240	1.142	0.07539	1.00438	0.7397
420	0.71873	89.56	2.182	98.78	0.0024874	0.01264	1.164	0.07894	1.00428	0.7387
430	0.70131	91.85	2.181	98.88	0.0024227	0.01288	1.186	0.08254	1.00417	0.7378
440	0.68473	94.14	2.179	98.97	0.0023616	0.01312	1.208	0.08620	1.00407	0.7369
450	0.66894	96.44	2.177	99.06	0.0023037	0.01336	1.230	0.08992	1.00398	0.7362
460	0.65389	98.73	2.175	99.13	0.0022487	0.01360	1.252	0.09368	1.00389	0.7355
470	0.63952	101.03	2.173	99.20	0.0021965	0.01384	1.273	0.09750	1.00380	0.7350
480	0.62578	103.34	2.171	99.27	0.0021468	0.01407	1.294	0.10136	1.00372	0.7345
490	0.61264	105.65	2.169	99.33	0.0020994	0.01431	1.315	0.10528	1.00364	0.7341
500	0.60005	107.97	2.166	99.39	0.0020542	0.01454	1.336	0.10923	1.00357	0.7338
510	0.58797	110.29	2.163	99.44	0.0020110	0.01476	1.357	0.11322	1.00350	0.7336
520	0.57639	112.62	2.161	99.49	0.0019697	0.01499	1.377	0.11728	1.00343	0.7334
530	0.56526	114.96	2.158	99.53	0.0019301	0.01522	1.397	0.12137	1.00336	0.7332
540	0.55456	117.30	2.155	99.57	0.0018921	0.01545	1.417	0.12552	1.00330	0.7331
550	0.54426	119.66	2.151	99.61	0.0018557	0.01567	1.437	0.12970	1.00324	0.7331
560	0.53435	122.02	2.148	99.65	0.0018207	0.01590	1.457	0.13392	1.00318	0.7331
570	0.52480	124.40	2.144	99.68	0.0017870	0.01612	1.477	0.13819	1.00312	0.7332
580	0.51559	126.78	2.141	99.71	0.0017546	0.01634	1.497	0.14249	1.00307	0.7334
590	0.50670	129.18	2.137	99.74	0.0017234	0.01656	1.516	0.14683	1.00301	0.7336
600	0.49812	131.58	2.133	99.77	0.0016934	0.01678	1.535	0.15121	1.00296	0.7338

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

150 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.045	0.01225	2099.81	317.9	-83.193	-82.853	0.50146	0.266	0.398	3811
100	0.01230	2061.98	312.9	-82.417	-82.076	0.50931	0.265	0.397	3789
105	0.01241	1967.08	300.2	-80.433	-80.088	0.52870	0.260	0.397	3731
110	0.01253	1874.79	287.9	-78.449	-78.101	0.54719	0.256	0.397	3672
115	0.01266	1785.07	275.9	-76.466	-76.114	0.56485	0.252	0.397	3612
120	0.01278	1697.83	264.4	-74.482	-74.126	0.58177	0.248	0.398	3550
125	0.01291	1613.03	253.2	-72.496	-72.138	0.59801	0.244	0.398	3487
130	0.01304	1530.60	242.4	-70.510	-70.148	0.61362	0.241	0.398	3423
135	0.01318	1450.48	231.9	-68.522	-68.156	0.62865	0.238	0.399	3357
140	0.01332	1372.61	221.7	-66.531	-66.161	0.64316	0.234	0.399	3291
145	0.01347	1296.92	211.9	-64.536	-64.162	0.65719	0.231	0.400	3223
150	0.01362	1223.35	202.4	-62.538	-62.160	0.67076	0.229	0.401	3154
155	0.01377	1151.84	193.2	-60.534	-60.152	0.68393	0.226	0.402	3083
160	0.01394	1082.31	184.3	-58.524	-58.137	0.69672	0.223	0.404	3012
165	0.01410	1014.71	175.6	-56.507	-56.115	0.70916	0.220	0.405	2939
170	0.01428	948.97	167.2	-54.481	-54.084	0.72129	0.218	0.407	2866
175	0.01446	885.01	159.1	-52.444	-52.042	0.73313	0.216	0.410	2791
180	0.01466	822.78	151.2	-50.394	-49.987	0.74471	0.213	0.412	2715
185	0.01486	762.19	143.6	-48.330	-47.917	0.75605	0.211	0.416	2637
190	0.01507	703.17	136.1	-46.247	-45.829	0.76719	0.209	0.420	2558
195	0.01530	645.64	128.9	-44.144	-43.719	0.77815	0.207	0.424	2476
200	0.01554	589.54	121.8	-42.016	-41.584	0.78897	0.205	0.430	2393
205	0.01580	534.77	114.8	-39.857	-39.418	0.79967	0.203	0.437	2308
210	0.01608	481.24	108.0	-37.661	-37.215	0.81029	0.201	0.445	2220
215	0.01638	428.87	101.2	-35.421	-34.966	0.82087	0.200	0.455	2128
* 216.384	0.01647	414.57	99.3	-34.792	-34.335	0.82380	0.199	0.458	2102
* 216.384	0.40132	48.12	0.98	28.914	40.061	1.16761	0.178	0.308	621
220	0.41306	50.39	0.95	29.684	41.158	1.17265	0.176	0.299	630
225	0.42879	53.43	0.90	30.718	42.628	1.17926	0.174	0.289	643
230	0.44403	56.33	0.86	31.721	44.055	1.18554	0.172	0.281	654
235	0.45887	59.09	0.82	32.700	45.445	1.19152	0.170	0.275	666
240	0.47337	61.76	0.79	33.657	46.806	1.19725	0.169	0.269	676
245	0.48758	64.34	0.76	34.598	48.141	1.20275	0.167	0.265	687
250	0.50155	66.84	0.74	35.523	49.454	1.20806	0.166	0.261	697
255	0.51531	69.28	0.71	36.436	50.749	1.21319	0.165	0.257	707
260	0.52888	71.67	0.69	37.337	52.027	1.21815	0.164	0.254	716
265	0.54228	74.00	0.67	38.229	53.291	1.22296	0.164	0.251	726
270	0.55553	76.29	0.65	39.112	54.542	1.22764	0.163	0.249	735
275	0.56865	78.54	0.63	39.987	55.782	1.23219	0.163	0.247	743
280	0.58165	80.76	0.62	40.856	57.012	1.23662	0.162	0.245	752
285	0.59455	82.94	0.60	41.718	58.232	1.24094	0.162	0.243	761
290	0.60734	85.09	0.59	42.575	59.445	1.24516	0.161	0.242	769
295	0.62005	87.22	0.57	43.427	60.650	1.24928	0.161	0.240	777
300	0.63268	89.33	0.56	44.275	61.848	1.25331	0.160	0.239	785
310	0.65771	93.47	0.54	45.958	64.226	1.26111	0.160	0.237	801
320	0.68249	97.54	0.52	47.627	66.584	1.26859	0.159	0.235	816
330	0.70705	101.54	0.50	49.284	68.923	1.27579	0.159	0.233	831
340	0.73143	105.49	0.48	50.931	71.248	1.28273	0.159	0.232	845
350	0.75563	109.40	0.46	52.570	73.559	1.28943	0.158	0.231	859
360	0.77970	113.25	0.45	54.202	75.858	1.29591	0.158	0.229	873
370	0.80363	117.08	0.43	55.827	78.148	1.30218	0.158	0.229	887
380	0.82745	120.86	0.42	57.446	80.429	1.30827	0.158	0.228	900
390	0.85117	124.62	0.41	59.061	82.703	1.31417	0.157	0.227	913
400	0.87480	128.35	0.40	60.671	84.970	1.31991	0.157	0.226	925
410	0.89835	132.06	0.38	62.278	87.230	1.32549	0.157	0.226	938
420	0.92182	135.74	0.37	63.882	89.486	1.33093	0.157	0.225	950
430	0.94523	139.41	0.36	65.483	91.737	1.33623	0.157	0.225	962
440	0.96857	143.05	0.36	67.082	93.985	1.34139	0.157	0.225	974
450	0.99186	146.69	0.35	68.679	96.229	1.34643	0.157	0.224	985
460	1.01510	150.30	0.34	70.275	98.470	1.35136	0.157	0.224	997
470	1.03829	153.90	0.33	71.869	100.709	1.35617	0.157	0.224	1008
480	1.06144	157.49	0.32	73.463	102.945	1.36088	0.157	0.224	1019
490	1.08455	161.07	0.32	75.056	105.181	1.36549	0.157	0.223	1030
500	1.10762	164.64	0.31	76.649	107.414	1.37001	0.157	0.223	1041
510	1.13066	168.19	0.30	78.242	109.647	1.37443	0.157	0.223	1051
520	1.15367	171.74	0.30	79.835	111.880	1.37876	0.158	0.223	1062
530	1.17665	175.28	0.29	81.429	114.112	1.38301	0.158	0.223	1072
540	1.19961	178.81	0.29	83.023	116.344	1.38719	0.158	0.223	1082
550	1.22253	182.33	0.28	84.619	118.576	1.39128	0.158	0.223	1093
560	1.24544	185.85	0.27	86.215	120.809	1.39530	0.158	0.223	1102
570	1.26832	189.36	0.27	87.813	123.042	1.39926	0.158	0.223	1112
580	1.29118	192.86	0.26	89.413	125.276	1.40314	0.159	0.223	1122
590	1.31402	196.36	0.26	91.014	127.512	1.40696	0.159	0.224	1132
600	1.33685	199.85	0.26	92.617	129.749	1.41072	0.159	0.224	1141

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

150 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.045	81.60630	214.27	14.629	171357.50	0.0018554	0.11164	41.831	0.00344	1.56900	5.3624
100	81.30999	213.01	14.545	167659.45	0.0018660	0.11108	40.277	0.00344	1.56662	5.1888
105	80.54922	209.78	14.324	158446.61	0.0018944	0.10956	36.582	0.00342	1.56051	4.7769
110	79.78393	206.50	14.095	149578.42	0.0019244	0.10797	33.259	0.00341	1.55439	4.4068
115	79.01367	203.16	13.860	141044.56	0.0019563	0.10630	30.269	0.00339	1.54824	4.0741
120	78.23798	199.76	13.618	132834.89	0.0019903	0.10457	27.579	0.00336	1.54206	3.7750
125	77.45631	196.31	13.370	124939.42	0.0020266	0.10277	25.160	0.00334	1.53585	3.5061
130	76.66808	192.79	13.117	117348.31	0.0020653	0.10092	22.984	0.00331	1.52961	3.2644
135	75.87262	189.20	12.859	110051.92	0.0021070	0.09902	21.026	0.00327	1.52332	3.0473
140	75.06919	185.54	12.597	103040.73	0.0021518	0.09707	19.264	0.00324	1.51699	2.8523
145	74.25696	181.80	12.330	96305.44	0.0022003	0.09508	17.680	0.00320	1.51061	2.6776
150	73.43500	177.98	12.061	89836.87	0.0022528	0.09306	16.254	0.00316	1.50417	2.5212
155	72.60224	174.08	11.788	83626.04	0.0023100	0.09100	14.970	0.00312	1.49767	2.3816
160	71.75747	170.09	11.513	77664.15	0.0023725	0.08891	13.815	0.00307	1.49108	2.2573
165	70.89933	166.00	11.235	71942.56	0.0024410	0.08679	12.775	0.00302	1.48442	2.1473
170	70.02623	161.80	10.955	66452.82	0.0025167	0.08464	11.839	0.00297	1.47766	2.0503
175	69.13634	157.50	10.674	61186.67	0.0026006	0.08247	10.995	0.00291	1.47078	1.9656
180	68.22754	153.07	10.390	56136.03	0.0026941	0.08028	10.234	0.00285	1.46379	1.8925
185	67.29732	148.51	10.105	51293.01	0.0027992	0.07807	9.548	0.00279	1.45665	1.8302
190	66.34271	143.82	9.817	46649.94	0.0029180	0.07583	8.928	0.00272	1.44935	1.7786
195	65.36015	138.97	9.526	42199.36	0.0030535	0.07357	8.367	0.00265	1.44186	1.7373
200	64.34532	133.94	9.231	37934.01	0.0032098	0.07129	7.860	0.00258	1.43415	1.7064
205	63.29285	128.73	8.931	33846.91	0.0033918	0.06898	7.399	0.00250	1.42618	1.6862
210	62.19601	123.30	8.624	29931.38	0.0036070	0.06663	6.980	0.00241	1.41791	1.6773
215	61.04614	117.63	8.307	26181.08	0.0038657	0.06425	6.597	0.00231	1.40928	1.6808
* 216.384	60.71712	116.01	8.218	25171.65	0.0039468	0.06358	6.497	0.00229	1.40681	1.6843
* 216.384	2.49178	37.49	2.220	119.89	0.0082057	0.00787	0.727	0.01027	1.01488	1.0230
220	2.42095	38.60	2.220	121.99	0.0077497	0.00795	0.734	0.01097	1.01445	0.9949
225	2.33215	40.11	2.221	124.61	0.0072144	0.00805	0.744	0.01193	1.01392	0.9627
230	2.25211	41.59	2.222	126.85	0.0067686	0.00816	0.754	0.01287	1.01344	0.9365
235	2.17928	43.02	2.222	128.78	0.0063901	0.00827	0.764	0.01380	1.01300	0.9148
240	2.11252	44.43	2.222	130.47	0.0060635	0.00840	0.775	0.01475	1.01260	0.8954
245	2.05093	45.82	2.222	131.96	0.0057780	0.00854	0.786	0.01572	1.01223	0.8775
250	1.99380	47.18	2.222	133.27	0.0055256	0.00868	0.797	0.01669	1.01189	0.8622
255	1.94059	48.53	2.222	134.45	0.0053004	0.00881	0.808	0.01766	1.01157	0.8492
260	1.89081	49.86	2.221	135.51	0.0050978	0.00895	0.820	0.01862	1.01127	0.8380
265	1.84408	51.17	2.221	136.46	0.0049141	0.00908	0.831	0.01958	1.01099	0.8284
270	1.80009	52.47	2.220	137.33	0.0047467	0.00921	0.842	0.02054	1.01073	0.8201
275	1.75855	53.76	2.219	138.12	0.0045931	0.00934	0.854	0.02150	1.01048	0.8130
280	1.71924	55.04	2.219	138.84	0.0044516	0.00946	0.865	0.02246	1.01025	0.8067
285	1.68196	56.31	2.218	139.50	0.0043206	0.00958	0.877	0.02342	1.01003	0.8012
290	1.64652	57.56	2.217	140.11	0.0041989	0.00971	0.888	0.02439	1.00981	0.7964
295	1.61277	58.82	2.216	140.67	0.0040855	0.00983	0.900	0.02537	1.00961	0.7919
300	1.58059	60.06	2.216	141.19	0.0039793	0.00995	0.912	0.02635	1.00942	0.7880
310	1.52042	62.53	2.214	142.11	0.0037860	0.01020	0.935	0.02833	1.00906	0.7810
320	1.46522	64.97	2.213	142.92	0.0036141	0.01044	0.958	0.03036	1.00873	0.7752
330	1.41432	67.39	2.211	143.62	0.0034598	0.01069	0.981	0.03241	1.00843	0.7702
340	1.36719	69.79	2.210	144.23	0.0033204	0.01093	1.004	0.03451	1.00814	0.7659
350	1.32339	72.18	2.208	144.77	0.0031936	0.01118	1.027	0.03664	1.00788	0.7622
360	1.28255	74.55	2.207	145.25	0.0030776	0.01142	1.049	0.03881	1.00764	0.7589
370	1.24435	76.92	2.205	145.68	0.0029710	0.01166	1.072	0.04101	1.00741	0.7561
380	1.20853	79.27	2.204	146.07	0.0028725	0.01190	1.094	0.04325	1.00720	0.7537
390	1.17485	81.62	2.202	146.41	0.0027812	0.01214	1.117	0.04553	1.00700	0.7515
400	1.14312	83.96	2.201	146.72	0.0026962	0.01238	1.139	0.04785	1.00681	0.7495
410	1.11315	86.29	2.199	147.00	0.0026169	0.01262	1.161	0.05020	1.00663	0.7478
420	1.08481	88.62	2.197	147.25	0.0025426	0.01286	1.183	0.05260	1.00646	0.7462
430	1.05795	90.95	2.195	147.49	0.0024729	0.01309	1.204	0.05502	1.00630	0.7448
440	1.03245	93.28	2.193	147.70	0.0024073	0.01333	1.226	0.05749	1.00615	0.7435
450	1.00821	95.61	2.191	147.89	0.0023454	0.01356	1.247	0.05999	1.00600	0.7424
460	0.98513	97.94	2.189	148.07	0.0022869	0.01379	1.268	0.06252	1.00586	0.7414
470	0.96312	100.27	2.187	148.23	0.0022316	0.01403	1.289	0.06508	1.00573	0.7405
480	0.94212	102.61	2.184	148.38	0.0021790	0.01426	1.310	0.06768	1.00561	0.7397
490	0.92204	104.94	2.182	148.51	0.0021291	0.01448	1.331	0.07031	1.00549	0.7390
500	0.90283	107.29	2.179	148.64	0.0020816	0.01471	1.351	0.07297	1.00537	0.7384
510	0.88444	109.64	2.176	148.76	0.0020363	0.01493	1.372	0.07563	1.00526	0.7381
520	0.86680	111.99	2.173	148.86	0.0019931	0.01516	1.392	0.07836	1.00516	0.7377
530	0.84987	114.35	2.170	148.96	0.0019518	0.01539	1.412	0.08111	1.00506	0.7373
540	0.83361	116.72	2.167	149.06	0.0019123	0.01561	1.432	0.08389	1.00496	0.7370
550	0.81797	119.10	2.163	149.14	0.0018745	0.01583	1.451	0.08670	1.00487	0.7367
560	0.80293	121.48	2.160	149.22	0.0018382	0.01605	1.471	0.08953	1.00478	0.7366
570	0.78844	123.87	2.156	149.30	0.0018033	0.01627	1.490	0.09239	1.00469	0.7365
580	0.77448	126.28	2.152	149.37	0.0017699	0.01649	1.510	0.09528	1.00461	0.7365
590	0.76102	128.69	2.148	149.44	0.0017377	0.01671	1.529	0.09818	1.00453	0.7366
600	0.74803	131.11	2.144	149.50	0.0017067	0.01693	1.548	0.10112	1.00445	0.7367

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

200 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.116	0.01225	2102.91	318.0	-83.185	-82.732	0.50154	0.266	0.397	3813
100	0.01229	2066.49	313.1	-82.438	-81.983	0.50910	0.265	0.397	3792
105	0.01241	1971.67	300.4	-80.456	-79.996	0.52848	0.260	0.397	3734
110	0.01253	1879.46	288.1	-78.474	-78.010	0.54696	0.256	0.397	3676
115	0.01265	1789.80	276.2	-76.492	-76.023	0.56462	0.252	0.397	3615
120	0.01278	1702.65	264.6	-74.510	-74.036	0.58154	0.248	0.397	3554
125	0.01291	1617.93	253.4	-72.527	-72.049	0.59777	0.245	0.398	3491
130	0.01304	1535.59	242.6	-70.542	-70.059	0.61337	0.241	0.398	3427
135	0.01317	1455.56	232.1	-68.556	-68.068	0.62840	0.238	0.398	3361
140	0.01331	1377.79	222.0	-66.568	-66.074	0.64290	0.235	0.399	3295
145	0.01346	1302.20	212.2	-64.576	-64.077	0.65691	0.232	0.400	3227
150	0.01361	1228.73	202.7	-62.580	-62.076	0.67048	0.229	0.401	3158
155	0.01377	1157.33	193.5	-60.579	-60.070	0.68364	0.226	0.402	3088
160	0.01393	1087.92	184.6	-58.573	-58.057	0.69642	0.223	0.403	3017
165	0.01409	1020.45	176.0	-56.559	-56.037	0.70885	0.221	0.405	2945
170	0.01427	954.83	167.6	-54.537	-54.008	0.72096	0.218	0.407	2872
175	0.01445	891.02	159.5	-52.504	-51.969	0.73278	0.216	0.409	2797
180	0.01464	828.93	151.6	-50.459	-49.917	0.74434	0.214	0.412	2721
185	0.01485	768.50	144.0	-48.400	-47.850	0.75567	0.211	0.415	2644
190	0.01506	709.66	136.6	-46.324	-45.766	0.76679	0.209	0.419	2566
195	0.01528	652.33	129.3	-44.227	-43.661	0.77772	0.207	0.423	2485
200	0.01552	596.44	122.2	-42.107	-41.532	0.78851	0.205	0.429	2403
205	0.01578	541.90	115.3	-39.957	-39.373	0.79917	0.203	0.435	2318
210	0.01605	488.65	108.5	-37.773	-37.178	0.80975	0.201	0.443	2231
215	0.01635	436.57	101.8	-35.546	-34.940	0.82029	0.200	0.452	2141
220	0.01668	385.61	95.2	-33.266	-32.648	0.83082	0.198	0.464	2046
225	0.01704	335.65	88.5	-30.921	-30.290	0.84142	0.197	0.479	1946
* 225.720	0.01709	328.54	87.6	-30.577	-29.944	0.84295	0.196	0.481	1932
* 225.720	0.29991	44.85	1.4	29.057	40.164	1.15358	0.183	0.339	620
230	0.31135	47.92	1.3	30.052	41.583	1.15983	0.180	0.324	632
235	0.32413	51.34	1.2	31.164	43.168	1.16665	0.177	0.311	645
240	0.33641	54.55	1.2	32.234	44.693	1.17307	0.175	0.300	658
245	0.34828	57.60	1.1	33.269	46.168	1.17915	0.173	0.291	670
250	0.35982	60.52	1.1	34.277	47.602	1.18495	0.171	0.283	681
255	0.37107	63.32	1.0	35.261	49.003	1.19050	0.170	0.277	692
260	0.38209	66.03	0.99	36.226	50.376	1.19583	0.168	0.272	703
265	0.39289	68.65	0.95	37.174	51.724	1.20096	0.167	0.267	713
270	0.40352	71.21	0.92	38.107	53.051	1.20593	0.166	0.263	723
275	0.41399	73.70	0.89	39.028	54.360	1.21073	0.165	0.260	733
280	0.42432	76.13	0.87	39.938	55.652	1.21539	0.165	0.257	742
285	0.43452	78.52	0.84	40.838	56.931	1.21991	0.164	0.254	751
290	0.44461	80.87	0.82	41.730	58.196	1.22431	0.163	0.252	760
295	0.45460	83.17	0.80	42.614	59.450	1.22860	0.163	0.250	769
300	0.46450	85.44	0.78	43.491	60.693	1.23278	0.162	0.248	777
310	0.48406	89.89	0.74	45.226	63.153	1.24084	0.161	0.244	794
320	0.50334	94.22	0.71	46.941	65.582	1.24856	0.161	0.242	810
330	0.52238	98.47	0.68	48.639	67.985	1.25595	0.160	0.239	825
340	0.54121	102.63	0.66	50.322	70.366	1.26306	0.160	0.237	841
350	0.55988	106.73	0.63	51.993	72.728	1.26990	0.159	0.235	855
360	0.57838	110.77	0.61	53.653	75.074	1.27651	0.159	0.234	869
370	0.59676	114.75	0.59	55.304	77.405	1.28290	0.158	0.232	883
380	0.61501	118.69	0.57	56.948	79.724	1.28909	0.158	0.231	897
390	0.63316	122.59	0.55	58.584	82.033	1.29508	0.158	0.230	910
400	0.65121	126.45	0.54	60.214	84.331	1.30090	0.158	0.229	923
410	0.66918	130.28	0.52	61.839	86.622	1.30656	0.158	0.229	936
420	0.68708	134.07	0.51	63.459	88.905	1.31206	0.158	0.228	948
430	0.70490	137.84	0.49	65.076	91.182	1.31742	0.157	0.227	960
440	0.72266	141.59	0.48	66.689	93.453	1.32264	0.157	0.227	972
450	0.74037	145.31	0.47	68.300	95.719	1.32773	0.157	0.226	984
460	0.75802	149.02	0.46	69.908	97.981	1.33270	0.157	0.226	995
470	0.77563	152.70	0.45	71.514	100.239	1.33756	0.157	0.226	1007
480	0.79319	156.37	0.44	73.118	102.494	1.34230	0.157	0.225	1019
490	0.81071	160.02	0.43	74.722	104.746	1.34695	0.157	0.225	1030
500	0.82820	163.66	0.42	76.324	106.996	1.35149	0.157	0.225	1041
510	0.84565	167.28	0.41	77.926	109.244	1.35595	0.158	0.225	1051
520	0.86307	170.90	0.40	79.527	111.491	1.36031	0.158	0.225	1062
530	0.88046	174.50	0.39	81.129	113.736	1.36459	0.158	0.225	1072
540	0.89782	178.09	0.38	82.731	115.981	1.36878	0.158	0.224	1083
550	0.91516	181.67	0.38	84.333	118.226	1.37290	0.158	0.224	1093
560	0.93248	185.24	0.37	85.936	120.470	1.37694	0.158	0.224	1103
570	0.94977	188.80	0.36	87.540	122.715	1.38092	0.158	0.224	1113
580	0.96704	192.35	0.36	89.146	124.960	1.38482	0.159	0.225	1123
590	0.98429	195.90	0.35	90.752	127.205	1.38866	0.159	0.225	1133
600	1.00153	199.44	0.34	92.361	129.452	1.39244	0.159	0.225	1142

* TWO-PHASE BOUNDARY

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THERMODYNAMIC PROPERTIES OF OXYGEN

200 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.116	81.61932	214.54	14.628	171638.21	0.0018525	0.11167	41.902	0.00344	1.56910	5.3686
100	81.33422	213.34	14.546	168076.68	0.0018627	0.11113	40.402	0.00344	1.56681	5.2012
105	80.57461	210.12	14.325	158866.20	0.0018908	0.10962	36.700	0.00342	1.56071	4.7884
110	79.81057	206.85	14.097	150000.44	0.0019206	0.10803	33.369	0.00341	1.55460	4.4174
115	79.04165	203.52	13.862	141469.10	0.0019522	0.10637	30.372	0.00339	1.54846	4.0840
120	78.26739	200.14	13.620	133262.04	0.0019858	0.10464	27.676	0.00336	1.54229	3.7842
125	77.48726	196.70	13.372	125369.27	0.0020216	0.10285	25.251	0.00334	1.53610	3.5146
130	76.70069	193.20	13.119	117780.99	0.0020600	0.10101	23.069	0.00331	1.52987	3.2723
135	75.90703	189.62	12.861	110487.53	0.0021011	0.09911	21.106	0.00328	1.52360	3.0546
140	75.10555	185.98	12.599	103479.41	0.0021454	0.09717	19.340	0.00324	1.51728	2.8591
145	74.29544	182.27	12.334	96747.32	0.0021932	0.09518	17.751	0.00320	1.51091	2.6838
150	73.47578	178.47	12.064	90282.13	0.0022450	0.09316	16.321	0.00316	1.50449	2.5268
155	72.64554	174.59	11.792	84074.85	0.0023013	0.09111	15.034	0.00312	1.49800	2.3867
160	71.80355	170.62	11.518	78116.71	0.0023628	0.08903	13.875	0.00308	1.49144	2.2619
165	70.94847	166.55	11.241	72399.10	0.0024303	0.08692	12.832	0.00303	1.48480	2.1513
170	70.07876	162.38	10.962	66913.61	0.0025046	0.08478	11.893	0.00297	1.47806	2.0538
175	69.19265	158.11	10.682	61651.99	0.0025869	0.08262	11.046	0.00292	1.47122	1.9686
180	68.28808	153.71	10.400	56606.23	0.0026786	0.08044	10.283	0.00286	1.46425	1.8948
185	67.36265	149.19	10.116	51768.48	0.0027813	0.07823	9.594	0.00280	1.45715	1.8319
190	66.41349	144.54	9.829	47131.15	0.0028973	0.07601	8.972	0.00273	1.44989	1.7795
195	65.43720	139.73	9.541	42686.85	0.0030294	0.07376	8.410	0.00266	1.44245	1.7374
200	64.42963	134.76	9.249	38428.43	0.0031811	0.07149	7.901	0.00259	1.43479	1.7055
205	63.38573	129.60	8.952	34349.04	0.0033575	0.06919	7.439	0.00251	1.42689	1.6841
210	62.29912	124.24	8.649	30442.15	0.0035650	0.06687	7.019	0.00242	1.41869	1.6737
215	61.16169	118.64	8.337	26701.66	0.0038132	0.06450	6.635	0.00233	1.41015	1.6753
220	59.96281	112.78	8.013	23122.02	0.0041159	0.06210	6.283	0.00223	1.40117	1.6908
225	58.68811	106.60	7.672	19698.62	0.0044939	0.05963	5.958	0.00212	1.39168	1.7230
* 225.720	58.49728	105.68	7.621	19218.46	0.0045563	0.05927	5.913	0.00210	1.39026	1.7293
* 225.720	3.33430	37.21	2.229	149.53	0.0091150	0.00869	0.796	0.00769	1.01994	1.1174
230	3.21178	38.62	2.231	153.92	0.0083969	0.00876	0.802	0.00841	1.01920	1.0688
235	3.08515	40.23	2.234	158.39	0.0077188	0.00885	0.809	0.00924	1.01844	1.0226
240	2.97256	41.78	2.236	162.16	0.0071701	0.00895	0.818	0.01005	1.01776	0.9852
245	2.87124	43.30	2.237	165.39	0.0067147	0.00907	0.827	0.01086	1.01715	0.9545
250	2.77919	44.77	2.238	168.19	0.0063293	0.00918	0.836	0.01166	1.01660	0.9290
255	2.69490	46.22	2.238	170.64	0.0059977	0.00930	0.846	0.01245	1.01610	0.9077
260	2.61722	47.64	2.239	172.80	0.0057085	0.00942	0.856	0.01323	1.01563	0.8897
265	2.54523	49.04	2.239	174.73	0.0054535	0.00953	0.866	0.01400	1.01520	0.8745
270	2.47819	50.42	2.238	176.46	0.0052264	0.00965	0.875	0.01477	1.01479	0.8616
275	2.41553	51.78	2.238	178.02	0.0050224	0.00976	0.887	0.01553	1.01442	0.8505
280	2.35673	53.12	2.238	179.43	0.0048379	0.00987	0.897	0.01630	1.01407	0.8409
285	2.30138	54.45	2.237	180.71	0.0046699	0.00998	0.908	0.01705	1.01373	0.8326
290	2.24915	55.77	2.236	181.88	0.0045162	0.01009	0.918	0.01781	1.01342	0.8254
295	2.19972	57.08	2.235	182.95	0.0043747	0.01020	0.929	0.01858	1.01312	0.8187
300	2.15284	58.38	2.235	183.94	0.0042439	0.01032	0.940	0.01934	1.01284	0.8128
310	2.06586	60.94	2.233	185.69	0.0040096	0.01054	0.962	0.02088	1.01232	0.8027
320	1.98674	63.47	2.231	187.19	0.0038051	0.01077	0.984	0.02244	1.01185	0.7944
330	1.91433	65.98	2.229	188.50	0.0036245	0.01100	1.006	0.02403	1.01142	0.7873
340	1.84770	68.45	2.228	189.63	0.0034635	0.01123	1.028	0.02563	1.01102	0.7812
350	1.78611	70.91	2.226	190.63	0.0033188	0.01146	1.050	0.02727	1.01065	0.7759
360	1.72896	73.35	2.224	191.51	0.0031878	0.01170	1.072	0.02893	1.01031	0.7713
370	1.67572	75.77	2.222	192.29	0.0030685	0.01192	1.094	0.03061	1.00999	0.7675
380	1.62599	78.18	2.220	192.99	0.0029592	0.01216	1.115	0.03231	1.00969	0.7642
390	1.57938	80.57	2.218	193.61	0.0028586	0.01239	1.137	0.03405	1.00941	0.7612
400	1.53559	82.96	2.216	194.17	0.0027657	0.01262	1.159	0.03581	1.00915	0.7585
410	1.49436	85.34	2.214	194.68	0.0026794	0.01285	1.180	0.03759	1.00890	0.7561
420	1.45544	87.71	2.212	195.14	0.0025991	0.01308	1.201	0.03941	1.00867	0.7540
430	1.41864	90.08	2.210	195.55	0.0025241	0.01331	1.222	0.04125	1.00845	0.7520
440	1.38377	92.45	2.208	195.93	0.0024538	0.01353	1.243	0.04312	1.00824	0.7503
450	1.35068	94.81	2.205	196.27	0.0023878	0.01376	1.264	0.04501	1.00805	0.7487
460	1.31922	97.17	2.203	196.59	0.0023256	0.01399	1.285	0.04692	1.00786	0.7474
470	1.28928	99.53	2.200	196.88	0.0022670	0.01422	1.306	0.04886	1.00768	0.7461
480	1.26073	101.89	2.198	197.14	0.0022116	0.01444	1.326	0.05083	1.00751	0.7450
490	1.23348	104.26	2.195	197.39	0.0021590	0.01466	1.346	0.05281	1.00735	0.7440
500	1.20744	106.63	2.192	197.61	0.0021092	0.01489	1.367	0.05482	1.00719	0.7432
510	1.18252	109.00	2.189	197.82	0.0020618	0.01510	1.387	0.05683	1.00704	0.7427
520	1.15866	111.38	2.186	198.01	0.0020166	0.01533	1.406	0.05889	1.00690	0.7420
530	1.13577	113.76	2.182	198.19	0.0019736	0.01555	1.426	0.06097	1.00676	0.7414
540	1.11380	116.15	2.179	198.35	0.0019325	0.01577	1.446	0.06307	1.00663	0.7409
550	1.09270	118.55	2.175	198.51	0.0018932	0.01599	1.465	0.06519	1.00651	0.7404
560	1.07241	120.95	2.171	198.65	0.0018556	0.01621	1.484	0.06733	1.00638	0.7401
570	1.05289	123.36	2.168	198.78	0.0018196	0.01642	1.504	0.06949	1.00627	0.7399
580	1.03408	125.78	2.164	198.91	0.0017850	0.01664	1.523	0.07166	1.00616	0.7397
590	1.01596	128.21	2.159	199.02	0.0017519	0.01685	1.542	0.07386	1.00605	0.7396
600	0.99847	130.65	2.155	199.13	0.0017200	0.01707	1.561	0.07607	1.00594	0.7396

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

250 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU /LB -R	C_P	VELOCITY OF SOUND FT/SEC
* 98.187	0.01225	2106.01	318.0	-83.178	-82.611	0.50162	0.266	0.397	3815
100	0.01229	2071.00	313.3	-82.459	-81.890	0.50888	0.265	0.397	3795
105	0.01241	1976.25	300.6	-80.479	-79.904	0.52827	0.260	0.397	3738
110	0.01253	1884.11	288.3	-78.498	-77.918	0.54674	0.256	0.397	3679
115	0.01265	1794.54	276.4	-76.518	-75.932	0.56440	0.252	0.397	3619
120	0.01277	1707.46	264.9	-74.538	-73.946	0.58130	0.248	0.397	3557
125	0.01290	1622.83	253.7	-72.556	-71.959	0.59752	0.245	0.397	3495
130	0.01303	1540.57	242.9	-70.574	-69.971	0.61312	0.241	0.398	3431
135	0.01317	1460.63	232.4	-68.590	-67.981	0.62814	0.238	0.398	3366
140	0.01331	1382.95	222.3	-66.604	-65.988	0.64263	0.235	0.399	3299
145	0.01345	1307.46	212.5	-64.615	-63.992	0.65664	0.232	0.399	3232
150	0.01360	1234.10	203.0	-62.622	-61.992	0.67020	0.229	0.400	3163
155	0.01376	1162.81	193.8	-60.624	-59.988	0.68334	0.226	0.401	3093
160	0.01392	1093.51	184.9	-58.621	-57.977	0.69611	0.223	0.403	3023
165	0.01409	1026.16	176.3	-56.611	-55.959	0.70853	0.221	0.404	2951
170	0.01426	960.68	167.9	-54.592	-53.932	0.72063	0.218	0.406	2878
175	0.01444	897.00	159.9	-52.564	-51.896	0.73244	0.216	0.408	2804
180	0.01463	835.06	152.0	-50.524	-49.847	0.74398	0.214	0.411	2728
185	0.01483	774.79	144.4	-48.470	-47.784	0.75529	0.211	0.414	2652
190	0.01504	716.12	137.0	-46.400	-45.703	0.76638	0.209	0.418	2574
195	0.01526	658.98	129.8	-44.310	-43.603	0.77730	0.207	0.422	2494
200	0.01550	603.30	122.7	-42.197	-41.479	0.78805	0.205	0.427	2412
205	0.01575	548.99	115.8	-40.056	-39.327	0.79869	0.203	0.434	2329
210	0.01603	495.99	109.1	-37.882	-37.140	0.80923	0.202	0.441	2243
215	0.01632	444.20	102.4	-35.667	-34.912	0.81971	0.200	0.450	2153
220	0.01664	393.56	95.8	-33.403	-32.633	0.83019	0.198	0.461	2060
225	0.01700	343.98	89.3	-31.077	-30.290	0.84071	0.197	0.475	1963
230	0.01739	295.39	82.6	-28.673	-27.867	0.85136	0.195	0.493	1859
* 233.499	0.01770	268.57	79.0	-26.927	-26.108	0.85895	0.199	0.514	1793
* 233.499	0.23731	41.27	1.8	28.960	39.945	1.14191	0.189	0.375	617
235	0.24091	42.55	1.7	29.350	40.502	1.14428	0.187	0.367	621
240	0.25239	46.56	1.6	30.593	42.277	1.15176	0.183	0.344	637
245	0.26324	50.25	1.5	31.768	43.954	1.15868	0.180	0.327	651
250	0.27360	53.71	1.5	32.890	45.556	1.16515	0.177	0.314	664
255	0.28357	56.97	1.4	33.970	47.098	1.17125	0.175	0.303	677
260	0.29321	60.07	1.3	35.017	48.591	1.17705	0.173	0.294	689
265	0.30260	63.05	1.3	36.037	50.045	1.18259	0.171	0.287	700
270	0.31175	65.91	1.2	37.032	51.465	1.18790	0.170	0.281	711
275	0.32072	68.68	1.2	38.009	52.856	1.19301	0.169	0.276	721
280	0.32951	71.37	1.1	38.968	54.222	1.19793	0.167	0.271	732
285	0.33816	73.99	1.1	39.912	55.567	1.20269	0.166	0.267	742
290	0.34668	76.54	1.1	40.844	56.893	1.20730	0.166	0.263	751
295	0.35508	79.04	1.0	41.765	58.202	1.21178	0.165	0.260	760
300	0.36338	81.49	1.0	42.675	59.497	1.21613	0.164	0.258	770
310	0.37970	86.26	0.97	44.470	62.048	1.22449	0.163	0.253	787
320	0.39572	90.88	0.92	46.236	64.555	1.23245	0.162	0.249	804
330	0.41148	95.37	0.88	47.977	67.026	1.24006	0.161	0.246	820
340	0.42702	99.76	0.84	49.699	69.468	1.24735	0.161	0.243	836
350	0.44237	104.06	0.81	51.404	71.883	1.25435	0.160	0.240	851
360	0.45756	108.29	0.78	53.095	74.277	1.26110	0.160	0.238	866
370	0.47261	112.44	0.75	54.774	76.653	1.26760	0.159	0.237	880
380	0.48754	116.53	0.73	56.442	79.012	1.27389	0.159	0.235	894
390	0.50235	120.57	0.71	58.101	81.356	1.27998	0.159	0.234	907
400	0.51707	124.56	0.68	59.751	83.688	1.28589	0.158	0.233	921
410	0.53169	128.51	0.66	61.395	86.009	1.29162	0.158	0.232	934
420	0.54624	132.43	0.64	63.033	88.321	1.29719	0.158	0.231	946
430	0.56072	136.30	0.63	64.666	90.623	1.30261	0.158	0.230	959
440	0.57514	140.15	0.61	66.294	92.919	1.30788	0.158	0.229	971
450	0.58949	143.97	0.59	67.918	95.207	1.31303	0.158	0.229	983
460	0.60380	147.76	0.58	69.539	97.490	1.31805	0.158	0.228	995
470	0.61805	151.53	0.56	71.156	99.768	1.32294	0.158	0.228	1007
480	0.63226	155.27	0.55	72.772	102.042	1.32773	0.158	0.227	1018
490	0.64644	159.00	0.54	74.385	104.311	1.33241	0.158	0.227	1029
500	0.66057	162.71	0.53	75.998	106.577	1.33699	0.158	0.226	1041
510	0.67467	166.40	0.51	77.608	108.841	1.34147	0.158	0.226	1051
520	0.68873	170.07	0.50	79.218	111.102	1.34586	0.158	0.226	1062
530	0.70277	173.74	0.49	80.828	113.362	1.35017	0.158	0.226	1073
540	0.71678	177.38	0.48	82.437	115.620	1.35439	0.158	0.226	1083
550	0.73077	181.02	0.47	84.047	117.876	1.35853	0.158	0.226	1094
560	0.74473	184.64	0.46	85.657	120.132	1.36259	0.158	0.226	1104
570	0.75867	188.26	0.46	87.267	122.388	1.36658	0.159	0.226	1114
580	0.77258	191.86	0.45	88.878	124.644	1.37051	0.159	0.226	1124
590	0.78648	195.45	0.44	90.491	126.900	1.37436	0.159	0.226	1133
600	0.80036	199.04	0.43	92.105	129.156	1.37816	0.159	0.226	1143

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

250 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_p$ BTU/LB	$V(DP/DV)_h$ PSIA-CU FT/BTU	$-V(DP/DV)_t$ PSIA	$-(DV/DT)_p/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.187	81.63233	214.82	14.626	171918.76	0.0018497	0.11170	41.972	0.00344	1.56921	5.3749
100	81.35839	213.67	14.548	168493.53	0.0018594	0.11118	40.527	0.00344	1.56700	5.2136
105	80.59994	210.46	14.327	159285.38	0.0018872	0.10968	36.817	0.00343	1.56092	4.7998
110	79.83714	207.20	14.098	150422.03	0.0019167	0.10809	33.479	0.00341	1.55481	4.4281
115	79.06955	203.89	13.863	141893.18	0.0019480	0.10644	30.476	0.00339	1.54868	4.0939
120	78.29671	200.52	13.621	133688.69	0.0019812	0.10471	27.774	0.00337	1.54253	3.7934
125	77.51812	197.09	13.374	125798.60	0.0020167	0.10293	25.343	0.00334	1.53634	3.5232
130	76.73320	193.61	13.121	118213.09	0.0020546	0.10109	23.155	0.00331	1.53012	3.2802
135	75.94132	190.05	12.864	110922.52	0.0020953	0.09920	21.187	0.00328	1.52387	3.0619
140	75.14177	186.43	12.602	103917.41	0.0021390	0.09726	19.416	0.00325	1.51757	2.8658
145	74.33376	182.73	12.337	97188.48	0.0021862	0.09529	17.823	0.00321	1.51122	2.6900
150	73.51639	178.95	12.068	90726.59	0.0022373	0.09327	16.389	0.00317	1.50481	2.5325
155	72.68864	175.09	11.796	84522.79	0.0022928	0.09123	15.098	0.00313	1.49834	2.3918
160	71.84939	171.15	11.523	78568.32	0.0023533	0.08915	13.936	0.00308	1.49180	2.2665
165	70.99733	167.10	11.247	72854.60	0.0024197	0.08705	12.889	0.00303	1.48518	2.1554
170	70.13096	162.96	10.969	67373.23	0.0024927	0.08492	11.947	0.00298	1.47847	2.0574
175	69.24858	158.72	10.689	62116.03	0.0025734	0.08277	11.097	0.00293	1.47165	1.9715
180	68.34818	154.36	10.409	57075.00	0.0026633	0.08059	10.331	0.00287	1.46472	1.8972
185	67.42744	149.87	10.126	52242.36	0.0027638	0.07840	9.640	0.00281	1.45765	1.8336
190	66.48363	145.25	9.842	47610.57	0.0028771	0.07618	9.016	0.00274	1.45042	1.7805
195	65.51346	140.49	9.555	43172.31	0.0030058	0.07395	8.452	0.00267	1.44303	1.7376
200	64.51299	135.56	9.266	38920.54	0.0031533	0.07169	7.942	0.00260	1.43542	1.7048
205	63.47739	130.46	8.972	34848.51	0.0033241	0.06941	7.478	0.00252	1.42758	1.6822
210	62.40068	125.16	8.673	30949.84	0.0035245	0.06710	7.057	0.00244	1.41946	1.6703
215	61.27523	119.64	8.366	27218.61	0.0037630	0.06475	6.672	0.00235	1.41100	1.6701
220	60.09116	113.87	8.048	23649.50	0.0040520	0.06236	6.320	0.00225	1.40213	1.6832
225	58.83525	107.80	7.714	20238.17	0.0044102	0.05993	5.995	0.00214	1.39277	1.7120
230	57.48924	101.38	7.357	16981.84	0.0048670	0.05742	5.723	0.00202	1.38279	1.7705
* 233.499	56.49262	98.66	7.037	15172.29	0.0052094	0.05564	5.556	0.00192	1.37543	1.8475
* 233.499	4.21392	36.70	2.236	173.90	0.0102236	0.00967	0.861	0.00612	1.02525	1.2027
235	4.15094	37.25	2.238	176.61	0.0098494	0.00966	0.862	0.00634	1.02486	1.1785
240	3.96210	39.01	2.243	184.46	0.0088244	0.00967	0.867	0.00709	1.02372	1.1107
245	3.79882	40.69	2.247	190.90	0.0080413	0.00972	0.873	0.00782	1.02274	1.0578
250	3.65500	42.31	2.250	196.30	0.0074193	0.00978	0.880	0.00853	1.02187	1.0158
255	3.52651	43.88	2.253	200.90	0.0069107	0.00986	0.887	0.00922	1.02110	0.9817
260	3.41047	45.40	2.254	204.88	0.0064852	0.00995	0.895	0.00991	1.02040	0.9537
265	3.30473	46.90	2.255	208.35	0.0061227	0.01004	0.903	0.01058	1.01976	0.9305
270	3.20766	48.36	2.256	211.42	0.0058092	0.01013	0.912	0.01124	1.01918	0.9111
275	3.11801	49.80	2.256	214.15	0.0055347	0.01022	0.921	0.01189	1.01864	0.8947
280	3.03479	51.22	2.256	216.60	0.0052917	0.01031	0.931	0.01254	1.01814	0.8807
285	2.95718	52.62	2.256	218.80	0.0050747	0.01041	0.940	0.01318	1.01767	0.8686
290	2.88452	54.00	2.255	220.79	0.0048793	0.01050	0.950	0.01382	1.01723	0.8583
295	2.81627	55.36	2.254	222.60	0.0047023	0.01060	0.960	0.01445	1.01682	0.8489
300	2.75195	56.71	2.254	224.26	0.0045408	0.01070	0.970	0.01509	1.01644	0.8406
310	2.63363	59.38	2.252	227.17	0.0042564	0.01090	0.990	0.01637	1.01573	0.8266
320	2.52703	62.00	2.250	229.65	0.0040131	0.01111	1.011	0.01766	1.01509	0.8152
330	2.43025	64.59	2.248	231.78	0.0038019	0.01132	1.032	0.01897	1.01451	0.8056
340	2.34181	67.14	2.246	233.63	0.0036162	0.01153	1.052	0.02029	1.01398	0.7975
350	2.26054	69.66	2.243	235.24	0.0034513	0.01175	1.073	0.02162	1.01349	0.7905
360	2.18549	72.17	2.241	236.66	0.0033037	0.01197	1.094	0.02298	1.01304	0.7845
370	2.11590	74.65	2.239	237.91	0.0031704	0.01219	1.116	0.02435	1.01262	0.7795
380	2.05113	77.11	2.236	239.02	0.0030494	0.01241	1.137	0.02573	1.01223	0.7752
390	1.99064	79.56	2.234	240.02	0.0029388	0.01263	1.158	0.02714	1.01187	0.7713
400	1.93399	81.99	2.232	240.91	0.0028373	0.01285	1.178	0.02857	1.01153	0.7679
410	1.88078	84.41	2.229	241.71	0.0027436	0.01307	1.199	0.03002	1.01121	0.7648
420	1.83068	86.83	2.227	242.43	0.0026569	0.01330	1.220	0.03149	1.01091	0.7620
430	1.78341	89.23	2.225	243.09	0.0025763	0.01352	1.241	0.03297	1.01063	0.7595
440	1.73871	91.63	2.222	243.68	0.0025011	0.01374	1.261	0.03448	1.01036	0.7573
450	1.69637	94.03	2.219	244.22	0.0024308	0.01396	1.282	0.03601	1.01011	0.7553
460	1.65618	96.42	2.217	244.72	0.0023648	0.01418	1.302	0.03756	1.00987	0.7535
470	1.61798	98.81	2.214	245.17	0.0023028	0.01440	1.322	0.03913	1.00964	0.7519
480	1.58162	101.20	2.211	245.58	0.0022444	0.01462	1.342	0.04071	1.00943	0.7505
490	1.54694	103.59	2.208	245.96	0.0021891	0.01484	1.362	0.04231	1.00922	0.7492
500	1.51385	105.99	2.205	246.31	0.0021369	0.01506	1.382	0.04393	1.00902	0.7480
510	1.48221	108.38	2.202	246.64	0.0020873	0.01527	1.402	0.04555	1.00883	0.7474
520	1.45194	110.78	2.198	246.94	0.0020402	0.01549	1.421	0.04721	1.00865	0.7464
530	1.42294	113.19	2.195	247.22	0.0019954	0.01571	1.441	0.04888	1.00848	0.7455
540	1.39512	115.60	2.191	247.47	0.0019528	0.01593	1.460	0.05058	1.00831	0.7448
550	1.36843	118.01	2.187	247.71	0.0019120	0.01614	1.479	0.05228	1.00815	0.7442
560	1.34277	120.43	2.183	247.93	0.0018731	0.01636	1.498	0.05401	1.00800	0.7437
570	1.31810	122.86	2.179	248.14	0.0018359	0.01657	1.517	0.05574	1.00785	0.7433
580	1.29436	125.30	2.175	248.33	0.0018002	0.01679	1.536	0.05750	1.00771	0.7429
590	1.27148	127.74	2.171	248.52	0.0017660	0.01700	1.555	0.05926	1.00757	0.7427
600	1.24943	130.20	2.166	248.68	0.0017332	0.01721	1.573	0.06104	1.00744	0.7426

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

300 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.259	0.01225	2109.11	318.0	-83.170	-82.490	0.50169	0.266	0.397	3818
100	0.01229	2075.51	313.5	-82.480	-81.798	0.50867	0.265	0.397	3798
105	0.01240	1980.82	300.8	-80.501	-79.812	0.52805	0.260	0.397	3741
110	0.01252	1888.76	288.5	-78.522	-77.827	0.54652	0.256	0.397	3682
115	0.01264	1799.26	276.6	-76.544	-75.842	0.56417	0.252	0.397	3622
120	0.01277	1712.27	265.1	-74.565	-73.856	0.58107	0.248	0.397	3561
125	0.01290	1627.71	253.9	-72.586	-71.870	0.59728	0.245	0.397	3498
130	0.01303	1545.54	243.1	-70.606	-69.883	0.61287	0.241	0.398	3435
135	0.01316	1465.69	232.7	-68.625	-67.893	0.62789	0.238	0.398	3370
140	0.01330	1388.10	222.6	-66.641	-65.902	0.64237	0.235	0.399	3303
145	0.01345	1312.71	212.8	-64.654	-63.907	0.65637	0.232	0.399	3236
150	0.01359	1239.45	203.3	-62.664	-61.909	0.66992	0.229	0.400	3168
155	0.01375	1168.27	194.1	-60.669	-59.905	0.68305	0.226	0.401	3098
160	0.01391	1099.09	185.2	-58.669	-57.896	0.69581	0.223	0.402	3028
165	0.01408	1031.85	176.6	-56.662	-55.880	0.70821	0.221	0.404	2956
170	0.01425	966.50	168.3	-54.648	-53.856	0.72030	0.218	0.406	2884
175	0.01443	902.96	160.2	-52.623	-51.822	0.73209	0.216	0.408	2810
180	0.01462	841.17	152.4	-50.588	-49.776	0.74362	0.214	0.410	2735
185	0.01482	781.05	144.8	-48.539	-47.716	0.75491	0.212	0.413	2659
190	0.01503	722.55	137.4	-46.475	-45.640	0.76598	0.210	0.417	2581
195	0.01525	665.60	130.2	-44.391	-43.545	0.77687	0.207	0.421	2502
200	0.01548	610.11	123.2	-42.286	-41.426	0.78760	0.205	0.426	2422
205	0.01573	556.03	116.4	-40.154	-39.280	0.79820	0.204	0.432	2339
210	0.01600	503.27	109.6	-37.990	-37.101	0.80871	0.202	0.439	2254
215	0.01629	451.76	103.0	-35.787	-34.882	0.81915	0.200	0.448	2166
220	0.01661	401.43	96.5	-33.538	-32.615	0.82957	0.198	0.459	2074
225	0.01696	352.21	90.0	-31.230	-30.288	0.84003	0.197	0.472	1979
230	0.01734	304.03	83.4	-28.848	-27.885	0.85058	0.195	0.489	1877
235	0.01778	261.92	78.8	-26.358	-25.370	0.86140	0.198	0.525	1792
240	0.01829	214.48	71.7	-23.737	-22.721	0.87256	0.197	0.553	1670
* 240.230	0.01832	212.26	70.8	-23.613	-22.596	0.87308	0.197	0.549	1655
* 240.230	0.19450	37.57	2.2	28.679	39.484	1.13157	0.194	0.418	612
245	0.20478	42.03	2.1	30.014	41.390	1.13943	0.189	0.383	629
250	0.21477	46.24	1.9	31.309	43.240	1.14690	0.184	0.358	645
255	0.22418	50.12	1.8	32.526	44.980	1.15379	0.181	0.339	659
260	0.23313	53.73	1.7	33.685	46.636	1.16022	0.178	0.324	673
265	0.24172	57.13	1.6	34.798	48.225	1.16628	0.176	0.312	686
270	0.25002	60.37	1.6	35.873	49.762	1.17202	0.174	0.303	698
275	0.25807	63.47	1.5	36.918	51.254	1.17750	0.172	0.295	710
280	0.26592	66.45	1.5	37.937	52.709	1.18274	0.170	0.288	721
285	0.27359	69.32	1.4	38.934	54.133	1.18778	0.169	0.282	731
290	0.28111	72.11	1.4	39.913	55.529	1.19264	0.168	0.277	742
295	0.28849	74.83	1.3	40.876	56.902	1.19734	0.167	0.272	752
300	0.29576	77.47	1.3	41.824	58.254	1.20188	0.166	0.269	761
310	0.30999	82.59	1.2	43.686	60.906	1.21058	0.165	0.262	780
320	0.32387	87.51	1.1	45.508	63.499	1.21881	0.164	0.257	798
330	0.33747	92.27	1.1	47.298	66.045	1.22664	0.163	0.252	815
340	0.35083	96.89	1.0	49.062	68.551	1.23413	0.162	0.249	831
350	0.36400	101.40	1.0	50.803	71.024	1.24129	0.161	0.246	847
360	0.37699	105.81	0.96	52.527	73.470	1.24818	0.160	0.243	862
370	0.38983	110.14	0.93	54.235	75.891	1.25482	0.160	0.241	877
380	0.40255	114.39	0.89	55.929	78.291	1.26122	0.160	0.239	891
390	0.41514	118.57	0.86	57.611	80.673	1.26741	0.159	0.237	905
400	0.42764	122.70	0.84	59.284	83.040	1.27340	0.159	0.236	919
410	0.44004	126.77	0.81	60.947	85.392	1.27921	0.159	0.235	932
420	0.45237	130.80	0.79	62.603	87.733	1.28485	0.158	0.233	945
430	0.46462	134.79	0.76	64.252	90.063	1.29033	0.158	0.232	958
440	0.47680	138.73	0.74	65.895	92.383	1.29566	0.158	0.232	970
450	0.48893	142.64	0.72	67.533	94.694	1.30086	0.158	0.231	982
460	0.50100	146.52	0.70	69.167	96.999	1.30592	0.158	0.230	994
470	0.51303	150.37	0.69	70.797	99.297	1.31086	0.158	0.229	1006
480	0.52500	154.20	0.67	72.424	101.589	1.31569	0.158	0.229	1018
490	0.53694	158.00	0.65	74.048	103.876	1.32041	0.158	0.228	1029
500	0.54884	161.78	0.64	75.670	106.159	1.32502	0.158	0.228	1041
510	0.56070	165.54	0.62	77.290	108.438	1.32953	0.158	0.228	1052
520	0.57253	169.28	0.61	78.909	110.714	1.33395	0.158	0.227	1062
530	0.58434	173.00	0.60	80.526	112.987	1.33828	0.158	0.227	1073
540	0.59611	176.70	0.58	82.143	115.258	1.34252	0.158	0.227	1084
550	0.60786	180.40	0.57	83.760	117.528	1.34669	0.158	0.227	1094
560	0.61958	184.07	0.56	85.376	119.795	1.35078	0.159	0.227	1104
570	0.63129	187.74	0.55	86.993	122.062	1.35479	0.159	0.227	1115
580	0.64297	191.39	0.54	88.611	124.329	1.35873	0.159	0.227	1125
590	0.65463	195.03	0.53	90.229	126.595	1.36260	0.159	0.227	1134
600	0.66627	198.66	0.52	91.848	128.861	1.36641	0.159	0.227	1144

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

300 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.259	81.64532	215.09	14.624	172199.17	0.0018468	0.11173	42.042	0.00344	1.56931	5.3811
100	81.38250	213.99	14.549	168910.02	0.0018561	0.11123	40.652	0.00344	1.56720	5.2259
105	80.62521	210.80	14.328	159704.17	0.0018837	0.10973	36.934	0.00343	1.56112	4.8113
110	79.86364	207.55	14.100	150843.20	0.0019129	0.10816	33.589	0.00341	1.55502	4.4388
115	79.09737	204.25	13.865	142316.80	0.0019438	0.10650	30.579	0.00339	1.54890	4.1038
120	78.32595	200.90	13.623	134114.86	0.0019768	0.10479	27.871	0.00337	1.54276	3.8026
125	77.54888	197.49	13.376	126227.40	0.0020118	0.10301	25.434	0.00334	1.53659	3.5317
130	76.76561	194.01	13.123	118644.61	0.0020493	0.10117	23.241	0.00331	1.53038	3.2881
135	75.97550	190.48	12.866	111356.89	0.0020895	0.09929	21.268	0.00328	1.52414	3.0692
140	75.17786	186.87	12.605	104354.74	0.0021327	0.09736	19.493	0.00325	1.51785	2.8726
145	74.37192	183.19	12.340	97628.90	0.0021792	0.09539	17.895	0.00321	1.51151	2.6962
150	73.55681	179.43	12.072	91170.25	0.0022296	0.09338	16.457	0.00317	1.50513	2.5382
155	72.73154	175.60	11.801	84969.86	0.0022843	0.09134	15.162	0.00313	1.49867	2.3970
160	71.89500	171.67	11.527	79018.98	0.0023439	0.08927	13.996	0.00309	1.49215	2.2712
165	71.04592	167.66	11.252	73309.05	0.0024092	0.08717	12.946	0.00304	1.48555	2.1595
170	70.18285	163.54	10.975	67831.71	0.0024809	0.08505	12.001	0.00299	1.47887	2.0609
175	69.30413	159.32	10.697	62578.80	0.0025602	0.08291	11.149	0.00293	1.47208	1.9745
180	68.40784	154.99	10.418	57542.37	0.0026482	0.08075	10.380	0.00288	1.46517	1.8996
185	67.49172	150.54	10.137	52714.68	0.0027466	0.07856	9.687	0.00282	1.45814	1.8354
190	66.55313	145.96	9.854	48088.23	0.0028573	0.07636	9.061	0.00275	1.45096	1.7816
195	65.58895	141.24	9.570	43655.80	0.0029828	0.07413	8.495	0.00268	1.44360	1.7379
200	64.59540	136.36	9.283	39410.40	0.0031262	0.07189	7.982	0.00261	1.43605	1.7041
205	63.56789	131.31	8.992	35345.40	0.0032918	0.06962	7.518	0.00253	1.42826	1.6804
210	62.50075	126.08	8.697	31454.55	0.0034854	0.06732	7.095	0.00245	1.42021	1.6672
215	61.38684	120.63	8.394	27732.07	0.0037147	0.06499	6.710	0.00236	1.41183	1.6653
220	60.21694	114.94	8.081	24172.85	0.0039910	0.06263	6.356	0.00227	1.40307	1.6760
225	58.97890	108.97	7.755	20772.75	0.0043310	0.06022	6.031	0.00216	1.39384	1.7017
230	57.65607	102.69	7.407	17529.23	0.0047604	0.05775	5.754	0.00205	1.38402	1.7535
235	56.23422	98.08	7.065	14728.72	0.0053526	0.05521	5.515	0.00187	1.37352	1.8878
240	54.66864	90.53	6.648	11725.32	0.0061127	0.05255	5.262	0.00174	1.36202	1.9944
* 240.230	54.59302	89.95	6.576	11587.92	0.0061079	0.05244	5.250	0.00175	1.36147	1.9803
* 240.230	5.14137	36.09	2.243	193.16	0.0115727	0.01071	0.925	0.00499	1.03086	1.2998
245	4.88326	37.93	2.252	205.22	0.0101079	0.01059	0.926	0.00566	1.02929	1.2071
250	4.65608	39.75	2.258	215.30	0.0090042	0.01055	0.929	0.00633	1.02792	1.1348
255	4.46079	41.47	2.264	223.56	0.0081703	0.01055	0.933	0.00698	1.02674	1.0792
260	4.28953	43.13	2.267	230.47	0.0075133	0.01057	0.938	0.00761	1.02570	1.0353
265	4.13708	44.74	2.270	236.37	0.0069795	0.01062	0.945	0.00822	1.02478	1.0000
270	3.99976	46.30	2.272	241.47	0.0065352	0.01067	0.951	0.00882	1.02395	0.9712
275	3.87492	47.83	2.273	245.93	0.0061583	0.01073	0.959	0.00940	1.02320	0.9474
280	3.76055	49.32	2.274	249.87	0.0058335	0.01080	0.967	0.00998	1.02251	0.9273
285	3.65509	50.79	2.274	253.38	0.0055499	0.01087	0.975	0.01055	1.02187	0.9103
290	3.55733	52.24	2.274	256.53	0.0052996	0.01094	0.983	0.01111	1.02128	0.8959
295	3.46628	53.66	2.273	259.36	0.0050766	0.01102	0.992	0.01167	1.02073	0.8830
300	3.38112	55.07	2.273	261.94	0.0048762	0.01110	1.001	0.01223	1.02022	0.8718
310	3.22596	57.84	2.271	266.42	0.0045301	0.01127	1.020	0.01334	1.01929	0.8530
320	3.08767	60.56	2.269	270.19	0.0042404	0.01146	1.039	0.01445	1.01846	0.8379
330	2.96323	63.22	2.266	273.41	0.0039933	0.01165	1.058	0.01557	1.01771	0.8254
340	2.85035	65.85	2.264	276.17	0.0037793	0.01185	1.078	0.01670	1.01703	0.8150
350	2.74726	68.45	2.261	278.58	0.0035917	0.01205	1.098	0.01784	1.01641	0.8061
360	2.65259	71.01	2.259	280.68	0.0034255	0.01226	1.118	0.01900	1.01584	0.7984
370	2.56520	73.55	2.256	282.53	0.0032769	0.01246	1.138	0.02016	1.01532	0.7922
380	2.48419	76.07	2.253	284.17	0.0031431	0.01267	1.158	0.02133	1.01483	0.7867
390	2.40881	78.56	2.250	285.62	0.0030217	0.01288	1.178	0.02252	1.01438	0.7819
400	2.33843	81.04	2.248	286.93	0.0029110	0.01309	1.199	0.02373	1.01396	0.7776
410	2.27250	83.51	2.245	288.10	0.0028095	0.01331	1.219	0.02495	1.01356	0.7737
420	2.21059	85.96	2.242	289.15	0.0027160	0.01352	1.239	0.02619	1.01319	0.7703
430	2.15230	88.41	2.239	290.10	0.0026295	0.01373	1.259	0.02745	1.01284	0.7672
440	2.09730	90.84	2.237	290.96	0.0025492	0.01395	1.279	0.02872	1.01251	0.7645
450	2.04528	93.27	2.234	291.75	0.0024744	0.01416	1.299	0.03001	1.01220	0.7620
460	1.99600	95.69	2.231	292.46	0.0024045	0.01438	1.319	0.03131	1.01190	0.7598
470	1.94922	98.11	2.228	293.11	0.0023390	0.01460	1.339	0.03263	1.01162	0.7578
480	1.90475	100.53	2.225	293.71	0.0022774	0.01481	1.358	0.03396	1.01136	0.7560
490	1.86241	102.95	2.221	294.26	0.0022195	0.01502	1.378	0.03531	1.01110	0.7544
500	1.82203	105.36	2.218	294.77	0.0021647	0.01524	1.397	0.03667	1.01086	0.7530
510	1.78348	107.78	2.214	295.23	0.0021129	0.01544	1.417	0.03802	1.01063	0.7521
520	1.74662	110.20	2.211	295.66	0.0020639	0.01566	1.436	0.03941	1.01041	0.7509
530	1.71135	112.63	2.207	296.06	0.0020173	0.01587	1.455	0.04082	1.01020	0.7498
540	1.67754	115.06	2.203	296.43	0.0019730	0.01609	1.474	0.04224	1.01000	0.7488
550	1.64512	117.49	2.199	296.77	0.0019308	0.01630	1.493	0.04368	1.00980	0.7480
560	1.61399	119.93	2.195	297.09	0.0018905	0.01651	1.512	0.04512	1.00962	0.7473
570	1.58407	122.38	2.191	297.39	0.0018521	0.01672	1.530	0.04658	1.00944	0.7467
580	1.55529	124.83	2.187	297.66	0.0018153	0.01693	1.549	0.04805	1.00927	0.7462
590	1.52758	127.29	2.182	297.92	0.0017801	0.01714	1.567	0.04953	1.00910	0.7458
600	1.50088	129.76	2.178	298.16	0.0017463	0.01735	1.586	0.05102	1.00894	0.7455

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

350 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.330	0.01225	2112.21	318.1	-83.162	-82.368	0.50177	0.266	0.397	3820
100	0.01228	2080.01	313.7	-82.501	-81.705	0.50846	0.265	0.397	3801
105	0.01240	1985.39	301.1	-80.524	-79.720	0.52783	0.261	0.397	3744
110	0.01252	1893.40	288.8	-78.547	-77.735	0.54630	0.256	0.397	3685
115	0.01264	1803.98	276.9	-76.570	-75.751	0.56394	0.252	0.397	3626
120	0.01276	1717.06	265.4	-74.593	-73.766	0.58084	0.249	0.397	3564
125	0.01289	1632.59	254.2	-72.616	-71.781	0.59704	0.245	0.397	3502
130	0.01302	1550.51	243.4	-70.638	-69.794	0.61263	0.241	0.397	3438
135	0.01316	1470.74	232.9	-68.658	-67.806	0.62763	0.238	0.398	3374
140	0.01330	1393.25	222.8	-66.677	-65.815	0.64211	0.235	0.398	3308
145	0.01344	1317.95	213.0	-64.693	-63.822	0.65610	0.232	0.399	3241
150	0.01359	1244.79	203.6	-62.705	-61.825	0.66964	0.229	0.400	3173
155	0.01374	1173.71	194.4	-60.714	-59.823	0.68276	0.226	0.401	3103
160	0.01390	1104.65	185.5	-58.717	-57.816	0.69551	0.224	0.402	3033
165	0.01407	1037.53	176.9	-56.713	-55.802	0.70790	0.221	0.404	2962
170	0.01424	972.30	168.6	-54.702	-53.780	0.71997	0.219	0.405	2890
175	0.01442	908.89	160.6	-52.682	-51.748	0.73175	0.216	0.407	2816
180	0.01461	847.24	152.8	-50.652	-49.705	0.74326	0.214	0.410	2742
185	0.01480	787.29	145.2	-48.608	-47.649	0.75453	0.212	0.413	2666
190	0.01501	728.95	137.8	-46.549	-45.576	0.76559	0.210	0.416	2589
195	0.01523	672.17	130.7	-44.472	-43.485	0.77645	0.208	0.420	2511
200	0.01546	616.88	123.7	-42.374	-41.372	0.78716	0.206	0.425	2431
205	0.01571	563.01	116.9	-40.250	-39.232	0.79773	0.204	0.431	2349
210	0.01597	510.49	110.2	-38.096	-37.061	0.80819	0.202	0.438	2265
215	0.01626	459.25	103.6	-35.905	-34.851	0.81859	0.200	0.446	2178
220	0.01657	409.22	97.1	-33.669	-32.595	0.82896	0.198	0.456	2088
225	0.01691	360.33	90.7	-31.379	-30.282	0.83935	0.197	0.469	1994
230	0.01730	312.55	84.2	-29.019	-27.898	0.84983	0.195	0.485	1895
235	0.01773	270.90	78.7	-26.546	-25.398	0.86059	0.198	0.511	1798
240	0.01822	224.18	72.4	-23.972	-22.792	0.87156	0.197	0.542	1690
245	0.01880	179.28	65.1	-21.232	-20.013	0.88302	0.196	0.576	1561
* 246.196	0.01896	169.03	63.5	-20.545	-19.317	0.88585	0.196	0.587	1531
* 246.196	0.16316	33.74	2.7	26.239	38.814	1.12203	0.199	0.470	608
250	0.17103	37.80	2.6	29.433	40.518	1.12890	0.194	0.429	622
255	0.18049	42.57	2.4	30.865	42.563	1.13700	0.188	0.392	640
260	0.18925	46.87	2.2	32.186	44.451	1.14434	0.184	0.365	656
265	0.19748	50.83	2.1	33.427	46.226	1.15110	0.181	0.346	671
270	0.20532	54.53	2.0	34.607	47.914	1.15741	0.178	0.330	684
275	0.21284	58.02	1.9	35.739	49.534	1.16336	0.176	0.318	697
280	0.22010	61.33	1.8	36.833	51.098	1.16899	0.174	0.308	709
285	0.22715	64.51	1.7	37.894	52.616	1.17437	0.172	0.300	721
290	0.23400	67.56	1.7	38.929	54.095	1.17951	0.171	0.292	732
295	0.24071	70.51	1.6	39.942	55.542	1.18446	0.169	0.286	743
300	0.24727	73.37	1.6	40.934	56.960	1.18923	0.168	0.281	753
310	0.26005	78.87	1.5	42.871	59.725	1.19829	0.167	0.272	773
320	0.27245	84.11	1.4	44.756	62.414	1.20683	0.165	0.265	792
330	0.28453	89.15	1.3	46.599	65.040	1.21491	0.164	0.260	810
340	0.29637	94.02	1.3	48.408	67.616	1.22260	0.163	0.255	826
350	0.30798	98.74	1.2	50.190	70.150	1.22995	0.162	0.252	843
360	0.31942	103.35	1.1	51.948	72.650	1.23699	0.161	0.248	859
370	0.33069	107.85	1.1	53.686	75.119	1.24375	0.161	0.246	874
380	0.34183	112.27	1.1	55.408	77.563	1.25027	0.160	0.243	888
390	0.35285	116.60	1.0	57.116	79.984	1.25656	0.160	0.241	903
400	0.36377	120.86	0.99	58.810	82.386	1.26264	0.159	0.239	917
410	0.37459	125.06	0.96	60.494	84.772	1.26853	0.159	0.238	930
420	0.38532	129.20	0.93	62.169	87.142	1.27424	0.159	0.236	944
430	0.39599	133.29	0.90	63.835	89.499	1.27979	0.159	0.235	957
440	0.40658	137.34	0.88	65.494	91.845	1.28518	0.158	0.234	969
450	0.41712	141.34	0.85	67.147	94.180	1.29043	0.158	0.233	982
460	0.42759	145.31	0.83	68.794	96.506	1.29554	0.158	0.232	994
470	0.43802	149.25	0.81	70.436	98.825	1.30053	0.158	0.231	1006
480	0.44841	153.15	0.79	72.074	101.136	1.30540	0.158	0.231	1018
490	0.45875	157.02	0.77	73.709	103.441	1.31015	0.158	0.230	1029
500	0.46905	160.87	0.75	75.341	105.740	1.31479	0.158	0.230	1041
510	0.47932	164.70	0.73	76.970	108.035	1.31934	0.158	0.229	1052
520	0.48955	168.50	0.72	78.598	110.326	1.32379	0.158	0.229	1063
530	0.49976	172.28	0.70	80.224	112.613	1.32814	0.158	0.229	1074
540	0.50994	176.05	0.69	81.848	114.898	1.33241	0.158	0.228	1084
550	0.52009	179.79	0.67	83.472	117.179	1.33660	0.158	0.228	1095
560	0.53021	183.52	0.66	85.096	119.459	1.34071	0.159	0.228	1105
570	0.54032	187.24	0.65	86.719	121.737	1.34474	0.159	0.228	1116
580	0.55040	190.94	0.63	88.342	124.014	1.34870	0.159	0.228	1126
590	0.56047	194.63	0.62	89.966	126.290	1.35259	0.159	0.228	1136
600	0.57052	198.30	0.61	91.591	128.566	1.35642	0.159	0.228	1145

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

350 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.330	81.65830	215.37	14.622	172479.42	0.0018440	0.11176	42.113	0.00345	1.56942	5.3874
100	81.40657	214.32	14.550	169326.13	0.0018528	0.11128	40.778	0.00344	1.56739	5.2384
105	80.65043	211.13	14.329	160122.57	0.0018802	0.10979	37.052	0.00343	1.56132	4.8229
110	79.89008	207.90	14.101	151263.94	0.0019091	0.10822	33.700	0.00341	1.55523	4.4495
115	79.12512	204.61	13.866	142739.97	0.0019397	0.10657	30.683	0.00339	1.54913	4.1138
120	78.35511	201.28	13.625	134540.53	0.0019723	0.10486	27.968	0.00337	1.54299	3.8119
125	77.57956	197.88	13.378	126655.66	0.0020070	0.10308	25.526	0.00335	1.53683	3.5403
130	76.79790	194.42	13.125	119075.57	0.0020441	0.10125	23.328	0.00332	1.53064	3.2961
135	76.00955	190.90	12.868	111790.64	0.0020838	0.09938	21.349	0.00329	1.52440	3.0766
140	75.21381	187.31	12.607	104791.41	0.0021264	0.09745	19.569	0.00325	1.51813	2.8794
145	74.40994	183.65	12.343	98068.61	0.0021724	0.09549	17.967	0.00322	1.51181	2.7024
150	73.59707	179.92	12.075	91613.14	0.0022220	0.09349	16.524	0.00318	1.50544	2.5439
155	72.77424	176.10	11.805	85416.08	0.0022760	0.09145	15.226	0.00314	1.49901	2.4022
160	71.94038	172.20	11.532	79468.71	0.0023347	0.08939	14.057	0.00309	1.49251	2.2758
165	71.09424	168.21	11.258	73762.48	0.0023989	0.08730	13.004	0.00304	1.48593	2.1636
170	70.23443	164.12	10.982	68289.07	0.0024694	0.08519	12.055	0.00299	1.47927	2.0645
175	69.35933	159.93	10.705	63040.33	0.0025472	0.08305	11.200	0.00294	1.47250	1.9776
180	68.46706	155.63	10.426	58008.36	0.0026335	0.08090	10.429	0.00288	1.46563	1.9021
185	67.55548	151.21	10.147	53185.46	0.0027298	0.07872	9.733	0.00282	1.45863	1.8373
190	66.62203	146.67	9.866	48564.18	0.0028379	0.07653	9.105	0.00276	1.45148	1.7828
195	65.66370	141.98	9.584	44137.34	0.0029603	0.07432	8.537	0.00269	1.44417	1.7383
200	64.67690	137.15	9.299	39898.07	0.0030998	0.07208	8.023	0.00262	1.43667	1.7036
205	63.65725	132.16	9.012	35839.79	0.0032605	0.06983	7.557	0.00255	1.42894	1.6788
210	62.59940	126.98	8.720	31956.37	0.0034475	0.06755	7.133	0.00246	1.42095	1.6643
215	61.49661	121.60	8.421	28242.17	0.0036683	0.06524	6.747	0.00238	1.41266	1.6607
220	60.34030	115.99	8.114	24692.24	0.0039328	0.06289	6.393	0.00228	1.40400	1.6693
225	59.11924	110.13	7.794	21302.61	0.0042561	0.06050	6.067	0.00218	1.39489	1.6921
230	57.81826	103.97	7.455	18070.90	0.0046607	0.05806	5.783	0.00207	1.38522	1.7375
235	56.41389	99.26	7.032	15282.42	0.0051521	0.05554	5.546	0.00193	1.37484	1.8383
240	54.89547	92.15	6.690	12306.22	0.0058857	0.05296	5.300	0.00178	1.36368	1.9541
245	53.19038	84.30	6.235	9535.95	0.0068300	0.05022	5.035	0.00164	1.35122	2.0783
* 246.196	52.74729	82.45	6.133	8915.81	0.0071236	0.04953	4.968	0.00160	1.34799	2.1208
* 246.196	6.12899	35.40	2.250	206.79	0.0132680	0.01184	0.991	0.00411	1.03686	1.4148
250	5.84708	37.00	2.260	221.03	0.0115870	0.01160	0.987	0.00463	1.03514	1.3134
255	5.54050	38.96	2.270	235.85	0.0100509	0.01143	0.986	0.00527	1.03328	1.2160
260	5.28414	40.79	2.277	247.67	0.0089543	0.01134	0.987	0.00588	1.03173	1.1444
265	5.06373	42.54	2.282	257.39	0.0081241	0.01131	0.990	0.00646	1.03039	1.0895
270	4.87042	44.21	2.286	265.58	0.0074692	0.01130	0.994	0.00702	1.02922	1.0464
275	4.69833	45.84	2.289	272.58	0.0069366	0.01131	0.999	0.00757	1.02817	1.0116
280	4.54335	47.43	2.290	278.66	0.0064930	0.01134	1.005	0.00810	1.02724	0.9831
285	4.40247	48.97	2.291	284.00	0.0061165	0.01137	1.012	0.00862	1.02638	0.9593
290	4.27342	50.49	2.292	288.73	0.0057919	0.01142	1.019	0.00913	1.02560	0.9394
295	4.15444	51.98	2.292	292.95	0.0055085	0.01147	1.026	0.00964	1.02489	0.9220
300	4.04416	53.45	2.292	296.74	0.0052584	0.01153	1.034	0.01015	1.02422	0.9070
310	3.84541	56.33	2.290	303.28	0.0048354	0.01167	1.050	0.01114	1.02302	0.8823
320	3.67043	59.13	2.288	308.72	0.0044897	0.01183	1.067	0.01214	1.02197	0.8627
330	3.51451	61.89	2.285	313.31	0.0042005	0.01199	1.085	0.01313	1.02103	0.8468
340	3.37420	64.59	2.283	317.23	0.0039539	0.01217	1.104	0.01412	1.02018	0.8337
350	3.24693	67.26	2.279	320.62	0.0037406	0.01236	1.122	0.01513	1.01941	0.8226
360	3.13071	69.88	2.276	323.56	0.0035537	0.01255	1.141	0.01614	1.01871	0.8131
370	3.02395	72.48	2.273	326.14	0.0033883	0.01274	1.161	0.01716	1.01807	0.8054
380	2.92541	75.05	2.270	328.42	0.0032405	0.01293	1.180	0.01818	1.01748	0.7987
390	2.83405	77.60	2.267	330.44	0.0031075	0.01313	1.199	0.01922	1.01693	0.7928
400	2.74902	80.12	2.264	332.24	0.0029870	0.01333	1.219	0.02027	1.01642	0.7876
410	2.66961	82.63	2.261	333.85	0.0028771	0.01354	1.239	0.02133	1.01594	0.7830
420	2.59522	85.12	2.258	335.30	0.0027765	0.01374	1.258	0.02241	1.01550	0.7789
430	2.52534	87.60	2.254	336.61	0.0026838	0.01395	1.278	0.02350	1.01508	0.7752
440	2.45953	90.07	2.251	337.79	0.0025981	0.01416	1.297	0.02460	1.01468	0.7719
450	2.39742	92.53	2.248	338.86	0.0025186	0.01437	1.317	0.02571	1.01431	0.7689
460	2.33866	94.99	2.245	339.84	0.0024446	0.01458	1.336	0.02684	1.01396	0.7662
470	2.28298	97.43	2.242	340.73	0.0023755	0.01479	1.355	0.02798	1.01362	0.7638
480	2.23012	99.88	2.238	341.54	0.0023108	0.01500	1.375	0.02913	1.01331	0.7616
490	2.17985	102.32	2.235	342.29	0.0022499	0.01520	1.394	0.03030	1.01301	0.7597
500	2.13197	104.76	2.231	342.98	0.0021927	0.01541	1.413	0.03147	1.01272	0.7580
510	2.08630	107.20	2.228	343.61	0.0021387	0.01561	1.432	0.03264	1.01245	0.7570
520	2.04268	109.64	2.224	344.19	0.0020876	0.01582	1.451	0.03384	1.01218	0.7554
530	2.00097	112.09	2.220	344.73	0.0020392	0.01604	1.469	0.03506	1.01193	0.7540
540	1.96103	114.53	2.216	345.23	0.0019932	0.01625	1.488	0.03629	1.01170	0.7528
550	1.92275	116.99	2.212	345.70	0.0019495	0.01646	1.507	0.03753	1.01147	0.7518
560	1.88603	119.44	2.208	346.13	0.0019079	0.01666	1.525	0.03877	1.01125	0.7509
570	1.85076	121.90	2.203	346.53	0.0018683	0.01687	1.544	0.04003	1.01103	0.7501
580	1.81685	124.37	2.199	346.91	0.0018304	0.01708	1.562	0.04130	1.01083	0.7495
590	1.78422	126.85	2.194	347.26	0.0017941	0.01729	1.580	0.04257	1.01064	0.7489
600	1.75280	129.33	2.190	347.58	0.0017595	0.01749	1.598	0.04386	1.01045	0.7485

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

400 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.401	0.01224	2115.30	318.1	-83.154	-82.247	0.50185	0.266	0.397	3822
100	0.01228	2084.50	313.9	-82.522	-81.612	0.50825	0.265	0.397	3804
105	0.01240	1989.95	301.3	-80.546	-79.628	0.52762	0.261	0.397	3747
110	0.01251	1898.04	289.0	-78.571	-77.644	0.54608	0.256	0.397	3689
115	0.01263	1808.69	277.1	-76.596	-75.660	0.56371	0.252	0.397	3629
120	0.01276	1721.85	265.6	-74.621	-73.676	0.58060	0.249	0.397	3568
125	0.01288	1637.46	254.4	-72.645	-71.691	0.59681	0.245	0.397	3506
130	0.01302	1555.46	243.7	-70.670	-69.705	0.61238	0.242	0.397	3442
135	0.01315	1475.78	233.2	-68.692	-67.718	0.62738	0.238	0.398	3378
140	0.01329	1398.38	223.1	-66.713	-65.729	0.64185	0.235	0.398	3312
145	0.01343	1323.18	213.3	-64.732	-63.737	0.65583	0.232	0.399	3245
150	0.01358	1250.12	203.9	-62.747	-61.741	0.66936	0.229	0.399	3177
155	0.01373	1179.14	194.7	-60.758	-59.741	0.68247	0.226	0.400	3108
160	0.01389	1110.19	185.8	-58.764	-57.735	0.69521	0.224	0.402	3038
165	0.01406	1043.19	177.3	-56.764	-55.723	0.70759	0.221	0.403	2967
170	0.01423	978.08	169.0	-54.757	-53.703	0.71965	0.219	0.405	2896
175	0.01441	914.81	160.9	-52.741	-51.674	0.73141	0.216	0.407	2823
180	0.01459	853.30	153.1	-50.715	-49.634	0.74291	0.214	0.409	2749
185	0.01479	793.49	145.6	-48.676	-47.581	0.75416	0.212	0.412	2673
190	0.01499	735.32	138.2	-46.623	-45.512	0.76520	0.210	0.415	2597
195	0.01521	678.71	131.1	-44.552	-43.425	0.77604	0.208	0.419	2519
200	0.01544	623.61	124.1	-42.461	-41.317	0.78672	0.206	0.424	2440
205	0.01569	569.95	117.4	-40.345	-39.183	0.79726	0.204	0.430	2359
210	0.01595	517.66	110.7	-38.201	-37.019	0.80769	0.202	0.436	2276
215	0.01623	466.67	104.2	-36.021	-34.819	0.81804	0.200	0.444	2190
220	0.01654	416.92	97.7	-33.799	-32.574	0.82836	0.198	0.454	2102
225	0.01688	368.36	91.4	-31.524	-30.275	0.83869	0.197	0.466	2009
230	0.01725	320.95	85.0	-29.185	-27.908	0.84909	0.195	0.481	1912
235	0.01767	276.94	79.4	-26.737	-25.429	0.85976	0.199	0.506	1815
240	0.01814	233.57	73.3	-24.199	-22.855	0.87059	0.197	0.533	1711
245	0.01870	189.26	66.2	-21.509	-20.124	0.88185	0.196	0.564	1587
250	0.01939	145.19	58.6	-18.619	-17.183	0.89374	0.197	0.609	1443
* 251.575	0.01964	130.85	56.9	-17.647	-16.192	0.89769	0.197	0.641	1405
* 251.575	0.13903	29.78	3.3	27.645	37.943	1.11293	0.204	0.536	602
255	0.14601	33.96	3.1	28.862	39.677	1.11978	0.198	0.480	617
260	0.15514	39.29	2.8	30.446	41.938	1.12856	0.192	0.428	637
265	0.16343	44.01	2.6	31.878	43.983	1.13635	0.187	0.393	654
270	0.17113	48.31	2.5	33.203	45.879	1.14344	0.183	0.367	669
275	0.17840	52.28	2.3	34.451	47.665	1.15000	0.180	0.348	684
280	0.18533	56.01	2.2	35.640	49.367	1.15613	0.178	0.333	697
285	0.19198	59.53	2.1	36.781	51.001	1.16192	0.175	0.321	710
290	0.19840	62.88	2.0	37.884	52.580	1.16741	0.174	0.311	722
295	0.20464	66.10	1.9	38.956	54.113	1.17265	0.172	0.303	734
300	0.21072	69.20	1.9	40.000	55.608	1.17768	0.171	0.295	745
310	0.22247	75.10	1.7	42.024	58.502	1.18717	0.168	0.284	766
320	0.23379	80.69	1.6	43.979	61.295	1.19604	0.167	0.275	786
330	0.24477	86.02	1.6	45.880	64.010	1.20439	0.165	0.268	804
340	0.25547	91.14	1.5	47.739	66.661	1.21230	0.164	0.262	822
350	0.26594	96.09	1.4	49.563	69.261	1.21984	0.163	0.258	839
360	0.27622	100.90	1.3	51.358	71.817	1.22704	0.162	0.254	855
370	0.28633	105.59	1.3	53.129	74.337	1.23395	0.162	0.250	871
380	0.29629	110.16	1.2	54.880	76.826	1.24058	0.161	0.247	886
390	0.30614	114.64	1.2	56.613	79.289	1.24698	0.160	0.245	901
400	0.31587	119.04	1.2	58.332	81.728	1.25316	0.160	0.243	915
410	0.32550	123.36	1.1	60.037	84.147	1.25913	0.160	0.241	929
420	0.33505	127.62	1.1	61.731	86.548	1.26491	0.159	0.239	942
430	0.34453	131.82	1.0	63.414	88.933	1.27053	0.159	0.238	956
440	0.35393	135.97	1.0	65.090	91.305	1.27598	0.159	0.237	968
450	0.36327	140.07	0.99	66.757	93.664	1.28128	0.159	0.235	981
460	0.37255	144.13	0.96	68.418	96.013	1.28644	0.159	0.234	994
470	0.38179	148.14	0.94	70.073	98.352	1.29147	0.158	0.233	1006
480	0.39098	152.13	0.91	71.723	100.683	1.29638	0.158	0.233	1018
490	0.40012	156.07	0.89	73.369	103.006	1.30117	0.158	0.232	1029
500	0.40923	159.99	0.87	75.011	105.322	1.30585	0.158	0.231	1041
510	0.41830	163.88	0.85	76.650	107.633	1.31043	0.158	0.231	1052
520	0.42734	167.75	0.83	78.286	109.939	1.31490	0.158	0.230	1063
530	0.43634	171.59	0.81	79.920	112.240	1.31929	0.158	0.230	1074
540	0.44532	175.41	0.79	81.553	114.537	1.32358	0.158	0.230	1085
550	0.45428	179.21	0.78	83.184	116.832	1.32779	0.159	0.229	1096
560	0.46321	183.00	0.76	84.814	119.124	1.33192	0.159	0.229	1106
570	0.47211	186.76	0.75	86.444	121.413	1.33597	0.159	0.229	1116
580	0.48100	190.51	0.73	88.073	123.701	1.33995	0.159	0.229	1127
590	0.48987	194.25	0.72	89.703	125.987	1.34386	0.159	0.229	1137
600	0.49871	197.97	0.70	91.333	128.273	1.34770	0.159	0.229	1147

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

400 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.401	81.67126	215.65	14.620	172759.53	0.0018412	0.11179	42.183	0.00345	1.56952	5.3937
100	81.43058	214.64	14.551	169741.88	0.0018496	0.11133	40.904	0.00344	1.56759	5.2508
105	80.67558	211.47	14.331	160540.57	0.0018767	0.10985	37.170	0.00343	1.56152	4.8344
110	79.91646	208.25	14.103	151684.27	0.0019053	0.10828	33.810	0.00341	1.55545	4.4602
115	79.15280	204.98	13.868	143162.69	0.0019356	0.10664	30.787	0.00340	1.54935	4.1237
120	78.38419	201.65	13.626	134965.72	0.0019679	0.10493	28.066	0.00337	1.54322	3.8211
125	77.61014	198.27	13.380	127083.41	0.0020022	0.10316	25.617	0.00335	1.53707	3.5489
130	76.83010	194.83	13.127	119505.97	0.0020388	0.10134	23.414	0.00332	1.53089	3.3041
135	76.04349	191.33	12.871	112223.79	0.0020781	0.09946	21.431	0.00329	1.52467	3.0839
140	75.24964	187.75	12.610	105227.42	0.0021202	0.09755	19.645	0.00326	1.51841	2.8862
145	74.44780	184.11	12.346	98507.60	0.0021655	0.09559	18.039	0.00322	1.51211	2.7087
150	73.63715	180.40	12.078	92055.24	0.0022145	0.09359	16.592	0.00318	1.50575	2.5496
155	72.81674	176.60	11.809	85861.45	0.0022677	0.09157	15.290	0.00314	1.49934	2.4074
160	71.98553	172.72	11.537	79917.51	0.0023255	0.08951	14.117	0.00310	1.49286	2.2805
165	71.14230	168.75	11.263	74214.90	0.0023887	0.08743	13.061	0.00305	1.48630	2.1678
170	70.28570	164.69	10.988	68745.31	0.0024580	0.08532	12.109	0.00300	1.47966	2.0682
175	69.41416	160.53	10.712	63500.64	0.0025343	0.08320	11.251	0.00295	1.47293	1.9807
180	68.52587	156.26	10.435	58472.99	0.0026190	0.08105	10.478	0.00289	1.46608	1.9046
185	67.61874	151.87	10.157	53654.73	0.0027133	0.07888	9.780	0.00283	1.45911	1.8392
190	66.69032	147.37	9.878	49038.44	0.0028190	0.07670	9.150	0.00277	1.45200	1.7840
195	65.73773	142.73	9.598	44617.00	0.0029383	0.07450	8.580	0.00270	1.44473	1.7387
200	64.75751	137.94	9.316	40383.59	0.0030741	0.07227	8.064	0.00263	1.43728	1.7032
205	63.74552	132.99	9.031	36331.74	0.0032300	0.07003	7.596	0.00256	1.42961	1.6774
210	62.69666	127.87	8.742	32455.39	0.0034110	0.06777	7.171	0.00248	1.42169	1.6616
215	61.60461	122.56	8.448	28749.63	0.0036236	0.06547	6.784	0.00239	1.41347	1.6565
220	60.46135	117.03	8.146	25207.82	0.0038772	0.06315	6.429	0.00230	1.40490	1.6631
225	59.25648	111.26	7.832	21827.96	0.0041850	0.06078	6.103	0.00220	1.39591	1.6831
230	57.97612	105.21	7.501	18607.18	0.0045671	0.05837	5.812	0.00210	1.38639	1.7225
235	56.59577	100.53	7.071	15786.56	0.0050320	0.05588	5.578	0.00195	1.37619	1.8179
240	55.11354	93.74	6.739	12872.82	0.0056914	0.05334	5.337	0.00181	1.36528	1.9215
245	53.46175	86.19	6.310	10118.04	0.0065449	0.05066	5.078	0.00168	1.35320	2.0355
250	51.57749	77.73	5.784	7488.37	0.0078302	0.04781	4.797	0.00152	1.33950	2.1988
* 251.575	50.91372	75.11	5.673	6662.18	0.0085382	0.04685	4.702	0.00143	1.33470	2.3172
* 251.575	7.19257	34.65	2.258	214.21	0.0154706	0.01312	1.058	0.00340	1.04335	1.5561
255	6.84895	36.23	2.270	232.56	0.0132637	0.01271	1.050	0.00386	1.04125	1.4295
260	6.44581	38.32	2.282	253.26	0.0111597	0.01236	1.044	0.00448	1.03879	1.3008
265	6.11879	40.26	2.292	269.31	0.0097492	0.01215	1.042	0.00506	1.03680	1.2106
270	5.84334	42.09	2.298	282.28	0.0087248	0.01205	1.042	0.00561	1.03512	1.1436
275	5.60535	43.84	2.303	293.06	0.0079402	0.01198	1.044	0.00614	1.03368	1.0920
280	5.39588	45.53	2.306	302.20	0.0073161	0.01195	1.047	0.00665	1.03240	1.0510
285	5.20892	47.16	2.309	310.08	0.0068051	0.01194	1.051	0.00714	1.03127	1.0177
290	5.04020	48.76	2.310	316.95	0.0063774	0.01194	1.056	0.00762	1.03025	0.9904
295	4.88658	50.32	2.311	323.01	0.0060130	0.01196	1.062	0.00809	1.02931	0.9670
300	4.74568	51.85	2.311	328.40	0.0056978	0.01200	1.068	0.00856	1.02846	0.9471
310	4.49499	54.84	2.310	337.58	0.0051778	0.01209	1.082	0.00947	1.02694	0.9149
320	4.27732	57.74	2.308	345.12	0.0047641	0.01221	1.097	0.01038	1.02563	0.8899
330	4.08546	60.58	2.305	351.42	0.0044251	0.01235	1.113	0.01128	1.02447	0.8700
340	3.91432	63.36	2.302	356.76	0.0041410	0.01251	1.130	0.01218	1.02344	0.8537
350	3.76021	66.09	2.298	361.34	0.0038986	0.01267	1.148	0.01308	1.02251	0.8401
360	3.62032	68.79	2.295	365.30	0.0036887	0.01285	1.166	0.01399	1.02166	0.8286
370	3.49249	71.44	2.291	368.76	0.0035047	0.01302	1.184	0.01489	1.02089	0.8194
380	3.37502	74.06	2.287	371.79	0.0033417	0.01320	1.202	0.01581	1.02019	0.8113
390	3.26652	76.66	2.284	374.48	0.0031961	0.01339	1.221	0.01673	1.01953	0.8043
400	3.16587	79.23	2.280	376.86	0.0030651	0.01358	1.240	0.01766	1.01893	0.7980
410	3.07216	81.78	2.277	378.99	0.0029464	0.01377	1.259	0.01861	1.01836	0.7926
420	2.98460	84.31	2.273	380.90	0.0028382	0.01397	1.277	0.01956	1.01784	0.7877
430	2.90254	86.83	2.270	382.62	0.0027390	0.01417	1.296	0.02053	1.01734	0.7833
440	2.82543	89.33	2.266	384.17	0.0026478	0.01437	1.315	0.02150	1.01688	0.7794
450	2.75277	91.82	2.263	385.58	0.0025634	0.01457	1.334	0.02249	1.01644	0.7759
460	2.68417	94.30	2.259	386.86	0.0024852	0.01477	1.353	0.02349	1.01603	0.7728
470	2.61925	96.78	2.256	388.03	0.0024123	0.01498	1.372	0.02449	1.01564	0.7699
480	2.55770	99.25	2.252	389.09	0.0023443	0.01518	1.391	0.02551	1.01527	0.7674
490	2.49924	101.71	2.248	390.07	0.0022806	0.01539	1.410	0.02654	1.01492	0.7651
500	2.44363	104.18	2.245	390.96	0.0022207	0.01559	1.428	0.02758	1.01459	0.7631
510	2.39064	106.64	2.241	391.79	0.0021644	0.01578	1.447	0.02860	1.01427	0.7618
520	2.34008	109.10	2.237	392.55	0.0021113	0.01599	1.466	0.02967	1.01397	0.7600
530	2.29177	111.56	2.233	393.25	0.0020610	0.01620	1.484	0.03074	1.01368	0.7584
540	2.24556	114.03	2.229	393.90	0.0020134	0.01640	1.502	0.03182	1.01340	0.7569
550	2.20130	116.50	2.224	394.50	0.0019682	0.01661	1.521	0.03291	1.01313	0.7556
560	2.15887	118.97	2.220	395.07	0.0019253	0.01682	1.539	0.03401	1.01288	0.7545
570	2.11814	121.45	2.215	395.59	0.0018844	0.01702	1.557	0.03512	1.01264	0.7536
580	2.07901	123.93	2.211	396.07	0.0018454	0.01723	1.575	0.03623	1.01240	0.7527
590	2.04138	126.42	2.206	396.53	0.0018081	0.01743	1.593	0.03736	1.01218	0.7520
600	2.00516	128.91	2.201	396.95	0.0017725	0.01764	1.611	0.03849	1.01196	0.7515

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

450 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	Cp BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.472	0.01224	2118.40	318.1	-83.147	-82.126	0.50193	0.266	0.397	3824
100	0.01226	2088.98	314.2	-82.543	-81.520	0.50804	0.265	0.397	3807
105	0.01239	1994.51	301.5	-80.568	-79.536	0.52740	0.261	0.397	3750
110	0.01251	1902.66	289.2	-78.594	-77.552	0.54586	0.257	0.397	3692
115	0.01263	1813.39	277.3	-76.621	-75.569	0.56349	0.253	0.397	3632
120	0.01275	1726.63	265.8	-74.648	-73.586	0.58037	0.249	0.397	3572
125	0.01288	1642.32	254.7	-72.675	-71.602	0.59657	0.245	0.397	3509
130	0.01301	1560.40	243.9	-70.701	-69.617	0.61213	0.242	0.397	3446
135	0.01314	1480.81	233.5	-68.726	-67.631	0.62713	0.238	0.397	3382
140	0.01328	1403.50	223.4	-66.749	-65.642	0.64159	0.235	0.398	3316
145	0.01343	1328.39	213.6	-64.770	-63.651	0.65556	0.232	0.398	3250
150	0.01357	1255.43	204.2	-62.788	-61.657	0.66908	0.229	0.399	3182
155	0.01373	1184.56	195.0	-60.802	-59.658	0.68219	0.227	0.400	3113
160	0.01388	1115.71	186.2	-58.811	-57.654	0.69491	0.224	0.401	3044
165	0.01405	1048.83	177.6	-56.815	-55.644	0.70728	0.221	0.403	2973
170	0.01422	983.85	169.3	-54.811	-53.626	0.71933	0.219	0.404	2901
175	0.01439	920.70	161.3	-52.799	-51.600	0.73108	0.217	0.406	2829
180	0.01458	859.33	153.5	-50.777	-49.562	0.74256	0.214	0.409	2755
185	0.01478	799.66	146.0	-48.743	-47.512	0.75379	0.212	0.411	2680
190	0.01498	741.65	138.6	-46.696	-45.447	0.76481	0.210	0.415	2605
195	0.01520	685.22	131.5	-44.631	-43.365	0.77563	0.208	0.418	2527
200	0.01542	630.30	124.6	-42.547	-41.262	0.78628	0.206	0.423	2449
205	0.01567	576.84	117.8	-40.439	-39.134	0.79679	0.204	0.428	2369
210	0.01593	524.77	111.2	-38.304	-36.977	0.80719	0.202	0.435	2287
215	0.01620	474.03	104.7	-36.135	-34.785	0.81750	0.200	0.442	2202
220	0.01651	424.56	98.3	-33.926	-32.550	0.82778	0.199	0.451	2115
225	0.01684	376.30	92.0	-31.667	-30.264	0.83805	0.197	0.463	2024
230	0.01720	329.23	85.7	-29.348	-27.914	0.84837	0.195	0.477	1929
235	0.01761	286.90	80.1	-26.923	-25.455	0.85895	0.199	0.501	1831
240	0.01808	243.22	73.6	-24.415	-22.908	0.86967	0.197	0.520	1724
245	0.01862	198.90	67.2	-21.774	-20.222	0.88075	0.196	0.554	1612
250	0.01926	155.83	60.0	-18.955	-17.349	0.89236	0.196	0.594	1478
255	0.02009	112.25	51.3	-15.858	-14.184	0.90489	0.198	0.644	1302
* 256.485	0.02039	100.35	51.4	-14.850	-13.151	0.90893	0.198	0.719	1298
* 256.485	0.11970	25.69	4.0	26.885	36.860	1.10397	0.209	0.625	596
260	0.12691	30.57	3.6	28.316	38.891	1.11184	0.202	0.538	614
265	0.13582	36.47	3.3	30.066	41.384	1.12134	0.195	0.465	635
270	0.14375	41.59	3.0	31.611	43.589	1.12958	0.190	0.420	653
275	0.15102	46.19	2.8	33.022	45.606	1.13698	0.185	0.388	670
280	0.15783	50.42	2.7	34.336	47.488	1.14377	0.182	0.365	685
285	0.16427	54.35	2.5	35.580	49.268	1.15007	0.179	0.347	699
290	0.17044	58.06	2.4	36.767	50.969	1.15598	0.177	0.333	712
295	0.17637	61.58	2.3	37.909	52.606	1.16158	0.175	0.322	725
300	0.18211	64.94	2.2	39.015	54.190	1.16690	0.173	0.312	737
310	0.19312	71.29	2.1	41.139	57.231	1.17668	0.170	0.297	759
320	0.20364	77.24	1.9	43.173	60.142	1.18612	0.168	0.286	780
330	0.21378	82.88	1.8	45.139	62.953	1.19477	0.166	0.277	799
340	0.22363	88.27	1.7	47.052	65.686	1.20293	0.165	0.270	818
350	0.23322	93.46	1.6	48.922	68.355	1.21067	0.164	0.264	835
360	0.24260	98.47	1.6	50.757	70.972	1.21804	0.163	0.259	852
370	0.25182	103.34	1.5	52.562	73.546	1.22509	0.162	0.255	868
380	0.26088	108.08	1.4	54.344	76.082	1.23186	0.162	0.252	884
390	0.26980	112.71	1.4	56.105	78.587	1.23836	0.161	0.249	899
400	0.27862	117.25	1.3	57.847	81.064	1.24463	0.161	0.246	913
410	0.28734	121.70	1.3	59.575	83.518	1.25069	0.160	0.244	927
420	0.29596	126.07	1.2	61.288	85.951	1.25656	0.160	0.242	941
430	0.30451	130.38	1.2	62.991	88.365	1.26224	0.159	0.241	955
440	0.31299	134.63	1.2	64.682	90.763	1.26775	0.159	0.239	968
450	0.32140	138.82	1.1	66.365	93.147	1.27311	0.159	0.238	981
460	0.32976	142.97	1.1	68.040	95.519	1.27832	0.159	0.237	993
470	0.33807	147.07	1.1	69.708	97.879	1.28340	0.159	0.235	1006
480	0.34632	151.13	1.0	71.370	100.229	1.28834	0.159	0.235	1018
490	0.35454	155.15	1.0	73.027	102.570	1.29317	0.159	0.234	1029
500	0.36272	159.14	0.99	74.680	104.904	1.29789	0.158	0.233	1041
510	0.37085	163.09	0.96	76.328	107.231	1.30249	0.158	0.232	1053
520	0.37896	167.02	0.94	77.974	109.552	1.30700	0.158	0.232	1064
530	0.38704	170.92	0.92	79.616	111.867	1.31141	0.159	0.231	1075
540	0.39508	174.80	0.90	81.257	114.178	1.31573	0.159	0.231	1086
550	0.40311	178.66	0.88	82.895	116.485	1.31996	0.159	0.231	1097
560	0.41110	182.49	0.86	84.532	118.789	1.32411	0.159	0.230	1107
570	0.41908	186.31	0.84	86.169	121.090	1.32819	0.159	0.230	1118
580	0.42703	190.10	0.83	87.804	123.388	1.33218	0.159	0.230	1128
590	0.43497	193.88	0.81	89.440	125.685	1.33611	0.159	0.230	1138
600	0.44288	197.65	0.80	91.075	127.980	1.33997	0.159	0.229	1148

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

450 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.472	81.68421	215.92	14.619	173039.49	0.0018384	0.11182	42.254	0.00345	1.56962	5.4000
100	81.45454	214.97	14.553	170157.27	0.0018463	0.11138	41.029	0.00345	1.56778	5.2632
105	80.70068	211.80	14.332	160958.18	0.0018732	0.10990	37.288	0.00343	1.56173	4.8460
110	79.94277	208.60	14.104	152104.17	0.0019015	0.10834	33.921	0.00342	1.55566	4.4710
115	79.18041	205.34	13.869	143584.96	0.0019316	0.10670	30.891	0.00340	1.54957	4.1337
120	78.41319	202.03	13.628	135390.43	0.0019635	0.10500	28.164	0.00338	1.54345	3.8304
125	77.64063	198.66	13.381	127510.64	0.0019974	0.10324	25.709	0.00335	1.53731	3.5575
130	76.86219	195.24	13.129	119935.81	0.0020337	0.10142	23.500	0.00332	1.53114	3.3120
135	76.07731	191.75	12.873	112656.33	0.0020724	0.09955	21.512	0.00329	1.52494	3.0913
140	75.28533	188.19	12.613	105662.73	0.0021140	0.09764	19.722	0.00326	1.51870	2.8930
145	74.48551	184.57	12.349	98945.88	0.0021588	0.09569	18.111	0.00322	1.51241	2.7149
150	73.67706	180.87	12.082	92496.58	0.0022071	0.09370	16.660	0.00319	1.50607	2.5553
155	72.85905	177.10	11.813	86305.99	0.0022595	0.09168	15.354	0.00314	1.49967	2.4126
160	72.03045	173.24	11.541	80365.40	0.0023164	0.08963	14.178	0.00310	1.49321	2.2852
165	71.19010	169.30	11.269	74666.32	0.0023786	0.08756	13.118	0.00305	1.48667	2.1720
170	70.33667	165.26	10.994	69200.46	0.0024467	0.08546	12.164	0.00300	1.48006	2.0719
175	69.46864	161.13	10.719	63959.74	0.0025217	0.08334	11.303	0.00295	1.47335	1.9838
180	68.58426	156.89	10.444	58936.29	0.0026047	0.08120	10.527	0.00290	1.46653	1.9071
185	67.68151	152.53	10.167	54122.52	0.0026970	0.07904	9.826	0.00284	1.45959	1.8411
190	66.75803	148.06	9.890	49511.04	0.0028004	0.07687	9.194	0.00278	1.45252	1.7853
195	65.81105	143.46	9.611	45094.80	0.0029168	0.07468	8.622	0.00271	1.44529	1.7393
200	64.83726	138.72	9.332	40867.02	0.0030490	0.07247	8.105	0.00264	1.43788	1.7029
205	63.83272	133.82	9.050	36821.31	0.0032004	0.07024	7.635	0.00257	1.43027	1.6761
210	62.79259	128.76	8.764	32951.70	0.0033755	0.06798	7.209	0.00249	1.42241	1.6591
215	61.71092	123.51	8.474	29252.75	0.0035806	0.06571	6.820	0.00241	1.41427	1.6525
220	60.58019	118.05	8.177	25719.76	0.0038239	0.06340	6.465	0.00232	1.40579	1.6572
225	59.39077	112.37	7.870	22349.02	0.0041175	0.06106	6.139	0.00222	1.39691	1.6746
230	58.12993	106.43	7.546	19138.33	0.0044790	0.05867	5.840	0.00212	1.38753	1.7083
235	56.77251	101.78	7.109	16288.28	0.0049196	0.05621	5.609	0.00198	1.37749	1.7988
240	55.32081	95.18	5.740	13455.13	0.0054672	0.05371	5.372	0.00187	1.36680	1.8737
245	53.71940	87.97	5.379	10684.64	0.0062940	0.05109	5.120	0.00172	1.35508	1.9975
250	51.91188	79.98	5.895	8089.58	0.0074230	0.04832	4.848	0.00157	1.34192	2.1445
255	49.78569	70.17	5.212	5588.49	0.0091757	0.04530	4.546	0.00141	1.32656	2.3259
* 256.485	49.05332	68.79	5.285	4922.58	0.0104502	0.04431	4.445	0.00126	1.32130	2.5961
* 256.485	8.35418	33.87	2.266	214.64	0.0184642	0.01463	1.129	0.00280	1.05047	1.7370
260	7.87960	35.63	2.281	240.90	0.0151034	0.01390	1.115	0.00328	1.04756	1.5543
265	7.36268	37.87	2.297	268.50	0.0122881	0.01332	1.103	0.00389	1.04439	1.3874
270	6.95660	39.90	2.308	289.32	0.0105232	0.01299	1.097	0.00445	1.04191	1.2763
275	6.62146	41.81	2.316	305.85	0.0092928	0.01279	1.094	0.00497	1.03986	1.1964
280	6.33598	43.62	2.321	319.43	0.0083764	0.01266	1.093	0.00547	1.03812	1.1360
285	6.08738	45.35	2.325	330.86	0.0076620	0.01258	1.094	0.00594	1.03661	1.0888
290	5.86730	47.04	2.328	340.64	0.0070862	0.01252	1.097	0.00640	1.03527	1.0510
295	5.67001	48.67	2.329	349.14	0.0066101	0.01250	1.101	0.00685	1.03407	1.0194
300	5.49133	50.27	2.330	356.61	0.0062083	0.01250	1.105	0.00729	1.03298	0.9931
310	5.17820	53.37	2.329	369.15	0.0055643	0.01254	1.116	0.00815	1.03108	0.9514
320	4.91061	56.38	2.327	379.30	0.0050673	0.01262	1.128	0.00899	1.02946	0.9199
330	4.67760	59.30	2.324	387.68	0.0046693	0.01272	1.143	0.00982	1.02805	0.8952
340	4.47175	62.16	2.321	394.72	0.0043417	0.01285	1.158	0.01065	1.02680	0.8752
350	4.28782	64.96	2.317	400.72	0.0040663	0.01300	1.174	0.01148	1.02569	0.8588
360	4.12193	67.72	2.313	405.88	0.0038307	0.01315	1.190	0.01230	1.02469	0.8450
370	3.97117	70.43	2.309	410.37	0.0036263	0.01331	1.207	0.01313	1.02378	0.8340
380	3.83325	73.10	2.305	414.29	0.0034468	0.01348	1.225	0.01395	1.02295	0.8244
390	3.70638	75.75	2.301	417.75	0.0032877	0.01365	1.243	0.01479	1.02218	0.8161
400	3.58911	78.36	2.297	420.81	0.0031455	0.01383	1.261	0.01563	1.02147	0.8089
410	3.48023	80.95	2.293	423.53	0.0030173	0.01401	1.279	0.01648	1.02082	0.8024
420	3.37879	83.52	2.289	425.97	0.0029012	0.01420	1.297	0.01734	1.02021	0.7968
430	3.28394	86.07	2.285	428.16	0.0027952	0.01439	1.315	0.01821	1.01964	0.7917
440	3.19499	88.61	2.281	430.14	0.0026981	0.01458	1.334	0.01909	1.01910	0.7872
450	3.11134	91.13	2.277	431.93	0.0026088	0.01478	1.352	0.01998	1.01860	0.7831
460	3.03249	93.64	2.274	433.55	0.0025261	0.01497	1.371	0.02087	1.01812	0.7795
470	2.95800	96.14	2.270	435.02	0.0024494	0.01517	1.389	0.02178	1.01768	0.7762
480	2.88746	98.64	2.266	436.37	0.0023780	0.01537	1.407	0.02269	1.01725	0.7733
490	2.82056	101.13	2.262	437.61	0.0023114	0.01557	1.426	0.02361	1.01685	0.7706
500	2.75698	103.61	2.258	438.74	0.0022489	0.01577	1.444	0.02454	1.01647	0.7682
510	2.69647	106.09	2.254	439.78	0.0021902	0.01595	1.462	0.02546	1.01610	0.7668
520	2.63879	108.57	2.250	440.74	0.0021350	0.01616	1.480	0.02641	1.01576	0.7646
530	2.58373	111.05	2.246	441.62	0.0020829	0.01636	1.498	0.02737	1.01543	0.7627
540	2.53110	113.53	2.241	442.44	0.0020336	0.01656	1.517	0.02834	1.01511	0.7610
550	2.48074	116.02	2.237	443.20	0.0019869	0.01677	1.535	0.02932	1.01481	0.7595
560	2.43248	118.51	2.232	443.91	0.0019426	0.01697	1.552	0.03030	1.01452	0.7582
570	2.38619	121.00	2.228	444.56	0.0019004	0.01717	1.570	0.03130	1.01424	0.7570
580	2.34174	123.50	2.223	445.18	0.0018603	0.01737	1.588	0.03229	1.01398	0.7560
590	2.29902	126.00	2.218	445.75	0.0018220	0.01758	1.606	0.03330	1.01372	0.7552
600	2.25793	128.51	2.213	446.28	0.0017855	0.01778	1.624	0.03431	1.01347	0.7544

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

500 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.543	0.01224	2121.49	318.1	-83.139	-82.005	0.50201	0.266	0.397	3826
100	0.01227	2093.47	314.4	-82.563	-81.427	0.50783	0.265	0.397	3810
105	0.01239	1999.06	301.7	-80.590	-79.443	0.52719	0.261	0.397	3753
110	0.01250	1907.28	289.5	-78.618	-77.461	0.54564	0.257	0.397	3695
115	0.01262	1818.08	277.6	-76.647	-75.478	0.56326	0.253	0.396	3636
120	0.01275	1731.40	266.1	-74.676	-73.495	0.58014	0.249	0.397	3575
125	0.01287	1647.17	254.9	-72.704	-71.512	0.59633	0.245	0.397	3513
130	0.01300	1565.33	244.2	-70.732	-69.528	0.61189	0.242	0.397	3450
135	0.01314	1485.83	233.7	-68.759	-67.543	0.62687	0.239	0.397	3386
140	0.01328	1408.61	223.6	-66.785	-65.556	0.64133	0.235	0.398	3320
145	0.01342	1333.59	213.9	-64.808	-63.566	0.65529	0.232	0.398	3254
150	0.01357	1260.73	204.4	-62.829	-61.573	0.66880	0.229	0.399	3187
155	0.01372	1189.96	195.3	-60.846	-59.576	0.68190	0.227	0.400	3118
160	0.01387	1121.22	186.5	-58.858	-57.573	0.69461	0.224	0.401	3049
165	0.01404	1054.45	177.9	-56.865	-55.565	0.70697	0.222	0.402	2978
170	0.01421	989.59	169.7	-54.865	-53.549	0.71901	0.219	0.404	2907
175	0.01438	926.57	161.6	-52.857	-51.525	0.73074	0.217	0.406	2835
180	0.01457	865.33	153.9	-50.839	-49.490	0.74221	0.214	0.408	2762
185	0.01476	805.81	146.4	-48.810	-47.443	0.75342	0.212	0.411	2688
190	0.01496	747.95	139.1	-46.768	-45.382	0.76442	0.210	0.414	2612
195	0.01518	691.69	132.0	-44.709	-43.304	0.77522	0.208	0.418	2536
200	0.01540	636.95	125.1	-42.632	-41.206	0.78585	0.206	0.422	2458
205	0.01564	583.69	118.3	-40.532	-39.084	0.79633	0.204	0.427	2378
210	0.01590	531.83	111.7	-38.406	-36.934	0.80669	0.202	0.433	2297
215	0.01618	481.33	105.3	-36.247	-34.750	0.81697	0.200	0.440	2214
220	0.01648	432.12	99.0	-34.051	-32.525	0.82720	0.199	0.449	2128
225	0.01680	384.16	92.7	-31.807	-30.252	0.83741	0.197	0.460	2039
230	0.01716	337.42	86.4	-29.506	-27.917	0.84766	0.195	0.473	1945
235	0.01756	294.81	80.8	-27.104	-25.478	0.85816	0.199	0.496	1847
240	0.01801	251.79	74.3	-24.629	-22.958	0.86877	0.197	0.513	1742
245	0.01853	208.25	68.2	-22.026	-20.311	0.87969	0.196	0.544	1636
250	0.01915	165.88	61.5	-19.271	-17.499	0.89105	0.196	0.583	1512
255	0.01992	123.97	53.6	-16.278	-14.435	0.90318	0.197	0.631	1356
260	0.02096	82.17	46.7	-12.864	-10.923	0.91681	0.200	0.761	1204
* 261.007	0.02122	73.85	45.5	-12.097	-10.132	0.91985	0.201	0.811	1176
* 261.007	0.10366	21.45	4.7	25.933	35.530	1.09484	0.215	0.754	590
265	0.11207	27.75	4.2	27.818	38.194	1.10497	0.206	0.600	612
270	0.12080	34.16	3.8	29.740	40.924	1.11518	0.197	0.503	635
275	0.12841	39.64	3.5	31.397	43.286	1.12385	0.191	0.446	654
280	0.13531	44.51	3.2	32.889	45.418	1.13154	0.187	0.409	671
285	0.14172	48.95	3.0	34.268	47.389	1.13852	0.183	0.381	687
290	0.14776	53.07	2.9	35.562	49.243	1.14497	0.180	0.361	702
295	0.15351	56.93	2.7	36.793	51.006	1.15099	0.178	0.345	715
300	0.15903	60.59	2.6	37.972	52.696	1.15667	0.176	0.332	728
310	0.16951	67.43	2.4	40.213	55.908	1.16721	0.172	0.312	752
320	0.17944	73.77	2.2	42.337	58.951	1.17687	0.170	0.297	774
330	0.18894	79.74	2.1	44.375	61.868	1.18585	0.168	0.287	794
340	0.19811	85.41	2.0	46.346	64.689	1.19427	0.166	0.278	813
350	0.20702	90.83	1.9	48.266	67.433	1.20222	0.165	0.271	831
360	0.21570	96.06	1.8	50.143	70.114	1.20978	0.164	0.265	849
370	0.22420	101.11	1.7	51.986	72.744	1.21698	0.163	0.261	865
380	0.23254	106.02	1.6	53.800	75.330	1.22388	0.162	0.257	881
390	0.24074	110.80	1.6	55.589	77.879	1.23050	0.162	0.253	897
400	0.24883	115.48	1.5	57.357	80.396	1.23687	0.161	0.250	912
410	0.25681	120.06	1.4	59.108	82.885	1.24302	0.161	0.248	926
420	0.26470	124.55	1.4	60.842	85.350	1.24896	0.160	0.245	940
430	0.27251	128.97	1.3	62.563	87.795	1.25471	0.160	0.243	954
440	0.28025	133.32	1.3	64.272	90.220	1.26029	0.160	0.242	967
450	0.28793	137.60	1.3	65.971	92.629	1.26570	0.159	0.240	980
460	0.29554	141.84	1.2	67.660	95.024	1.27096	0.159	0.239	993
470	0.30310	146.02	1.2	69.342	97.405	1.27608	0.159	0.238	1005
480	0.31062	150.15	1.2	71.016	99.775	1.28107	0.159	0.236	1018
490	0.31809	154.25	1.1	72.685	102.135	1.28594	0.159	0.236	1030
500	0.32552	158.31	1.1	74.348	104.486	1.29069	0.159	0.235	1041
510	0.33291	162.33	1.1	76.006	106.829	1.29533	0.159	0.234	1053
520	0.34028	166.32	1.1	77.660	109.165	1.29987	0.159	0.233	1064
530	0.34761	170.28	1.0	79.312	111.495	1.30430	0.159	0.233	1076
540	0.35491	174.21	1.0	80.960	113.820	1.30865	0.159	0.232	1087
550	0.36218	178.12	0.99	82.606	116.139	1.31291	0.159	0.232	1097
560	0.36944	182.01	0.97	84.250	118.455	1.31708	0.159	0.231	1108
570	0.37667	185.87	0.95	85.893	120.767	1.32117	0.159	0.231	1119
580	0.38387	189.72	0.93	87.535	123.076	1.32519	0.159	0.231	1129
590	0.39106	193.55	0.91	89.176	125.383	1.32913	0.159	0.231	1139
600	0.39823	197.35	0.89	90.817	127.688	1.33300	0.159	0.230	1149

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

500 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.543	81.69715	216.20	14.617	173319.31	0.0018356	0.11185	42.324	0.00345	1.56973	5.4062
100	81.47845	215.29	14.554	170572.29	0.0018431	0.11143	41.155	0.00345	1.56797	5.2757
105	80.72572	212.14	14.333	161375.41	0.0018697	0.10996	37.406	0.00343	1.56193	4.8576
110	79.96901	208.95	14.105	152523.66	0.0018978	0.10840	34.032	0.00342	1.55587	4.4817
115	79.20795	205.70	13.871	144006.78	0.0019275	0.10677	30.995	0.00340	1.54979	4.1437
120	78.44211	202.40	13.630	135814.66	0.0019591	0.10507	28.262	0.00338	1.54368	3.8397
125	77.67103	199.05	13.383	127937.35	0.0019927	0.10331	25.801	0.00335	1.53756	3.5661
130	76.89419	195.64	13.131	120365.09	0.0020285	0.10150	23.587	0.00333	1.53140	3.3200
135	76.11102	192.17	12.875	113088.28	0.0020668	0.09964	21.593	0.00330	1.52521	3.0987
140	75.32089	188.63	12.615	106097.48	0.0021079	0.09773	19.799	0.00326	1.51898	2.8998
145	74.52308	185.03	12.352	99383.47	0.0021521	0.09579	18.183	0.00323	1.51270	2.7212
150	73.71680	181.35	12.085	92937.16	0.0021998	0.09381	16.728	0.00319	1.50638	2.5611
155	72.90116	177.60	11.817	86749.70	0.0022514	0.09179	15.419	0.00315	1.50000	2.4178
160	72.07516	173.76	11.546	80812.39	0.0023075	0.08975	14.239	0.00311	1.49356	2.2900
165	71.23765	169.84	11.274	75116.76	0.0023686	0.08768	13.176	0.00306	1.48704	2.1762
170	70.38735	165.83	11.001	69654.53	0.0024356	0.08559	12.218	0.00301	1.48045	2.0756
175	69.52277	161.72	10.727	64417.65	0.0025093	0.08348	11.355	0.00296	1.47376	1.9870
180	68.64224	157.51	10.452	59398.28	0.0025907	0.08135	10.576	0.00290	1.46698	1.9097
185	67.74380	153.19	10.177	54588.85	0.0026811	0.07920	9.873	0.00285	1.46007	1.8431
190	66.82516	148.75	9.901	49982.03	0.0027821	0.07704	9.238	0.00279	1.45304	1.7866
195	65.88367	144.19	9.625	45570.79	0.0028958	0.07486	8.665	0.00272	1.44585	1.7399
200	64.91617	139.49	9.347	41348.42	0.0030245	0.07266	8.145	0.00265	1.43848	1.7027
205	63.91889	134.64	9.068	37308.58	0.0031716	0.07044	7.674	0.00258	1.43092	1.6749
210	62.88723	129.63	8.786	33445.37	0.0033412	0.06820	7.247	0.00250	1.42312	1.6568
215	61.81559	124.44	8.500	29753.45	0.0035391	0.06594	6.857	0.00242	1.41505	1.6487
220	60.69692	119.06	8.208	26228.19	0.0037728	0.06365	6.501	0.00233	1.40666	1.6516
225	59.52227	113.46	7.906	22865.96	0.0040532	0.06133	6.174	0.00224	1.39789	1.6667
230	58.27993	107.63	7.590	19664.62	0.0043960	0.05897	5.873	0.00214	1.38865	1.6963
235	56.94442	103.02	7.146	16787.59	0.0048141	0.05654	5.640	0.00200	1.37876	1.7810
240	55.52283	96.60	6.782	13979.99	0.0053149	0.05407	5.406	0.00190	1.36829	1.8480
245	53.96503	89.67	6.443	11237.95	0.0060706	0.05151	5.160	0.00175	1.35687	1.9633
250	52.22622	82.12	5.012	8663.20	0.0071012	0.04882	4.897	0.00160	1.34420	2.1060
255	50.21312	73.28	5.419	6224.68	0.0086117	0.04592	4.608	0.00145	1.32964	2.2799
260	47.71666	63.89	4.898	3920.78	0.0119107	0.04262	4.270	0.00117	1.31172	2.7451
* 261.007	47.12193	62.03	4.809	3480.02	0.0130752	0.04188	4.193	0.00110	1.30748	2.9233
* 261.007	9.64714	33.07	2.274	206.94	0.0227987	0.01652	1.205	0.00227	1.05843	1.9802
265	8.92314	35.25	2.295	247.66	0.0170055	0.01513	1.180	0.00283	1.05397	1.6832
270	8.27840	37.61	2.313	282.83	0.0133693	0.01428	1.162	0.00343	1.05000	1.4725
275	7.78763	39.72	2.326	308.68	0.0112351	0.01381	1.151	0.00397	1.04699	1.3394
280	7.39018	41.68	2.334	328.90	0.0098022	0.01351	1.145	0.00448	1.04456	1.2464
285	7.05594	43.54	2.340	345.37	0.0087608	0.01332	1.142	0.00495	1.04251	1.1774
290	6.76757	45.32	2.345	359.13	0.0079630	0.01319	1.141	0.00540	1.04075	1.1244
295	6.51410	47.04	2.347	370.86	0.0073283	0.01311	1.142	0.00584	1.03921	1.0815
300	6.28816	48.71	2.349	381.02	0.0068088	0.01305	1.144	0.00626	1.03783	1.0465
310	5.89922	51.94	2.349	397.79	0.0060038	0.01302	1.151	0.00708	1.03546	0.9926
320	5.57291	55.04	2.348	411.13	0.0054036	0.01305	1.161	0.00787	1.03348	0.9529
330	5.29261	58.06	2.345	422.02	0.0049353	0.01311	1.173	0.00865	1.03178	0.9225
340	5.04759	60.99	2.341	431.09	0.0045574	0.01321	1.186	0.00942	1.03029	0.8983
350	4.83049	63.86	2.336	438.76	0.0042445	0.01333	1.200	0.01018	1.02897	0.8786
360	4.63604	66.68	2.332	445.32	0.0039802	0.01347	1.216	0.01095	1.02780	0.8623
370	4.46032	69.45	2.327	450.98	0.0037533	0.01361	1.232	0.01170	1.02673	0.8493
380	4.30035	72.17	2.323	455.92	0.0035559	0.01376	1.248	0.01246	1.02577	0.8381
390	4.15380	74.86	2.318	460.26	0.0033823	0.01392	1.265	0.01323	1.02488	0.8285
400	4.01881	77.52	2.314	464.09	0.0032280	0.01408	1.282	0.01400	1.02407	0.8200
410	3.89389	80.15	2.309	467.49	0.0030899	0.01425	1.299	0.01478	1.02331	0.8126
420	3.77780	82.76	2.305	470.53	0.0029654	0.01443	1.317	0.01557	1.02261	0.8061
430	3.66953	85.35	2.301	473.25	0.0028524	0.01461	1.334	0.01636	1.02196	0.8003
440	3.56820	87.91	2.296	475.70	0.0027492	0.01480	1.352	0.01716	1.02135	0.7951
450	3.47311	90.46	2.292	477.91	0.0026546	0.01498	1.370	0.01796	1.02078	0.7905
460	3.38362	93.00	2.288	479.92	0.0025674	0.01517	1.388	0.01878	1.02024	0.7863
470	3.29920	95.53	2.284	481.74	0.0024868	0.01536	1.406	0.01960	1.01973	0.7826
480	3.21939	98.05	2.280	483.40	0.0024120	0.01556	1.424	0.02043	1.01925	0.7792
490	3.14377	100.56	2.276	484.92	0.0023422	0.01575	1.442	0.02127	1.01879	0.7762
500	3.07201	103.06	2.272	486.32	0.0022771	0.01594	1.460	0.02211	1.01836	0.7735
510	3.00377	105.56	2.267	487.60	0.0022160	0.01612	1.477	0.02294	1.01795	0.7718
520	2.93879	108.06	2.263	488.78	0.0021587	0.01632	1.495	0.02381	1.01756	0.7693
530	2.87681	110.56	2.259	489.87	0.0021047	0.01652	1.513	0.02468	1.01719	0.7671
540	2.81763	113.06	2.254	490.87	0.0020537	0.01672	1.531	0.02556	1.01683	0.7652
550	2.76102	115.56	2.250	491.80	0.0020055	0.01692	1.548	0.02645	1.01649	0.7634
560	2.70683	118.06	2.245	492.67	0.0019598	0.01712	1.566	0.02734	1.01617	0.7619
570	2.65487	120.57	2.240	493.47	0.0019164	0.01732	1.584	0.02824	1.01586	0.7605
580	2.60502	123.08	2.235	494.22	0.0018752	0.01752	1.601	0.02914	1.01556	0.7594
590	2.55714	125.59	2.230	494.92	0.0018359	0.01772	1.619	0.03005	1.01527	0.7583
600	2.51109	128.11	2.225	495.58	0.0017984	0.01792	1.636	0.03097	1.01499	0.7574

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

550 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.614	0.01224	2124.57	318.2	-83.131	-81.884	0.50208	0.266	0.397	3829
100	0.01227	2097.94	314.6	-82.584	-81.334	0.50762	0.265	0.397	3813
105	0.01238	2003.60	301.9	-80.613	-79.351	0.52697	0.261	0.397	3756
110	0.01250	1911.90	289.7	-78.642	-77.369	0.54542	0.257	0.396	3698
115	0.01262	1822.77	277.8	-76.672	-75.387	0.56304	0.253	0.396	3639
120	0.01274	1736.16	266.3	-74.703	-73.405	0.57991	0.249	0.396	3579
125	0.01287	1652.01	255.2	-72.733	-71.423	0.59609	0.245	0.396	3517
130	0.01300	1570.26	244.4	-70.763	-69.440	0.61165	0.242	0.397	3454
135	0.01313	1490.84	234.0	-68.793	-67.455	0.62662	0.239	0.397	3390
140	0.01327	1413.70	223.9	-66.821	-65.469	0.64107	0.235	0.397	3325
145	0.01341	1338.78	214.2	-64.846	-63.480	0.65502	0.232	0.398	3258
150	0.01356	1266.02	204.7	-62.869	-61.489	0.66853	0.230	0.399	3191
155	0.01371	1195.35	195.6	-60.889	-59.493	0.68161	0.227	0.400	3123
160	0.01387	1126.72	186.8	-58.904	-57.492	0.69432	0.224	0.401	3054
165	0.01403	1060.06	178.2	-56.914	-55.486	0.70666	0.222	0.402	2984
170	0.01420	995.31	170.0	-54.918	-53.472	0.71869	0.219	0.403	2913
175	0.01437	932.42	162.0	-52.914	-51.450	0.73041	0.217	0.405	2841
180	0.01456	871.31	154.2	-50.901	-49.418	0.74186	0.215	0.407	2768
185	0.01475	811.94	146.7	-48.876	-47.374	0.75306	0.212	0.410	2695
190	0.01495	754.23	139.5	-46.839	-45.317	0.76404	0.210	0.413	2620
195	0.01516	698.12	132.4	-44.787	-43.243	0.77481	0.208	0.417	2544
200	0.01539	643.56	125.5	-42.716	-41.149	0.78542	0.206	0.421	2467
205	0.01562	590.49	118.8	-40.624	-39.033	0.79587	0.204	0.426	2388
210	0.01588	538.84	112.3	-38.506	-36.889	0.80620	0.202	0.432	2308
215	0.01615	488.56	105.8	-36.358	-34.713	0.81644	0.201	0.439	2225
220	0.01644	439.61	99.5	-34.173	-32.498	0.82662	0.199	0.447	2141
225	0.01676	391.93	93.3	-31.944	-30.237	0.83679	0.197	0.457	2053
230	0.01712	345.50	87.2	-29.661	-27.918	0.84697	0.195	0.470	1961
235	0.01751	302.64	81.5	-27.280	-25.497	0.85739	0.199	0.491	1862
240	0.01795	260.19	75.0	-24.829	-23.001	0.86789	0.197	0.507	1760
245	0.01845	217.34	69.1	-22.269	-20.390	0.87867	0.196	0.536	1658
250	0.01904	175.71	62.6	-19.568	-17.629	0.88982	0.196	0.571	1540
255	0.01976	134.93	55.3	-16.662	-14.650	0.90162	0.196	0.614	1398
260	0.02070	93.88	49.0	-13.422	-11.314	0.91457	0.199	0.726	1261
265	0.02212	52.77	39.7	-9.507	-7.254	0.93003	0.204	0.921	1051
* 265.199	0.02219	51.01	40.3	-9.324	-7.064	0.93075	0.204	0.974	1061
* 265.199	0.08987	17.01	5.6	24.730	33.883	1.08518	0.222	0.959	584
270	0.10044	25.61	4.8	27.396	37.625	1.09918	0.208	0.659	613
275	0.10896	32.43	4.3	29.485	40.582	1.11003	0.199	0.538	637
280	0.11627	38.19	3.9	31.247	43.088	1.11907	0.193	0.470	657
285	0.12283	43.27	3.6	32.814	45.324	1.12698	0.188	0.427	675
290	0.12889	47.88	3.4	34.250	47.377	1.13412	0.184	0.396	691
295	0.13457	52.15	3.2	35.591	49.297	1.14069	0.181	0.373	706
300	0.13996	56.15	3.0	36.861	51.115	1.14680	0.178	0.355	719
310	0.15008	63.53	2.8	39.241	54.526	1.15799	0.174	0.329	745
320	0.15956	70.29	2.5	41.468	57.718	1.16812	0.172	0.311	768
330	0.16857	76.60	2.4	43.585	60.753	1.17746	0.169	0.297	789
340	0.17721	82.55	2.2	45.622	63.670	1.18617	0.167	0.287	809
350	0.18556	88.22	2.1	47.595	66.494	1.19436	0.166	0.278	828
360	0.19368	93.66	2.0	49.518	69.243	1.20210	0.165	0.272	846
370	0.20160	98.91	1.9	51.400	71.932	1.20947	0.164	0.266	863
380	0.20936	103.99	1.8	53.248	74.570	1.21650	0.163	0.262	879
390	0.21697	108.93	1.7	55.067	77.164	1.22324	0.162	0.258	895
400	0.22446	113.74	1.7	56.862	79.722	1.22972	0.162	0.254	910
410	0.23185	118.45	1.6	58.636	82.249	1.23596	0.161	0.251	925
420	0.23914	123.06	1.6	60.392	84.747	1.24198	0.161	0.249	939
430	0.24635	127.58	1.5	62.133	87.222	1.24780	0.160	0.246	953
440	0.25348	132.03	1.5	63.860	89.675	1.25344	0.160	0.244	967
450	0.26055	136.41	1.4	65.574	92.110	1.25891	0.160	0.243	980
460	0.26756	140.73	1.4	67.279	94.528	1.26423	0.159	0.241	993
470	0.27451	145.00	1.3	68.974	96.931	1.26940	0.159	0.240	1005
480	0.28142	149.21	1.3	70.661	99.322	1.27443	0.159	0.238	1018
490	0.28828	153.38	1.3	72.341	101.701	1.27933	0.159	0.237	1030
500	0.29510	157.50	1.2	74.014	104.069	1.28412	0.159	0.236	1042
510	0.30189	161.59	1.2	75.683	106.429	1.28879	0.159	0.236	1054
520	0.30864	165.64	1.2	77.346	108.780	1.29336	0.159	0.235	1065
530	0.31536	169.66	1.1	79.006	111.124	1.29782	0.159	0.234	1076
540	0.32205	173.65	1.1	80.663	113.462	1.30219	0.159	0.233	1088
550	0.32872	177.61	1.1	82.316	115.794	1.30647	0.159	0.233	1098
560	0.33536	181.55	1.1	83.967	118.122	1.31067	0.159	0.233	1109
570	0.34198	185.46	1.0	85.617	120.445	1.31478	0.159	0.232	1120
580	0.34857	189.36	1.0	87.265	122.765	1.31881	0.159	0.232	1130
590	0.35515	193.23	1.0	88.912	125.082	1.32277	0.159	0.232	1141
600	0.36171	197.08	0.99	90.558	127.397	1.32666	0.160	0.231	1151

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

550 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.614	81.71007	216.47	14.615	173598.98	0.0018328	0.11188	42.395	0.00345	1.56983	5.4125
100	81.50231	215.61	14.555	170986.95	0.0018399	0.11148	41.282	0.00345	1.56816	5.2882
105	80.75070	212.48	14.335	161792.25	0.0018662	0.11001	37.525	0.00344	1.56213	4.8692
110	79.99520	209.29	14.107	152942.74	0.0018941	0.10846	34.143	0.00342	1.55608	4.4925
115	79.23542	206.06	13.872	144428.16	0.0019235	0.10683	31.099	0.00340	1.55001	4.1538
120	78.47095	202.78	13.631	136238.41	0.0019548	0.10514	28.360	0.00338	1.54391	3.8490
125	77.70134	199.44	13.385	128363.55	0.0019880	0.10339	25.893	0.00336	1.53780	3.5748
130	76.92608	196.05	13.133	120793.82	0.0020234	0.10158	23.673	0.00333	1.53165	3.3281
135	76.14461	192.59	12.877	113519.63	0.0020613	0.09973	21.675	0.00330	1.52547	3.1062
140	75.35632	189.07	12.618	106531.55	0.0021018	0.09783	19.876	0.00327	1.51925	2.9067
145	74.56050	185.49	12.355	99820.35	0.0021455	0.09589	18.256	0.00323	1.51300	2.7276
150	73.75638	181.83	12.089	93376.99	0.0021925	0.09391	16.797	0.00319	1.50669	2.5669
155	72.94309	178.09	11.820	87192.59	0.0022434	0.09190	15.483	0.00315	1.50033	2.4231
160	72.11964	174.28	11.550	81258.49	0.0022986	0.08987	14.300	0.00311	1.49390	2.2947
165	71.28494	170.38	11.279	75566.22	0.0023588	0.08781	13.233	0.00306	1.48741	2.1805
170	70.43773	166.40	11.007	70107.53	0.0024246	0.08573	12.273	0.00302	1.48084	2.0793
175	69.57657	162.32	10.734	64874.38	0.0024970	0.08362	11.406	0.00297	1.47418	1.9902
180	68.69982	158.13	10.460	59858.98	0.0025768	0.08150	10.625	0.00291	1.46742	1.9124
185	67.80561	153.84	10.186	55053.75	0.0026654	0.07936	9.920	0.00285	1.46055	1.8452
190	66.89173	149.44	9.912	50451.43	0.0027643	0.07720	9.283	0.00279	1.45354	1.7881
195	65.95563	144.91	9.638	46045.01	0.0028752	0.07503	8.707	0.00273	1.44639	1.7406
200	64.99427	140.25	9.363	41827.82	0.0030007	0.07284	8.186	0.00266	1.43908	1.7026
205	64.00405	135.45	9.086	37793.60	0.0031436	0.07064	7.713	0.00259	1.43156	1.6739
210	62.98063	130.49	8.807	33936.49	0.0033080	0.06842	7.284	0.00252	1.42383	1.6546
215	61.91869	125.37	8.525	30251.22	0.0034990	0.06617	6.894	0.00244	1.41583	1.6452
220	60.81164	120.05	8.237	26733.24	0.0037237	0.06390	6.537	0.00235	1.40752	1.6464
225	59.65112	114.54	7.941	23378.97	0.0039919	0.06160	6.210	0.00226	1.39885	1.6593
230	58.42637	108.80	7.632	20186.30	0.0043175	0.05926	5.908	0.00216	1.38973	1.6858
235	57.11181	104.23	7.182	17284.53	0.0047148	0.05685	5.670	0.00203	1.38000	1.7643
240	55.71816	97.98	6.826	14497.51	0.0051765	0.05442	5.440	0.00193	1.36972	1.8250
245	54.20001	91.30	6.502	11779.76	0.0058700	0.05190	5.198	0.00179	1.35859	1.9323
250	52.51900	84.05	6.094	9228.04	0.0067881	0.04928	4.943	0.00164	1.34633	2.0600
255	50.60081	75.85	5.560	6827.63	0.0080958	0.04648	4.665	0.00150	1.33244	2.2184
260	48.29930	67.22	5.108	4534.29	0.0108068	0.04339	4.350	0.00124	1.31589	2.6218
265	45.21281	55.35	4.305	2386.08	0.0166402	0.04085	3.957	0.00098	1.29392	3.2126
* 265.199	45.05905	55.56	4.374	2298.26	0.0175249	0.04115	3.939	0.00094	1.29283	3.3550
* 265.199	11.12734	32.27	2.281	189.26	0.0297097	0.01912	1.291	0.00179	1.06760	2.3300
270	9.95601	35.12	2.312	254.93	0.0187797	0.01635	1.245	0.00249	1.06034	1.8075
275	9.17729	37.55	2.332	297.65	0.0143153	0.01521	1.220	0.00308	1.05553	1.5516
280	8.60071	39.72	2.346	328.42	0.0118394	0.01460	1.205	0.00361	1.05198	1.3971
285	8.14114	41.73	2.355	352.25	0.0102271	0.01422	1.195	0.00409	1.04916	1.2919
290	7.75869	43.62	2.361	371.52	0.0090778	0.01396	1.190	0.00454	1.04681	1.2154
295	7.43121	45.43	2.365	387.56	0.0082091	0.01379	1.187	0.00497	1.04481	1.1562
300	7.14503	47.18	2.368	401.20	0.0075249	0.01367	1.186	0.00539	1.04306	1.1092
310	6.66300	50.54	2.370	423.29	0.0065071	0.01354	1.189	0.00618	1.04011	1.0394
320	6.26717	53.75	2.368	440.52	0.0057784	0.01350	1.195	0.00694	1.03770	0.9896
330	5.93234	56.84	2.365	454.40	0.0052258	0.01352	1.204	0.00767	1.03566	0.9523
340	5.64304	59.86	2.361	465.84	0.0047893	0.01359	1.215	0.00840	1.03390	0.9232
350	5.38903	62.79	2.356	475.44	0.0044338	0.01368	1.228	0.00912	1.03236	0.8998
360	5.16317	65.67	2.351	483.60	0.0041375	0.01379	1.242	0.00983	1.03099	0.8806
370	4.96030	68.50	2.346	490.62	0.0038860	0.01391	1.256	0.01054	1.02976	0.8654
380	4.77654	71.27	2.341	496.71	0.0036691	0.01404	1.271	0.01124	1.02865	0.8524
390	4.60892	74.01	2.336	502.04	0.0034798	0.01419	1.287	0.01195	1.02763	0.8413
400	4.45509	76.71	2.331	506.73	0.0033128	0.01434	1.303	0.01266	1.02670	0.8316
410	4.31318	79.38	2.326	510.89	0.0031642	0.01450	1.320	0.01338	1.02584	0.8231
420	4.18168	82.03	2.321	514.59	0.0030308	0.01467	1.337	0.01411	1.02505	0.8157
430	4.05932	84.64	2.316	517.90	0.0029104	0.01484	1.354	0.01484	1.02431	0.8091
440	3.94507	87.24	2.312	520.88	0.0028009	0.01501	1.371	0.01557	1.02362	0.8032
450	3.83806	89.82	2.307	523.56	0.0027009	0.01519	1.388	0.01632	1.02298	0.7979
460	3.73752	92.39	2.303	525.99	0.0026091	0.01537	1.405	0.01706	1.02237	0.7932
470	3.64283	94.94	2.299	528.20	0.0025244	0.01556	1.423	0.01782	1.02180	0.7890
480	3.55343	97.48	2.294	530.21	0.0024460	0.01574	1.440	0.01858	1.02126	0.7852
490	3.46885	100.01	2.290	532.04	0.0023732	0.01593	1.458	0.01935	1.02075	0.7818
500	3.38866	102.53	2.285	533.72	0.0023053	0.01612	1.475	0.02012	1.02027	0.7787
510	3.31250	105.05	2.281	535.26	0.0022418	0.01629	1.493	0.02088	1.01981	0.7769
520	3.24003	107.57	2.276	536.68	0.0021824	0.01649	1.510	0.02168	1.01937	0.7741
530	3.17099	110.08	2.272	537.99	0.0021264	0.01668	1.528	0.02248	1.01896	0.7716
540	3.10510	112.60	2.267	539.20	0.0020737	0.01688	1.545	0.02328	1.01856	0.7694
550	3.04213	115.11	2.263	540.32	0.0020240	0.01708	1.562	0.02409	1.01818	0.7674
560	2.98188	117.63	2.258	541.36	0.0019769	0.01727	1.580	0.02491	1.01782	0.7656
570	2.92417	120.15	2.253	542.33	0.0019323	0.01747	1.597	0.02573	1.01747	0.7641
580	2.86882	122.67	2.248	543.23	0.0018899	0.01767	1.614	0.02656	1.01714	0.7627
590	2.81569	125.20	2.243	544.07	0.0018496	0.01786	1.632	0.02740	1.01682	0.7615
600	2.76462	127.73	2.238	544.86	0.0018112	0.01806	1.649	0.02823	1.01651	0.7604

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

600 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.684	0.01224	2127.66	318.2	-83.123	-81.763	0.50216	0.266	0.397	3831
100	0.01227	2102.41	314.8	-82.605	-81.242	0.50741	0.265	0.397	3816
105	0.01238	2008.14	302.2	-80.635	-79.259	0.52676	0.261	0.396	3760
110	0.01250	1916.51	289.9	-78.666	-77.277	0.54520	0.257	0.396	3702
115	0.01262	1827.45	278.0	-76.698	-75.296	0.56281	0.253	0.396	3643
120	0.01274	1740.92	266.6	-74.730	-73.315	0.57968	0.249	0.396	3582
125	0.01286	1656.85	255.4	-72.762	-71.333	0.59585	0.245	0.396	3520
130	0.01299	1575.17	244.7	-70.795	-69.351	0.61140	0.242	0.397	3458
135	0.01313	1495.84	234.3	-68.826	-67.367	0.62637	0.239	0.397	3394
140	0.01326	1418.79	224.2	-66.856	-65.382	0.64081	0.236	0.397	3329
145	0.01341	1343.96	214.4	-64.884	-63.395	0.65476	0.233	0.398	3263
150	0.01355	1271.29	205.0	-62.910	-61.404	0.66825	0.230	0.398	3196
155	0.01370	1200.72	195.9	-60.932	-59.410	0.68133	0.227	0.399	3128
160	0.01386	1132.20	187.1	-58.951	-57.411	0.69402	0.224	0.400	3059
165	0.01402	1065.65	178.6	-56.964	-55.406	0.70636	0.222	0.402	2989
170	0.01419	1001.02	170.3	-54.971	-53.395	0.71837	0.219	0.403	2919
175	0.01436	938.24	162.3	-52.971	-51.375	0.73008	0.217	0.405	2847
180	0.01454	877.27	154.6	-50.962	-49.346	0.74151	0.215	0.407	2775
185	0.01473	818.03	147.1	-48.942	-47.305	0.75270	0.213	0.409	2701
190	0.01493	760.47	139.9	-46.910	-45.251	0.76365	0.210	0.412	2627
195	0.01515	704.52	132.8	-44.863	-43.181	0.77441	0.208	0.416	2552
200	0.01537	650.13	126.0	-42.799	-41.092	0.78499	0.206	0.420	2475
205	0.01560	597.25	119.3	-40.714	-38.981	0.79542	0.204	0.425	2397
210	0.01585	545.80	112.8	-38.605	-36.844	0.80572	0.203	0.430	2318
215	0.01612	495.74	106.4	-36.467	-34.676	0.81592	0.201	0.437	2237
220	0.01641	447.03	100.1	-34.294	-32.470	0.82606	0.199	0.445	2153
225	0.01673	399.62	94.0	-32.079	-30.220	0.83617	0.197	0.455	2067
230	0.01707	353.49	87.8	-29.812	-27.915	0.84629	0.195	0.467	1977
235	0.01746	310.42	82.2	-27.452	-25.512	0.85663	0.199	0.487	1878
240	0.01789	268.45	75.8	-25.027	-23.039	0.86704	0.197	0.502	1778
245	0.01837	226.21	70.0	-22.502	-20.460	0.87768	0.196	0.528	1680
250	0.01894	185.22	63.7	-19.850	-17.745	0.88865	0.196	0.559	1567
255	0.01962	145.22	57.1	-17.020	-14.840	0.90016	0.195	0.604	1439
260	0.02049	105.49	50.6	-13.908	-11.632	0.91261	0.198	0.689	1305
265	0.02171	66.37	42.2	-10.291	-7.879	0.92691	0.202	0.821	1119
* 269.107	0.02338	32.45	35.2	-6.435	-3.837	0.94204	0.209	1.249	947
* 269.107	0.07749	12.27	6.8	23.154	31.764	1.07436	0.229	1.346	578
270	0.08022	14.61	6.4	23.953	32.866	1.07845	0.225	1.138	585
275	0.09134	24.21	5.3	27.085	37.233	1.09448	0.209	0.711	617
280	0.09958	31.31	4.7	29.317	40.381	1.10583	0.200	0.567	641
285	0.10656	37.25	4.3	31.169	43.008	1.11514	0.193	0.491	662
290	0.11279	42.49	4.0	32.801	45.332	1.12322	0.188	0.442	680
295	0.11851	47.23	3.7	34.287	47.455	1.13048	0.185	0.408	696
300	0.12386	51.61	3.5	35.670	49.431	1.13712	0.181	0.383	711
310	0.13377	59.58	3.2	38.216	53.078	1.14908	0.177	0.349	738
320	0.14292	66.80	2.9	40.561	56.441	1.15976	0.173	0.325	762
330	0.15154	73.46	2.7	42.769	59.606	1.16950	0.171	0.309	785
340	0.15976	79.71	2.5	44.877	62.627	1.17852	0.169	0.296	805
350	0.16767	85.64	2.4	46.908	65.537	1.18696	0.167	0.286	825
360	0.17532	91.30	2.2	48.880	68.359	1.19491	0.166	0.278	843
370	0.18277	96.74	2.1	50.804	71.110	1.20244	0.165	0.272	860
380	0.19004	101.99	2.0	52.687	73.802	1.20962	0.164	0.267	877
390	0.19717	107.08	1.9	54.538	76.444	1.21649	0.163	0.262	893
400	0.20416	112.04	1.9	56.361	79.044	1.22307	0.162	0.258	909
410	0.21105	116.87	1.8	58.160	81.609	1.22940	0.162	0.255	924
420	0.21784	121.60	1.7	59.938	84.142	1.23551	0.161	0.252	938
430	0.22455	126.23	1.7	61.699	86.648	1.24140	0.161	0.249	953
440	0.23118	130.78	1.6	63.444	89.129	1.24711	0.160	0.247	966
450	0.23775	135.25	1.6	65.175	91.590	1.25264	0.160	0.245	980
460	0.24425	139.66	1.5	66.895	94.032	1.25801	0.160	0.243	993
470	0.25070	144.00	1.5	68.604	96.457	1.26322	0.160	0.242	1006
480	0.25710	148.29	1.4	70.304	98.868	1.26830	0.159	0.240	1018
490	0.26345	152.53	1.4	71.995	101.266	1.27324	0.159	0.239	1030
500	0.26977	156.72	1.4	73.680	103.652	1.27806	0.159	0.238	1042
510	0.27604	160.88	1.3	75.359	106.028	1.28277	0.159	0.237	1054
520	0.28229	164.99	1.3	77.032	108.395	1.28736	0.159	0.236	1066
530	0.28850	169.07	1.3	78.700	110.754	1.29186	0.159	0.235	1077
540	0.29468	173.11	1.2	80.365	113.105	1.29625	0.159	0.235	1089
550	0.30084	177.13	1.2	82.026	115.450	1.30055	0.159	0.234	1100
560	0.30697	181.11	1.2	83.684	117.790	1.30477	0.159	0.234	1110
570	0.31308	185.08	1.2	85.340	120.125	1.30890	0.159	0.233	1121
580	0.31917	189.02	1.1	86.994	122.456	1.31296	0.159	0.233	1132
590	0.32524	192.93	1.1	88.647	124.783	1.31693	0.159	0.233	1142
600	0.33129	196.83	1.1	90.299	127.107	1.32084	0.160	0.232	1152

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

600 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.684	81.72298	216.75	14.613	173878.50	0.0018300	0.11191	42.466	0.00345	1.56994	5.4189
100	81.52612	215.94	14.556	171401.26	0.0018367	0.11153	41.408	0.00345	1.56835	5.3007
105	80.77563	212.81	14.336	162208.70	0.0018628	0.11007	37.643	0.00344	1.56233	4.8808
110	80.02132	209.64	14.108	153361.40	0.0018904	0.10852	34.254	0.00342	1.55628	4.5033
115	79.26281	206.42	13.873	144849.10	0.0019195	0.10690	31.204	0.00340	1.55022	4.1638
120	78.49971	203.15	13.633	136661.69	0.0019505	0.10521	28.458	0.00338	1.54414	3.8583
125	77.73156	199.83	13.386	128789.25	0.0019833	0.10346	25.986	0.00336	1.53804	3.5835
130	76.95787	196.45	13.135	121222.01	0.0020183	0.10166	23.760	0.00333	1.53190	3.3361
135	76.17810	193.01	12.880	113950.39	0.0020558	0.09981	21.757	0.00330	1.52574	3.1136
140	75.39162	189.51	12.620	106964.98	0.0020958	0.09792	19.952	0.00327	1.51953	2.9136
145	74.59777	185.94	12.357	100256.55	0.0021389	0.09598	18.328	0.00324	1.51329	2.7339
150	73.79579	182.30	12.092	93816.07	0.0021853	0.09402	16.865	0.00320	1.50700	2.5727
155	72.98482	178.59	11.824	87634.67	0.0022355	0.09201	15.547	0.00316	1.50065	2.4284
160	72.16391	174.80	11.555	81703.70	0.0022899	0.08999	14.361	0.00312	1.49425	2.2995
165	71.33198	170.92	11.284	76014.72	0.0023491	0.08793	13.291	0.00307	1.48778	2.1848
170	70.48782	166.96	11.013	70559.48	0.0024138	0.08586	12.327	0.00302	1.48123	2.0831
175	69.63002	162.91	10.741	65329.96	0.0024849	0.08376	11.458	0.00297	1.47459	1.9935
180	68.75701	158.75	10.468	60318.40	0.0025632	0.08165	10.674	0.00292	1.46786	1.9151
185	67.86696	154.49	10.196	55517.25	0.0026500	0.07952	9.966	0.00286	1.46102	1.8473
190	66.95775	150.12	9.923	50919.26	0.0027467	0.07737	9.327	0.00280	1.45405	1.7896
195	66.02692	145.63	9.651	46517.48	0.0028551	0.07521	8.749	0.00274	1.44694	1.7414
200	65.07157	141.01	9.378	42305.28	0.0029774	0.07303	8.226	0.00267	1.43966	1.7026
205	64.08825	136.26	9.104	38276.42	0.0031164	0.07084	7.753	0.00260	1.43220	1.6730
210	63.07283	131.35	8.828	34425.12	0.0032758	0.06863	7.322	0.00253	1.42452	1.6527
215	62.02029	126.28	8.550	30746.15	0.0034603	0.06640	6.930	0.00245	1.41659	1.6420
220	60.92443	121.03	8.266	27235.02	0.0036766	0.06414	6.573	0.00237	1.40837	1.6415
225	59.77746	115.59	7.976	23888.21	0.0039333	0.06186	6.245	0.00228	1.39979	1.6523
230	58.56943	109.95	7.673	20703.57	0.0042431	0.05955	5.943	0.00218	1.39080	1.6761
235	57.27493	105.43	7.218	17779.12	0.0046211	0.05716	5.699	0.00205	1.38120	1.7485
240	55.90733	99.33	6.870	15008.41	0.0050502	0.05476	5.472	0.00195	1.37111	1.8045
245	54.42548	92.87	6.558	12311.50	0.0056884	0.05229	5.236	0.00182	1.36024	1.9041
250	52.79609	85.88	5.169	9779.03	0.0065138	0.04973	4.986	0.00168	1.34835	2.0193
255	50.95982	78.30	5.710	7400.55	0.0077100	0.04702	4.718	0.00153	1.33503	2.1808
260	48.80112	70.06	5.248	5148.26	0.0098353	0.04407	4.419	0.00131	1.31949	2.4874
265	46.05671	59.55	4.540	3056.78	0.0137949	0.04094	4.065	0.00108	1.29990	2.9358
* 269.107	42.76382	49.26	3.932	1387.80	0.0253563	0.04159	3.673	0.00078	1.27667	3.9714
* 269.107	12.90419	31.50	2.286	158.38	0.0427338	0.02330	1.392	0.00134	1.07867	2.8943
270	12.46534	32.19	2.296	182.07	0.0353680	0.02145	1.372	0.00151	1.07593	2.6205
275	10.94825	35.24	2.333	265.08	0.0201637	0.01747	1.308	0.00225	1.06649	1.9153
280	10.04207	37.71	2.354	314.43	0.0150331	0.01608	1.276	0.00283	1.06087	1.6195
285	9.38439	39.90	2.368	349.59	0.0122939	0.01534	1.257	0.00333	1.05681	1.4467
290	8.86608	41.93	2.377	376.69	0.0105456	0.01488	1.245	0.00379	1.05362	1.3318
295	8.43797	43.85	2.383	398.53	0.0093149	0.01457	1.237	0.00423	1.05098	1.2479
300	8.07339	45.68	2.387	416.69	0.0083929	0.01436	1.232	0.00464	1.04874	1.1841
310	7.47550	49.17	2.390	445.43	0.0070884	0.01411	1.229	0.00541	1.04508	1.0929
320	6.99678	52.49	2.389	467.36	0.0061978	0.01399	1.231	0.00615	1.04215	1.0304
330	6.59885	55.67	2.386	484.77	0.0055437	0.01396	1.237	0.00685	1.03972	0.9848
340	6.25939	58.76	2.382	498.96	0.0050389	0.01398	1.246	0.00754	1.03765	0.9499
350	5.96425	61.76	2.376	510.77	0.0046350	0.01404	1.256	0.00822	1.03586	0.9223
360	5.70387	64.70	2.371	520.76	0.0043031	0.01412	1.268	0.00889	1.03427	0.8999
370	5.47146	67.58	2.365	529.30	0.0040244	0.01422	1.281	0.00956	1.03286	0.8822
380	5.26205	70.40	2.359	536.68	0.0037864	0.01433	1.295	0.01022	1.03159	0.8673
390	5.07188	73.19	2.353	543.11	0.0035803	0.01446	1.310	0.01088	1.03044	0.8545
400	4.89801	75.93	2.348	548.76	0.0033998	0.01460	1.325	0.01155	1.02938	0.8435
410	4.73815	78.64	2.343	553.75	0.0032400	0.01475	1.341	0.01222	1.02842	0.8339
420	4.59042	81.32	2.337	558.19	0.0030974	0.01490	1.357	0.01289	1.02752	0.8255
430	4.45332	83.97	2.332	562.15	0.0029692	0.01506	1.373	0.01357	1.02669	0.8181
440	4.32558	86.59	2.327	565.70	0.0028532	0.01523	1.389	0.01425	1.02592	0.8115
450	4.20616	89.20	2.322	568.90	0.0027476	0.01540	1.406	0.01494	1.02520	0.8056
460	4.09417	91.79	2.318	571.79	0.0026510	0.01558	1.423	0.01563	1.02452	0.8003
470	3.98886	94.37	2.313	574.41	0.0025622	0.01575	1.440	0.01633	1.02389	0.7956
480	3.88957	96.93	2.308	576.80	0.0024802	0.01593	1.457	0.01704	1.02329	0.7914
490	3.79575	99.48	2.304	578.97	0.0024042	0.01611	1.474	0.01775	1.02272	0.7875
500	3.70690	102.03	2.299	580.96	0.0023335	0.01630	1.491	0.01847	1.02218	0.7841
510	3.62261	104.56	2.295	582.79	0.0022676	0.01646	1.508	0.01916	1.02168	0.7820
520	3.54249	107.10	2.290	584.47	0.0022060	0.01665	1.525	0.01990	1.02119	0.7789
530	3.46621	109.62	2.285	586.02	0.0021481	0.01685	1.542	0.02064	1.02073	0.7761
540	3.39348	112.15	2.280	587.45	0.0020937	0.01704	1.559	0.02138	1.02030	0.7736
550	3.32403	114.68	2.276	588.78	0.0020424	0.01723	1.576	0.02213	1.01988	0.7713
560	3.25762	117.21	2.271	590.00	0.0019940	0.01743	1.593	0.02289	1.01948	0.7694
570	3.19405	119.74	2.266	591.15	0.0019481	0.01762	1.610	0.02365	1.01910	0.7676
580	3.13312	122.27	2.261	592.21	0.0019046	0.01781	1.627	0.02441	1.01873	0.7660
590	3.07465	124.81	2.255	593.20	0.0018633	0.01801	1.644	0.02518	1.01838	0.7646
600	3.01849	127.35	2.250	594.13	0.0018239	0.01820	1.661	0.02595	1.01804	0.7634

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

650 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.755	0.01223	2130.74	318.2	-83.115	-81.643	0.50224	0.266	0.397	3833
100	0.01226	2106.87	315.0	-82.625	-81.149	0.50721	0.265	0.397	3819
105	0.01238	2012.67	302.4	-80.657	-79.167	0.52655	0.261	0.396	3763
110	0.01249	1921.11	290.1	-78.689	-77.186	0.54498	0.257	0.396	3705
115	0.01261	1832.13	278.3	-76.723	-75.205	0.56259	0.253	0.396	3646
120	0.01273	1745.67	266.8	-74.757	-73.224	0.57945	0.249	0.396	3586
125	0.01286	1661.67	255.7	-72.791	-71.243	0.59562	0.246	0.396	3524
130	0.01299	1580.08	244.9	-70.825	-69.262	0.61116	0.242	0.396	3461
135	0.01312	1500.83	234.5	-68.859	-67.280	0.62612	0.239	0.397	3398
140	0.01326	1423.87	224.4	-66.891	-65.295	0.64055	0.236	0.397	3333
145	0.01340	1349.13	214.7	-64.922	-63.309	0.65449	0.233	0.397	3267
150	0.01354	1276.55	205.3	-62.950	-61.320	0.66798	0.230	0.398	3200
155	0.01369	1206.08	196.2	-60.975	-59.327	0.68105	0.227	0.399	3133
160	0.01385	1137.66	187.4	-58.997	-57.330	0.69373	0.225	0.400	3064
165	0.01401	1071.22	178.9	-57.013	-55.327	0.70605	0.222	0.401	2995
170	0.01418	1006.70	170.7	-55.024	-53.317	0.71805	0.220	0.403	2924
175	0.01435	944.05	162.7	-53.027	-51.300	0.72975	0.217	0.404	2853
180	0.01453	883.20	155.0	-51.022	-49.273	0.74117	0.215	0.406	2781
185	0.01472	824.10	147.5	-49.007	-47.235	0.75234	0.213	0.409	2708
190	0.01492	766.68	140.3	-46.983	-45.184	0.76328	0.211	0.412	2635
195	0.01513	710.89	133.2	-44.939	-43.118	0.77401	0.209	0.415	2560
200	0.01535	656.67	126.4	-42.881	-41.034	0.78457	0.207	0.419	2484
205	0.01558	603.96	119.8	-40.804	-38.928	0.79497	0.205	0.423	2407
210	0.01583	552.71	113.3	-38.703	-36.797	0.80524	0.203	0.429	2328
215	0.01610	502.87	106.9	-36.574	-34.637	0.81541	0.201	0.435	2248
220	0.01638	454.39	100.7	-34.412	-32.440	0.82551	0.199	0.443	2165
225	0.01669	407.23	94.6	-32.211	-30.201	0.83557	0.197	0.452	2080
230	0.01703	361.38	88.5	-29.960	-27.910	0.84563	0.195	0.463	1992
235	0.01741	316.13	82.8	-27.620	-25.524	0.85589	0.199	0.483	1893
240	0.01783	276.58	76.5	-25.219	-23.073	0.86622	0.197	0.497	1796
245	0.01830	234.88	70.9	-22.726	-20.523	0.87673	0.196	0.521	1700
250	0.01885	194.46	64.7	-20.118	-17.850	0.88753	0.195	0.549	1591
255	0.01950	155.21	58.3	-17.353	-15.006	0.89879	0.196	0.589	1471
260	0.02030	116.45	52.1	-14.348	-11.905	0.91084	0.197	0.659	1344
265	0.02139	78.72	44.4	-10.947	-8.373	0.92429	0.200	0.763	1179
270	0.02310	40.40	35.6	-6.715	-3.934	0.94088	0.207	1.043	972
* 272.762	0.02499	17.50	30.1	-3.260	-0.253	0.95444	0.220	1.847	825
* 272.762	0.06592	7.68	8.2	20.981	28.916	1.06140	0.245	2.165	561
275	0.07362	14.33	7.1	23.588	32.449	1.07431	0.226	1.195	593
280	0.08425	23.61	5.9	26.914	37.054	1.09092	0.210	0.745	624
285	0.09211	30.81	5.2	29.251	40.338	1.10254	0.200	0.588	648
290	0.09873	36.84	4.7	31.172	43.056	1.11200	0.194	0.506	668
295	0.10463	42.15	4.3	32.855	45.449	1.12018	0.189	0.454	686
300	0.11003	46.98	4.0	34.383	47.626	1.12750	0.185	0.419	702
310	0.11985	55.61	3.6	37.132	51.557	1.14039	0.179	0.372	731
320	0.12877	63.30	3.3	39.615	55.114	1.15169	0.175	0.342	757
330	0.13709	70.34	3.0	41.924	58.425	1.16188	0.172	0.321	780
340	0.14497	76.90	2.8	44.111	61.560	1.17124	0.170	0.306	801
350	0.15251	83.08	2.6	46.205	64.562	1.17994	0.168	0.295	822
360	0.15978	88.96	2.5	48.229	67.461	1.18811	0.167	0.285	840
370	0.16683	94.60	2.4	50.197	70.277	1.19583	0.165	0.278	858
380	0.17370	100.02	2.3	52.119	73.026	1.20316	0.164	0.272	875
390	0.18041	105.27	2.1	54.003	75.718	1.21015	0.164	0.267	892
400	0.18700	110.37	2.1	55.854	78.362	1.21684	0.163	0.262	908
410	0.19347	115.33	2.0	57.679	80.965	1.22327	0.162	0.258	923
420	0.19984	120.17	1.9	59.481	83.534	1.22946	0.162	0.255	938
430	0.20612	124.91	1.8	61.262	86.071	1.23543	0.161	0.252	952
440	0.21233	129.56	1.8	63.026	88.582	1.24120	0.161	0.250	966
450	0.21846	134.12	1.7	64.774	91.069	1.24679	0.160	0.248	980
460	0.22454	138.62	1.7	66.509	93.536	1.25221	0.160	0.246	993
470	0.23056	143.04	1.6	68.233	95.983	1.25748	0.160	0.244	1006
480	0.23653	147.41	1.6	69.945	98.415	1.26260	0.160	0.242	1019
490	0.24246	151.71	1.5	71.649	100.832	1.26758	0.159	0.241	1031
500	0.24834	155.97	1.5	73.345	103.236	1.27244	0.159	0.240	1043
510	0.25419	160.19	1.4	75.034	105.629	1.27718	0.159	0.239	1055
520	0.26000	164.36	1.4	76.716	108.011	1.28180	0.159	0.238	1067
530	0.26578	168.50	1.4	78.394	110.384	1.28632	0.159	0.237	1078
540	0.27154	172.60	1.3	80.066	112.749	1.29074	0.159	0.236	1090
550	0.27726	176.66	1.3	81.735	115.107	1.29507	0.159	0.235	1101
560	0.28296	180.70	1.3	83.401	117.459	1.29931	0.159	0.235	1112
570	0.28864	184.71	1.3	85.063	119.805	1.30346	0.159	0.234	1122
580	0.29430	188.70	1.2	86.724	122.147	1.30753	0.159	0.234	1133
590	0.29994	192.66	1.2	88.383	124.484	1.31153	0.159	0.234	1144
600	0.30556	196.60	1.2	90.040	126.818	1.31545	0.160	0.233	1154

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

650 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.755	81.73587	217.03	14.611	174157.88	0.0018273	0.11193	42.537	0.00345	1.57004	5.4252
100	81.54987	216.26	14.558	171815.20	0.0018335	0.11158	41.534	0.00345	1.56854	5.3132
105	80.80050	213.14	14.337	162624.77	0.0018594	0.11012	37.762	0.00344	1.56253	4.8924
110	80.04738	209.99	14.109	153779.66	0.0018867	0.10858	34.366	0.00342	1.55649	4.5141
115	79.29014	206.78	13.875	145269.60	0.0019156	0.10696	31.309	0.00341	1.55044	4.1739
120	78.52839	203.53	13.634	137084.50	0.0019462	0.10528	28.556	0.00338	1.54437	3.8677
125	77.76169	200.22	13.388	129214.44	0.0019787	0.10354	26.078	0.00336	1.53828	3.5921
130	76.98956	196.85	13.137	121649.65	0.0020133	0.10174	23.847	0.00333	1.53215	3.3442
135	76.21147	193.43	12.882	114380.57	0.0020503	0.09990	21.838	0.00331	1.52600	3.1211
140	75.42680	189.95	12.623	107397.78	0.0020899	0.09801	20.029	0.00327	1.51981	2.9205
145	74.63491	186.39	12.360	100692.07	0.0021324	0.09608	18.401	0.00324	1.51358	2.7402
150	73.83504	182.77	12.095	94254.41	0.0021782	0.09412	16.934	0.00320	1.50730	2.5786
155	73.02637	179.08	11.828	88075.95	0.0022275	0.09213	15.612	0.00316	1.50098	2.4337
160	72.20797	175.31	11.559	82148.05	0.0022812	0.09010	14.422	0.00312	1.49459	2.3043
165	71.37878	171.46	11.289	76462.27	0.0023395	0.08806	13.349	0.00308	1.48814	2.1891
170	70.53763	167.52	11.019	71010.39	0.0024032	0.08599	12.382	0.00303	1.48161	2.0869
175	69.68315	163.49	10.748	65784.41	0.0024730	0.08390	11.510	0.00298	1.47500	1.9968
180	68.81382	159.37	10.476	60776.57	0.0025499	0.08179	10.723	0.00293	1.46830	1.9178
185	67.92786	155.14	10.205	55979.37	0.0026349	0.07967	10.013	0.00287	1.46149	1.8495
190	67.02323	150.80	9.934	51385.57	0.0027296	0.07753	9.372	0.00281	1.45455	1.7911
195	66.09757	146.35	9.664	46988.26	0.0028354	0.07538	8.792	0.00275	1.44748	1.7423
200	65.14809	141.77	9.393	42780.83	0.0029546	0.07322	8.267	0.00268	1.44025	1.7027
205	64.17150	137.05	9.121	38757.10	0.0030898	0.07103	7.792	0.00261	1.43283	1.6722
210	63.16386	132.20	8.849	34911.33	0.0032445	0.06884	7.360	0.00254	1.42521	1.6509
215	62.12043	127.18	8.574	31238.34	0.0034229	0.06662	6.957	0.00246	1.41735	1.6389
220	61.03536	122.00	8.295	27733.67	0.0036312	0.06438	6.608	0.00238	1.40920	1.6369
225	59.90140	116.63	8.009	24393.82	0.0038773	0.06212	6.280	0.00229	1.40072	1.6457
230	58.70932	111.07	7.713	21215.65	0.0041725	0.05983	5.977	0.00220	1.39184	1.6669
235	57.43403	106.61	7.254	18271.39	0.0045326	0.05747	5.728	0.00207	1.38238	1.7337
240	56.09081	100.65	5.914	15513.33	0.0049342	0.05510	5.504	0.00198	1.37246	1.7859
245	54.64237	94.38	5.611	12834.35	0.0055229	0.05267	5.272	0.00185	1.36183	1.8782
250	53.05948	87.62	5.238	10318.14	0.0062707	0.05015	5.028	0.00172	1.35026	1.9830
255	51.29273	80.41	5.808	7961.02	0.0073254	0.04752	4.758	0.00157	1.33744	2.1275
260	49.25186	72.60	5.367	5735.23	0.0090795	0.04470	4.483	0.00138	1.32272	2.3802
265	46.75227	63.19	4.752	3680.40	0.0120705	0.04153	4.155	0.00116	1.30485	2.7476
270	43.28109	51.27	3.974	1748.51	0.0203515	0.04051	3.736	0.00090	1.28030	3.4645
* 272.762	40.02139	43.06	3.409	700.51	0.0428992	0.04405	3.378	0.00060	1.25753	5.0992
* 272.762	15.16965	30.77	2.207	116.47	0.0703634	0.03063	1.520	0.00093	1.09290	3.8675
275	13.58320	32.79	2.311	194.63	0.0364436	0.02256	1.443	0.00139	1.08292	2.7510
280	11.86901	35.63	2.357	280.28	0.0209154	0.01841	1.368	0.00208	1.07221	1.9940
285	10.85635	38.07	2.378	334.44	0.0154511	0.01687	1.330	0.00264	1.06592	1.6706
290	10.12818	40.26	2.392	373.08	0.0125696	0.01602	1.307	0.00313	1.06140	1.4865
295	9.55761	42.30	2.400	402.88	0.0107439	0.01550	1.292	0.00357	1.05788	1.3634
300	9.08827	44.22	2.406	426.95	0.0094651	0.01515	1.282	0.00398	1.05498	1.2748
310	8.34392	47.85	2.411	463.98	0.0077656	0.01473	1.271	0.00475	1.05041	1.1546
320	7.76563	51.27	2.411	491.56	0.0066690	0.01451	1.269	0.00547	1.04686	1.0760
330	7.29437	54.54	2.408	513.09	0.0058922	0.01441	1.271	0.00615	1.04397	1.0204
340	6.89799	57.70	2.403	530.45	0.0053076	0.01439	1.277	0.00681	1.04155	0.9787
350	6.55700	60.77	2.397	544.77	0.0048488	0.01441	1.285	0.00746	1.03947	0.9462
360	6.25866	63.76	2.391	556.80	0.0044771	0.01447	1.295	0.00810	1.03765	0.9202
370	5.99414	66.69	2.384	567.04	0.0041687	0.01454	1.307	0.00872	1.03604	0.8998
380	5.75710	69.57	2.378	575.85	0.0039079	0.01463	1.320	0.00935	1.03460	0.8828
390	5.54281	72.39	2.372	583.50	0.0036838	0.01474	1.333	0.00997	1.03330	0.8683
400	5.34767	75.18	2.365	590.20	0.0034889	0.01486	1.347	0.01060	1.03211	0.8558
410	5.16883	77.92	2.360	596.11	0.0033174	0.01500	1.362	0.01122	1.03103	0.8450
420	5.00405	80.63	2.354	601.34	0.0031652	0.01514	1.377	0.01186	1.03003	0.8356
430	4.85151	83.32	2.348	606.01	0.0030289	0.01529	1.393	0.01249	1.02910	0.8273
440	4.70971	85.97	2.343	610.19	0.0029061	0.01545	1.408	0.01313	1.02824	0.8199
450	4.57740	88.61	2.338	613.94	0.0027947	0.01561	1.424	0.01377	1.02744	0.8134
460	4.45354	91.22	2.333	617.33	0.0026932	0.01578	1.441	0.01442	1.02669	0.8075
470	4.33724	93.82	2.328	620.40	0.0026001	0.01595	1.457	0.01507	1.02599	0.8023
480	4.22776	96.40	2.323	623.19	0.0025144	0.01612	1.474	0.01573	1.02533	0.7975
490	4.12443	98.97	2.318	625.74	0.0024352	0.01630	1.490	0.01639	1.02470	0.7933
500	4.02670	101.54	2.313	628.06	0.0023618	0.01648	1.507	0.01706	1.02411	0.7895
510	3.93408	104.09	2.308	630.20	0.0022934	0.01663	1.523	0.01771	1.02356	0.7871
520	3.84612	106.64	2.303	632.16	0.0022295	0.01682	1.540	0.01839	1.02302	0.7837
530	3.76246	109.18	2.299	633.96	0.0021697	0.01701	1.557	0.01908	1.02252	0.7806
540	3.68274	111.72	2.294	635.63	0.0021136	0.01720	1.574	0.01978	1.02204	0.7778
550	3.60668	114.26	2.289	637.17	0.0020608	0.01739	1.590	0.02047	1.02158	0.7753
560	3.53401	116.80	2.284	638.60	0.0020109	0.01758	1.607	0.02118	1.02114	0.7731
570	3.46448	119.35	2.279	639.93	0.0019638	0.01777	1.624	0.02188	1.02072	0.7711
580	3.39787	121.89	2.274	641.17	0.0019192	0.01796	1.641	0.02259	1.02032	0.7694
590	3.33399	124.44	2.268	642.32	0.0018768	0.01815	1.657	0.02331	1.01994	0.7678
600	3.27267	126.99	2.263	643.40	0.0018366	0.01834	1.674	0.02403	1.01957	0.7664

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

700 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.826	0.01223	2133.82	318.3	-83.107	-81.522	0.50232	0.266	0.396	3835
100	0.01226	2111.33	315.2	-82.645	-81.056	0.50700	0.265	0.396	3822
105	0.01237	2017.20	302.6	-80.678	-79.075	0.52633	0.261	0.396	3766
110	0.01249	1925.70	290.4	-78.713	-77.094	0.54476	0.257	0.396	3708
115	0.01261	1836.79	278.5	-76.748	-75.114	0.56237	0.253	0.396	3649
120	0.01273	1750.41	267.0	-74.784	-73.134	0.57922	0.249	0.396	3589
125	0.01285	1666.49	255.9	-72.820	-71.154	0.59538	0.246	0.396	3528
130	0.01298	1584.98	245.2	-70.856	-69.173	0.61092	0.242	0.396	3465
135	0.01312	1505.81	234.8	-68.892	-67.192	0.62587	0.239	0.396	3402
140	0.01325	1428.93	224.7	-66.926	-65.209	0.64030	0.236	0.397	3337
145	0.01339	1354.28	215.0	-64.959	-63.223	0.65423	0.233	0.397	3271
150	0.01354	1281.80	205.6	-62.990	-61.235	0.66771	0.230	0.398	3205
155	0.01369	1211.43	196.5	-61.018	-59.244	0.68077	0.227	0.399	3137
160	0.01384	1143.11	187.7	-59.042	-57.248	0.69344	0.225	0.400	3069
165	0.01400	1076.77	179.2	-57.062	-55.247	0.70575	0.222	0.401	3000
170	0.01417	1012.37	171.0	-55.076	-53.240	0.71774	0.220	0.402	2930
175	0.01434	949.84	163.0	-53.083	-51.224	0.72942	0.217	0.404	2859
180	0.01452	889.11	155.3	-51.082	-49.200	0.74083	0.215	0.406	2788
185	0.01471	830.14	147.9	-49.072	-47.165	0.75198	0.213	0.408	2715
190	0.01491	772.87	140.7	-47.050	-45.118	0.76290	0.211	0.411	2642
195	0.01511	717.23	133.6	-45.014	-43.055	0.77362	0.209	0.414	2568
200	0.01533	663.17	126.8	-42.963	-40.976	0.78415	0.207	0.418	2492
205	0.01556	610.64	120.2	-40.892	-38.875	0.79453	0.205	0.422	2416
210	0.01581	559.57	113.8	-38.800	-36.750	0.80477	0.203	0.428	2338
215	0.01607	509.94	107.5	-36.680	-34.597	0.81490	0.201	0.434	2259
220	0.01635	461.68	101.3	-34.529	-32.409	0.82496	0.199	0.441	2177
225	0.01666	414.77	95.2	-32.340	-30.181	0.83497	0.197	0.450	2094
230	0.01699	369.19	89.2	-30.105	-27.903	0.84498	0.196	0.461	2007
235	0.01736	325.78	83.5	-27.784	-25.533	0.85517	0.199	0.479	1908
240	0.01777	284.58	77.3	-25.405	-23.101	0.86541	0.197	0.492	1813
245	0.01823	243.37	71.7	-22.943	-20.580	0.87581	0.196	0.515	1720
250	0.01876	203.47	65.7	-20.375	-17.944	0.88646	0.195	0.541	1615
255	0.01938	164.84	59.5	-17.667	-15.155	0.89750	0.195	0.576	1500
260	0.02014	126.88	53.4	-14.752	-12.142	0.90920	0.196	0.635	1378
265	0.02112	90.03	46.2	-11.512	-8.775	0.92203	0.199	0.717	1227
270	0.02255	53.89	38.3	-7.688	-4.765	0.93702	0.204	0.897	1048
275	0.02555	16.52	28.3	-2.010	1.301	0.95926	0.222	1.832	794
* 276.191	0.02769	5.63	24.3	0.825	4.414	0.97055	0.238	4.334	689
* 276.191	0.05371	3.04	10.7	17.519	24.481	1.04322	0.267	5.798	553
280	0.06900	14.89	7.6	23.547	32.491	1.07208	0.225	1.190	604
285	0.07877	23.79	6.3	26.899	37.110	1.08844	0.209	0.759	633
290	0.08615	30.89	5.6	29.293	40.460	1.10010	0.200	0.601	656
295	0.09239	36.91	5.1	31.258	43.234	1.10959	0.193	0.516	675
300	0.09794	42.25	4.7	32.978	45.674	1.11779	0.188	0.463	694
310	0.10779	51.61	4.1	35.979	49.952	1.13182	0.182	0.399	725
320	0.11658	59.81	3.7	38.624	53.735	1.14384	0.177	0.361	751
330	0.12467	67.24	3.4	41.049	57.208	1.15452	0.174	0.335	776
340	0.13227	74.11	3.1	43.322	60.467	1.16425	0.171	0.317	798
350	0.13951	80.56	2.9	45.485	63.568	1.17324	0.169	0.304	819
360	0.14645	86.67	2.8	47.565	66.549	1.18164	0.167	0.293	838
370	0.15317	92.50	2.6	49.580	69.434	1.18955	0.166	0.284	856
380	0.15970	98.10	2.5	51.542	72.242	1.19704	0.165	0.277	874
390	0.16606	103.50	2.4	53.460	74.985	1.20416	0.164	0.272	891
400	0.17229	108.73	2.3	55.342	77.675	1.21097	0.163	0.267	907
410	0.17840	113.82	2.2	57.194	80.319	1.21750	0.163	0.262	922
420	0.18441	118.78	2.1	59.019	82.923	1.22378	0.162	0.259	937
430	0.19034	123.63	2.0	60.822	85.493	1.22982	0.162	0.255	952
440	0.19618	128.37	1.9	62.605	88.034	1.23566	0.161	0.253	966
450	0.20195	133.03	1.9	64.371	90.548	1.24131	0.161	0.250	980
460	0.20766	137.60	1.8	66.122	93.039	1.24679	0.160	0.248	993
470	0.21331	142.11	1.8	67.860	95.510	1.25210	0.160	0.246	1006
480	0.21892	146.55	1.7	69.586	97.962	1.25727	0.160	0.244	1019
490	0.22447	150.93	1.7	71.302	100.398	1.26229	0.160	0.243	1032
500	0.22999	155.25	1.6	73.009	102.821	1.26718	0.159	0.242	1044
510	0.23547	159.53	1.6	74.708	105.230	1.27195	0.159	0.240	1056
520	0.24091	163.76	1.5	76.400	107.628	1.27661	0.159	0.239	1068
530	0.24632	167.95	1.5	78.087	110.016	1.28116	0.159	0.238	1079
540	0.25171	172.11	1.5	79.768	112.394	1.28561	0.159	0.237	1091
550	0.25707	176.23	1.4	81.444	114.765	1.28996	0.159	0.237	1102
560	0.26240	180.31	1.4	83.117	117.129	1.29422	0.159	0.236	1113
570	0.26771	184.37	1.4	84.786	119.487	1.29839	0.159	0.235	1124
580	0.27300	188.40	1.3	86.453	121.839	1.30248	0.159	0.235	1135
590	0.27827	192.41	1.3	88.118	124.187	1.30649	0.159	0.235	1145
600	0.28352	196.39	1.3	89.781	126.530	1.31043	0.160	0.234	1156

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

700 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.826	81.74875	217.30	14.609	174437.11	0.0018245	0.11196	42.608	0.00345	1.57014	5.4315
100	81.57358	216.58	14.559	172228.79	0.0018303	0.11163	41.661	0.00345	1.56873	5.3258
105	80.82532	213.48	14.338	163040.47	0.0018560	0.11018	37.881	0.00344	1.56273	4.9041
110	80.07337	210.33	14.111	154197.51	0.0018830	0.10864	34.477	0.00343	1.55670	4.5250
115	79.31739	207.14	13.876	145689.66	0.0019116	0.10703	31.413	0.00341	1.55066	4.1839
120	78.55699	203.90	13.636	137506.84	0.0019419	0.10535	28.655	0.00339	1.54460	3.8771
125	77.79174	200.61	13.390	129639.12	0.0019741	0.10361	26.171	0.00336	1.53851	3.6008
130	77.02116	197.26	13.139	122076.75	0.0020083	0.10182	23.934	0.00334	1.53240	3.3522
135	76.24473	193.85	12.884	114810.16	0.0020449	0.09998	21.920	0.00331	1.52626	3.1285
140	75.46185	190.38	12.625	107829.95	0.0020840	0.09810	20.107	0.00328	1.52009	2.9274
145	74.67190	186.85	12.363	101126.91	0.0021259	0.09618	18.473	0.00324	1.51387	2.7466
150	73.87413	183.25	12.098	94692.02	0.0021711	0.09422	17.002	0.00321	1.50761	2.5844
155	73.06774	179.57	11.832	88516.43	0.0022199	0.09224	15.677	0.00317	1.50130	2.4391
160	72.25181	175.82	11.563	82591.53	0.0022727	0.09022	14.483	0.00312	1.49493	2.3092
165	71.42534	171.99	11.294	76908.88	0.0023301	0.08818	13.406	0.00308	1.48850	2.1934
170	70.58715	168.08	11.024	71460.27	0.0023927	0.08612	12.436	0.00303	1.48200	2.0907
175	69.73595	164.08	10.754	66237.73	0.0024613	0.08404	11.561	0.00298	1.47541	2.0001
180	68.87024	159.98	10.484	61233.51	0.0025367	0.08194	10.772	0.00293	1.46873	1.9206
185	67.98831	155.78	10.214	56440.12	0.0026201	0.07983	10.060	0.00288	1.46195	1.8517
190	67.08819	151.48	9.945	51850.37	0.0027127	0.07770	9.416	0.00282	1.45505	1.7927
195	66.16759	147.06	9.676	47457.36	0.0028161	0.07556	8.834	0.00276	1.44801	1.7432
200	65.22385	142.52	9.407	43254.53	0.0029324	0.07340	8.308	0.00269	1.44082	1.7029
205	64.25383	137.84	9.138	39235.70	0.0030640	0.07123	7.831	0.00262	1.43346	1.6715
210	63.25377	133.03	8.868	35395.20	0.0032141	0.06904	7.397	0.00255	1.42589	1.6492
215	62.21917	128.07	8.597	31727.87	0.0033868	0.06684	7.003	0.00248	1.41809	1.6360
220	61.14453	122.95	8.322	28229.28	0.0035876	0.06462	6.644	0.00240	1.41002	1.6325
225	60.02305	117.65	8.042	24895.95	0.0038237	0.06238	6.314	0.00231	1.40162	1.6395
230	58.84620	112.18	7.752	21725.70	0.0041054	0.06010	6.012	0.00222	1.39285	1.6583
235	57.58934	107.75	7.289	18751.38	0.0044488	0.05777	5.756	0.00209	1.38353	1.7195
240	56.26902	101.94	6.959	16012.83	0.0048268	0.05543	5.535	0.00200	1.37378	1.7689
245	54.85147	95.84	6.661	13349.30	0.0053712	0.05303	5.306	0.00188	1.36336	1.8544
250	53.31080	89.30	6.303	10846.91	0.0060531	0.05056	5.068	0.00175	1.35210	1.9503
255	51.60523	82.38	5.898	8506.46	0.0069940	0.04800	4.815	0.00161	1.33970	2.0810
260	49.66295	74.93	5.472	6301.27	0.0084704	0.04527	4.542	0.00144	1.32568	2.2920
265	47.34537	66.19	4.908	4262.56	0.0108311	0.04228	4.234	0.00125	1.30907	2.5844
270	44.34568	55.92	4.243	2389.96	0.0160381	0.04039	3.864	0.00102	1.28779	3.0886
275	39.14219	41.88	3.253	646.58	0.0437480	0.04302	3.291	0.00060	1.25144	5.0465
* 276.191	36.11172	36.34	2.817	203.38	0.1192392	0.05317	2.995	0.00034	1.23058	8.7891
* 276.191	18.61751	30.72	2.150	56.54	0.1887051	0.04906	1.719	0.00045	1.11481	7.3121
280	14.49204	33.66	2.336	215.73	0.0353494	0.02301	1.504	0.00133	1.08863	2.7987
285	12.69456	36.25	2.385	301.94	0.0209381	0.01916	1.424	0.00199	1.07736	2.0309
290	11.60729	38.63	2.405	358.60	0.0155437	0.01753	1.382	0.00252	1.07058	1.7036
295	10.82377	40.79	2.417	399.56	0.0126577	0.01665	1.355	0.00298	1.06571	1.5136
300	10.20985	42.81	2.425	431.38	0.0108187	0.01608	1.338	0.00340	1.06191	1.3871
310	9.27705	46.58	2.432	478.76	0.0085618	0.01542	1.318	0.00417	1.05615	1.2264
320	8.57817	50.10	2.433	513.05	0.0072004	0.01508	1.309	0.00487	1.05184	1.1272
330	8.02136	53.45	2.430	539.36	0.0062747	0.01490	1.307	0.00554	1.04843	1.0593
340	7.56028	56.68	2.425	560.32	0.0055971	0.01481	1.310	0.00618	1.04560	1.0097
350	7.16816	59.81	2.418	577.47	0.0050758	0.01479	1.315	0.00680	1.04320	0.9717
360	6.82808	62.86	2.411	591.77	0.0046599	0.01482	1.323	0.00741	1.04112	0.9417
370	6.52866	65.84	2.404	603.88	0.0043190	0.01486	1.333	0.00801	1.03930	0.9183
380	6.26188	68.77	2.397	614.26	0.0040335	0.01493	1.344	0.00860	1.03767	0.8989
390	6.02184	71.63	2.390	623.25	0.0037902	0.01502	1.357	0.00919	1.03621	0.8825
400	5.80410	74.45	2.383	631.09	0.0035800	0.01513	1.370	0.00978	1.03488	0.8685
410	5.60525	77.24	2.377	637.99	0.0033962	0.01525	1.383	0.01037	1.03367	0.8565
420	5.42257	79.98	2.371	644.09	0.0032339	0.01538	1.398	0.01097	1.03257	0.8459
430	5.25388	82.69	2.365	649.51	0.0030893	0.01552	1.412	0.01157	1.03154	0.8367
440	5.09742	85.38	2.359	654.36	0.0029595	0.01567	1.427	0.01217	1.03059	0.8285
450	4.95172	88.03	2.353	658.72	0.0028422	0.01582	1.443	0.01277	1.02971	0.8213
460	4.81558	90.67	2.348	662.64	0.0027356	0.01598	1.458	0.01338	1.02888	0.8148
470	4.68794	93.29	2.342	666.20	0.0026382	0.01615	1.474	0.01399	1.02811	0.8090
480	4.56796	95.90	2.337	669.42	0.0025487	0.01631	1.490	0.01461	1.02739	0.8038
490	4.45486	98.49	2.332	672.36	0.0024663	0.01648	1.506	0.01523	1.02670	0.7992
500	4.34802	101.06	2.327	675.04	0.0023900	0.01665	1.523	0.01586	1.02606	0.7950
510	4.24686	103.63	2.322	677.50	0.0023191	0.01680	1.539	0.01646	1.02544	0.7923
520	4.15089	106.20	2.317	679.76	0.0022530	0.01699	1.555	0.01710	1.02486	0.7885
530	4.05968	108.76	2.312	681.84	0.0021913	0.01717	1.571	0.01775	1.02431	0.7851
540	3.97285	111.31	2.307	683.75	0.0021334	0.01736	1.588	0.01840	1.02379	0.7821
550	3.89006	113.86	2.302	685.53	0.0020790	0.01754	1.604	0.01905	1.02329	0.7793
560	3.81101	116.41	2.297	687.17	0.0020278	0.01773	1.621	0.01971	1.02281	0.7769
570	3.73542	118.97	2.292	688.70	0.0019794	0.01792	1.637	0.02037	1.02236	0.7747
580	3.66305	121.52	2.287	690.12	0.0019336	0.01810	1.654	0.02103	1.02192	0.7727
590	3.59369	124.08	2.281	691.45	0.0018903	0.01829	1.670	0.02170	1.02150	0.7710
600	3.52713	126.64	2.276	692.69	0.0018491	0.01848	1.687	0.02237	1.02110	0.7694

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

731.379 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_p BTU / LB -R	C_v BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.871	0.01223	2135.75	318.3	-83.102	-81.446	0.50236	0.266	0.396	3837
100	0.01226	2114.13	315.4	-82.658	-80.998	0.50687	0.265	0.396	3824
105	0.01237	2020.03	302.7	-80.692	-79.017	0.52620	0.261	0.396	3768
110	0.01249	1928.58	290.5	-78.727	-77.036	0.54463	0.257	0.396	3710
115	0.01260	1839.72	278.6	-76.764	-75.057	0.56223	0.253	0.396	3651
120	0.01273	1753.38	267.2	-74.801	-73.077	0.57907	0.249	0.396	3591
125	0.01285	1669.51	256.1	-72.838	-71.098	0.59524	0.246	0.396	3530
130	0.01298	1588.05	245.3	-70.875	-69.118	0.61077	0.242	0.396	3468
135	0.01311	1508.93	234.9	-68.912	-67.137	0.62572	0.239	0.396	3404
140	0.01325	1432.11	224.9	-66.948	-65.154	0.64014	0.236	0.397	3340
145	0.01339	1357.51	215.2	-64.983	-63.170	0.65406	0.233	0.397	3274
150	0.01353	1285.09	205.8	-63.015	-61.182	0.66754	0.230	0.398	3208
155	0.01368	1214.78	196.7	-61.045	-59.192	0.68059	0.227	0.398	3140
160	0.01384	1146.52	187.9	-59.071	-57.197	0.69325	0.225	0.399	3072
165	0.01399	1080.25	179.4	-57.092	-55.197	0.70556	0.222	0.401	3003
170	0.01416	1015.92	171.2	-55.109	-53.191	0.71754	0.220	0.402	2934
175	0.01433	953.46	163.2	-53.118	-51.177	0.72922	0.217	0.404	2863
180	0.01451	892.81	155.6	-51.120	-49.154	0.74061	0.215	0.405	2792
185	0.01470	833.93	148.1	-49.112	-47.121	0.75175	0.213	0.408	2719
190	0.01490	776.74	140.9	-47.093	-45.076	0.76267	0.211	0.410	2646
195	0.01510	721.19	133.9	-45.061	-43.016	0.77337	0.209	0.414	2572
200	0.01532	667.23	127.1	-43.013	-40.939	0.78389	0.207	0.417	2498
205	0.01555	614.80	120.5	-40.947	-38.841	0.79425	0.205	0.422	2421
210	0.01580	563.86	114.1	-38.860	-36.720	0.80447	0.203	0.427	2344
215	0.01606	514.35	107.8	-36.746	-34.571	0.81459	0.201	0.433	2265
220	0.01634	466.23	101.6	-34.601	-32.389	0.82462	0.199	0.440	2185
225	0.01664	419.47	95.6	-32.420	-30.167	0.83460	0.197	0.448	2102
230	0.01697	374.05	89.6	-30.195	-27.897	0.84458	0.196	0.459	2016
235	0.01734	330.55	83.9	-27.885	-25.537	0.85473	0.199	0.477	1917
240	0.01774	289.54	77.8	-25.520	-23.117	0.86491	0.197	0.489	1824
245	0.01819	248.62	72.2	-23.075	-20.612	0.87525	0.196	0.511	1732
250	0.01870	209.01	66.2	-20.531	-17.998	0.88581	0.195	0.535	1629
255	0.01931	170.72	60.2	-17.855	-15.240	0.89673	0.195	0.569	1518
260	0.02004	133.21	54.1	-14.991	-12.277	0.90824	0.196	0.621	1398
265	0.02097	96.83	47.2	-11.835	-8.995	0.92074	0.198	0.694	1254
270	0.02228	61.64	39.8	-8.192	-5.175	0.93502	0.202	0.840	1089
275	0.02461	26.39	31.3	-3.311	0.021	0.95408	0.214	1.357	880
280	0.05789	8.11	9.7	20.112	27.953	1.05454	0.244	2.241	587
285	0.07067	19.25	7.2	25.076	34.646	1.07827	0.216	0.934	621
290	0.07879	27.00	6.3	27.934	38.605	1.09205	0.204	0.687	649
295	0.08536	33.55	5.6	30.149	41.709	1.10267	0.197	0.567	670
300	0.09107	39.25	5.1	32.025	44.359	1.11158	0.191	0.498	688
310	0.10101	49.09	4.4	35.217	48.896	1.12646	0.183	0.418	721
320	0.10974	57.63	4.0	37.978	52.840	1.13899	0.176	0.374	748
330	0.11772	65.31	3.6	40.482	56.425	1.15002	0.175	0.345	773
340	0.12518	72.38	3.3	42.815	59.768	1.16000	0.172	0.325	795
350	0.13225	79.00	3.1	45.024	62.935	1.16918	0.170	0.310	817
360	0.13902	85.25	2.9	47.142	65.970	1.17773	0.168	0.298	837
370	0.14555	91.20	2.8	49.187	68.900	1.18576	0.167	0.289	855
380	0.15189	96.91	2.6	51.175	71.746	1.19335	0.166	0.281	873
390	0.15806	102.40	2.5	53.116	74.523	1.20056	0.165	0.275	890
400	0.16409	107.73	2.4	55.018	77.242	1.20745	0.164	0.269	906
410	0.17001	112.89	2.3	56.887	79.911	1.21404	0.163	0.265	922
420	0.17582	117.92	2.2	58.728	82.539	1.22037	0.162	0.261	937
430	0.18154	122.84	2.1	60.544	85.130	1.22647	0.162	0.257	952
440	0.18718	127.64	2.0	62.339	87.689	1.23235	0.161	0.254	966
450	0.19274	132.36	2.0	64.117	90.220	1.23804	0.161	0.252	980
460	0.19825	136.99	1.9	65.878	92.727	1.24355	0.161	0.250	993
470	0.20370	141.54	1.8	67.625	95.212	1.24889	0.160	0.248	1005
480	0.20910	146.02	1.8	69.360	97.678	1.25409	0.160	0.246	1019
490	0.21445	150.45	1.7	71.083	100.127	1.25913	0.160	0.244	1032
500	0.21976	154.81	1.7	72.798	102.560	1.26405	0.160	0.243	1044
510	0.22503	159.13	1.7	74.503	104.980	1.26884	0.159	0.241	1057
520	0.23027	163.40	1.6	76.202	107.388	1.27352	0.159	0.240	1068
530	0.23548	167.62	1.6	77.894	109.785	1.27808	0.159	0.239	1080
540	0.24065	171.81	1.5	79.580	112.172	1.28255	0.159	0.238	1092
550	0.24581	175.96	1.5	81.261	114.551	1.28691	0.159	0.238	1103
560	0.25093	180.08	1.5	82.939	116.923	1.29118	0.159	0.237	1114
570	0.25604	184.17	1.4	84.612	119.288	1.29537	0.159	0.236	1125
580	0.26112	188.23	1.4	86.283	121.647	1.29947	0.159	0.236	1136
590	0.26618	192.26	1.4	87.951	124.001	1.30350	0.159	0.235	1146
600	0.27123	196.27	1.3	89.618	126.350	1.30745	0.160	0.235	1157

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

731.379 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_p$ BTU/LB	$V(DP/DU)_v$ PSIA-CU FT/BTU	$-V(DP/DV)_t$ PSIA	$-(DV/DT)_p/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.871	81.75683	217.47	14.608	174612.27	0.0018228	0.11198	42.652	0.00346	1.57021	5.4355
100	81.58843	216.78	14.560	172488.17	0.0018284	0.11166	41.741	0.00345	1.56885	5.3337
105	80.84086	213.69	14.339	163301.15	0.0018539	0.11021	37.955	0.00344	1.56285	4.9114
110	80.08965	210.55	14.111	154459.54	0.0018807	0.10868	34.547	0.00343	1.55683	4.5318
115	79.33446	207.37	13.877	145953.07	0.0019092	0.10707	31.479	0.00341	1.55080	4.1903
120	78.57490	204.13	13.637	137771.66	0.0019393	0.10540	28.716	0.00339	1.54474	3.8829
125	77.81055	200.85	13.391	129905.39	0.0019712	0.10366	26.229	0.00336	1.53866	3.6063
130	77.04094	197.51	13.140	122344.52	0.0020052	0.10187	23.989	0.00334	1.53256	3.3573
135	76.26554	194.11	12.885	115079.48	0.0020415	0.10004	21.972	0.00331	1.52643	3.1333
140	75.48379	190.65	12.626	108100.86	0.0020803	0.09816	20.155	0.00328	1.52026	2.9317
145	74.69504	187.13	12.365	101399.47	0.0021219	0.09624	18.519	0.00324	1.51405	2.7506
150	73.89858	183.54	12.100	94966.28	0.0021667	0.09429	17.045	0.00321	1.50780	2.5881
155	73.09360	179.88	11.834	88792.47	0.0022150	0.09230	15.717	0.00317	1.50150	2.4424
160	72.27922	176.15	11.566	82869.41	0.0022673	0.09029	14.521	0.00313	1.49515	2.3122
165	71.45443	172.33	11.297	77188.68	0.0023242	0.08826	13.443	0.00308	1.48873	2.1962
170	70.61809	168.43	11.028	71742.69	0.0023861	0.08620	12.471	0.00304	1.48224	2.0931
175	69.76893	164.44	10.758	66521.65	0.0024540	0.08412	11.594	0.00299	1.47567	2.0022
180	68.90546	160.36	10.489	61519.65	0.0025286	0.08203	10.803	0.00294	1.46900	1.9224
185	68.02602	156.18	10.220	56728.60	0.0026109	0.07992	10.089	0.00288	1.46224	1.8531
190	67.12869	151.90	9.952	52141.32	0.0027023	0.07780	9.444	0.00282	1.45536	1.7938
195	66.21122	147.50	9.684	47750.92	0.0028042	0.07566	8.851	0.00276	1.44834	1.7438
200	65.27103	142.98	9.416	43550.87	0.0029187	0.07351	8.333	0.00270	1.44118	1.7030
205	64.30504	138.34	9.149	39535.02	0.0030481	0.07135	7.855	0.00263	1.43384	1.6712
210	63.30963	133.56	8.881	35697.69	0.0031954	0.06917	7.421	0.00256	1.42631	1.6482
215	62.28044	128.63	8.611	32033.75	0.0033647	0.06698	7.025	0.00248	1.41855	1.6343
220	61.21216	123.54	8.339	28538.81	0.0035610	0.06477	6.666	0.00241	1.41052	1.6299
225	60.09828	118.29	8.062	25209.36	0.0037913	0.06253	6.336	0.00232	1.40219	1.6358
230	58.93064	112.86	7.776	22043.20	0.0040650	0.06027	6.033	0.00223	1.39348	1.6531
235	57.68496	108.48	7.311	19067.74	0.0043984	0.05795	5.773	0.00211	1.38424	1.7111
240	56.37834	102.74	6.986	16323.75	0.0047635	0.05563	5.554	0.00202	1.37458	1.7590
245	54.97903	96.73	6.692	13668.82	0.0052822	0.05325	5.328	0.00190	1.36429	1.8403
250	53.46296	90.31	6.341	11174.05	0.0059277	0.05082	5.092	0.00178	1.35321	1.9314
255	51.79226	83.57	5.951	8842.18	0.0068078	0.04829	4.844	0.00164	1.34106	2.0545
260	49.90427	76.31	5.532	6647.69	0.0081436	0.04562	4.576	0.00147	1.32741	2.2442
265	47.68130	67.94	4.998	4616.99	0.0102203	0.04272	4.279	0.00129	1.31147	2.5040
270	44.88934	58.40	4.386	2767.10	0.0143874	0.04049	3.931	0.00107	1.29163	2.9360
275	40.63933	46.53	3.593	1172.63	0.0291567	0.04094	3.450	0.00074	1.26182	4.1165
280	27.27269	32.53	2.287	140.16	0.0688844	0.03046	1.654	0.00079	1.10623	4.3789
285	14.15067	35.14	2.367	272.39	0.0265896	0.02126	1.499	0.00151	1.08649	2.3726
290	12.59247	37.65	2.412	342.74	0.0182425	0.01878	1.437	0.00215	1.07735	1.8919
295	11.71499	39.89	2.427	393.61	0.0142244	0.01751	1.400	0.00263	1.07125	1.6332
300	10.98022	41.96	2.437	430.93	0.0118618	0.01676	1.375	0.00307	1.06668	1.4721
310	9.90040	45.81	2.446	486.03	0.0091350	0.01590	1.349	0.00384	1.06000	1.2777
320	9.11264	49.39	2.447	525.14	0.0075690	0.01546	1.335	0.00454	1.05513	1.1626
330	8.49486	52.80	2.444	554.80	0.0065338	0.01522	1.330	0.00519	1.05133	1.0857
340	7.98870	56.07	2.439	578.26	0.0057900	0.01509	1.331	0.00582	1.04822	1.0304
350	7.56151	59.24	2.432	597.34	0.0052253	0.01504	1.335	0.00643	1.04561	0.9885
360	7.19315	62.32	2.424	613.19	0.0047792	0.01505	1.341	0.00702	1.04335	0.9557
370	6.87032	65.33	2.417	626.56	0.0044164	0.01507	1.350	0.00760	1.04138	0.9303
380	6.58372	68.28	2.409	638.00	0.0041144	0.01513	1.360	0.00818	1.03963	0.9093
390	6.32664	71.17	2.402	647.88	0.0038585	0.01521	1.371	0.00875	1.03806	0.8917
400	6.09404	74.02	2.395	656.48	0.0036383	0.01530	1.384	0.00932	1.03665	0.8767
410	5.88207	76.82	2.388	664.04	0.0034464	0.01541	1.397	0.00990	1.03538	0.8638
420	5.68771	79.58	2.381	670.72	0.0032775	0.01554	1.411	0.01047	1.03418	0.8525
430	5.50852	82.31	2.375	675.65	0.0031275	0.01567	1.425	0.01105	1.03309	0.8427
440	5.34256	85.01	2.369	681.94	0.0029932	0.01581	1.439	0.01163	1.03208	0.8340
450	5.18821	87.69	2.363	686.69	0.0028721	0.01596	1.454	0.01221	1.03114	0.8263
460	5.04413	90.34	2.357	690.97	0.0027623	0.01611	1.470	0.01280	1.03027	0.8194
470	4.90920	92.97	2.352	694.84	0.0026621	0.01627	1.485	0.01339	1.02945	0.8133
480	4.78246	95.59	2.347	698.35	0.0025703	0.01643	1.501	0.01399	1.02868	0.8078
490	4.66310	98.19	2.341	701.55	0.0024857	0.01660	1.517	0.01458	1.02796	0.8029
500	4.55042	100.78	2.336	704.47	0.0024076	0.01677	1.532	0.01519	1.02728	0.7984
510	4.44380	103.36	2.331	707.14	0.0023352	0.01691	1.548	0.01577	1.02663	0.7946
520	4.34272	105.93	2.326	709.59	0.0022677	0.01709	1.555	0.01638	1.02602	0.7916
530	4.24670	108.50	2.321	711.85	0.0022047	0.01727	1.581	0.01701	1.02544	0.7880
540	4.15533	111.06	2.316	713.94	0.0021457	0.01746	1.597	0.01763	1.02489	0.7847
550	4.06826	113.62	2.311	715.86	0.0020904	0.01764	1.613	0.01826	1.02437	0.7818
560	3.98515	116.18	2.305	717.65	0.0020383	0.01782	1.629	0.01889	1.02386	0.7792
570	3.90571	118.73	2.300	719.31	0.0019891	0.01801	1.646	0.01952	1.02338	0.7769
580	3.82969	121.29	2.295	720.85	0.0019427	0.01819	1.662	0.02016	1.02293	0.7748
590	3.75684	123.86	2.289	722.29	0.0018987	0.01838	1.678	0.02080	1.02249	0.7730
600	3.68696	126.42	2.284	723.63	0.0018569	0.01857	1.694	0.02145	1.02206	0.7713

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

750 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.897	0.01223	2136.90	318.3	-83.099	-81.401	0.50239	0.266	0.396	3837
100	0.01226	2115.78	315.4	-82.666	-80.964	0.50679	0.266	0.396	3825
105	0.01237	2021.71	302.8	-80.700	-78.982	0.52612	0.261	0.396	3769
110	0.01248	1930.29	290.6	-78.736	-77.002	0.54454	0.257	0.396	3711
115	0.01260	1841.45	278.7	-76.773	-75.023	0.56214	0.253	0.396	3653
120	0.01272	1755.14	267.3	-74.811	-73.043	0.57899	0.249	0.396	3593
125	0.01285	1671.30	256.2	-72.849	-71.064	0.59515	0.246	0.396	3531
130	0.01298	1589.87	245.4	-70.887	-69.084	0.61068	0.242	0.396	3469
135	0.01311	1510.78	235.0	-68.924	-67.104	0.62563	0.239	0.396	3406
140	0.01325	1433.99	225.0	-66.961	-65.122	0.64004	0.236	0.397	3341
145	0.01339	1359.43	215.3	-64.997	-63.138	0.65397	0.233	0.397	3276
150	0.01353	1287.04	205.9	-63.030	-61.151	0.66743	0.230	0.398	3209
155	0.01368	1216.76	196.8	-61.060	-59.161	0.68048	0.227	0.398	3142
160	0.01383	1148.54	188.0	-59.088	-57.167	0.69315	0.225	0.399	3074
165	0.01399	1082.31	179.5	-57.110	-55.167	0.70545	0.222	0.400	3005
170	0.01416	1018.02	171.3	-55.128	-53.162	0.71742	0.220	0.402	2936
175	0.01433	955.60	163.4	-53.139	-51.149	0.72909	0.218	0.403	2865
180	0.01451	895.00	155.7	-51.142	-49.127	0.74049	0.215	0.405	2794
185	0.01470	836.16	148.3	-49.136	-47.095	0.75162	0.213	0.408	2722
190	0.01489	779.03	141.0	-47.119	-45.051	0.76253	0.211	0.410	2649
195	0.01510	723.54	134.1	-45.089	-42.992	0.77322	0.209	0.413	2575
200	0.01531	669.63	127.3	-43.043	-40.917	0.78374	0.207	0.417	2501
205	0.01554	617.27	120.7	-40.980	-38.821	0.79409	0.205	0.421	2425
210	0.01579	566.39	114.3	-38.895	-36.702	0.80430	0.203	0.426	2348
215	0.01605	516.95	108.0	-36.784	-34.556	0.81440	0.201	0.432	2269
220	0.01633	468.91	101.8	-34.644	-32.377	0.82442	0.199	0.439	2189
225	0.01663	422.24	95.8	-32.467	-30.158	0.83439	0.197	0.448	2107
230	0.01695	376.92	89.8	-30.247	-27.893	0.84434	0.196	0.458	2022
235	0.01732	333.37	84.1	-27.944	-25.539	0.85446	0.199	0.476	1922
240	0.01772	292.46	78.0	-25.587	-23.126	0.86462	0.197	0.488	1830
245	0.01816	251.70	72.5	-23.153	-20.630	0.87492	0.196	0.509	1739
250	0.01867	212.26	66.6	-20.622	-18.029	0.88543	0.195	0.532	1637
255	0.01927	174.17	60.6	-17.964	-15.288	0.89628	0.195	0.565	1528
260	0.01998	136.89	54.6	-15.127	-12.352	0.90768	0.196	0.614	1410
265	0.02089	100.77	47.8	-12.017	-9.116	0.92001	0.198	0.683	1270
270	0.02213	66.05	40.6	-8.464	-5.390	0.93394	0.201	0.813	1111
275	0.02422	31.69	32.6	-3.879	-0.515	0.95182	0.211	1.213	918
280	0.04816	3.15	12.2	16.041	22.729	1.03522	0.267	5.973	572
285	0.06579	16.34	7.9	23.789	32.926	1.07141	0.222	1.102	613
290	0.07455	24.71	6.7	27.042	37.395	1.08697	0.207	0.744	641
295	0.08138	31.52	5.9	29.442	40.745	1.09842	0.199	0.604	666
300	0.08722	37.45	5.4	31.428	43.541	1.10782	0.193	0.521	685
310	0.09722	47.60	4.7	34.749	48.251	1.12328	0.184	0.431	718
320	0.10594	56.34	4.1	37.585	52.298	1.13613	0.179	0.382	747
330	0.11386	64.17	3.8	40.140	55.953	1.14738	0.175	0.351	772
340	0.12124	71.37	3.5	42.509	59.348	1.15751	0.172	0.329	795
350	0.12823	78.08	3.2	44.747	62.556	1.16681	0.170	0.313	816
360	0.13490	84.41	3.0	46.888	65.623	1.17546	0.168	0.301	836
370	0.14134	90.44	2.9	48.952	68.581	1.18356	0.167	0.291	855
380	0.14757	96.21	2.7	50.956	71.450	1.19121	0.166	0.283	872
390	0.15363	101.76	2.6	52.911	74.247	1.19848	0.165	0.276	890
400	0.15956	107.14	2.5	54.825	76.984	1.20541	0.164	0.271	906
410	0.16536	112.35	2.4	56.704	79.669	1.21204	0.163	0.266	922
420	0.17106	117.42	2.3	58.554	82.310	1.21840	0.162	0.262	937
430	0.17667	122.37	2.2	60.379	84.914	1.22453	0.162	0.259	952
440	0.18219	127.22	2.1	62.181	87.484	1.23044	0.161	0.256	966
450	0.18765	131.96	2.0	63.965	90.026	1.23615	0.161	0.253	980
460	0.19304	136.62	2.0	65.733	92.542	1.24168	0.161	0.250	993
470	0.19838	141.21	1.9	67.485	95.036	1.24704	0.160	0.248	1007
480	0.20366	145.72	1.8	69.225	97.510	1.25225	0.160	0.246	1020
490	0.20890	150.17	1.8	70.954	99.966	1.25732	0.160	0.245	1032
500	0.21410	154.56	1.7	72.672	102.406	1.26225	0.160	0.243	1045
510	0.21925	158.90	1.7	74.382	104.832	1.26705	0.159	0.242	1057
520	0.22438	163.19	1.7	76.084	107.246	1.27174	0.159	0.241	1069
530	0.22947	167.43	1.6	77.779	109.648	1.27631	0.159	0.240	1081
540	0.23453	171.64	1.6	79.469	112.041	1.28079	0.159	0.239	1092
550	0.23957	175.81	1.5	81.153	114.425	1.28516	0.159	0.238	1103
560	0.24458	179.95	1.5	82.833	116.801	1.28944	0.159	0.237	1114
570	0.24957	184.05	1.5	84.509	119.170	1.29363	0.159	0.237	1125
580	0.25454	188.13	1.4	86.182	121.533	1.29774	0.159	0.236	1136
590	0.25949	192.18	1.4	87.852	123.890	1.30177	0.159	0.236	1147
600	0.26442	196.20	1.4	89.521	126.244	1.30573	0.160	0.235	1157

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

750 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.897	81.76162	217.58	14.608	174716.20	0.0018218	0.11199	42.678	0.00346	1.57025	5.4378
100	81.59724	216.90	14.560	172642.03	0.0018272	0.11168	41.788	0.00345	1.56892	5.3384
105	80.85007	213.81	14.339	163455.78	0.0018526	0.11023	38.000	0.00344	1.56292	4.9158
110	80.09931	210.68	14.112	154614.96	0.0018794	0.10870	34.589	0.00343	1.55691	4.5358
115	79.34458	207.50	13.878	146109.30	0.0019077	0.10709	31.518	0.00341	1.55088	4.1940
120	78.58552	204.27	13.637	137928.72	0.0019377	0.10542	28.753	0.00339	1.54483	3.8864
125	77.82170	200.99	13.391	130063.31	0.0019695	0.10369	26.263	0.00337	1.53875	3.6096
130	77.05266	197.66	13.141	122503.32	0.0020034	0.10190	24.021	0.00334	1.53265	3.3603
135	76.27788	194.27	12.886	115239.18	0.0020395	0.10007	22.002	0.00331	1.52652	3.1361
140	75.49678	190.82	12.627	108261.51	0.0020781	0.09819	20.184	0.00328	1.52036	2.9343
145	74.70875	187.30	12.366	101561.08	0.0021195	0.09628	18.546	0.00325	1.51416	2.7530
150	73.91305	183.72	12.101	95128.90	0.0021641	0.09433	17.071	0.00321	1.50792	2.5903
155	73.10892	180.06	11.835	88956.13	0.0022122	0.09234	15.742	0.00317	1.50162	2.4444
160	72.29545	176.34	11.568	83034.15	0.0022642	0.09034	14.544	0.00313	1.49527	2.3140
165	71.47165	172.53	11.299	77354.56	0.0023207	0.08830	13.464	0.00309	1.48886	2.1978
170	70.63641	168.64	11.030	71909.14	0.0023823	0.08625	12.491	0.00304	1.48238	2.0946
175	69.78843	164.66	10.761	66689.94	0.0024497	0.08418	11.613	0.00299	1.47582	2.0034
180	68.92629	160.59	10.492	61689.23	0.0025237	0.08209	10.821	0.00294	1.46916	1.9235
185	68.04832	156.42	10.223	56899.54	0.0026055	0.07998	10.106	0.00288	1.46241	1.8540
190	67.15262	152.15	9.956	52313.70	0.0026961	0.07786	9.461	0.00283	1.45554	1.7944
195	66.23700	147.76	9.688	47924.83	0.0027973	0.07573	8.877	0.00277	1.44854	1.7442
200	65.29888	143.26	9.421	43726.43	0.0029107	0.07358	8.348	0.00270	1.44139	1.7031
205	64.33527	138.63	9.155	39712.27	0.0030388	0.07142	7.870	0.00264	1.43407	1.6710
210	63.34258	133.86	8.888	35876.78	0.0031845	0.06925	7.435	0.00256	1.42656	1.6477
215	62.31655	128.95	8.620	32214.81	0.0033518	0.06706	7.039	0.00249	1.41882	1.6334
220	61.25198	123.89	8.349	28721.96	0.0035455	0.06485	6.679	0.00241	1.41082	1.6285
225	60.14253	118.66	8.074	25394.73	0.0037724	0.06263	6.349	0.00233	1.40252	1.6336
230	58.98023	113.26	7.790	22230.92	0.0040416	0.06037	6.046	0.00224	1.39385	1.6501
235	57.74105	108.90	7.324	19249.13	0.0043693	0.05806	5.783	0.00211	1.38465	1.7062
240	56.44233	103.21	7.002	16507.38	0.0047271	0.05575	5.565	0.00202	1.37505	1.7533
245	55.05347	97.26	6.709	13857.19	0.0052315	0.05338	5.340	0.00191	1.36484	1.8323
250	53.55137	90.91	6.363	11366.61	0.0058569	0.05095	5.107	0.00179	1.35385	1.9206
255	51.90024	84.25	5.981	9039.26	0.0067041	0.04845	4.860	0.00165	1.34184	2.0397
260	50.04215	77.10	5.566	6850.45	0.0079663	0.04582	4.596	0.00149	1.32841	2.2181
265	47.86979	68.93	5.048	4823.93	0.0099032	0.04297	4.305	0.00131	1.31282	2.4620
270	45.18106	59.74	4.462	2984.30	0.0136086	0.04058	3.967	0.00110	1.29370	2.8611
275	41.28167	48.67	3.740	1308.09	0.0249130	0.04043	3.521	0.00081	1.26630	3.8016
280	20.76566	31.96	2.206	65.43	0.1868925	0.04272	1.855	0.00034	1.12861	9.3353
285	15.19881	34.50	2.354	248.40	0.0319474	0.02303	1.555	0.00138	1.09309	2.6776
290	13.41363	37.00	2.398	331.48	0.0201182	0.01961	1.474	0.00196	1.08186	2.0149
295	12.28747	39.37	2.433	387.36	0.0153375	0.01810	1.429	0.00244	1.07482	1.7155
300	11.46586	41.48	2.444	429.42	0.0125702	0.01720	1.401	0.00288	1.06970	1.5291
310	10.28559	45.37	2.454	489.61	0.0095062	0.01620	1.368	0.00365	1.06238	1.3108
320	9.43943	48.98	2.456	531.81	0.0078017	0.01569	1.351	0.00435	1.05715	1.1849
330	8.78249	52.42	2.453	563.60	0.0066949	0.01541	1.345	0.00500	1.05310	1.1022
340	8.24778	55.71	2.447	588.62	0.0059087	0.01526	1.343	0.00562	1.04981	1.0432
350	7.79861	58.90	2.440	608.90	0.0053166	0.01520	1.346	0.00622	1.04706	0.9988
360	7.41267	62.01	2.432	625.71	0.0048517	0.01519	1.352	0.00681	1.04470	0.9643
370	7.07536	65.03	2.424	639.87	0.0044753	0.01520	1.360	0.00738	1.04263	0.9376
380	6.77657	68.00	2.416	651.96	0.0041632	0.01524	1.370	0.00795	1.04081	0.9156
390	6.50905	70.91	2.409	662.39	0.0038995	0.01531	1.380	0.00851	1.03918	0.8972
400	6.26737	73.76	2.401	671.46	0.0036732	0.01540	1.392	0.00907	1.03770	0.8816
410	6.04742	76.58	2.394	679.42	0.0034765	0.01551	1.405	0.00963	1.03636	0.8682
420	5.84595	79.35	2.387	686.45	0.0033036	0.01563	1.418	0.01020	1.03514	0.8565
430	5.66040	82.09	2.381	692.69	0.0031503	0.01576	1.432	0.01076	1.03401	0.8463
440	5.48868	84.80	2.375	698.26	0.0030133	0.01589	1.447	0.01133	1.03297	0.8373
450	5.32910	87.49	2.369	703.25	0.0028899	0.01604	1.461	0.01190	1.03200	0.8293
460	5.18024	90.15	2.363	707.75	0.0027781	0.01619	1.476	0.01248	1.03109	0.8222
470	5.04092	92.79	2.357	711.81	0.0026763	0.01634	1.492	0.01306	1.03025	0.8159
480	4.91012	95.41	2.352	715.50	0.0025830	0.01650	1.507	0.01364	1.02946	0.8102
490	4.78699	98.02	2.347	718.85	0.0024973	0.01667	1.523	0.01422	1.02871	0.8051
500	4.67080	100.61	2.341	721.91	0.0024181	0.01683	1.538	0.01481	1.02801	0.8005
510	4.56091	103.20	2.336	724.71	0.0023447	0.01697	1.554	0.01538	1.02734	0.7976
520	4.45675	105.77	2.331	727.29	0.0022764	0.01715	1.570	0.01599	1.02671	0.7934
530	4.35785	108.34	2.326	729.66	0.0022127	0.01733	1.586	0.01659	1.02611	0.7897
540	4.26377	110.91	2.321	731.84	0.0021531	0.01752	1.602	0.01720	1.02555	0.7863
550	4.17413	113.47	2.316	733.86	0.0020971	0.01770	1.618	0.01782	1.02500	0.7833
560	4.08859	116.04	2.310	735.73	0.0020445	0.01788	1.634	0.01844	1.02449	0.7806
570	4.00685	118.60	2.305	737.47	0.0019949	0.01807	1.651	0.01906	1.02399	0.7782
580	3.92864	121.16	2.300	739.09	0.0019480	0.01825	1.667	0.01968	1.02352	0.7761
590	3.85371	123.73	2.294	740.59	0.0019036	0.01843	1.683	0.02031	1.02307	0.7741
600	3.78185	126.30	2.289	742.00	0.0018615	0.01862	1.699	0.02094	1.02264	0.7724

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

800 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.968	0.01223	2139.97	318.3	-83.091	-81.280	0.50247	0.267	0.396	3840
100	0.01225	2120.23	315.7	-82.686	-80.871	0.50658	0.266	0.396	3828
105	0.01236	2026.23	303.0	-80.722	-78.890	0.52591	0.261	0.396	3772
110	0.01248	1934.87	290.8	-78.759	-76.911	0.54433	0.257	0.396	3715
115	0.01260	1846.11	279.0	-76.798	-74.932	0.56192	0.253	0.396	3656
120	0.01272	1759.87	267.5	-74.837	-72.953	0.57876	0.249	0.396	3596
125	0.01284	1676.10	256.4	-72.877	-70.974	0.59492	0.246	0.396	3535
130	0.01297	1594.74	245.7	-70.917	-68.996	0.61044	0.242	0.396	3473
135	0.01310	1515.74	235.3	-68.957	-67.016	0.62538	0.239	0.396	3409
140	0.01324	1439.03	225.2	-66.996	-65.035	0.63979	0.236	0.396	3345
145	0.01338	1364.56	215.5	-65.034	-63.052	0.65370	0.233	0.397	3280
150	0.01352	1292.26	206.2	-63.069	-61.066	0.66716	0.230	0.397	3214
155	0.01367	1222.08	197.1	-61.103	-59.078	0.68020	0.228	0.398	3147
160	0.01382	1153.96	188.3	-59.133	-57.085	0.69286	0.225	0.399	3079
165	0.01398	1087.83	179.8	-57.159	-55.087	0.70515	0.222	0.400	3011
170	0.01415	1023.65	171.6	-55.179	-53.084	0.71711	0.220	0.401	2941
175	0.01432	961.35	163.7	-53.194	-51.073	0.72877	0.218	0.403	2871
180	0.01450	900.87	156.0	-51.201	-49.054	0.74015	0.215	0.405	2800
185	0.01468	842.16	148.6	-49.199	-47.024	0.75127	0.213	0.407	2729
190	0.01488	785.16	141.4	-47.187	-44.983	0.76216	0.211	0.410	2656
195	0.01508	729.81	134.5	-45.162	-42.928	0.77283	0.209	0.413	2583
200	0.01530	676.06	127.7	-43.123	-40.857	0.78332	0.207	0.416	2509
205	0.01552	623.87	121.1	-41.066	-38.767	0.79365	0.205	0.420	2434
210	0.01577	573.17	114.7	-38.989	-36.654	0.80384	0.203	0.425	2358
215	0.01602	523.92	108.5	-36.887	-34.514	0.81391	0.201	0.431	2280
220	0.01630	476.09	102.4	-34.757	-32.343	0.82389	0.199	0.437	2201
225	0.01659	429.64	96.4	-32.592	-30.134	0.83381	0.197	0.445	2120
230	0.01692	384.57	90.5	-30.387	-27.880	0.84371	0.196	0.455	2036
235	0.01727	340.90	84.7	-28.101	-25.542	0.85377	0.199	0.472	1937
240	0.01766	300.25	78.8	-25.764	-23.147	0.86385	0.197	0.484	1846
245	0.01810	259.89	73.3	-23.356	-20.675	0.87405	0.196	0.503	1757
250	0.01859	220.86	67.5	-20.859	-18.105	0.88443	0.195	0.525	1658
255	0.01916	183.24	61.6	-18.247	-15.408	0.89511	0.195	0.555	1554
260	0.01984	146.56	55.7	-15.478	-12.538	0.90626	0.196	0.597	1440
265	0.02069	111.06	49.3	-12.475	-9.411	0.91817	0.197	0.656	1309
270	0.02180	77.35	42.5	-9.121	-5.892	0.93132	0.200	0.756	1164
275	0.02347	44.59	35.4	-5.066	-1.588	0.94711	0.206	0.995	1000
280	0.02713	13.56	25.3	1.073	5.092	0.97116	0.226	2.027	750
285	0.05142	8.10	10.8	18.796	26.413	1.04664	0.244	2.269	591
290	0.06347	18.29	8.2	24.219	33.622	1.07175	0.217	1.010	628
295	0.07127	26.06	7.1	27.325	37.882	1.08632	0.205	0.736	658
300	0.07755	32.63	6.3	29.694	41.182	1.09742	0.197	0.600	678
310	0.08785	43.62	5.3	33.428	46.442	1.11468	0.187	0.471	712
320	0.09657	52.91	4.6	36.492	50.798	1.12851	0.181	0.407	742
330	0.10438	61.15	4.2	39.195	54.658	1.14040	0.177	0.368	768
340	0.11158	68.67	3.8	41.672	58.201	1.15098	0.174	0.342	792
350	0.11835	75.65	3.6	43.991	61.524	1.16061	0.171	0.323	814
360	0.12480	82.20	3.3	46.196	64.684	1.16951	0.169	0.309	834
370	0.13098	88.42	3.1	48.314	67.718	1.17782	0.168	0.298	853
380	0.13696	94.36	3.0	50.362	70.651	1.18565	0.166	0.289	871
390	0.14276	100.07	2.8	52.355	73.504	1.19306	0.165	0.282	889
400	0.14842	105.58	2.7	54.301	76.289	1.20011	0.164	0.275	905
410	0.15396	110.92	2.6	56.209	79.016	1.20684	0.164	0.270	921
420	0.15938	116.11	2.5	58.085	81.696	1.21330	0.163	0.266	937
430	0.16472	121.16	2.4	59.932	84.333	1.21951	0.162	0.262	952
440	0.16997	126.10	2.3	61.756	86.934	1.22549	0.162	0.258	966
450	0.17515	130.94	2.2	63.558	89.504	1.23126	0.161	0.255	980
470	0.18532	140.34	2.1	67.110	94.562	1.24226	0.161	0.251	1007
480	0.19032	144.92	2.0	68.863	97.058	1.24751	0.160	0.249	1020
490	0.19528	149.44	1.9	70.604	99.533	1.25262	0.160	0.247	1033
500	0.20020	153.89	1.9	72.335	101.992	1.25759	0.160	0.245	1046
510	0.20508	158.29	1.8	74.055	104.435	1.26242	0.160	0.244	1058
520	0.20992	162.64	1.8	75.767	106.865	1.26714	0.159	0.242	1070
530	0.21473	166.94	1.7	77.471	109.282	1.27175	0.159	0.241	1082
540	0.21952	171.20	1.7	79.169	111.688	1.27624	0.159	0.240	1093
550	0.22427	175.42	1.7	80.861	114.085	1.28064	0.159	0.239	1105
560	0.22901	179.61	1.6	82.548	116.473	1.28494	0.159	0.238	1116
570	0.23371	183.76	1.6	84.231	118.853	1.28916	0.159	0.238	1127
580	0.23840	187.88	1.5	85.911	121.227	1.29329	0.159	0.237	1138
590	0.24307	191.97	1.5	87.587	123.595	1.29733	0.159	0.237	1149
600	0.24772	196.03	1.5	89.261	125.958	1.30130	0.160	0.236	1159

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

800 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.968	81.77447	217.85	14.606	174995.14	0.0018190	0.11202	42.749	0.00346	1.57035	5.4442
100	81.62084	217.22	14.561	173054.91	0.0018240	0.11173	41.915	0.00345	1.56911	5.3510
105	80.87478	214.14	14.341	163870.72	0.0018492	0.11028	38.119	0.00344	1.56312	4.9275
110	80.12518	211.02	14.113	155032.00	0.0018758	0.10876	34.701	0.00343	1.55712	4.5467
115	79.37170	207.86	13.879	146528.50	0.0019038	0.10716	31.623	0.00341	1.55109	4.2042
120	78.61397	204.64	13.639	138350.14	0.0019335	0.10549	28.852	0.00339	1.54505	3.8958
125	77.85157	201.38	13.393	130487.01	0.0019650	0.10376	26.356	0.00337	1.53899	3.6183
130	77.08406	198.06	13.143	122929.35	0.0019984	0.10198	24.109	0.00334	1.53290	3.3684
135	76.31092	194.68	12.888	115667.63	0.0020341	0.10016	22.084	0.00331	1.52678	3.1436
140	75.53159	191.25	12.630	108692.44	0.0020723	0.09828	20.261	0.00328	1.52064	2.9413
145	74.74546	187.75	12.368	101994.59	0.0021132	0.09637	18.619	0.00325	1.51446	2.7594
150	73.95183	184.19	12.105	95565.07	0.0021572	0.09443	17.139	0.00321	1.50822	2.5962
155	73.14992	180.55	11.839	89395.05	0.0022046	0.09245	15.806	0.00318	1.50194	2.4498
160	72.33888	176.85	11.572	83475.94	0.0022558	0.09045	14.605	0.00313	1.49561	2.3189
165	71.51773	173.06	11.304	77799.32	0.0023115	0.08843	13.522	0.00309	1.48922	2.2022
170	70.68538	169.19	11.036	72357.01	0.0023721	0.08638	12.546	0.00304	1.48276	2.0985
175	69.84060	165.24	10.767	67141.06	0.0024383	0.08431	11.665	0.00300	1.47622	2.0068
180	68.98197	161.20	10.500	62143.75	0.0025110	0.08223	10.871	0.00295	1.46959	1.9263
185	68.10790	157.06	10.232	57357.65	0.0025911	0.08013	10.153	0.00289	1.46287	1.8563
190	67.21656	152.81	9.966	52775.58	0.0026799	0.07802	9.505	0.00283	1.45603	1.7961
195	66.30581	148.46	9.700	48390.70	0.0027788	0.07590	8.919	0.00277	1.44907	1.7453
200	65.37320	144.00	9.436	44196.49	0.0028895	0.07376	8.389	0.00271	1.44196	1.7035
205	64.41584	139.41	9.171	40186.85	0.0030142	0.07161	7.908	0.00265	1.43469	1.6705
210	63.43033	134.69	8.907	36356.13	0.0031558	0.06945	7.472	0.00258	1.42722	1.6463
215	62.41262	129.83	8.642	32699.24	0.0033178	0.06728	7.076	0.00250	1.41955	1.6309
220	61.35781	124.82	8.376	29211.79	0.0035049	0.06509	6.714	0.00242	1.41162	1.6246
225	60.25991	119.65	8.105	25890.29	0.0037231	0.06288	6.383	0.00234	1.40339	1.6281
230	59.11156	114.33	7.827	22732.44	0.0039806	0.06064	6.079	0.00225	1.39483	1.6425
235	57.88936	110.02	7.358	19734.68	0.0042937	0.05835	5.810	0.00213	1.38575	1.6934
240	56.61105	104.45	7.045	16997.41	0.0046340	0.05606	5.595	0.00205	1.37630	1.7390
245	55.24894	98.63	6.755	14358.71	0.0051022	0.05373	5.373	0.00193	1.36627	1.8118
250	53.78227	92.46	6.421	11878.27	0.0056787	0.05135	5.144	0.00182	1.35554	1.8935
255	52.18007	86.03	6.058	9561.23	0.0064474	0.04889	4.904	0.00169	1.34387	2.0027
260	50.39502	79.13	5.652	7385.69	0.0075405	0.04633	4.648	0.00154	1.33095	2.1551
265	48.34208	71.46	5.175	5368.76	0.0091747	0.04360	4.369	0.00138	1.31620	2.3654
270	45.87927	63.03	4.642	3548.59	0.0119899	0.04088	4.055	0.00118	1.29864	2.6990
275	42.60090	53.37	4.043	1899.57	0.0186492	0.03997	3.670	0.00094	1.27552	3.2904
280	36.86006	40.06	3.034	499.96	0.0506083	0.04134	3.077	0.00055	1.23571	5.4319
285	19.44751	32.96	2.285	157.47	0.0688431	0.03192	1.790	0.00072	1.12013	4.5816
290	15.75484	35.56	2.392	288.23	0.0284135	0.02287	1.598	0.00144	1.09660	2.5416
295	14.03133	38.12	2.454	365.69	0.0193158	0.02007	1.520	0.00194	1.08574	2.0067
300	12.89513	40.25	2.462	420.72	0.0148965	0.01857	1.474	0.00240	1.07862	1.7130
310	11.38261	44.24	2.477	496.51	0.0106349	0.01708	1.423	0.00319	1.06918	1.4107
320	10.35513	47.94	2.479	547.90	0.0084834	0.01636	1.397	0.00389	1.06281	1.2502
330	9.58062	51.44	2.476	585.88	0.0071564	0.01596	1.384	0.00453	1.05802	1.1492
340	8.96202	54.79	2.470	615.41	0.0062438	0.01573	1.379	0.00513	1.05421	1.0792
350	8.44922	58.04	2.462	639.14	0.0055717	0.01561	1.378	0.00571	1.05105	1.0277
360	8.01293	61.19	2.454	658.68	0.0050526	0.01556	1.382	0.00628	1.04837	0.9881
370	7.63450	64.26	2.445	675.06	0.0046376	0.01554	1.388	0.00683	1.04605	0.9577
380	7.30134	67.27	2.436	688.99	0.0042969	0.01556	1.395	0.00737	1.04401	0.9330
390	7.00452	70.21	2.428	700.97	0.0040115	0.01561	1.405	0.00791	1.04220	0.9124
400	6.73750	73.10	2.420	711.36	0.0037682	0.01568	1.415	0.00845	1.04057	0.8951
410	6.49533	75.95	2.412	720.46	0.0035560	0.01577	1.427	0.00899	1.03909	0.8802
420	6.27418	78.76	2.404	728.47	0.0033742	0.01588	1.439	0.00952	1.03774	0.8673
430	6.07103	81.52	2.397	735.58	0.0032119	0.01599	1.452	0.01006	1.03651	0.8561
440	5.88345	84.26	2.391	741.91	0.0030675	0.01612	1.466	0.01060	1.03537	0.8462
450	5.70949	86.96	2.384	747.58	0.0029378	0.01625	1.480	0.01114	1.03431	0.8375
460	5.54749	89.65	2.378	752.67	0.0028208	0.01640	1.494	0.01169	1.03332	0.8297
470	5.39611	92.31	2.372	757.28	0.0027144	0.01654	1.509	0.01224	1.03240	0.8228
480	5.25419	94.95	2.367	761.45	0.0026173	0.01670	1.524	0.01279	1.03154	0.8166
490	5.12077	97.57	2.361	765.24	0.0025282	0.01685	1.539	0.01334	1.03073	0.8110
500	4.99500	100.18	2.356	768.70	0.0024461	0.01701	1.554	0.01390	1.02997	0.8060
510	4.87618	102.78	2.350	771.86	0.0023702	0.01715	1.570	0.01444	1.02925	0.8028
520	4.76366	105.37	2.345	774.77	0.0022996	0.01732	1.585	0.01501	1.02857	0.7983
530	4.65691	107.95	2.340	777.44	0.0022339	0.01750	1.601	0.01558	1.02792	0.7943
540	4.55545	110.53	2.334	779.90	0.0021726	0.01768	1.617	0.01616	1.02731	0.7906
550	4.45884	113.10	2.329	782.18	0.0021151	0.01785	1.632	0.01674	1.02673	0.7874
560	4.36671	115.67	2.324	784.29	0.0020611	0.01803	1.648	0.01732	1.02617	0.7844
570	4.27873	118.24	2.318	786.25	0.0020102	0.01821	1.664	0.01791	1.02564	0.7818
580	4.19460	120.82	2.313	788.07	0.0019622	0.01839	1.680	0.01850	1.02513	0.7794
590	4.11403	123.39	2.308	789.77	0.0019168	0.01858	1.696	0.01909	1.02464	0.7773
600	4.03680	125.97	2.302	791.35	0.0018738	0.01876	1.712	0.01969	1.02418	0.7754

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

810 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 96.982	0.01223	2140.59	318.3	-83.090	-81.256	0.50249	0.267	0.396	3840
100	0.01225	2121.12	315.7	-82.690	-80.852	0.50654	0.266	0.396	3829
105	0.01236	2027.13	303.1	-80.725	-78.872	0.52587	0.261	0.396	3773
110	0.01248	1935.79	290.8	-78.764	-76.892	0.54428	0.257	0.396	3715
115	0.01260	1847.03	279.0	-76.803	-74.913	0.56188	0.253	0.396	3657
120	0.01272	1760.81	267.5	-74.843	-72.935	0.57872	0.250	0.396	3597
125	0.01284	1677.06	256.5	-72.883	-70.957	0.59487	0.246	0.396	3536
130	0.01297	1595.72	245.7	-70.923	-68.978	0.61039	0.243	0.396	3473
135	0.01310	1516.73	235.3	-68.964	-66.998	0.62533	0.239	0.396	3410
140	0.01324	1440.04	225.3	-67.003	-65.017	0.63974	0.236	0.396	3346
145	0.01338	1365.58	215.6	-65.041	-63.035	0.65365	0.233	0.397	3281
150	0.01352	1293.30	206.2	-63.077	-61.049	0.66711	0.230	0.397	3215
155	0.01367	1223.14	197.1	-61.111	-59.061	0.68015	0.228	0.398	3148
160	0.01382	1155.04	188.4	-59.142	-57.069	0.69280	0.225	0.399	3080
165	0.01398	1088.93	179.9	-57.168	-55.071	0.70509	0.222	0.400	3012
170	0.01415	1024.77	171.7	-55.190	-53.068	0.71705	0.220	0.401	2942
175	0.01432	962.49	163.8	-53.205	-51.058	0.72871	0.218	0.403	2872
180	0.01449	902.04	156.1	-51.213	-49.039	0.74008	0.215	0.405	2802
185	0.01468	843.35	148.7	-49.212	-47.010	0.75120	0.213	0.407	2730
190	0.01487	786.38	141.5	-47.201	-44.970	0.76208	0.211	0.409	2658
195	0.01508	731.06	134.5	-45.177	-42.916	0.77276	0.209	0.412	2585
200	0.01529	677.35	127.8	-43.139	-40.845	0.78324	0.207	0.416	2511
205	0.01552	625.18	121.2	-41.083	-38.756	0.79356	0.205	0.420	2436
210	0.01576	574.52	114.8	-39.008	-36.644	0.80374	0.203	0.425	2359
215	0.01602	525.31	108.6	-36.908	-34.505	0.81381	0.201	0.430	2282
220	0.01629	477.52	102.5	-34.779	-32.336	0.82378	0.199	0.437	2203
225	0.01659	431.12	96.5	-32.617	-30.129	0.83370	0.197	0.445	2122
230	0.01691	386.09	90.6	-30.414	-27.878	0.84359	0.196	0.455	2039
235	0.01727	342.40	84.9	-28.132	-25.542	0.85363	0.199	0.472	1940
240	0.01765	301.79	78.9	-25.798	-23.150	0.86370	0.197	0.483	1850
245	0.01809	261.51	73.4	-23.396	-20.683	0.87388	0.196	0.502	1760
250	0.01858	222.56	67.6	-20.906	-18.119	0.88424	0.195	0.524	1663
255	0.01914	185.02	61.8	-18.303	-15.431	0.89488	0.195	0.553	1559
260	0.01982	148.45	55.9	-15.545	-12.573	0.90598	0.195	0.594	1445
265	0.02065	113.07	49.5	-12.562	-9.465	0.91782	0.197	0.651	1316
270	0.02174	79.52	42.9	-9.241	-5.981	0.93084	0.199	0.746	1174
275	0.02335	47.01	35.9	-5.265	-1.762	0.94632	0.205	0.967	1014
280	0.02665	16.43	26.3	0.495	4.492	0.96884	0.223	1.772	778
285	0.04802	6.51	11.8	17.266	24.469	1.03949	0.250	2.848	586
290	0.06127	17.00	8.6	23.551	32.741	1.06831	0.220	1.090	625
295	0.06933	24.97	7.3	26.857	37.256	1.08376	0.207	0.770	657
300	0.07572	31.66	6.5	29.320	40.678	1.09527	0.198	0.618	676
310	0.08610	42.83	5.4	33.151	46.066	1.11295	0.188	0.479	711
320	0.09483	52.23	4.8	36.266	50.490	1.12700	0.181	0.412	741
330	0.10262	60.56	4.3	39.002	54.394	1.13901	0.177	0.372	768
340	0.10979	68.14	3.9	41.501	57.969	1.14969	0.174	0.345	791
350	0.11653	75.17	3.6	43.838	61.316	1.15939	0.171	0.325	813
360	0.12293	81.77	3.4	46.056	64.494	1.16835	0.169	0.311	834
370	0.12907	88.03	3.2	48.185	67.544	1.17670	0.168	0.299	853
380	0.13500	94.00	3.0	50.242	70.491	1.18456	0.167	0.290	871
390	0.14075	99.74	2.9	52.243	73.355	1.19200	0.165	0.283	888
400	0.14636	105.28	2.7	54.196	76.149	1.19908	0.165	0.276	905
410	0.15185	110.64	2.6	56.110	78.886	1.20583	0.164	0.271	921
420	0.15722	115.85	2.5	57.991	81.573	1.21231	0.163	0.266	937
430	0.16251	120.92	2.4	59.843	84.217	1.21853	0.162	0.263	952
440	0.16771	125.88	2.3	61.670	86.824	1.22453	0.162	0.259	966
450	0.17283	130.73	2.2	63.476	89.399	1.23031	0.161	0.256	980
460	0.17790	135.49	2.2	65.263	91.946	1.23591	0.161	0.253	994
470	0.18290	140.17	2.1	67.034	94.468	1.24133	0.161	0.251	1007
480	0.18786	144.77	2.0	68.791	96.967	1.24660	0.160	0.249	1020
490	0.19276	149.30	2.0	70.534	99.447	1.25171	0.160	0.247	1033
500	0.19763	153.76	1.9	72.267	101.909	1.25668	0.160	0.245	1046
510	0.20245	158.18	1.9	73.990	104.356	1.26153	0.160	0.244	1058
520	0.20725	162.53	1.8	75.703	106.788	1.26625	0.160	0.243	1070
530	0.21201	166.85	1.8	77.410	109.209	1.27086	0.159	0.241	1082
540	0.21674	171.12	1.7	79.109	111.618	1.27536	0.159	0.240	1094
550	0.22144	175.35	1.7	80.803	114.017	1.27977	0.159	0.239	1105
560	0.22612	179.54	1.6	82.492	116.408	1.28407	0.159	0.239	1116
570	0.23078	183.70	1.6	84.176	118.790	1.28829	0.159	0.238	1127
580	0.23541	187.83	1.6	85.856	121.166	1.29242	0.159	0.237	1138
590	0.24003	191.93	1.5	87.534	123.536	1.29648	0.159	0.237	1149
600	0.24463	196.00	1.5	89.209	125.901	1.30045	0.160	0.236	1159

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

810 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.982	81.77704	217.91	14.605	175050.91	0.0018185	0.11203	42.764	0.00346	1.57037	5.4454
100	81.62556	217.29	14.561	173137.45	0.0018234	0.11174	41.940	0.00346	1.56915	5.3535
105	80.87971	214.21	14.341	163953.66	0.0018486	0.11030	38.143	0.00344	1.56316	4.9298
110	80.13034	211.09	14.113	155115.36	0.0018750	0.10877	34.723	0.00343	1.55716	4.5489
115	79.37711	207.93	13.879	146612.29	0.0019030	0.10717	31.644	0.00341	1.55114	4.2062
120	78.61965	204.72	13.639	138434.37	0.0019326	0.10550	28.872	0.00339	1.54510	3.8977
125	77.85754	201.46	13.393	130571.69	0.0019641	0.10378	26.375	0.00337	1.53904	3.6201
130	77.09033	198.14	13.143	123014.50	0.0019975	0.10200	24.126	0.00334	1.53295	3.3701
135	76.31751	194.77	12.888	115753.25	0.0020331	0.10017	22.101	0.00331	1.52684	3.1451
140	75.53854	191.34	12.630	108778.56	0.0020711	0.09830	20.277	0.00328	1.52069	2.9427
145	74.75278	187.84	12.369	102081.21	0.0021119	0.09639	18.634	0.00325	1.51451	2.7607
150	73.95956	184.28	12.105	95652.21	0.0021558	0.09445	17.153	0.00321	1.50828	2.5974
155	73.15810	180.65	11.840	89482.74	0.0022031	0.09248	15.819	0.00318	1.50201	2.4509
160	72.34754	176.95	11.573	83564.20	0.0022542	0.09047	14.617	0.00314	1.49568	2.3199
165	71.52692	173.17	11.305	77888.16	0.0023096	0.08845	13.534	0.00309	1.48929	2.2031
170	70.69515	169.30	11.037	72446.47	0.0023700	0.08640	12.557	0.00305	1.48283	2.0993
175	69.85100	165.36	10.769	67231.15	0.0024360	0.08434	11.676	0.00300	1.47630	2.0075
180	68.99307	161.32	10.501	62234.52	0.0025085	0.08226	10.880	0.00295	1.46968	1.9269
185	68.11977	157.18	10.234	57449.11	0.0025883	0.08016	10.163	0.00289	1.46296	1.8567
190	67.22928	152.95	9.968	52867.78	0.0026767	0.07805	9.514	0.00284	1.45613	1.7964
195	66.31950	148.60	9.703	48483.68	0.0027751	0.07593	8.928	0.00278	1.44917	1.7455
200	65.38797	144.14	9.438	44290.30	0.0028853	0.07380	8.397	0.00271	1.44207	1.7036
205	64.43185	139.56	9.175	40281.53	0.0030094	0.07165	7.916	0.00265	1.43481	1.6705
210	63.44776	134.85	8.911	36451.74	0.0031502	0.06949	7.480	0.00258	1.42736	1.6460
215	62.43168	130.00	8.647	32795.84	0.0033112	0.06732	7.083	0.00251	1.41969	1.6304
220	61.37878	125.00	8.381	29309.43	0.0034969	0.06513	6.721	0.00243	1.41177	1.6239
225	60.28315	119.85	8.111	25989.02	0.0037134	0.06292	6.390	0.00235	1.40357	1.6271
230	59.13751	114.54	7.834	22832.32	0.0039688	0.06069	6.086	0.00226	1.39502	1.6410
235	57.91863	110.25	7.365	19831.52	0.0042791	0.05841	5.816	0.00214	1.38597	1.6909
240	56.64427	104.70	7.054	17094.91	0.0046160	0.05612	5.601	0.00205	1.37654	1.7362
245	55.28730	98.90	6.764	14458.31	0.0050775	0.05380	5.380	0.00194	1.36656	1.8079
250	53.82737	92.76	6.432	11979.72	0.0056450	0.05142	5.151	0.00182	1.35587	1.8884
255	52.23438	86.38	6.073	9664.46	0.0063995	0.04898	4.912	0.00170	1.34426	1.9957
260	50.46281	79.53	5.669	7491.27	0.0074631	0.04643	4.658	0.00155	1.33144	2.1436
265	48.43132	71.94	5.199	5476.01	0.0090469	0.04372	4.382	0.00139	1.31684	2.3484
270	46.00677	63.64	4.675	3658.67	0.0117266	0.04094	4.072	0.00119	1.29955	2.6718
275	42.81928	54.20	4.092	2012.87	0.0178420	0.03995	3.695	0.00096	1.27706	3.2198
280	37.52837	41.56	3.145	616.76	0.0426374	0.04068	3.142	0.00061	1.24030	4.9265
285	20.82422	32.75	2.265	135.54	0.0869687	0.03480	1.872	0.00059	1.12899	5.5133
290	16.32173	35.30	2.389	277.49	0.0308728	0.02374	1.628	0.00133	1.10019	2.6908
295	14.42331	37.88	2.456	360.12	0.0203169	0.02054	1.540	0.00185	1.08820	2.0771
300	13.20624	40.02	2.466	418.17	0.0154517	0.01888	1.490	0.00231	1.08056	1.7562
310	11.61396	44.03	2.481	497.43	0.0108864	0.01728	1.435	0.00310	1.07062	1.4328
320	10.54535	47.74	2.484	550.81	0.0086304	0.01650	1.407	0.00380	1.06399	1.2642
330	9.74495	51.25	2.481	590.12	0.0072540	0.01608	1.392	0.00444	1.05904	1.1592
340	9.10821	54.62	2.475	620.60	0.0063138	0.01583	1.386	0.00504	1.05511	1.0868
350	8.58183	57.87	2.467	645.06	0.0056244	0.01570	1.385	0.00562	1.05187	1.0337
360	8.13490	61.03	2.458	665.17	0.0050938	0.01564	1.388	0.00618	1.04912	0.9930
370	7.74785	64.11	2.449	682.01	0.0046707	0.01561	1.393	0.00673	1.04675	0.9619
380	7.40752	67.12	2.440	696.32	0.0043241	0.01563	1.401	0.00727	1.04466	0.9366
390	7.10462	70.08	2.431	708.62	0.0040342	0.01567	1.410	0.00780	1.04281	0.9155
400	6.83235	72.98	2.423	719.29	0.0037874	0.01574	1.420	0.00833	1.04115	0.8978
410	6.58560	75.83	2.415	728.62	0.0035744	0.01583	1.431	0.00887	1.03964	0.8826
420	6.36040	78.64	2.408	736.84	0.0033884	0.01593	1.444	0.00940	1.03827	0.8695
430	6.15364	81.41	2.401	744.12	0.0032243	0.01604	1.457	0.00993	1.03701	0.8581
440	5.96282	84.15	2.394	750.61	0.0030783	0.01617	1.470	0.01047	1.03585	0.8480
450	5.78592	86.86	2.388	756.42	0.0029475	0.01630	1.484	0.01100	1.03477	0.8391
460	5.62124	89.55	2.381	761.64	0.0028293	0.01644	1.498	0.01154	1.03377	0.8312
470	5.46741	92.21	2.375	766.35	0.0027221	0.01658	1.513	0.01208	1.03284	0.8242
480	5.32323	94.86	2.370	770.62	0.0026242	0.01673	1.527	0.01263	1.03196	0.8179
490	5.18772	97.48	2.364	774.51	0.0025344	0.01689	1.542	0.01318	1.03114	0.8122
500	5.06001	100.10	2.359	778.05	0.0024517	0.01705	1.558	0.01373	1.03037	0.8071
510	4.93938	102.70	2.353	781.29	0.0023752	0.01718	1.573	0.01426	1.02963	0.8039
520	4.82517	105.29	2.348	784.25	0.0023043	0.01736	1.588	0.01483	1.02894	0.7993
530	4.71683	107.87	2.343	786.99	0.0022382	0.01753	1.604	0.01539	1.02829	0.7952
540	4.61387	110.45	2.337	789.51	0.0021765	0.01771	1.619	0.01596	1.02766	0.7915
550	4.51586	113.03	2.332	791.84	0.0021187	0.01789	1.635	0.01654	1.02707	0.7882
560	4.42240	115.60	2.327	794.00	0.0020644	0.01806	1.651	0.01712	1.02651	0.7852
570	4.33316	118.18	2.321	796.00	0.0020133	0.01824	1.667	0.01770	1.02597	0.7825
580	4.24783	120.75	2.316	797.87	0.0019650	0.01842	1.682	0.01828	1.02545	0.7801
590	4.16613	123.32	2.310	799.61	0.0019195	0.01860	1.698	0.01886	1.02496	0.7779
600	4.08782	125.90	2.305	801.23	0.0018763	0.01879	1.714	0.01945	1.02448	0.7760

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

820 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 98.996	0.01223	2141.20	318.3	-83.088	-81.232	0.50250	0.267	0.396	3840
100	0.01225	2122.01	315.7	-82.694	-80.834	0.50650	0.266	0.396	3829
105	0.01236	2028.03	303.1	-80.731	-78.853	0.52582	0.261	0.396	3773
110	0.01248	1936.70	290.9	-78.769	-76.874	0.54424	0.257	0.396	3716
115	0.01260	1847.96	279.1	-76.808	-74.895	0.56183	0.253	0.396	3657
120	0.01272	1761.76	267.6	-74.848	-72.917	0.57867	0.250	0.396	3597
125	0.01284	1678.02	256.5	-72.889	-70.939	0.59482	0.246	0.396	3536
130	0.01297	1596.69	245.8	-70.929	-68.960	0.61034	0.243	0.396	3474
135	0.01310	1517.72	235.4	-68.970	-66.981	0.62528	0.239	0.396	3411
140	0.01324	1441.05	225.3	-67.010	-65.000	0.63969	0.236	0.396	3347
145	0.01338	1366.61	215.6	-65.048	-63.017	0.65360	0.233	0.397	3282
150	0.01352	1294.35	206.3	-63.085	-61.032	0.66706	0.230	0.397	3216
155	0.01367	1224.20	197.2	-61.120	-59.044	0.68009	0.228	0.398	3149
160	0.01382	1156.12	188.4	-59.151	-57.052	0.69274	0.225	0.399	3081
165	0.01398	1090.04	180.0	-57.178	-55.055	0.70503	0.223	0.400	3013
170	0.01414	1025.90	171.8	-55.200	-53.052	0.71699	0.220	0.401	2943
175	0.01431	963.64	163.8	-53.216	-51.042	0.72864	0.218	0.403	2873
180	0.01449	903.21	156.2	-51.225	-49.024	0.74001	0.216	0.405	2803
185	0.01468	844.55	148.8	-49.225	-46.996	0.75113	0.213	0.407	2731
190	0.01487	787.60	141.6	-47.214	-44.956	0.76201	0.211	0.409	2659
195	0.01508	732.31	134.6	-45.192	-42.903	0.77268	0.209	0.412	2586
200	0.01529	678.63	127.9	-43.155	-40.833	0.78316	0.207	0.416	2512
205	0.01552	626.49	121.3	-41.101	-38.745	0.79348	0.205	0.420	2437
210	0.01576	575.86	114.9	-39.026	-36.634	0.80365	0.203	0.425	2361
215	0.01601	526.69	108.7	-36.928	-34.497	0.81371	0.201	0.430	2284
220	0.01629	478.94	102.6	-34.802	-32.329	0.82368	0.199	0.437	2205
225	0.01658	432.59	96.6	-32.642	-30.124	0.83358	0.197	0.445	2125
230	0.01690	387.61	90.7	-30.442	-27.875	0.84346	0.196	0.454	2042
235	0.01726	343.90	85.0	-28.163	-25.542	0.85350	0.199	0.471	1942
240	0.01764	303.34	79.1	-25.633	-23.154	0.86355	0.198	0.483	1853
245	0.01807	263.13	73.6	-23.436	-20.691	0.87371	0.196	0.501	1764
250	0.01856	224.25	67.8	-20.952	-18.133	0.88404	0.195	0.522	1667
255	0.01912	186.80	62.0	-18.357	-15.453	0.89466	0.195	0.551	1564
260	0.01979	150.34	56.1	-15.612	-12.607	0.90571	0.195	0.590	1451
265	0.02061	115.06	49.8	-12.648	-9.518	0.91748	0.197	0.646	1324
270	0.02168	81.68	43.3	-9.359	-6.068	0.93038	0.199	0.737	1183
275	0.02324	49.39	36.4	-5.455	-1.926	0.94557	0.204	0.942	1027
280	0.02625	19.19	27.2	0.006	3.992	0.96688	0.220	1.595	803
285	0.04433	5.13	13.0	15.405	22.136	1.03100	0.256	3.659	583
290	0.05905	15.71	9.0	22.838	31.805	1.06469	0.222	1.183	622
295	0.06742	23.88	7.6	26.372	36.608	1.08113	0.208	0.806	655
300	0.07390	30.66	6.6	28.932	40.154	1.09306	0.199	0.635	673
310	0.08439	42.04	5.6	32.871	45.685	1.11121	0.189	0.488	710
320	0.09313	51.56	4.9	36.038	50.179	1.12548	0.182	0.417	740
330	0.10090	59.96	4.4	38.807	54.128	1.13764	0.177	0.375	767
340	0.10804	67.61	4.0	41.330	57.735	1.14841	0.174	0.348	791
350	0.11474	74.69	3.7	43.684	61.106	1.15818	0.172	0.328	813
360	0.12110	81.33	3.4	45.916	64.304	1.16719	0.170	0.313	833
370	0.12720	87.63	3.2	48.056	67.370	1.17559	0.168	0.301	853
380	0.13308	93.64	3.1	50.122	70.330	1.18349	0.167	0.291	871
390	0.13879	99.41	2.9	52.131	73.205	1.19095	0.166	0.284	888
400	0.14435	104.97	2.8	54.091	76.009	1.19806	0.165	0.277	905
410	0.14979	110.36	2.6	56.011	78.755	1.20483	0.164	0.272	921
420	0.15512	115.59	2.5	57.896	81.449	1.21133	0.163	0.267	937
430	0.16035	120.69	2.4	59.753	84.101	1.21757	0.162	0.263	952
440	0.16550	125.66	2.3	61.585	86.714	1.22357	0.162	0.260	966
450	0.17058	130.53	2.3	63.394	89.295	1.22937	0.161	0.257	980
460	0.17559	135.31	2.2	65.185	91.847	1.23498	0.161	0.254	994
470	0.18054	140.00	2.1	66.959	94.373	1.24042	0.161	0.251	1008
480	0.18545	144.61	2.1	68.718	96.877	1.24569	0.160	0.249	1021
490	0.19030	149.16	2.0	70.464	99.361	1.25081	0.160	0.247	1033
500	0.19512	153.64	1.9	72.199	101.827	1.25579	0.160	0.246	1046
510	0.19990	158.06	1.9	73.924	104.277	1.26064	0.160	0.244	1058
520	0.20464	162.43	1.8	75.640	106.712	1.26537	0.160	0.243	1070
530	0.20935	166.75	1.8	77.348	109.136	1.26999	0.159	0.242	1082
540	0.21403	171.03	1.7	79.049	111.547	1.27450	0.159	0.241	1094
550	0.21868	175.27	1.7	80.745	113.949	1.27890	0.159	0.240	1105
560	0.22331	179.48	1.7	82.435	116.342	1.28322	0.159	0.239	1117
570	0.22791	183.65	1.6	84.120	118.727	1.28744	0.159	0.238	1128
580	0.23250	187.78	1.6	85.802	121.105	1.29157	0.159	0.237	1139
590	0.23707	191.89	1.6	87.481	123.477	1.29563	0.159	0.237	1149
600	0.24161	195.97	1.5	89.157	125.844	1.29960	0.160	0.236	1160

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

820 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 98.996	81.77961	217.96	14.605	175106.68	0.0018179	0.11203	42.778	0.00346	1.57039	5.4467
100	81.63027	217.35	14.562	173219.97	0.0018228	0.11175	41.966	0.00346	1.56919	5.3560
105	80.88464	214.28	14.341	164036.59	0.0018479	0.11031	38.167	0.00344	1.56320	4.9322
110	80.13551	211.16	14.114	155198.71	0.0018743	0.10878	34.746	0.00343	1.55720	4.5511
115	79.38253	208.00	13.879	146696.06	0.0019023	0.10718	31.665	0.00341	1.55118	4.2082
120	78.62533	204.79	13.639	138518.58	0.0019318	0.10552	28.891	0.00339	1.54514	3.8996
125	77.86350	201.53	13.394	130656.35	0.0019632	0.10379	26.393	0.00337	1.53908	3.6218
130	77.09659	198.22	13.143	123099.63	0.0019965	0.10202	24.144	0.00334	1.53300	3.3717
135	76.32410	194.85	12.889	115838.85	0.0020320	0.10019	22.117	0.00332	1.52689	3.1466
140	75.54548	191.42	12.631	108864.65	0.0020700	0.09832	20.292	0.00328	1.52074	2.9441
145	74.76010	187.93	12.369	102167.81	0.0021107	0.09641	18.648	0.00325	1.51456	2.7620
150	73.96729	184.37	12.106	95739.33	0.0021544	0.09447	17.167	0.00322	1.50834	2.5985
155	73.16627	180.75	11.840	89570.41	0.0022016	0.09250	15.832	0.00318	1.50207	2.4520
160	72.35620	177.05	11.574	83652.42	0.0022525	0.09050	14.630	0.00314	1.49575	2.3209
165	71.53610	173.27	11.306	77976.97	0.0023078	0.08847	13.545	0.00309	1.48936	2.2040
170	70.70490	169.42	11.038	72535.88	0.0023680	0.08643	12.568	0.00305	1.48291	2.1001
175	69.86138	165.47	10.770	67321.20	0.0024338	0.08437	11.686	0.00300	1.47638	2.0082
180	69.00414	161.44	10.503	62325.23	0.0025059	0.08229	10.890	0.00295	1.46976	1.9275
185	68.13162	157.31	10.236	57540.53	0.0025855	0.08019	10.172	0.00289	1.46305	1.8572
190	67.24199	153.08	9.970	52959.93	0.0026735	0.07809	9.523	0.00284	1.45623	1.7968
195	66.33316	148.74	9.705	48576.60	0.0027715	0.07597	8.936	0.00278	1.44928	1.7457
200	65.40272	144.29	9.441	44384.03	0.0028811	0.07383	8.405	0.00272	1.44218	1.7037
205	64.44783	139.72	9.178	40376.13	0.0030046	0.07169	7.924	0.00265	1.43493	1.6704
210	63.46515	135.01	8.915	36547.26	0.0031445	0.06953	7.487	0.00258	1.42749	1.6458
215	62.45069	130.17	8.651	32892.33	0.0033045	0.06736	7.090	0.00251	1.41983	1.6299
220	61.39969	125.19	8.386	29406.96	0.0034890	0.06518	6.728	0.00243	1.41193	1.6231
225	60.30631	120.05	8.117	26087.63	0.0037039	0.06297	6.397	0.00235	1.40374	1.6260
230	59.16336	114.75	7.842	22932.06	0.0039570	0.06075	6.093	0.00226	1.39521	1.6396
235	57.94778	110.47	7.372	19928.29	0.0042646	0.05847	5.821	0.00214	1.38618	1.6885
240	56.67732	104.94	7.062	17192.24	0.0045983	0.05619	5.607	0.00205	1.37679	1.7335
245	55.32542	99.17	6.773	14557.68	0.0050531	0.05387	5.386	0.00194	1.36684	1.8040
250	53.87213	93.06	6.443	12080.88	0.0056119	0.05150	5.159	0.00183	1.35619	1.8833
255	52.28817	86.72	6.087	9767.32	0.0063527	0.04906	4.920	0.00170	1.34465	1.9889
260	50.52975	79.92	5.685	7596.39	0.0073879	0.04653	4.668	0.00156	1.33192	2.1324
265	48.51899	72.42	5.223	5582.74	0.0089242	0.04384	4.394	0.00140	1.31746	2.3320
270	46.13084	64.23	4.706	3767.94	0.0114789	0.04101	4.088	0.00121	1.30043	2.6459
275	43.32679	55.00	4.137	2124.89	0.0171221	0.03996	3.720	0.00099	1.27851	3.1558
280	38.09058	42.91	3.243	731.09	0.0371758	0.04022	3.198	0.00066	1.24417	4.5670
285	22.55895	32.62	2.248	115.67	0.1121408	0.03777	1.978	0.00046	1.14022	6.8978
290	16.93339	35.06	2.385	266.10	0.0337355	0.02472	1.662	0.00123	1.10407	2.8622
295	14.83284	37.64	2.458	354.16	0.0214113	0.02104	1.562	0.00176	1.09078	2.1531
300	13.53110	39.72	2.460	414.91	0.0159984	0.01919	1.507	0.00223	1.08260	1.7958
310	11.84961	43.82	2.486	498.21	0.0111473	0.01747	1.447	0.00302	1.07209	1.4558
320	10.73805	47.54	2.489	553.63	0.0087811	0.01665	1.416	0.00371	1.06518	1.2787
330	9.91090	51.06	2.486	594.28	0.0073533	0.01619	1.401	0.00435	1.06006	1.1693
340	9.25555	54.44	2.479	625.73	0.0063847	0.01593	1.393	0.00495	1.05602	1.0945
350	8.71530	57.71	2.471	650.93	0.0056777	0.01579	1.392	0.00553	1.05269	1.0397
360	8.25752	60.87	2.462	671.62	0.0051354	0.01572	1.394	0.00609	1.04987	0.9979
370	7.86171	63.96	2.453	688.93	0.0047041	0.01568	1.399	0.00663	1.04745	0.9660
380	7.51410	66.98	2.444	703.63	0.0043515	0.01569	1.406	0.00716	1.04532	0.9401
390	7.20504	69.94	2.435	716.26	0.0040570	0.01573	1.415	0.00769	1.04343	0.9187
400	6.92748	72.85	2.427	727.20	0.0038067	0.01579	1.425	0.00822	1.04173	0.9005
410	6.67610	75.71	2.419	736.77	0.0035909	0.01588	1.436	0.00875	1.04019	0.8851
420	6.44681	78.52	2.411	745.20	0.0034026	0.01598	1.448	0.00928	1.03880	0.8717
430	6.23642	81.30	2.404	752.66	0.0032367	0.01609	1.461	0.00980	1.03751	0.8600
440	6.04233	84.05	2.397	759.31	0.0030892	0.01621	1.474	0.01033	1.03633	0.8498
450	5.86247	86.76	2.391	765.25	0.0029571	0.01634	1.488	0.01086	1.03524	0.8408
460	5.69510	89.45	2.385	770.60	0.0028379	0.01648	1.502	0.01140	1.03422	0.8327
470	5.53879	92.12	2.378	775.43	0.0027297	0.01662	1.516	0.01194	1.03327	0.8256
480	5.39234	94.77	2.373	779.80	0.0026310	0.01677	1.531	0.01248	1.03238	0.8192
490	5.25473	97.40	2.367	783.77	0.0025406	0.01693	1.546	0.01302	1.03155	0.8134
500	5.12507	100.01	2.361	787.39	0.0024573	0.01708	1.561	0.01356	1.03076	0.8082
510	5.00262	102.62	2.356	790.71	0.0023803	0.01722	1.576	0.01409	1.03002	0.8050
520	4.88671	105.21	2.351	793.75	0.0023089	0.01739	1.591	0.01465	1.02932	0.8003
530	4.77678	107.80	2.345	796.54	0.0022424	0.01756	1.607	0.01521	1.02865	0.7961
540	4.67233	110.38	2.340	799.12	0.0021803	0.01774	1.622	0.01578	1.02802	0.7923
550	4.57290	112.96	2.335	801.51	0.0021222	0.01792	1.638	0.01634	1.02742	0.7890
560	4.47811	115.53	2.329	803.71	0.0020677	0.01809	1.654	0.01691	1.02684	0.7859
570	4.38761	118.11	2.324	805.76	0.0020163	0.01827	1.669	0.01749	1.02629	0.7832
580	4.30108	120.68	2.318	807.67	0.0019679	0.01845	1.685	0.01807	1.02577	0.7807
590	4.21824	123.26	2.313	809.45	0.0019221	0.01863	1.701	0.01864	1.02527	0.7786
600	4.13884	125.84	2.307	811.11	0.0018787	0.01881	1.717	0.01923	1.02479	0.7766

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

830 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.010	0.01223	2141.82	318.3	-83.087	-81.207	0.50252	0.267	0.396	3841
100	0.01225	2122.89	315.8	-82.698	-80.815	0.50646	0.266	0.396	3830
105	0.01236	2028.93	303.2	-80.735	-78.835	0.52578	0.261	0.396	3774
110	0.01248	1937.62	290.9	-78.773	-76.856	0.54420	0.257	0.396	3716
115	0.01260	1848.89	279.1	-76.813	-74.877	0.56179	0.253	0.396	3658
120	0.01272	1762.70	267.6	-74.853	-72.899	0.57863	0.250	0.396	3598
125	0.01284	1678.98	256.5	-72.894	-70.921	0.59477	0.246	0.396	3537
130	0.01297	1597.67	245.8	-70.936	-68.942	0.61029	0.243	0.396	3475
135	0.01310	1518.71	235.4	-68.976	-66.963	0.62523	0.239	0.396	3412
140	0.01324	1442.05	225.4	-67.017	-64.982	0.63964	0.236	0.396	3348
145	0.01337	1367.63	215.7	-65.056	-63.000	0.65355	0.233	0.397	3283
150	0.01352	1295.39	206.3	-63.093	-61.015	0.66700	0.230	0.397	3217
155	0.01367	1225.26	197.3	-61.128	-59.028	0.68004	0.226	0.398	3150
160	0.01382	1157.20	188.5	-59.160	-57.036	0.69268	0.225	0.399	3082
165	0.01398	1091.14	180.0	-57.187	-55.039	0.70497	0.223	0.400	3014
170	0.01414	1027.02	171.8	-55.210	-53.037	0.71693	0.220	0.401	2945
175	0.01431	964.78	163.9	-53.227	-51.027	0.72858	0.218	0.403	2875
180	0.01449	904.38	156.3	-51.236	-49.009	0.73995	0.216	0.404	2804
185	0.01467	845.74	148.8	-49.237	-46.982	0.75106	0.213	0.407	2733
190	0.01487	788.82	141.7	-47.228	-44.943	0.76194	0.211	0.409	2661
195	0.01507	733.56	134.7	-45.206	-42.890	0.77260	0.209	0.412	2588
200	0.01529	679.91	128.0	-43.170	-40.821	0.78308	0.207	0.416	2514
205	0.01551	627.80	121.4	-41.118	-38.733	0.79339	0.205	0.420	2439
210	0.01575	577.21	115.0	-39.045	-36.624	0.80356	0.203	0.424	2363
215	0.01601	528.08	108.8	-36.948	-34.488	0.81361	0.201	0.430	2286
220	0.01628	480.37	102.7	-34.824	-32.322	0.82357	0.199	0.436	2208
225	0.01658	434.05	96.7	-32.666	-30.119	0.83347	0.197	0.444	2127
230	0.01690	389.12	90.9	-30.469	-27.872	0.84334	0.196	0.454	2045
235	0.01725	345.40	85.1	-28.193	-25.542	0.85336	0.199	0.470	1945
240	0.01763	304.87	79.2	-25.868	-23.157	0.86340	0.198	0.482	1856
245	0.01806	264.74	73.7	-23.475	-20.699	0.87354	0.196	0.500	1768
250	0.01855	225.94	68.0	-20.998	-18.147	0.88385	0.195	0.521	1671
255	0.01911	188.57	62.2	-18.411	-15.475	0.89443	0.195	0.549	1569
260	0.01976	152.21	56.3	-15.678	-12.640	0.90544	0.195	0.587	1456
265	0.02057	117.04	50.1	-12.732	-9.570	0.91714	0.196	0.642	1331
270	0.02162	83.81	43.6	-9.474	-6.151	0.92992	0.199	0.729	1193
275	0.02313	51.72	36.8	-5.636	-2.081	0.94485	0.204	0.919	1039
280	0.02592	21.86	28.0	-0.421	3.563	0.96518	0.218	1.465	826
285	0.04043	4.22	14.4	13.179	19.393	1.02110	0.260	4.531	584
290	0.05683	14.44	9.4	22.072	30.806	1.06088	0.225	1.292	620
295	0.06552	22.79	7.9	25.867	35.937	1.07844	0.209	0.846	653
300	0.07214	29.71	6.8	28.539	39.626	1.09085	0.200	0.656	671
310	0.08272	41.26	5.7	32.586	45.298	1.10946	0.189	0.498	709
320	0.09146	50.89	5.0	35.808	49.866	1.12397	0.182	0.423	740
330	0.09922	59.37	4.5	38.611	53.861	1.13627	0.178	0.379	766
340	0.10634	67.08	4.1	41.157	57.500	1.14713	0.174	0.350	790
350	0.11300	74.21	3.8	43.529	60.896	1.15698	0.172	0.330	812
360	0.11932	80.90	3.5	45.775	64.114	1.16604	0.170	0.314	833
370	0.12537	87.24	3.3	47.926	67.195	1.17449	0.168	0.302	852
380	0.13121	93.28	3.1	50.002	70.169	1.18242	0.167	0.293	871
390	0.13688	99.08	3.0	52.018	73.055	1.18992	0.166	0.285	888
400	0.14239	104.67	2.8	53.985	75.870	1.19704	0.165	0.278	905
410	0.14778	110.08	2.7	55.911	78.624	1.20384	0.164	0.273	921
420	0.15306	115.34	2.6	57.802	81.326	1.21035	0.163	0.268	937
430	0.15824	120.45	2.5	59.663	83.984	1.21661	0.163	0.264	952
440	0.16335	125.45	2.4	61.499	86.604	1.22263	0.162	0.260	966
450	0.16837	130.34	2.3	63.312	89.191	1.22845	0.162	0.257	980
460	0.17334	135.13	2.2	65.107	91.748	1.23407	0.161	0.254	994
470	0.17824	139.83	2.1	66.884	94.279	1.23951	0.161	0.252	1008
480	0.18310	144.46	2.1	68.646	96.787	1.24479	0.160	0.250	1021
490	0.18791	149.02	2.0	70.394	99.274	1.24992	0.160	0.248	1034
500	0.19267	153.51	2.0	72.132	101.744	1.25491	0.160	0.246	1046
510	0.19740	157.94	1.9	73.859	104.197	1.25977	0.160	0.245	1059
520	0.20209	162.33	1.9	75.576	106.636	1.26450	0.160	0.243	1071
530	0.20675	166.66	1.8	77.286	109.063	1.26912	0.159	0.242	1083
540	0.21138	170.95	1.8	78.989	111.477	1.27364	0.159	0.241	1094
550	0.21598	175.20	1.7	80.686	113.882	1.27805	0.159	0.240	1106
560	0.22056	179.41	1.7	82.378	116.277	1.28236	0.159	0.239	1117
570	0.22512	183.59	1.6	84.065	118.664	1.28659	0.159	0.238	1128
580	0.22966	187.74	1.6	85.748	121.045	1.29073	0.159	0.238	1139
590	0.23417	191.85	1.6	87.428	123.419	1.29479	0.159	0.237	1150
600	0.23867	195.95	1.5	89.105	125.787	1.29877	0.160	0.237	1160

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

830 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.010	81.78218	218.02	14.605	175162.44	0.0018174	0.11204	42.792	0.00346	1.57041	5.4480
100	81.63498	217.41	14.562	173302.48	0.0018222	0.11176	41.991	0.00346	1.56923	5.3585
105	80.88957	214.34	14.341	164119.51	0.0018472	0.11032	38.191	0.00344	1.56324	4.9345
110	80.14067	211.23	14.114	155282.03	0.0018736	0.10879	34.768	0.00343	1.55724	4.5533
115	79.38794	208.07	13.880	146779.82	0.0019015	0.10719	31.686	0.00341	1.55122	4.2102
120	78.63100	204.87	13.640	138602.77	0.0019310	0.10553	28.911	0.00339	1.54519	3.9015
125	77.86946	201.61	13.394	130740.99	0.0019622	0.10381	26.412	0.00337	1.53913	3.6236
130	77.10285	198.30	13.144	123184.73	0.0019955	0.10203	24.161	0.00334	1.53305	3.3733
135	76.33069	194.93	12.889	115924.43	0.0020310	0.10021	22.134	0.00332	1.52694	3.1481
140	75.55242	191.51	12.631	108950.71	0.0020688	0.09834	20.308	0.00329	1.52080	2.9455
145	74.76742	188.02	12.370	102254.38	0.0021094	0.09643	18.663	0.00325	1.51462	2.7633
150	73.97501	184.47	12.106	95826.42	0.0021530	0.09449	17.181	0.00322	1.50840	2.5997
155	73.17444	180.85	11.841	89658.04	0.0022000	0.09252	15.845	0.00318	1.50213	2.4531
160	72.36484	177.15	11.574	83740.61	0.0022509	0.09052	14.642	0.00314	1.49581	2.3219
165	71.54527	173.38	11.307	78065.74	0.0023060	0.08850	13.557	0.00309	1.48943	2.2049
170	70.71464	169.53	11.039	72625.26	0.0023660	0.08646	12.579	0.00305	1.48299	2.1008
175	69.87175	165.59	10.771	67411.21	0.0024315	0.08439	11.696	0.00300	1.47646	2.0089
180	69.01521	161.56	10.504	62415.90	0.0025034	0.08232	10.900	0.00295	1.46985	1.9281
185	68.14345	157.44	10.238	57631.89	0.0025826	0.08022	10.181	0.00290	1.46314	1.8577
190	67.25468	153.21	9.972	53052.02	0.0026703	0.07812	9.532	0.00284	1.45632	1.7972
195	66.34681	148.88	9.707	48669.46	0.0027678	0.07600	8.945	0.00278	1.44938	1.7460
200	65.41744	144.44	9.444	44477.70	0.0028769	0.07387	8.413	0.00272	1.44229	1.7038
205	64.46378	139.87	9.181	40470.66	0.0029998	0.07173	7.932	0.00265	1.43505	1.6703
210	63.48249	135.18	8.919	36642.70	0.0031390	0.06957	7.495	0.00258	1.42762	1.6455
215	62.46966	130.35	8.656	32988.73	0.0032980	0.06741	7.097	0.00251	1.41997	1.6295
220	61.42054	125.37	8.391	29504.37	0.0034812	0.06522	6.735	0.00243	1.41209	1.6224
225	60.32938	120.24	8.123	26186.12	0.0036944	0.06302	6.404	0.00235	1.40391	1.6250
230	59.18911	114.96	7.849	23031.65	0.0039454	0.06080	6.100	0.00226	1.39541	1.6381
235	57.97679	110.69	7.379	20024.96	0.0042502	0.05852	5.826	0.00215	1.38640	1.6860
240	56.71020	105.19	7.071	17289.42	0.0045809	0.05625	5.612	0.00206	1.37703	1.7308
245	55.36331	99.44	6.782	14656.83	0.0050291	0.05393	5.393	0.00195	1.36711	1.8001
250	53.91656	93.37	6.454	12181.77	0.0055793	0.05157	5.166	0.00184	1.35652	1.8783
255	52.34145	87.06	6.101	9869.83	0.0063068	0.04915	4.929	0.00171	1.34504	1.9823
260	50.59586	80.30	5.701	7701.07	0.0073150	0.04663	4.678	0.00157	1.33240	2.1215
265	48.60516	72.89	5.246	5688.96	0.0088062	0.04395	4.406	0.00141	1.31808	2.3163
270	46.25170	64.81	4.737	3876.45	0.0112452	0.04107	4.103	0.00122	1.30129	2.6213
275	43.22462	55.77	4.181	2235.73	0.0164751	0.03997	3.743	0.00101	1.27990	3.0973
280	38.57824	44.17	3.331	843.37	0.0331747	0.03988	3.247	0.00071	1.24754	4.2949
285	24.73164	32.71	2.247	104.28	0.1385496	0.04007	2.118	0.00036	1.15439	8.6220
290	17.59704	34.83	2.381	254.15	0.0370858	0.02581	1.698	0.00114	1.10830	3.0605
295	15.26150	37.41	2.460	347.81	0.0226100	0.02158	1.584	0.00167	1.09348	2.2356
300	13.86242	39.49	2.463	411.80	0.0166203	0.01953	1.524	0.00215	1.08468	1.8431
310	12.08970	43.61	2.490	498.84	0.0114180	0.01768	1.459	0.00294	1.07359	1.4795
320	10.93329	47.35	2.494	556.34	0.0089356	0.01679	1.426	0.00363	1.06639	1.2934
330	10.07850	50.88	2.491	598.37	0.0074545	0.01631	1.409	0.00427	1.06110	1.1796
340	9.40405	54.27	2.484	630.81	0.0064566	0.01603	1.401	0.00486	1.05693	1.1022
350	8.84962	57.54	2.476	656.76	0.0057316	0.01587	1.398	0.00544	1.05351	1.0459
360	8.38080	60.72	2.467	678.04	0.0051774	0.01580	1.400	0.00600	1.05063	1.0029
370	7.97608	63.82	2.457	695.83	0.0047377	0.01575	1.404	0.00653	1.04815	0.9702
380	7.62110	66.85	2.448	710.92	0.0043790	0.01576	1.411	0.00706	1.04597	0.9437
390	7.30580	69.81	2.439	723.87	0.0040799	0.01579	1.420	0.00759	1.04404	0.9218
400	7.02288	72.72	2.431	735.10	0.0038260	0.01585	1.429	0.00811	1.04231	0.9033
410	6.76682	75.59	2.423	744.91	0.0036074	0.01593	1.440	0.00863	1.04075	0.8875
420	6.53342	78.41	2.415	753.54	0.0034169	0.01603	1.452	0.00916	1.03932	0.8739
430	6.31936	81.19	2.407	761.19	0.0032492	0.01614	1.465	0.00968	1.03802	0.8620
440	6.12198	83.94	2.401	767.99	0.0031001	0.01626	1.478	0.01020	1.03682	0.8516
450	5.93913	86.66	2.394	774.08	0.0029667	0.01639	1.491	0.01073	1.03570	0.8424
460	5.76905	89.36	2.388	779.56	0.0028464	0.01652	1.505	0.01126	1.03467	0.8343
470	5.61026	92.03	2.382	784.49	0.0027373	0.01666	1.520	0.01179	1.03371	0.8270
480	5.46153	94.68	2.376	788.97	0.0026379	0.01681	1.534	0.01233	1.03280	0.8205
490	5.32181	97.31	2.370	793.03	0.0025467	0.01696	1.549	0.01286	1.03195	0.8146
500	5.19019	99.93	2.364	796.74	0.0024629	0.01712	1.564	0.01340	1.03116	0.8094
510	5.06591	102.54	2.359	800.13	0.0023854	0.01725	1.579	0.01392	1.03040	0.8050
520	4.94830	105.13	2.353	803.24	0.0023135	0.01742	1.594	0.01448	1.02969	0.8013
530	4.83677	107.72	2.348	806.10	0.0022466	0.01760	1.610	0.01503	1.02901	0.7970
540	4.73081	110.31	2.343	808.73	0.0021842	0.01777	1.625	0.01559	1.02837	0.7932
550	4.62997	112.89	2.337	811.17	0.0021258	0.01795	1.641	0.01615	1.02776	0.7898
560	4.53384	115.46	2.332	813.43	0.0020709	0.01812	1.656	0.01672	1.02718	0.7867
570	4.44207	118.04	2.327	815.52	0.0020193	0.01830	1.672	0.01729	1.02662	0.7839
580	4.35433	120.61	2.321	817.47	0.0019707	0.01848	1.688	0.01786	1.02609	0.7814
590	4.27036	123.19	2.316	819.29	0.0019247	0.01866	1.703	0.01843	1.02559	0.7792
600	4.18987	125.77	2.310	820.99	0.0018811	0.01884	1.719	0.01901	1.02510	0.7772

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

840 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.024	0.01223	2142.43	318.3	-83.085	-81.183	0.50253	0.267	0.396	3841
100	0.01225	2123.78	315.8	-82.702	-80.797	0.50642	0.266	0.396	3830
105	0.01236	2029.83	303.2	-80.739	-78.816	0.52574	0.261	0.396	3774
110	0.01248	1938.53	291.0	-78.778	-76.837	0.54415	0.257	0.396	3717
115	0.01260	1849.82	279.1	-76.818	-74.859	0.56174	0.253	0.396	3659
120	0.01272	1763.64	267.7	-74.859	-72.881	0.57858	0.250	0.396	3599
125	0.01284	1679.93	256.6	-72.900	-70.903	0.59473	0.246	0.396	3538
130	0.01297	1598.64	245.9	-70.942	-68.924	0.61025	0.243	0.396	3476
135	0.01310	1519.70	235.5	-68.983	-66.945	0.62518	0.239	0.396	3413
140	0.01323	1443.06	225.5	-67.024	-64.965	0.63958	0.236	0.396	3349
145	0.01337	1368.66	215.8	-65.063	-62.983	0.65349	0.233	0.397	3283
150	0.01352	1296.43	206.4	-63.101	-60.999	0.66695	0.230	0.397	3218
155	0.01366	1226.32	197.3	-61.136	-59.011	0.67998	0.228	0.398	3151
160	0.01382	1158.28	188.5	-59.169	-57.019	0.69263	0.225	0.399	3083
165	0.01398	1092.24	180.1	-57.197	-55.023	0.70491	0.223	0.400	3015
170	0.01414	1028.14	171.9	-55.220	-53.021	0.71686	0.220	0.401	2946
175	0.01431	965.93	164.0	-53.238	-51.012	0.72851	0.218	0.403	2876
180	0.01449	905.55	156.3	-51.248	-48.995	0.73988	0.216	0.404	2805
185	0.01467	846.94	148.9	-49.250	-46.968	0.75099	0.213	0.406	2734
190	0.01487	790.04	141.7	-47.241	-44.929	0.76186	0.211	0.409	2662
195	0.01507	734.81	134.8	-45.221	-42.877	0.77252	0.209	0.412	2589
200	0.01528	681.18	128.0	-43.186	-40.809	0.78300	0.207	0.415	2516
205	0.01551	629.11	121.5	-41.135	-38.722	0.79331	0.205	0.419	2441
210	0.01575	578.55	115.1	-39.063	-36.614	0.80347	0.203	0.424	2365
215	0.01600	529.46	108.9	-36.969	-34.480	0.81351	0.201	0.430	2288
220	0.01628	481.79	102.8	-34.846	-32.315	0.82347	0.199	0.436	2210
225	0.01657	435.52	96.9	-32.691	-30.114	0.83336	0.197	0.444	2130
230	0.01689	390.63	91.0	-30.496	-27.869	0.84321	0.196	0.453	2047
235	0.01724	346.89	85.2	-28.224	-25.542	0.85322	0.199	0.470	1948
240	0.01762	306.41	79.3	-25.902	-23.161	0.86325	0.198	0.481	1859
245	0.01805	266.34	73.9	-23.514	-20.707	0.87337	0.196	0.499	1771
250	0.01853	227.62	68.1	-21.043	-18.160	0.88366	0.195	0.520	1675
255	0.01909	190.33	62.4	-18.465	-15.496	0.89421	0.195	0.547	1574
260	0.01974	154.07	56.5	-15.743	-12.673	0.90518	0.195	0.584	1462
265	0.02054	119.01	50.4	-12.815	-9.620	0.91680	0.196	0.638	1338
270	0.02157	85.92	43.9	-9.586	-6.232	0.92947	0.199	0.721	1202
275	0.02303	54.03	37.3	-5.811	-2.228	0.94416	0.203	0.898	1051
280	0.02563	24.45	28.7	-0.801	3.186	0.96366	0.216	1.365	846
285	0.03680	4.13	16.2	10.808	16.532	1.01081	0.260	4.784	594
290	0.05458	13.20	9.9	21.246	29.736	1.05683	0.228	1.420	617
295	0.06365	21.71	8.2	25.341	35.241	1.07567	0.211	0.890	651
300	0.07040	28.75	7.1	28.136	39.086	1.08861	0.201	0.679	670
310	0.08107	40.48	5.8	32.296	44.907	1.10771	0.190	0.508	708
320	0.08984	50.22	5.1	35.575	49.549	1.12246	0.183	0.429	739
330	0.09758	58.78	4.6	38.413	53.592	1.13490	0.178	0.383	766
340	0.10467	66.55	4.2	40.983	57.264	1.14587	0.175	0.353	790
350	0.11130	73.74	3.8	43.373	60.685	1.15578	0.172	0.332	812
360	0.11758	80.48	3.6	45.633	63.923	1.16490	0.170	0.316	833
370	0.12359	86.85	3.4	47.795	67.020	1.17339	0.168	0.304	852
380	0.12939	92.93	3.2	49.881	70.007	1.18136	0.167	0.294	871
390	0.13501	98.75	3.0	51.905	72.905	1.18889	0.166	0.286	888
400	0.14048	104.37	2.9	53.879	75.730	1.19604	0.165	0.279	905
410	0.14582	109.81	2.7	55.811	78.493	1.20286	0.164	0.274	921
420	0.15105	115.08	2.6	57.707	81.203	1.20939	0.163	0.269	937
430	0.15619	120.22	2.5	59.573	83.868	1.21566	0.163	0.264	952
440	0.16124	125.23	2.4	61.413	86.494	1.22170	0.162	0.261	966
450	0.16623	130.14	2.3	63.230	89.086	1.22752	0.162	0.258	980
460	0.17114	134.95	2.3	65.028	91.648	1.23316	0.161	0.255	994
470	0.17600	139.67	2.2	66.808	94.184	1.23861	0.161	0.252	1008
480	0.18081	144.31	2.1	68.573	96.697	1.24390	0.160	0.250	1021
490	0.18557	148.88	2.0	70.324	99.188	1.24904	0.160	0.248	1034
500	0.19028	153.38	2.0	72.064	101.661	1.25403	0.160	0.246	1046
510	0.19496	157.83	1.9	73.793	104.118	1.25890	0.160	0.245	1059
520	0.19960	162.22	1.9	75.513	106.560	1.26364	0.160	0.244	1071
530	0.20422	166.57	1.8	77.225	108.990	1.26827	0.159	0.242	1083
540	0.20880	170.87	1.8	78.929	111.407	1.27279	0.159	0.241	1094
550	0.21335	175.13	1.7	80.628	113.814	1.27720	0.159	0.240	1106
560	0.21788	179.35	1.7	82.321	116.212	1.28152	0.159	0.239	1117
570	0.22239	183.54	1.7	84.009	118.601	1.28575	0.159	0.239	1128
580	0.22688	187.69	1.6	85.694	120.984	1.28990	0.159	0.238	1139
590	0.23135	191.82	1.6	87.375	123.360	1.29396	0.159	0.237	1150
600	0.23580	195.92	1.6	89.053	125.730	1.29794	0.160	0.237	1161

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

840 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.024	81.78474	218.07	14.604	175218.19	0.0018168	0.11204	42.806	0.00346	1.57043	5.4492
100	81.63969	217.48	14.562	173384.97	0.0018216	0.11177	42.017	0.00346	1.56927	5.3611
105	80.89450	214.41	14.342	164202.40	0.0018466	0.11033	38.214	0.00344	1.56328	4.9369
110	80.14583	211.30	14.114	155365.35	0.0018729	0.10880	34.791	0.00343	1.55728	4.5554
115	79.39334	208.14	13.880	146863.56	0.0019007	0.10721	31.707	0.00341	1.55127	4.2123
120	78.63667	204.94	13.640	138686.95	0.0019301	0.10555	28.931	0.00339	1.54523	3.9034
125	77.87541	201.69	13.394	130825.61	0.0019613	0.10382	26.430	0.00337	1.53918	3.6253
130	77.10911	198.38	13.144	123269.81	0.0019945	0.10205	24.179	0.00334	1.53310	3.3750
135	76.33727	195.02	12.890	116009.98	0.0020299	0.10022	22.150	0.00332	1.52699	3.1496
140	75.55935	191.60	12.632	109036.75	0.0020677	0.09836	20.323	0.00329	1.52085	2.9469
145	74.77473	188.11	12.370	102340.92	0.0021082	0.09645	18.677	0.00325	1.51468	2.7646
150	73.98273	184.56	12.107	95913.49	0.0021517	0.09451	17.195	0.00322	1.50846	2.6009
155	73.18260	180.94	11.842	89745.64	0.0021985	0.09254	15.858	0.00318	1.50220	2.4542
160	72.37348	177.25	11.575	83828.76	0.0022492	0.09054	14.654	0.00314	1.49588	2.3229
165	71.55443	173.48	11.308	78154.48	0.0023042	0.08852	13.569	0.00309	1.48950	2.2057
170	70.72438	169.64	11.040	72714.60	0.0023640	0.08648	12.590	0.00305	1.48306	2.1016
175	69.88211	165.70	10.773	67501.18	0.0024293	0.08442	11.707	0.00300	1.47654	2.0095
180	69.02626	161.68	10.506	62506.52	0.0025009	0.08235	10.910	0.00295	1.46993	1.9286
185	68.15527	157.56	10.239	57723.20	0.0025798	0.08025	10.191	0.00290	1.46323	1.8582
190	67.26734	153.34	9.974	53144.06	0.0026671	0.07815	9.541	0.00284	1.45642	1.7975
195	66.36043	149.02	9.710	48762.25	0.0027642	0.07603	8.953	0.00278	1.44948	1.7462
200	65.43214	144.58	9.447	44571.30	0.0028728	0.07391	8.422	0.00272	1.44241	1.7039
205	64.47969	140.02	9.184	40565.11	0.0029950	0.07177	7.940	0.00265	1.43517	1.6702
210	63.49980	135.34	8.922	36738.05	0.0031334	0.06961	7.502	0.00259	1.42775	1.6453
215	62.48857	130.52	8.660	33085.03	0.0032914	0.06745	7.105	0.00251	1.42012	1.6290
220	61.44132	125.55	8.396	29601.68	0.0034734	0.06527	6.742	0.00244	1.41224	1.6217
225	60.35238	120.44	8.130	26284.48	0.0036850	0.06307	6.411	0.00235	1.40409	1.6240
230	59.21476	115.17	7.856	23131.11	0.0039339	0.06085	6.106	0.00227	1.39560	1.6367
235	58.00568	110.91	7.386	20121.55	0.0042359	0.05858	5.832	0.00215	1.38661	1.6836
240	56.74292	105.43	7.079	17386.43	0.0045636	0.05631	5.618	0.00206	1.37727	1.7282
245	55.40097	99.71	6.791	14755.76	0.0050055	0.05400	5.399	0.00195	1.36739	1.7964
250	53.96065	93.66	6.464	12282.40	0.0055474	0.05165	5.173	0.00184	1.35684	1.8734
255	52.39424	87.40	6.115	9972.00	0.0062619	0.04923	4.937	0.00172	1.34542	1.9757
260	50.66116	80.69	5.716	7805.33	0.0072441	0.04672	4.687	0.00158	1.33287	2.1109
265	48.68989	73.35	5.269	5794.69	0.0086926	0.04407	4.418	0.00142	1.31869	2.3011
270	46.36953	65.38	4.767	3984.24	0.0110244	0.04120	4.119	0.00123	1.30213	2.5944
275	43.41376	56.51	4.223	2345.50	0.0158699	0.03999	3.765	0.00103	1.28123	3.0436
280	39.01043	45.33	3.411	953.90	0.0301028	0.03963	3.291	0.00074	1.25052	4.0798
285	27.17599	33.19	2.291	112.14	0.1441473	0.04122	2.286	0.00032	1.17048	9.5522
290	18.32127	34.62	2.376	241.79	0.0410181	0.02701	1.739	0.00104	1.11292	3.2921
295	15.71103	37.19	2.462	341.13	0.0239249	0.02216	1.609	0.00159	1.09633	2.3252
300	14.20456	39.26	2.467	408.44	0.0172827	0.01989	1.542	0.00206	1.08683	1.8932
310	12.33437	43.41	2.495	499.34	0.0116988	0.01788	1.471	0.00285	1.07511	1.5041
320	11.13111	47.16	2.498	558.97	0.0090939	0.01694	1.436	0.00355	1.06762	1.3086
330	10.24778	50.70	2.495	602.39	0.0075576	0.01643	1.417	0.00418	1.06214	1.1902
340	9.55371	54.10	2.489	635.84	0.0065295	0.01613	1.408	0.00478	1.05785	1.1101
350	8.98479	57.38	2.480	662.54	0.0057861	0.01596	1.405	0.00535	1.05435	1.0521
360	8.50473	60.57	2.471	684.42	0.0052197	0.01587	1.406	0.00590	1.05139	1.0080
370	8.09096	63.67	2.462	702.69	0.0047716	0.01583	1.410	0.00644	1.04885	0.9745
380	7.72851	66.71	2.452	718.18	0.0044067	0.01582	1.416	0.00696	1.04663	0.9474
390	7.40690	69.68	2.443	731.47	0.0041029	0.01585	1.425	0.00749	1.04466	0.9249
400	7.11855	72.60	2.434	742.98	0.0038454	0.01591	1.434	0.00800	1.04290	0.9061
410	6.85778	75.47	2.426	753.03	0.0036240	0.01598	1.445	0.00852	1.04130	0.8900
420	6.62022	78.30	2.418	761.87	0.0034312	0.01608	1.456	0.00904	1.03985	0.8761
430	6.40246	81.09	2.411	769.70	0.0032616	0.01618	1.469	0.00956	1.03853	0.8640
440	6.20176	83.84	2.404	776.67	0.0031110	0.01630	1.482	0.01008	1.03730	0.8534
450	6.01592	86.56	2.397	782.90	0.0029763	0.01643	1.495	0.01060	1.03617	0.8441
460	5.84311	89.26	2.391	788.50	0.0028550	0.01656	1.509	0.01112	1.03512	0.8358
470	5.68182	91.94	2.385	793.56	0.0027450	0.01670	1.523	0.01165	1.03414	0.8284
480	5.53079	94.59	2.379	798.13	0.0026447	0.01685	1.538	0.01218	1.03322	0.8217
490	5.38894	97.23	2.373	802.29	0.0025529	0.01700	1.552	0.01271	1.03236	0.8158
500	5.25536	99.85	2.367	806.08	0.0024685	0.01716	1.567	0.01325	1.03155	0.8105
510	5.12925	102.46	2.362	809.55	0.0023904	0.01728	1.582	0.01376	1.03079	0.8071
520	5.00992	105.06	2.356	812.73	0.0023181	0.01746	1.597	0.01431	1.03006	0.8023
530	4.89679	107.65	2.351	815.65	0.0022509	0.01763	1.613	0.01486	1.02938	0.7980
540	4.78932	110.23	2.345	818.34	0.0021881	0.01780	1.628	0.01541	1.02873	0.7941
550	4.68705	112.81	2.340	820.83	0.0021294	0.01798	1.644	0.01597	1.02811	0.7906
560	4.58958	115.39	2.335	823.14	0.0020742	0.01816	1.659	0.01653	1.02752	0.7874
570	4.49654	117.97	2.329	825.28	0.0020224	0.01833	1.675	0.01709	1.02695	0.7846
580	4.40761	120.55	2.324	827.28	0.0019735	0.01851	1.690	0.01765	1.02642	0.7821
590	4.32248	123.13	2.318	829.13	0.0019273	0.01869	1.706	0.01822	1.02590	0.7798
600	4.24091	125.71	2.313	830.87	0.0018836	0.01887	1.722	0.01879	1.02541	0.7778

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

850 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.038	0.01223	2143.05	318.3	-83.083	-81.159	0.50255	0.267	0.396	3842
100	0.01225	2124.67	315.9	-82.706	-80.778	0.50638	0.266	0.396	3831
105	0.01236	2030.73	303.3	-80.744	-78.798	0.52570	0.261	0.396	3775
110	0.01248	1939.45	291.0	-78.783	-76.819	0.54411	0.257	0.396	3718
115	0.01259	1850.75	279.2	-76.823	-74.840	0.56170	0.253	0.396	3659
120	0.01272	1764.59	267.7	-74.864	-72.863	0.57853	0.250	0.396	3599
125	0.01284	1680.89	256.6	-72.906	-70.885	0.59468	0.246	0.396	3539
130	0.01297	1599.61	245.9	-70.948	-68.907	0.61020	0.243	0.396	3476
135	0.01310	1520.69	235.5	-68.989	-66.928	0.62513	0.239	0.396	3413
140	0.01323	1444.07	225.5	-67.031	-64.948	0.63953	0.236	0.396	3349
145	0.01337	1369.68	215.8	-65.071	-62.966	0.65344	0.233	0.397	3284
150	0.01352	1297.47	206.4	-63.109	-60.982	0.66689	0.230	0.397	3218
155	0.01366	1227.38	197.4	-61.145	-58.994	0.67993	0.228	0.398	3152
160	0.01382	1159.36	188.6	-59.178	-57.003	0.69257	0.225	0.399	3084
165	0.01397	1093.34	180.1	-57.206	-55.007	0.70485	0.223	0.400	3016
170	0.01414	1029.26	172.0	-55.231	-53.005	0.71680	0.220	0.401	2947
175	0.01431	967.07	164.0	-53.249	-50.997	0.72845	0.218	0.402	2877
180	0.01448	906.71	156.4	-51.260	-48.980	0.73981	0.216	0.404	2807
185	0.01467	848.13	149.0	-49.262	-46.953	0.75092	0.213	0.406	2735
190	0.01486	791.26	141.8	-47.255	-44.915	0.76179	0.211	0.409	2663
195	0.01507	736.06	134.9	-45.235	-42.864	0.77245	0.209	0.412	2591
200	0.01528	682.46	128.1	-43.202	-40.797	0.78292	0.207	0.415	2517
205	0.01550	630.42	121.6	-41.152	-38.711	0.79322	0.205	0.419	2443
210	0.01574	579.90	115.2	-39.082	-36.604	0.80338	0.203	0.424	2367
215	0.01600	530.84	109.0	-36.989	-34.471	0.81342	0.201	0.429	2290
220	0.01627	483.21	102.9	-34.868	-32.308	0.82336	0.199	0.436	2212
225	0.01656	436.98	97.0	-32.715	-30.108	0.83324	0.197	0.443	2132
230	0.01688	392.14	91.1	-30.523	-27.866	0.84309	0.196	0.453	2050
235	0.01723	348.38	85.4	-28.254	-25.542	0.85309	0.199	0.469	1951
240	0.01761	307.94	79.5	-25.936	-23.164	0.86310	0.198	0.480	1863
245	0.01804	267.95	74.0	-23.553	-20.714	0.87320	0.196	0.498	1775
250	0.01852	229.29	68.3	-21.088	-18.174	0.88347	0.195	0.518	1679
255	0.01907	192.08	62.6	-18.518	-15.517	0.89399	0.195	0.546	1578
260	0.01971	155.92	56.7	-15.808	-12.705	0.90491	0.195	0.582	1467
265	0.02050	120.97	50.6	-12.896	-9.669	0.91648	0.196	0.634	1345
270	0.02151	88.02	44.2	-9.696	-6.310	0.92903	0.198	0.713	1210
275	0.02294	56.30	37.7	-5.978	-2.368	0.94350	0.203	0.879	1063
280	0.02538	26.98	29.4	-1.145	2.849	0.96229	0.214	1.284	866
285	0.03399	4.97	17.9	8.755	14.105	1.00207	0.248	4.180	622
290	0.05231	11.99	10.5	20.353	28.587	1.05253	0.231	1.572	615
295	0.06179	20.64	8.5	24.792	34.518	1.07283	0.213	0.938	650
300	0.06869	27.81	7.3	27.720	38.532	1.08633	0.203	0.702	668
310	0.07947	39.71	6.0	32.002	44.510	1.10595	0.191	0.518	707
320	0.08825	49.55	5.2	35.340	49.230	1.12094	0.183	0.435	738
330	0.09598	58.20	4.6	38.214	53.321	1.13354	0.178	0.387	765
340	0.10304	66.03	4.2	40.809	57.027	1.14460	0.175	0.356	789
350	0.10964	73.27	3.9	43.217	60.474	1.15459	0.172	0.334	812
360	0.11588	80.05	3.6	45.491	63.731	1.16377	0.170	0.318	832
370	0.12186	86.46	3.4	47.665	66.845	1.17230	0.169	0.305	852
380	0.12761	92.57	3.2	49.760	69.846	1.18031	0.167	0.295	870
390	0.13319	98.43	3.0	51.792	72.755	1.18786	0.166	0.287	888
400	0.13861	104.07	2.9	53.773	75.590	1.19504	0.165	0.280	905
410	0.14391	109.53	2.8	55.711	78.361	1.20189	0.164	0.274	921
420	0.14909	114.83	2.7	57.612	81.079	1.20844	0.163	0.269	937
430	0.15418	119.99	2.5	59.483	83.752	1.21472	0.163	0.265	952
440	0.15919	125.02	2.5	61.327	86.384	1.22078	0.162	0.261	966
450	0.16413	129.94	2.4	63.148	88.982	1.22661	0.162	0.258	981
460	0.16900	134.77	2.3	64.949	91.549	1.23226	0.161	0.255	994
470	0.17381	139.50	2.2	66.733	94.090	1.23772	0.161	0.253	1008
480	0.17857	144.16	2.1	68.500	96.606	1.24302	0.160	0.251	1021
490	0.18328	148.74	2.1	70.254	99.102	1.24816	0.160	0.249	1034
500	0.18795	153.26	2.0	71.996	101.579	1.25317	0.160	0.247	1047
510	0.19258	157.72	2.0	73.728	104.039	1.25804	0.160	0.245	1059
520	0.19718	162.12	1.9	75.449	106.485	1.26279	0.160	0.244	1071
530	0.20174	166.48	1.9	77.163	108.917	1.26742	0.160	0.243	1083
540	0.20628	170.79	1.8	78.869	111.337	1.27194	0.159	0.241	1095
550	0.21079	175.06	1.8	80.569	113.746	1.27637	0.159	0.240	1106
560	0.21527	179.29	1.7	82.264	116.147	1.28069	0.159	0.240	1118
570	0.21973	183.48	1.7	83.954	118.539	1.28492	0.159	0.239	1129
580	0.22417	187.65	1.7	85.639	120.923	1.28907	0.159	0.238	1140
590	0.22859	191.78	1.6	87.322	123.301	1.29314	0.159	0.238	1150
600	0.23299	195.89	1.6	89.001	125.673	1.29712	0.160	0.237	1161

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

850 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.038	81.78731	218.13	14.604	175273.94	0.0018163	0.11205	42.820	0.00346	1.57045	5.4505
100	81.64440	217.54	14.562	173467.45	0.0018209	0.11178	42.042	0.00346	1.56930	5.3636
105	80.89943	214.48	14.342	164285.29	0.0018459	0.11034	38.238	0.00345	1.56332	4.9392
110	80.15099	211.37	14.114	155448.65	0.0018722	0.10882	34.813	0.00343	1.55732	4.5576
115	79.39875	208.22	13.880	146947.28	0.0018999	0.10722	31.729	0.00341	1.55131	4.2143
120	78.64234	205.02	13.640	138771.10	0.0019293	0.10556	28.951	0.00339	1.54528	3.9053
125	77.88136	201.76	13.395	130910.21	0.0019604	0.10384	26.449	0.00337	1.53923	3.6271
130	77.11536	198.46	13.144	123354.87	0.0019936	0.10206	24.196	0.00335	1.53315	3.3766
135	76.34385	195.10	12.890	116095.52	0.0020288	0.10024	22.167	0.00332	1.52705	3.1511
140	75.56628	191.68	12.632	109122.77	0.0020665	0.09838	20.339	0.00329	1.52091	2.9483
145	74.78203	188.20	12.371	102427.44	0.0021069	0.09647	18.692	0.00325	1.51474	2.7659
150	73.99044	184.66	12.108	96000.52	0.0021503	0.09453	17.208	0.00322	1.50852	2.6021
155	73.19075	181.04	11.842	89833.21	0.0021970	0.09256	15.871	0.00318	1.50226	2.4552
160	72.38211	177.35	11.576	83916.89	0.0022476	0.09057	14.666	0.00314	1.49595	2.3239
165	71.56358	173.59	11.309	78243.18	0.0023023	0.08855	13.580	0.00310	1.48958	2.2066
170	70.73410	169.75	11.041	72803.89	0.0023619	0.08651	12.601	0.00305	1.48314	2.1024
175	69.89246	165.82	10.774	67591.10	0.0024270	0.08445	11.717	0.00300	1.47662	2.0102
180	69.03730	161.80	10.507	62597.10	0.0024984	0.08237	10.920	0.00295	1.47002	1.9292
185	68.16707	157.69	10.241	57814.46	0.0025770	0.08028	10.200	0.00290	1.46332	1.8586
190	67.27999	153.48	9.976	53236.03	0.0026640	0.07818	9.550	0.00284	1.45652	1.7979
195	66.37403	149.16	9.712	48854.99	0.0027606	0.07607	8.962	0.00278	1.44959	1.7464
200	65.44681	144.73	9.449	44664.84	0.0028687	0.07394	8.430	0.00272	1.44252	1.7040
205	64.49557	140.18	9.187	40659.49	0.0029902	0.07180	7.947	0.00266	1.43529	1.6702
210	63.51706	135.50	8.926	36833.31	0.0031279	0.06965	7.510	0.00259	1.42788	1.6450
215	62.50743	130.69	8.664	33181.24	0.0032849	0.06749	7.112	0.00252	1.42026	1.6286
220	61.46205	125.73	8.402	29698.89	0.0034657	0.06531	6.749	0.00244	1.41240	1.6210
225	60.37531	120.63	8.136	26382.73	0.0036757	0.06312	6.418	0.00236	1.40426	1.6229
230	59.24031	115.38	7.863	23230.43	0.0039224	0.06090	6.113	0.00227	1.39579	1.6353
235	58.03445	111.13	7.392	20218.06	0.0042218	0.05864	5.837	0.00215	1.38683	1.6813
240	56.77547	105.67	7.087	17483.29	0.0045465	0.05637	5.624	0.00207	1.37751	1.7256
245	55.43840	99.97	6.799	14854.48	0.0049821	0.05407	5.406	0.00196	1.36767	1.7926
250	54.00443	93.96	5.475	12382.76	0.0055159	0.05172	5.180	0.00185	1.35716	1.8686
255	52.44654	87.73	6.129	10073.83	0.0062179	0.04932	4.945	0.00172	1.34580	1.9693
260	50.72568	81.06	5.732	7909.16	0.0071751	0.04682	4.697	0.00159	1.33334	2.1006
265	48.77323	73.81	5.291	5899.95	0.0085832	0.04418	4.429	0.00143	1.31929	2.2864
270	46.48452	65.94	4.796	4091.35	0.0108153	0.04134	4.134	0.00125	1.30294	2.5674
275	43.59506	57.23	4.263	2454.26	0.0153574	0.04002	3.787	0.00104	1.28291	2.9941
280	39.39956	46.43	3.486	1062.87	0.0276616	0.03945	3.332	0.00078	1.25322	3.9044
285	29.41649	34.13	2.449	146.13	0.1224683	0.04153	2.451	0.00034	1.18536	8.8838
290	19.11606	34.45	2.370	229.29	0.0456255	0.02833	1.784	0.00094	1.11800	3.5641
295	16.18338	36.99	2.463	334.06	0.0253689	0.02278	1.634	0.00150	1.09932	2.4227
300	14.55819	39.05	2.470	404.84	0.0179894	0.02027	1.560	0.00198	1.08905	1.9463
310	12.58378	43.22	2.499	499.70	0.0119900	0.01810	1.484	0.00278	1.07667	1.5296
320	11.33158	46.97	2.503	561.50	0.0092563	0.01710	1.446	0.00347	1.06887	1.3241
330	10.41875	50.53	2.500	606.35	0.0076625	0.01655	1.426	0.00410	1.06320	1.2009
340	9.70456	53.93	2.494	640.81	0.0066034	0.01623	1.416	0.00470	1.05879	1.1181
350	9.12084	57.22	2.485	668.29	0.0058412	0.01605	1.412	0.00526	1.05518	1.0584
360	8.62932	60.42	2.475	690.77	0.0052624	0.01595	1.412	0.00581	1.05216	1.0131
370	8.20636	63.53	2.466	709.53	0.0048056	0.01590	1.416	0.00635	1.04956	0.9788
380	7.83632	66.57	2.456	725.42	0.0044345	0.01589	1.422	0.00687	1.04729	0.9510
390	7.50833	69.55	2.447	739.05	0.0041260	0.01591	1.430	0.00739	1.04528	0.9281
400	7.21450	72.48	2.438	750.84	0.0038649	0.01596	1.439	0.00790	1.04348	0.9089
410	6.94896	75.35	2.430	761.14	0.0036406	0.01604	1.449	0.00841	1.04186	0.8925
420	6.70721	78.19	2.422	770.20	0.0034455	0.01613	1.461	0.00893	1.04038	0.8783
430	6.48572	80.98	2.414	778.21	0.0032741	0.01623	1.473	0.00944	1.03903	0.8660
440	6.28168	83.74	2.407	785.34	0.0031219	0.01635	1.486	0.00995	1.03779	0.8553
450	6.09281	86.47	2.400	791.72	0.0029859	0.01647	1.499	0.01047	1.03664	0.8457
460	5.91726	89.17	2.394	797.45	0.0028635	0.01661	1.513	0.01099	1.03557	0.8373
470	5.75346	91.85	2.388	802.62	0.0027526	0.01674	1.527	0.01151	1.03458	0.8298
480	5.60012	94.50	2.382	807.29	0.0026516	0.01689	1.541	0.01204	1.03364	0.8230
490	5.45614	97.14	2.376	811.55	0.0025591	0.01704	1.556	0.01256	1.03277	0.8170
500	5.32058	99.77	2.370	815.42	0.0024740	0.01719	1.570	0.01309	1.03195	0.8116
510	5.19263	102.38	2.365	818.96	0.0023955	0.01732	1.585	0.01360	1.03117	0.8082
520	5.07159	104.98	2.359	822.21	0.0023227	0.01749	1.600	0.01414	1.03044	0.8033
530	4.95684	107.57	2.354	825.20	0.0022551	0.01766	1.616	0.01469	1.02974	0.7989
540	4.84786	110.16	2.348	827.96	0.0021920	0.01784	1.631	0.01524	1.02908	0.7949
550	4.74417	112.74	2.343	830.50	0.0021329	0.01801	1.646	0.01579	1.02845	0.7914
560	4.64535	115.32	2.337	832.86	0.0020775	0.01819	1.662	0.01634	1.02785	0.7882
570	4.55104	117.90	2.332	835.05	0.0020254	0.01836	1.677	0.01690	1.02728	0.7853
580	4.46089	120.48	2.327	837.08	0.0019763	0.01854	1.693	0.01745	1.02674	0.7828
590	4.37462	123.06	2.321	838.98	0.0019299	0.01872	1.709	0.01802	1.02622	0.7805
600	4.29195	125.65	2.315	840.75	0.0018860	0.01890	1.724	0.01858	1.02572	0.7784

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

860 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.052	0.01223	2143.66	318.4	-83.082	-81.135	0.50256	0.267	0.396	3842
100	0.01225	2125.56	315.9	-82.710	-80.760	0.50633	0.266	0.396	3832
105	0.01236	2031.64	303.3	-80.748	-78.779	0.52566	0.261	0.396	3776
110	0.01248	1940.36	291.1	-78.787	-76.801	0.54407	0.257	0.396	3718
115	0.01259	1851.68	279.2	-76.828	-74.822	0.56165	0.253	0.396	3660
120	0.01271	1765.53	267.8	-74.869	-72.844	0.57849	0.250	0.396	3600
125	0.01284	1681.85	256.7	-72.911	-70.867	0.59464	0.246	0.396	3539
130	0.01297	1600.59	246.0	-70.954	-68.889	0.61015	0.243	0.396	3477
135	0.01310	1521.68	235.6	-68.996	-66.910	0.62508	0.239	0.396	3414
140	0.01323	1445.07	225.6	-67.037	-64.930	0.63948	0.236	0.396	3350
145	0.01337	1370.70	215.9	-65.078	-62.949	0.65339	0.233	0.396	3285
150	0.01351	1298.51	206.5	-63.117	-60.965	0.66684	0.230	0.397	3219
155	0.01366	1228.44	197.4	-61.153	-58.978	0.67987	0.228	0.398	3153
160	0.01381	1160.44	188.7	-59.186	-56.987	0.69251	0.225	0.399	3085
165	0.01397	1094.44	180.2	-57.216	-54.991	0.70479	0.223	0.400	3017
170	0.01414	1030.38	172.0	-55.241	-52.990	0.71674	0.220	0.401	2948
175	0.01431	968.22	164.1	-53.260	-50.981	0.72838	0.218	0.402	2878
180	0.01448	907.88	156.5	-51.272	-48.965	0.73974	0.216	0.404	2808
185	0.01467	849.32	149.1	-49.275	-46.939	0.75085	0.213	0.406	2737
190	0.01486	792.48	141.9	-47.268	-44.902	0.76172	0.211	0.409	2665
195	0.01506	737.30	135.0	-45.250	-42.851	0.77237	0.209	0.412	2592
200	0.01528	683.74	128.2	-43.218	-40.785	0.78284	0.207	0.415	2519
205	0.01550	631.73	121.7	-41.169	-38.700	0.79313	0.205	0.419	2444
210	0.01574	581.24	115.3	-39.100	-36.594	0.80329	0.203	0.424	2369
215	0.01599	532.21	109.1	-37.009	-34.462	0.81332	0.201	0.429	2293
220	0.01626	484.62	103.0	-34.891	-32.300	0.82326	0.199	0.435	2215
225	0.01656	438.44	97.1	-32.740	-30.103	0.83313	0.197	0.443	2135
230	0.01687	393.64	91.2	-30.550	-27.863	0.84297	0.196	0.452	2053
235	0.01722	349.87	85.5	-28.285	-25.542	0.85295	0.199	0.469	1954
240	0.01760	309.45	79.6	-25.970	-23.167	0.86295	0.198	0.480	1866
245	0.01803	269.54	74.2	-23.592	-20.721	0.87304	0.196	0.497	1778
250	0.01850	230.96	68.5	-21.133	-18.186	0.88326	0.195	0.517	1683
255	0.01905	193.82	62.8	-18.571	-15.537	0.89377	0.195	0.544	1583
260	0.01969	157.76	57.0	-15.871	-12.736	0.90465	0.195	0.579	1473
265	0.02047	122.91	50.9	-12.977	-9.717	0.91615	0.196	0.630	1352
270	0.02146	90.09	44.6	-9.803	-6.386	0.92860	0.198	0.706	1219
275	0.02285	58.54	36.1	-6.139	-2.501	0.94286	0.202	0.861	1075
280	0.02515	29.44	30.0	-1.461	2.545	0.96104	0.213	1.218	884
285	0.03206	6.48	19.5	7.170	12.277	0.99543	0.242	3.411	650
290	0.05002	10.86	11.1	19.385	27.350	1.04793	0.234	1.749	613
295	0.05995	19.59	8.8	24.220	33.767	1.06990	0.214	0.992	648
300	0.06701	26.87	7.5	27.293	37.964	1.08402	0.204	0.728	667
310	0.07789	38.94	6.1	31.703	44.107	1.10418	0.191	0.529	707
320	0.08669	48.89	5.3	35.102	48.908	1.11943	0.184	0.441	737
330	0.09442	57.62	4.7	38.013	53.048	1.13218	0.179	0.391	764
340	0.10145	65.51	4.3	40.633	56.789	1.14335	0.175	0.359	789
350	0.10802	72.80	4.0	43.060	60.261	1.15341	0.172	0.337	811
360	0.11423	79.63	3.7	45.348	63.539	1.16265	0.170	0.320	832
370	0.12016	86.08	3.5	47.534	66.669	1.17122	0.169	0.307	852
380	0.12587	92.22	3.3	49.638	69.684	1.17926	0.167	0.296	870
390	0.13140	98.11	3.1	51.679	72.605	1.18685	0.166	0.288	888
400	0.13679	103.78	2.9	53.667	75.450	1.19405	0.165	0.281	905
410	0.14204	109.26	2.8	55.611	78.230	1.20092	0.164	0.275	921
420	0.14718	114.58	2.7	57.518	80.956	1.20749	0.163	0.270	937
430	0.15223	119.76	2.6	59.393	83.635	1.21379	0.163	0.266	952
440	0.15719	124.81	2.5	61.241	86.274	1.21986	0.162	0.262	966
450	0.16208	129.75	2.4	63.066	88.877	1.22571	0.162	0.259	981
460	0.16690	134.59	2.3	64.871	91.450	1.23136	0.161	0.256	995
470	0.17167	139.34	2.2	66.657	93.995	1.23684	0.161	0.253	1008
480	0.17638	144.01	2.2	68.428	96.516	1.24215	0.161	0.251	1021
490	0.18105	148.60	2.1	70.184	99.016	1.24730	0.160	0.249	1034
500	0.18567	153.13	2.0	71.929	101.496	1.25231	0.160	0.247	1047
510	0.19026	157.60	2.0	73.662	103.960	1.25719	0.160	0.246	1059
520	0.19481	162.02	1.9	75.386	106.409	1.26194	0.160	0.244	1071
530	0.19933	166.39	1.9	77.101	108.844	1.26658	0.160	0.243	1083
540	0.20381	170.71	1.8	78.809	111.267	1.27111	0.159	0.242	1095
550	0.20828	174.99	1.8	80.511	113.679	1.27554	0.159	0.241	1107
560	0.21271	179.23	1.8	82.207	116.082	1.27987	0.159	0.240	1118
570	0.21713	183.43	1.7	83.898	118.476	1.28410	0.159	0.239	1129
580	0.22152	187.61	1.7	85.585	120.862	1.28826	0.159	0.238	1140
590	0.22590	191.75	1.6	87.268	123.242	1.29232	0.159	0.238	1151
600	0.23026	195.86	1.6	88.949	125.617	1.29631	0.160	0.237	1161

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

860 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^9	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.052	81.78988	218.18	14.603	175329.68	0.0018157	0.11206	42.835	0.00346	1.57047	5.4518
100	81.64911	217.61	14.563	173549.91	0.0018203	0.11179	42.068	0.00346	1.56934	5.3661
105	80.90435	214.54	14.342	164368.16	0.0018452	0.11035	38.262	0.00345	1.56336	4.9416
110	80.15614	211.44	14.115	155531.93	0.0018715	0.10883	34.835	0.00343	1.55736	4.5598
115	79.40415	208.29	13.881	147030.98	0.0018992	0.10723	31.750	0.00341	1.55135	4.2163
120	78.64801	205.09	13.640	138855.24	0.0019285	0.10557	28.971	0.00339	1.54532	3.9072
125	77.88731	201.84	13.395	130994.79	0.0019595	0.10385	26.468	0.00337	1.53927	3.6288
130	77.12161	198.54	13.145	123439.91	0.0019926	0.10208	24.214	0.00335	1.53320	3.3782
135	76.35042	195.18	12.890	116181.02	0.0020278	0.10026	22.183	0.00332	1.52710	3.1526
140	75.57320	191.77	12.632	109208.76	0.0020654	0.09839	20.354	0.00329	1.52096	2.9497
145	74.78933	188.29	12.372	102513.93	0.0021057	0.09649	18.707	0.00325	1.51479	2.7672
150	73.99814	184.75	12.108	96087.53	0.0021489	0.09455	17.222	0.00322	1.50858	2.6033
155	73.19889	181.14	11.843	89920.74	0.0021956	0.09258	15.884	0.00318	1.50233	2.4563
160	72.39073	177.45	11.577	84004.98	0.0022459	0.09059	14.679	0.00314	1.49602	2.3248
165	71.57272	173.70	11.310	78331.84	0.0023005	0.08857	13.592	0.00310	1.48965	2.2075
170	70.74381	169.86	11.042	72893.15	0.0023599	0.08653	12.612	0.00305	1.48321	2.1032
175	69.90279	165.93	10.775	67680.98	0.0024248	0.08448	11.728	0.00300	1.47670	2.0109
180	69.04832	161.92	10.509	62687.63	0.0024959	0.08240	10.930	0.00295	1.47010	1.9298
185	68.17885	157.82	10.243	57905.67	0.0025742	0.08031	10.210	0.00290	1.46341	1.8591
190	67.29262	153.61	9.978	53327.96	0.0026608	0.07821	9.559	0.00284	1.45661	1.7982
195	66.38760	149.30	9.715	48947.66	0.0027570	0.07610	8.970	0.00278	1.44969	1.7467
200	65.46144	144.87	9.452	44758.30	0.0028646	0.07398	8.438	0.00272	1.44263	1.7041
205	64.51141	140.33	9.191	40753.78	0.0029855	0.07184	7.955	0.00266	1.43541	1.6701
210	63.53428	135.66	8.930	36928.49	0.0031224	0.06969	7.517	0.00259	1.42801	1.6448
215	62.52624	130.86	8.669	33277.36	0.0032785	0.06753	7.119	0.00252	1.42040	1.6281
220	61.48271	125.92	8.407	29795.98	0.0034580	0.06536	6.756	0.00244	1.41255	1.6203
225	60.39815	120.83	8.142	26480.85	0.0036664	0.06317	6.424	0.00236	1.40443	1.6219
230	59.26576	115.59	7.870	23329.62	0.0039111	0.06096	6.120	0.00228	1.39598	1.6339
235	58.06309	111.35	7.399	20314.48	0.0042079	0.05869	5.842	0.00216	1.38704	1.6789
240	56.80787	105.91	7.095	17580.00	0.0045297	0.05643	5.630	0.00207	1.37775	1.7230
245	55.47561	100.23	6.808	14952.99	0.0049591	0.05413	5.412	0.00196	1.36794	1.7890
250	54.04788	94.26	6.486	12482.86	0.0054850	0.05180	5.187	0.00185	1.35748	1.8639
255	52.49836	88.07	6.143	10175.33	0.0061749	0.04940	4.953	0.00173	1.34618	1.9630
260	50.78944	81.44	5.747	8012.60	0.0071081	0.04691	4.706	0.00160	1.33380	2.0906
265	48.85524	74.26	5.313	6004.75	0.0084776	0.04429	4.441	0.00144	1.31987	2.2723
270	46.59682	66.49	4.824	4197.79	0.0106169	0.04148	4.148	0.00126	1.30374	2.5416
275	43.76924	57.93	4.301	2562.10	0.0148703	0.04005	3.808	0.00106	1.28373	2.9482
280	39.75420	47.47	3.555	1170.46	0.0256690	0.03932	3.369	0.00081	1.25568	3.7577
285	31.18692	35.43	2.576	202.08	0.0962671	0.04136	2.590	0.00039	1.19720	7.6903
290	19.99245	34.31	2.366	217.09	0.0509685	0.02975	1.835	0.00085	1.12363	3.8842
295	16.68067	36.79	2.464	326.74	0.0269553	0.02345	1.661	0.00142	1.10247	2.5290
300	14.92401	38.84	2.474	401.01	0.0187429	0.02067	1.580	0.00190	1.09136	2.0026
310	12.83808	43.03	2.504	499.95	0.0122920	0.01832	1.497	0.00270	1.07826	1.5560
320	11.53475	46.79	2.508	563.95	0.0094226	0.01725	1.456	0.00339	1.07013	1.3400
330	10.59144	50.35	2.505	610.25	0.0077693	0.01667	1.435	0.00402	1.06427	1.2118
340	9.85660	53.77	2.498	645.74	0.0066783	0.01633	1.423	0.00462	1.05972	1.1262
350	9.25776	57.07	2.490	674.00	0.0058968	0.01614	1.418	0.00518	1.05603	1.0647
360	8.75458	60.27	2.480	697.09	0.0053054	0.01603	1.418	0.00573	1.05293	1.0182
370	8.32228	63.39	2.470	716.35	0.0048399	0.01597	1.421	0.00625	1.05027	0.9831
380	7.94455	66.44	2.460	732.64	0.0044624	0.01595	1.427	0.00677	1.04795	0.9547
390	7.61009	69.43	2.451	746.61	0.0041492	0.01597	1.435	0.00729	1.04590	0.9313
400	7.31072	72.36	2.442	758.69	0.0038845	0.01602	1.444	0.00780	1.04407	0.9117
410	7.04037	75.24	2.433	769.24	0.0036573	0.01609	1.454	0.00831	1.04242	0.8950
420	6.79439	78.08	2.425	778.51	0.0034599	0.01618	1.465	0.00881	1.04092	0.8806
430	6.56914	80.87	2.418	786.71	0.0032865	0.01628	1.477	0.00932	1.03954	0.8681
440	6.36173	83.64	2.410	794.01	0.0031329	0.01639	1.490	0.00983	1.03828	0.8571
450	6.16983	86.37	2.403	800.53	0.0029956	0.01652	1.503	0.01035	1.03711	0.8474
460	5.99151	89.07	2.397	806.39	0.0028720	0.01665	1.516	0.01086	1.03602	0.8388
470	5.82519	91.76	2.391	811.67	0.0027602	0.01678	1.530	0.01138	1.03501	0.8312
480	5.66953	94.42	2.385	816.45	0.0026584	0.01693	1.544	0.01190	1.03407	0.8243
490	5.52341	97.06	2.379	820.80	0.0025652	0.01708	1.559	0.01242	1.03318	0.8182
500	5.38586	99.69	2.373	824.76	0.0024796	0.01723	1.574	0.01294	1.03234	0.8127
510	5.25606	102.30	2.367	828.38	0.0024006	0.01735	1.588	0.01344	1.03155	0.8092
520	5.13329	104.90	2.362	831.70	0.0023273	0.01752	1.603	0.01398	1.03081	0.8043
530	5.01692	107.50	2.356	834.75	0.0022593	0.01769	1.619	0.01452	1.03010	0.7998
540	4.90642	110.09	2.351	837.57	0.0021958	0.01787	1.634	0.01506	1.02943	0.7958
550	4.80130	112.67	2.346	840.17	0.0021364	0.01804	1.649	0.01561	1.02880	0.7922
560	4.70114	115.26	2.340	842.57	0.0020808	0.01822	1.665	0.01616	1.02819	0.7889
570	4.60554	117.84	2.335	844.81	0.0020284	0.01839	1.680	0.01671	1.02761	0.7860
580	4.51419	120.42	2.329	846.89	0.0019791	0.01857	1.696	0.01726	1.02706	0.7834
590	4.42677	123.00	2.324	848.83	0.0019325	0.01875	1.711	0.01782	1.02653	0.7811
600	4.34301	125.58	2.318	850.64	0.0018884	0.01892	1.727	0.01837	1.02603	0.7790

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

870 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.067	0.01223	2144.27	318.4	-83.080	-81.111	0.50258	0.267	0.396	3843
100	0.01225	2126.45	316.0	-82.714	-80.741	0.50629	0.266	0.396	3832
105	0.01236	2032.54	303.3	-80.752	-78.761	0.52561	0.261	0.396	3776
110	0.01247	1941.28	291.1	-78.792	-76.782	0.54402	0.257	0.396	3719
115	0.01259	1852.61	279.3	-76.833	-74.804	0.56161	0.253	0.396	3661
120	0.01271	1766.47	267.8	-74.875	-72.826	0.57844	0.250	0.395	3601
125	0.01284	1682.81	256.7	-72.917	-70.849	0.59459	0.246	0.395	3540
130	0.01297	1601.56	246.0	-70.960	-68.871	0.61010	0.243	0.396	3478
135	0.01310	1522.67	235.6	-69.002	-66.893	0.62503	0.239	0.396	3415
140	0.01323	1446.08	225.6	-67.044	-64.913	0.63943	0.236	0.396	3351
145	0.01337	1371.73	215.9	-65.085	-62.931	0.65334	0.233	0.396	3286
150	0.01351	1299.55	206.5	-63.124	-60.948	0.66679	0.230	0.397	3220
155	0.01366	1229.50	197.5	-61.161	-58.961	0.67982	0.228	0.398	3154
160	0.01381	1161.52	188.7	-59.195	-56.970	0.69245	0.225	0.398	3086
165	0.01397	1095.54	180.3	-57.226	-54.975	0.70473	0.223	0.400	3018
170	0.01413	1031.50	172.1	-55.251	-52.974	0.71668	0.220	0.401	2949
175	0.01430	969.36	164.2	-53.271	-50.966	0.72832	0.218	0.402	2879
180	0.01448	909.05	156.5	-51.283	-48.950	0.73968	0.216	0.404	2809
185	0.01466	850.51	149.1	-49.287	-46.925	0.75078	0.213	0.406	2738
190	0.01486	793.70	142.0	-47.282	-44.888	0.76164	0.211	0.409	2666
195	0.01506	738.55	135.0	-45.264	-42.838	0.77229	0.209	0.411	2594
200	0.01527	685.01	128.3	-43.233	-40.773	0.78276	0.207	0.415	2520
205	0.01550	633.04	121.8	-41.186	-38.689	0.79305	0.205	0.419	2446
210	0.01574	582.58	115.4	-39.119	-36.584	0.80320	0.203	0.423	2371
215	0.01599	533.59	109.2	-37.029	-34.453	0.81322	0.201	0.429	2295
220	0.01626	486.04	103.1	-34.913	-32.293	0.82315	0.199	0.435	2217
225	0.01655	439.89	97.2	-32.764	-30.098	0.83302	0.197	0.443	2137
230	0.01687	395.15	91.4	-30.577	-27.860	0.84285	0.196	0.452	2056
235	0.01721	351.36	85.6	-28.315	-25.542	0.85282	0.199	0.468	1957
240	0.01759	310.99	79.8	-26.004	-23.170	0.86281	0.198	0.479	1869
245	0.01801	271.13	74.3	-23.631	-20.729	0.87287	0.196	0.496	1782
250	0.01849	232.62	68.6	-21.177	-18.199	0.88309	0.195	0.516	1687
255	0.01903	195.56	63.0	-18.623	-15.557	0.89356	0.195	0.542	1588
260	0.01966	159.59	57.2	-15.935	-12.767	0.90439	0.195	0.576	1478
265	0.02043	124.84	51.2	-13.056	-9.764	0.91583	0.196	0.626	1359
270	0.02141	92.14	44.9	-9.909	-6.459	0.92819	0.198	0.699	1228
275	0.02276	60.75	38.5	-6.295	-2.628	0.94224	0.202	0.845	1086
280	0.02495	31.86	30.7	-1.752	2.268	0.95988	0.211	1.163	902
285	0.03073	8.36	20.8	5.972	10.922	0.99048	0.237	2.817	679
290	0.04771	9.82	11.7	18.333	26.019	1.04303	0.237	1.951	612
295	0.05812	18.55	9.2	23.621	32.984	1.06687	0.216	1.051	647
300	0.06535	25.94	7.8	26.854	37.361	1.08166	0.205	0.755	666
310	0.07635	36.18	6.3	31.399	43.699	1.10241	0.192	0.540	705
320	0.08517	48.23	5.4	34.861	48.583	1.11792	0.184	0.447	737
330	0.09289	57.04	4.8	37.810	52.774	1.13082	0.179	0.395	764
340	0.09990	65.00	4.4	40.456	56.550	1.14209	0.175	0.362	788
350	0.10643	72.34	4.0	42.902	60.048	1.15224	0.173	0.339	811
360	0.11261	79.21	3.8	45.205	63.346	1.16153	0.171	0.322	832
370	0.11850	85.69	3.5	47.402	66.493	1.17015	0.169	0.308	852
380	0.12417	91.87	3.3	49.517	69.521	1.17823	0.167	0.298	870
390	0.12966	97.79	3.1	51.565	72.454	1.18585	0.166	0.289	888
400	0.13500	103.48	3.0	53.560	75.309	1.19307	0.165	0.282	905
410	0.14021	108.99	2.9	55.510	78.099	1.19996	0.164	0.276	921
420	0.14531	114.33	2.7	57.423	80.832	1.20655	0.164	0.271	937
430	0.15031	119.53	2.6	59.303	83.519	1.21287	0.163	0.266	952
440	0.15523	124.60	2.5	61.155	86.164	1.21895	0.162	0.263	967
450	0.16008	129.56	2.4	62.984	88.773	1.22481	0.162	0.259	981
460	0.16486	134.41	2.3	64.792	91.351	1.23048	0.161	0.256	995
470	0.16958	139.18	2.3	66.581	93.901	1.23596	0.161	0.254	1008
480	0.17425	143.86	2.2	68.355	96.426	1.24128	0.161	0.251	1021
490	0.17887	148.47	2.1	70.114	98.930	1.24644	0.160	0.249	1034
500	0.18345	153.01	2.1	71.861	101.414	1.25146	0.160	0.248	1047
510	0.18799	157.49	2.0	73.596	103.881	1.25635	0.160	0.246	1060
520	0.19249	161.92	2.0	75.322	106.333	1.26111	0.160	0.244	1072
530	0.19697	166.30	1.9	77.040	108.771	1.26575	0.160	0.243	1084
540	0.20141	170.63	1.9	78.749	111.197	1.27029	0.159	0.242	1095
550	0.20583	174.92	1.8	80.453	113.611	1.27472	0.159	0.241	1107
560	0.21022	179.17	1.8	82.150	116.017	1.27905	0.159	0.240	1118
570	0.21459	183.38	1.7	83.842	118.413	1.28329	0.159	0.239	1129
580	0.21894	187.56	1.7	85.531	120.802	1.28745	0.159	0.239	1140
590	0.22327	191.72	1.7	87.215	123.184	1.29152	0.159	0.238	1151
600	0.22758	195.84	1.6	88.897	125.560	1.29551	0.160	0.237	1162

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

870 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.067	81.79244	218.24	14.603	175385.42	0.0018152	0.11206	42.849	0.00346	1.57050	5.4531
100	81.65381	217.67	14.563	173632.37	0.0018197	0.11180	42.093	0.00346	1.56938	5.3686
105	80.90927	214.61	14.342	164451.01	0.0018445	0.11036	38.286	0.00345	1.56340	4.9439
110	80.16130	211.51	14.115	155615.19	0.0018707	0.10884	34.858	0.00343	1.55740	4.5620
115	79.40955	208.36	13.881	147114.67	0.0018984	0.10725	31.771	0.00341	1.55140	4.2184
120	78.65367	205.16	13.641	138939.36	0.0019276	0.10559	28.990	0.00339	1.54537	3.9090
125	77.89325	201.92	13.395	131079.36	0.0019587	0.10387	26.486	0.00337	1.53932	3.6306
130	77.12786	198.62	13.145	123524.93	0.0019916	0.10210	24.231	0.00335	1.53325	3.3798
135	76.35699	195.27	12.891	116266.51	0.0020267	0.10028	22.200	0.00332	1.52715	3.1541
140	75.58012	191.85	12.633	109294.73	0.0020642	0.09841	20.370	0.00329	1.52102	2.9510
145	74.79662	188.38	12.372	102600.40	0.0021044	0.09651	18.721	0.00325	1.51485	2.7685
150	74.00584	184.84	12.109	96174.51	0.0021476	0.09457	17.236	0.00322	1.50864	2.6045
155	73.20703	181.24	11.844	90008.25	0.0021941	0.09261	15.897	0.00318	1.50239	2.4574
160	72.39934	177.56	11.578	84093.04	0.0022443	0.09061	14.691	0.00314	1.49608	2.3258
165	71.58185	173.80	11.311	78420.47	0.0022987	0.08860	13.603	0.00310	1.48972	2.2084
170	70.75351	169.97	11.044	72982.37	0.0023579	0.08656	12.623	0.00305	1.48329	2.1040
175	69.91311	166.05	10.777	67770.82	0.0024226	0.08450	11.738	0.00300	1.47678	2.0116
180	69.05932	162.04	10.510	62778.11	0.0024934	0.08243	10.940	0.00295	1.47019	1.9304
185	68.19061	157.94	10.245	57996.83	0.0025714	0.08034	10.219	0.00290	1.46350	1.8596
190	67.30523	153.74	9.980	53419.82	0.0026577	0.07825	9.568	0.00285	1.45671	1.7986
195	66.40115	149.44	9.717	49040.27	0.0027535	0.07614	8.979	0.00279	1.44979	1.7469
200	65.47606	145.02	9.455	44851.69	0.0028605	0.07401	8.446	0.00272	1.44274	1.7042
205	64.52723	140.48	9.194	40848.01	0.0029808	0.07188	7.963	0.00266	1.43553	1.6701
210	63.55147	135.82	8.933	37023.59	0.0031169	0.06973	7.525	0.00259	1.42814	1.6446
215	62.54501	131.03	8.673	33373.38	0.0032720	0.06758	7.126	0.00252	1.42054	1.6277
220	61.50332	126.10	8.412	29892.97	0.0034504	0.06540	6.763	0.00244	1.41271	1.6196
225	60.42092	121.02	8.147	26578.86	0.0036572	0.06322	6.431	0.00236	1.40460	1.6210
230	59.29111	115.79	7.877	23428.67	0.0038999	0.06101	6.127	0.00228	1.39617	1.6325
235	58.09161	111.57	7.406	20410.82	0.0041940	0.05875	5.847	0.00216	1.38725	1.6766
240	56.84010	106.15	7.104	17676.56	0.0045131	0.05649	5.635	0.00207	1.37799	1.7205
245	55.51260	100.50	6.817	15051.29	0.0049364	0.05420	5.418	0.00197	1.36821	1.7853
250	54.09102	94.55	6.496	12582.71	0.0054546	0.05187	5.194	0.00186	1.35779	1.8592
255	52.54973	88.40	6.156	10276.51	0.0061327	0.04948	4.961	0.00174	1.34655	1.9568
260	50.85246	81.81	5.762	8115.64	0.0070429	0.04701	4.716	0.00160	1.33425	2.0809
265	48.93597	74.71	5.334	6109.11	0.0083757	0.04441	4.452	0.00145	1.32045	2.2586
270	46.70657	67.03	4.852	4303.61	0.0104284	0.04162	4.163	0.00127	1.30452	2.5171
275	43.93692	58.62	4.339	2669.07	0.0144230	0.04010	3.828	0.00108	1.28491	2.9055
280	40.08059	48.45	3.621	1276.82	0.0240074	0.03923	3.404	0.00084	1.25794	3.6327
285	32.54618	36.82	2.702	271.94	0.0764950	0.04096	2.702	0.00045	1.20636	6.6902
290	20.96127	34.22	2.363	205.88	0.0570050	0.03123	1.893	0.00076	1.12987	4.2579
295	17.20522	36.61	2.465	319.21	0.0286969	0.02417	1.690	0.00134	1.10580	2.6449
300	15.30277	38.64	2.477	396.98	0.0195470	0.02109	1.600	0.00182	1.09375	2.0624
310	13.09741	42.85	2.509	500.08	0.0126050	0.01855	1.510	0.00262	1.07988	1.5834
320	11.74067	46.61	2.513	566.31	0.0095930	0.01741	1.467	0.00332	1.07141	1.3563
330	10.76587	50.18	2.510	614.08	0.0078779	0.01679	1.443	0.00395	1.06535	1.2230
340	10.00984	53.60	2.503	650.62	0.0067542	0.01644	1.431	0.00454	1.06067	1.1345
350	9.39555	56.91	2.494	679.67	0.0059530	0.01623	1.425	0.00510	1.05688	1.0711
360	8.88050	60.12	2.484	703.38	0.0053488	0.01611	1.424	0.00564	1.05370	1.0234
370	8.43872	63.25	2.474	723.14	0.0048744	0.01604	1.427	0.00617	1.05099	0.9874
380	8.05320	66.31	2.464	739.84	0.0044905	0.01602	1.432	0.00668	1.04862	0.9584
390	7.71218	69.30	2.455	754.15	0.0041725	0.01604	1.440	0.00719	1.04653	0.9345
400	7.40722	72.24	2.446	766.52	0.0039041	0.01608	1.448	0.00770	1.04466	0.9145
410	7.13201	75.12	2.437	777.32	0.0036740	0.01615	1.458	0.00820	1.04298	0.8975
420	6.88176	77.97	2.429	786.81	0.0034743	0.01623	1.469	0.00871	1.04145	0.8828
430	6.65272	80.77	2.421	795.20	0.0032990	0.01633	1.481	0.00921	1.04005	0.8701
440	6.44192	83.54	2.414	802.66	0.0031438	0.01644	1.493	0.00972	1.03877	0.8589
450	6.24696	86.27	2.407	809.33	0.0030052	0.01656	1.506	0.01022	1.03758	0.8491
460	6.06586	88.98	2.400	815.32	0.0028806	0.01669	1.520	0.01073	1.03648	0.8404
470	5.89700	91.67	2.394	820.72	0.0027678	0.01683	1.534	0.01125	1.03545	0.8326
480	5.73901	94.33	2.388	825.61	0.0026652	0.01697	1.548	0.01176	1.03449	0.8256
490	5.59073	96.98	2.382	830.05	0.0025714	0.01711	1.562	0.01228	1.03359	0.8194
500	5.45119	99.61	2.376	834.10	0.0024851	0.01727	1.577	0.01280	1.03274	0.8138
510	5.31953	102.22	2.370	837.80	0.0024056	0.01739	1.592	0.01329	1.03194	0.8103
520	5.19503	104.83	2.365	841.19	0.0023319	0.01756	1.606	0.01382	1.03118	0.8053
530	5.07704	107.43	2.359	844.30	0.0022635	0.01773	1.622	0.01436	1.03047	0.8007
540	4.96502	110.02	2.354	847.18	0.0021997	0.01790	1.637	0.01490	1.02979	0.7967
550	4.85846	112.60	2.348	849.83	0.0021400	0.01807	1.652	0.01544	1.02914	0.7930
560	4.75694	115.19	2.343	852.29	0.0020840	0.01825	1.667	0.01598	1.02853	0.7897
570	4.66007	117.77	2.338	854.58	0.0020314	0.01842	1.683	0.01652	1.02794	0.7867
580	4.56750	120.35	2.332	856.70	0.0019819	0.01860	1.698	0.01707	1.02738	0.7841
590	4.47892	122.94	2.326	858.68	0.0019351	0.01878	1.714	0.01762	1.02685	0.7817
600	4.39407	125.52	2.321	860.53	0.0018908	0.01895	1.729	0.01817	1.02633	0.7796

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

880 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.081	0.01223	2144.89	318.4	-83.079	-81.087	0.50259	0.267	0.396	3843
100	0.01225	2127.33	316.0	-82.718	-80.722	0.50625	0.266	0.396	3833
105	0.01236	2033.44	303.4	-80.756	-78.743	0.52557	0.261	0.396	3777
110	0.01247	1942.19	291.2	-78.796	-76.764	0.54398	0.257	0.396	3720
115	0.01259	1853.53	279.3	-76.838	-74.786	0.56157	0.253	0.396	3661
120	0.01271	1767.41	267.9	-74.880	-72.808	0.57840	0.250	0.395	3602
125	0.01284	1683.76	256.8	-72.923	-70.831	0.59454	0.246	0.395	3541
130	0.01296	1602.53	246.1	-70.966	-68.853	0.61005	0.243	0.396	3479
135	0.01310	1523.66	235.7	-69.009	-66.875	0.62499	0.239	0.396	3416
140	0.01323	1447.08	225.7	-67.051	-64.895	0.63938	0.236	0.396	3352
145	0.01337	1372.75	216.0	-65.093	-62.914	0.65329	0.233	0.396	3287
150	0.01351	1300.59	206.6	-63.132	-60.931	0.66673	0.231	0.397	3221
155	0.01366	1230.56	197.5	-61.170	-58.944	0.67976	0.228	0.398	3154
160	0.01381	1162.59	188.8	-59.204	-56.954	0.69240	0.225	0.398	3087
165	0.01397	1096.63	180.3	-57.235	-54.959	0.70467	0.223	0.399	3019
170	0.01413	1032.62	172.2	-55.261	-52.958	0.71662	0.220	0.401	2950
175	0.01430	970.50	164.2	-53.281	-50.951	0.72826	0.218	0.402	2880
180	0.01448	910.21	156.6	-51.295	-48.936	0.73961	0.216	0.404	2810
185	0.01466	851.70	149.2	-49.300	-46.911	0.75071	0.214	0.406	2739
190	0.01485	794.91	142.0	-47.295	-44.875	0.76157	0.211	0.408	2668
195	0.01506	739.79	135.1	-45.279	-42.825	0.77222	0.209	0.411	2595
200	0.01527	686.28	128.4	-43.249	-40.761	0.78267	0.207	0.415	2522
205	0.01549	634.34	121.8	-41.203	-38.678	0.79296	0.205	0.419	2448
210	0.01573	583.91	115.5	-39.137	-36.574	0.80311	0.203	0.423	2373
215	0.01598	534.96	109.3	-37.049	-34.445	0.81313	0.201	0.428	2297
220	0.01625	487.45	103.2	-34.934	-32.286	0.82305	0.199	0.435	2219
225	0.01654	441.35	97.3	-32.788	-30.092	0.83291	0.197	0.442	2140
230	0.01686	396.65	91.5	-30.604	-27.857	0.84273	0.196	0.451	2058
235	0.01721	352.84	85.7	-28.345	-25.541	0.85269	0.199	0.467	1959
240	0.01758	312.51	79.9	-26.038	-23.172	0.86266	0.198	0.478	1872
245	0.01800	272.72	74.4	-23.669	-20.735	0.87271	0.196	0.495	1785
250	0.01847	234.28	68.8	-21.222	-18.211	0.88291	0.195	0.514	1691
255	0.01901	197.29	63.2	-18.675	-15.577	0.89334	0.195	0.540	1592
260	0.01964	161.41	57.4	-15.997	-12.797	0.90414	0.195	0.574	1483
265	0.02040	126.76	51.4	-13.134	-9.810	0.91552	0.196	0.622	1366
270	0.02136	94.18	45.2	-10.012	-6.531	0.92777	0.198	0.692	1236
275	0.02268	62.93	38.9	-6.446	-2.750	0.94164	0.202	0.831	1096
280	0.02476	34.22	31.2	-2.023	2.012	0.95880	0.210	1.116	918
285	0.02975	10.41	22.0	5.032	9.880	0.98662	0.232	2.398	706
290	0.04539	8.93	12.5	17.197	24.594	1.03782	0.240	2.171	612
295	0.05631	17.54	9.5	22.994	32.169	1.06375	0.218	1.115	645
300	0.06371	25.02	8.0	26.401	36.783	1.07927	0.206	0.785	665
310	0.07484	37.43	6.5	31.090	43.285	1.10062	0.193	0.552	705
320	0.08369	47.58	5.6	34.618	48.255	1.11641	0.185	0.454	736
330	0.09139	56.47	4.9	37.606	52.498	1.12947	0.179	0.400	763
340	0.09838	64.49	4.5	40.278	56.310	1.14085	0.176	0.365	788
350	0.10489	71.88	4.1	42.743	59.834	1.15107	0.173	0.341	811
360	0.11102	78.79	3.8	45.061	63.153	1.16042	0.171	0.323	832
370	0.11688	85.31	3.6	47.270	66.316	1.16908	0.169	0.310	851
380	0.12252	91.52	3.4	49.395	69.359	1.17720	0.168	0.299	870
390	0.12797	97.47	3.2	51.451	72.304	1.18485	0.166	0.290	888
400	0.13326	103.19	3.0	53.453	75.169	1.19210	0.165	0.283	905
410	0.13843	108.72	2.9	55.410	77.967	1.19901	0.164	0.277	921
420	0.14349	114.09	2.8	57.327	80.709	1.20562	0.164	0.272	937
430	0.14845	119.30	2.7	59.212	83.402	1.21196	0.163	0.267	952
440	0.15332	124.39	2.6	61.069	86.053	1.21805	0.162	0.263	967
450	0.15812	129.37	2.5	62.902	88.668	1.22393	0.162	0.260	981
460	0.16286	134.24	2.4	64.713	91.251	1.22961	0.161	0.257	995
470	0.16754	139.02	2.3	66.506	93.806	1.23510	0.161	0.254	1008
480	0.17216	143.71	2.2	68.282	96.336	1.24043	0.161	0.252	1022
490	0.17674	148.34	2.2	70.044	98.844	1.24560	0.160	0.250	1035
500	0.18127	152.89	2.1	71.793	101.332	1.25062	0.160	0.248	1047
510	0.18577	157.38	2.0	73.531	103.802	1.25552	0.160	0.246	1060
520	0.19023	161.82	2.0	75.259	106.257	1.26028	0.160	0.245	1072
530	0.19466	166.21	1.9	76.978	108.698	1.26493	0.160	0.243	1084
540	0.19906	170.55	1.9	78.689	111.127	1.26947	0.159	0.242	1096
550	0.20343	174.85	1.8	80.394	113.544	1.27391	0.159	0.241	1107
560	0.20778	179.11	1.8	82.093	115.952	1.27824	0.159	0.240	1119
570	0.21211	183.33	1.8	83.787	118.350	1.28249	0.159	0.239	1130
580	0.21641	187.52	1.7	85.476	120.741	1.28665	0.159	0.239	1141
590	0.22070	191.68	1.7	87.162	123.125	1.29072	0.159	0.238	1151
600	0.22497	195.81	1.6	88.845	125.503	1.29472	0.160	0.238	1162

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

880 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.081	81.79501	218.29	14.603	175441.15	0.0018146	0.11207	42.863	0.00346	1.57052	5.4543
100	81.65851	217.74	14.563	173714.80	0.0018191	0.11181	42.118	0.00346	1.56942	5.3712
105	80.91419	214.68	14.343	164533.85	0.0018439	0.11037	38.310	0.00345	1.56344	4.9463
110	80.16645	211.58	14.115	155698.44	0.0018700	0.10885	34.880	0.00343	1.55745	4.5642
115	79.41495	208.43	13.881	147198.34	0.0018976	0.10726	31.792	0.00341	1.55144	4.2204
120	78.65933	205.24	13.641	139023.46	0.0019268	0.10560	29.010	0.00339	1.54541	3.9109
125	77.89919	202.00	13.396	131163.90	0.0019578	0.10388	26.505	0.00337	1.53937	3.6323
130	77.13410	198.70	13.145	123609.92	0.0019906	0.10211	24.249	0.00335	1.53330	3.3815
135	76.36356	195.35	12.891	116351.97	0.0020257	0.10029	22.216	0.00332	1.52720	3.1556
140	75.58703	191.94	12.633	109380.68	0.0020631	0.09843	20.385	0.00329	1.52107	2.9524
145	74.80391	188.47	12.373	102686.84	0.0021032	0.09653	18.736	0.00326	1.51491	2.7697
150	74.01353	184.94	12.109	96261.46	0.0021462	0.09459	17.250	0.00322	1.50870	2.6057
155	73.21516	181.33	11.845	90095.73	0.0021926	0.09263	15.910	0.00318	1.50245	2.4585
160	72.40795	177.66	11.578	84181.06	0.0022426	0.09064	14.703	0.00314	1.49615	2.3268
165	71.59098	173.91	11.312	78509.06	0.0022969	0.08862	13.615	0.00310	1.48979	2.2093
170	70.76320	170.08	11.045	73071.56	0.0023559	0.08658	12.634	0.00305	1.48336	2.1048
175	69.92342	166.16	10.778	67860.61	0.0024204	0.08453	11.748	0.00301	1.47686	2.0123
180	69.07032	162.16	10.512	62868.55	0.0024910	0.08246	10.950	0.00296	1.47027	1.9310
185	68.20236	158.07	10.246	58087.94	0.0025687	0.08038	10.228	0.00290	1.46359	1.8601
190	67.31782	153.87	9.982	53511.63	0.0026545	0.07828	9.577	0.00285	1.45681	1.7990
195	66.41468	149.57	9.719	49132.82	0.0027499	0.07617	8.987	0.00279	1.44990	1.7472
200	65.49064	145.16	9.458	44945.02	0.0028565	0.07405	8.454	0.00273	1.44285	1.7043
205	64.54301	140.64	9.197	40942.16	0.0029761	0.07192	7.971	0.00266	1.43565	1.6700
210	63.56862	135.99	8.937	37118.60	0.0031115	0.06977	7.532	0.00259	1.42827	1.6443
215	62.56373	131.20	8.677	33469.30	0.0032657	0.06762	7.134	0.00252	1.42068	1.6272
220	61.52386	126.28	8.417	29989.86	0.0034428	0.06545	6.770	0.00245	1.41286	1.6190
225	60.44362	121.21	8.153	26676.75	0.0036481	0.06327	6.438	0.00237	1.40477	1.6200
230	59.31637	116.00	7.884	23527.59	0.0038887	0.06106	6.133	0.00228	1.39635	1.6312
235	58.12001	111.79	7.412	20507.07	0.0041803	0.05881	5.853	0.00217	1.38746	1.6742
240	56.87218	106.39	7.112	17772.97	0.0044966	0.05655	5.641	0.00208	1.37823	1.7179
245	55.54938	100.76	6.825	15149.40	0.0049140	0.05427	5.425	0.00197	1.36848	1.7817
250	54.13386	94.84	6.507	12682.31	0.0054247	0.05194	5.201	0.00187	1.35810	1.8546
255	52.60064	88.72	6.169	10377.38	0.0060913	0.04956	4.969	0.00174	1.34693	1.9507
260	50.91476	82.18	5.777	8218.30	0.0069794	0.04710	4.725	0.00161	1.33470	2.0714
265	49.01546	75.15	5.356	6213.03	0.0082774	0.04452	4.463	0.00146	1.32102	2.2453
270	46.81392	67.56	4.879	4408.84	0.0102489	0.04175	4.177	0.00129	1.30529	2.4937
275	44.09864	59.28	4.375	2775.23	0.0140101	0.04014	3.847	0.00110	1.28605	2.8656
280	40.38335	49.39	3.683	1382.06	0.0225976	0.03917	3.436	0.00087	1.26004	3.5244
285	33.61741	38.19	2.819	349.94	0.0627959	0.04049	2.794	0.00050	1.21360	5.9559
290	22.03033	34.20	2.365	196.69	0.0634658	0.03268	1.958	0.00068	1.13679	4.6823
295	17.75950	36.44	2.466	311.57	0.0306044	0.02493	1.721	0.00126	1.10933	2.7715
300	15.69524	38.45	2.481	392.76	0.0204044	0.02154	1.621	0.00175	1.09623	2.1258
310	13.36194	42.67	2.513	500.10	0.0129293	0.01878	1.524	0.00255	1.08154	1.6117
320	11.94940	46.44	2.518	568.60	0.0097676	0.01757	1.477	0.00324	1.07271	1.3730
330	10.94208	50.01	2.515	617.85	0.0079885	0.01692	1.452	0.00387	1.06645	1.2343
340	10.16430	53.44	2.508	655.45	0.0068311	0.01654	1.438	0.00446	1.06163	1.1429
350	9.53423	56.76	2.499	685.30	0.0060098	0.01632	1.432	0.00502	1.05773	1.0776
360	9.00709	59.98	2.489	709.64	0.0053926	0.01619	1.431	0.00556	1.05448	1.0287
370	8.55567	63.11	2.479	729.90	0.0049092	0.01611	1.433	0.00608	1.05171	0.9918
380	8.16225	66.18	2.468	747.02	0.0045187	0.01609	1.438	0.00659	1.04929	0.9621
390	7.81461	69.18	2.459	761.68	0.0041959	0.01610	1.445	0.00710	1.04716	0.9378
400	7.50399	72.12	2.449	774.35	0.0039237	0.01614	1.453	0.00760	1.04525	0.9173
410	7.22387	75.01	2.441	785.39	0.0036907	0.01620	1.463	0.00810	1.04354	0.9000
420	6.96932	77.86	2.432	795.10	0.0034887	0.01628	1.474	0.00860	1.04199	0.8851
430	6.73646	80.67	2.424	803.68	0.0033115	0.01638	1.485	0.00910	1.04056	0.8721
440	6.52225	83.44	2.417	811.31	0.0031547	0.01649	1.497	0.00960	1.03926	0.8608
450	6.32420	86.18	2.410	818.13	0.0030149	0.01660	1.510	0.01010	1.03805	0.8508
460	6.14031	88.89	2.403	824.25	0.0028891	0.01673	1.524	0.01061	1.03693	0.8419
470	5.96889	91.58	2.397	829.77	0.0027754	0.01687	1.537	0.01112	1.03589	0.8340
480	5.80855	94.25	2.391	834.76	0.0026720	0.01701	1.551	0.01163	1.03491	0.8270
490	5.65811	96.89	2.385	839.30	0.0025775	0.01715	1.565	0.01214	1.03400	0.8206
500	5.51657	99.53	2.379	843.43	0.0024907	0.01730	1.580	0.01265	1.03314	0.8150
510	5.38305	102.15	2.373	847.21	0.0024106	0.01742	1.595	0.01314	1.03233	0.8114
520	5.25680	104.75	2.368	850.67	0.0023365	0.01759	1.610	0.01367	1.03156	0.8062
530	5.13719	107.35	2.362	853.86	0.0022677	0.01776	1.625	0.01420	1.03083	0.8016
540	5.02364	109.95	2.357	856.79	0.0022035	0.01793	1.640	0.01473	1.03015	0.7975
550	4.91564	112.54	2.351	859.50	0.0021435	0.01810	1.655	0.01527	1.02949	0.7938
560	4.81276	115.12	2.346	862.01	0.0020873	0.01828	1.670	0.01580	1.02887	0.7905
570	4.71461	117.70	2.340	864.34	0.0020345	0.01845	1.685	0.01634	1.02827	0.7875
580	4.62082	120.29	2.335	866.51	0.0019847	0.01863	1.701	0.01689	1.02771	0.7848
590	4.53109	122.87	2.329	868.53	0.0019377	0.01880	1.716	0.01743	1.02716	0.7823
600	4.44513	125.46	2.324	870.42	0.0018932	0.01898	1.732	0.01798	1.02664	0.7802

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

890 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.095	0.01223	2145.50	318.4	-83.077	-81.062	0.50261	0.267	0.396	3843
100	0.01225	2128.22	316.0	-82.722	-80.704	0.50621	0.266	0.396	3833
105	0.01236	2034.34	303.4	-80.761	-78.724	0.52553	0.261	0.396	3778
110	0.01247	1943.10	291.2	-78.801	-76.745	0.54394	0.257	0.396	3720
115	0.01259	1854.46	279.4	-76.843	-74.768	0.56152	0.253	0.395	3662
120	0.01271	1768.35	267.9	-74.885	-72.790	0.57835	0.250	0.395	3602
125	0.01284	1684.72	256.8	-72.928	-70.813	0.59450	0.246	0.395	3541
130	0.01296	1603.50	246.1	-70.972	-68.835	0.61001	0.243	0.396	3479
135	0.01309	1524.65	235.7	-69.015	-66.857	0.62494	0.239	0.396	3417
140	0.01323	1448.09	225.7	-67.058	-64.878	0.63933	0.236	0.396	3353
145	0.01337	1373.77	216.0	-65.100	-62.897	0.65323	0.233	0.396	3288
150	0.01351	1301.63	206.7	-63.140	-60.914	0.66668	0.231	0.397	3222
155	0.01366	1231.62	197.6	-61.178	-58.927	0.67970	0.228	0.398	3155
160	0.01381	1163.67	188.8	-59.213	-56.937	0.69234	0.225	0.398	3088
165	0.01397	1097.73	180.4	-57.245	-54.943	0.70461	0.223	0.399	3020
170	0.01413	1033.74	172.2	-55.271	-52.943	0.71655	0.220	0.401	2951
175	0.01430	971.64	164.3	-53.292	-50.936	0.72819	0.218	0.402	2882
180	0.01448	911.37	156.7	-51.306	-48.921	0.73954	0.216	0.404	2811
185	0.01466	852.89	149.3	-49.312	-46.896	0.75064	0.214	0.406	2741
190	0.01485	796.12	142.1	-47.309	-44.861	0.76150	0.211	0.408	2669
195	0.01505	741.03	135.2	-45.293	-42.812	0.77214	0.209	0.411	2597
200	0.01527	687.55	128.5	-43.264	-40.749	0.78259	0.207	0.414	2524
205	0.01549	635.64	121.9	-41.219	-38.667	0.79288	0.205	0.418	2450
210	0.01573	585.25	115.6	-39.155	-36.564	0.80302	0.203	0.423	2375
215	0.01598	536.34	109.4	-37.069	-34.436	0.81303	0.201	0.428	2299
220	0.01625	488.86	103.4	-34.956	-32.279	0.82295	0.199	0.434	2221
225	0.01654	442.80	97.4	-32.812	-30.087	0.83279	0.197	0.442	2142
230	0.01685	398.14	91.6	-30.631	-27.853	0.84260	0.196	0.451	2061
235	0.01720	354.32	85.8	-28.375	-25.541	0.85255	0.199	0.467	1962
240	0.01757	314.02	80.1	-26.071	-23.175	0.86251	0.198	0.478	1875
245	0.01799	274.30	74.6	-23.707	-20.742	0.87255	0.196	0.494	1788
250	0.01846	235.93	69.0	-21.265	-18.224	0.88272	0.195	0.513	1695
255	0.01899	199.01	63.4	-18.726	-15.596	0.89313	0.195	0.539	1597
260	0.01962	163.22	57.6	-16.059	-12.826	0.90389	0.195	0.571	1488
265	0.02037	128.66	51.7	-13.211	-9.854	0.91521	0.196	0.618	1372
270	0.02131	96.20	45.5	-10.112	-6.600	0.92737	0.198	0.686	1244
275	0.02260	65.09	39.3	-6.591	-2.867	0.94107	0.201	0.817	1107
280	0.02459	36.55	31.8	-2.278	1.775	0.95779	0.209	1.075	934
285	0.02899	12.55	23.0	4.267	9.045	0.98350	0.228	2.100	732
290	0.04311	8.23	13.3	15.984	23.088	1.03234	0.242	2.389	614
295	0.05451	16.57	9.9	22.336	31.319	1.06052	0.220	1.186	644
300	0.06210	24.12	8.3	25.934	36.169	1.07683	0.207	0.816	664
310	0.07332	36.54	6.6	30.768	42.852	1.09878	0.193	0.564	703
320	0.08223	46.94	5.7	34.372	47.924	1.11489	0.185	0.460	735
330	0.08993	55.90	5.0	37.400	52.220	1.12812	0.180	0.404	763
340	0.09690	63.98	4.6	40.099	56.068	1.13961	0.176	0.368	788
350	0.10337	71.42	4.2	42.583	59.619	1.14990	0.173	0.343	810
360	0.10948	78.37	3.9	44.917	62.959	1.15931	0.171	0.325	831
370	0.11530	84.93	3.6	47.138	66.139	1.16802	0.169	0.311	851
380	0.12089	91.18	3.4	49.272	69.196	1.17618	0.168	0.300	870
390	0.12630	97.15	3.2	51.337	72.153	1.18386	0.166	0.291	888
400	0.13156	102.90	3.1	53.346	75.028	1.19114	0.165	0.284	905
410	0.13669	108.46	2.9	55.309	77.835	1.19807	0.165	0.278	921
420	0.14170	113.84	2.8	57.232	80.585	1.20470	0.164	0.272	937
430	0.14662	119.08	2.7	59.122	83.286	1.21105	0.163	0.268	952
440	0.15145	124.18	2.6	60.983	85.943	1.21716	0.162	0.264	967
450	0.15621	129.18	2.5	62.820	88.564	1.22305	0.162	0.260	981
460	0.16090	134.06	2.4	64.634	91.152	1.22874	0.161	0.257	995
470	0.16554	138.86	2.3	66.430	93.712	1.23424	0.161	0.255	1009
480	0.17012	143.57	2.3	68.209	96.246	1.23958	0.161	0.252	1022
490	0.17466	148.20	2.2	69.974	98.758	1.24476	0.160	0.250	1035
500	0.17915	152.77	2.1	71.725	101.249	1.24979	0.160	0.248	1048
510	0.18360	157.28	2.1	73.465	103.723	1.25469	0.160	0.247	1060
520	0.18802	161.73	2.0	75.195	106.181	1.25946	0.160	0.245	1072
530	0.19240	166.12	2.0	76.916	108.625	1.26412	0.160	0.244	1084
540	0.19676	170.48	1.9	78.629	111.057	1.26866	0.159	0.243	1096
550	0.20109	174.78	1.9	80.336	113.477	1.27310	0.159	0.241	1108
560	0.20540	179.05	1.8	82.036	115.887	1.27745	0.159	0.241	1119
570	0.20968	183.28	1.8	83.731	118.288	1.28170	0.159	0.240	1130
580	0.21394	187.48	1.7	85.422	120.681	1.28586	0.159	0.239	1141
590	0.21819	191.65	1.7	87.109	123.067	1.28994	0.159	0.238	1152
600	0.22241	195.79	1.7	88.793	125.447	1.29394	0.160	0.238	1163

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

890 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.095	81.79757	218.35	14.602	175496.88	0.0018141	0.11207	42.877	0.00346	1.57054	5.4556
100	81.66321	217.80	14.563	173797.23	0.0018184	0.11182	42.144	0.00346	1.56946	5.3737
105	80.91911	214.74	14.343	164616.67	0.0018432	0.11038	38.334	0.00345	1.56348	4.9486
110	80.17159	211.64	14.115	155781.67	0.0018693	0.10886	34.903	0.00343	1.55749	4.5664
115	79.42034	208.50	13.881	147281.99	0.0018968	0.10727	31.813	0.00342	1.55148	4.2224
120	78.66499	205.31	13.641	139107.54	0.0019260	0.10561	29.030	0.00340	1.54546	3.9128
125	77.90513	202.07	13.396	131248.42	0.0019569	0.10390	26.524	0.00337	1.53941	3.6341
130	77.14034	198.78	13.146	123694.90	0.0019897	0.10213	24.266	0.00335	1.53335	3.3831
135	76.37012	195.43	12.892	116437.42	0.0020246	0.10031	22.233	0.00332	1.52725	3.1572
140	75.59394	192.03	12.634	109466.60	0.0020620	0.09845	20.401	0.00329	1.52113	2.9538
145	74.81119	188.56	12.373	102773.25	0.0021019	0.09655	18.750	0.00326	1.51497	2.7710
150	74.02122	185.03	12.110	96348.38	0.0021449	0.09461	17.263	0.00322	1.50876	2.6068
155	73.22328	181.43	11.845	90183.18	0.0021911	0.09265	15.923	0.00318	1.50252	2.4596
160	72.41655	177.76	11.579	84269.05	0.0022410	0.09066	14.716	0.00314	1.49622	2.3278
165	71.60009	174.01	11.313	78597.62	0.0022951	0.08864	13.627	0.00310	1.48986	2.2102
170	70.77287	170.19	11.046	73160.70	0.0023540	0.08661	12.645	0.00305	1.48344	2.1056
175	69.93372	166.28	10.779	67950.37	0.0024182	0.08456	11.759	0.00301	1.47694	2.0130
180	69.08130	162.28	10.513	62958.94	0.0024885	0.08249	10.959	0.00296	1.47036	1.9316
185	68.21410	158.19	10.248	58178.99	0.0025659	0.08041	10.238	0.00290	1.46368	1.8606
190	67.33039	154.00	9.984	53603.39	0.0026514	0.07831	9.585	0.00285	1.45690	1.7993
195	66.42819	149.71	9.722	49225.31	0.0027464	0.07620	8.996	0.00279	1.45000	1.7474
200	65.50520	145.31	9.460	45038.28	0.0028524	0.07408	8.462	0.00273	1.44296	1.7044
205	64.55875	140.79	9.200	41036.23	0.0029715	0.07195	7.979	0.00266	1.43577	1.6700
210	63.58572	136.15	8.941	37213.53	0.0031061	0.06981	7.540	0.00260	1.42840	1.6441
215	62.58239	131.37	8.682	33565.13	0.0032593	0.06766	7.141	0.00252	1.42082	1.6268
220	61.54435	126.46	8.422	30086.64	0.0034352	0.06550	6.777	0.00245	1.41302	1.6183
225	60.46624	121.41	8.159	26774.51	0.0036391	0.06331	6.445	0.00237	1.40494	1.6190
230	59.34154	116.21	7.891	23626.37	0.0038777	0.06111	6.140	0.00229	1.39654	1.6298
235	58.14829	112.00	7.419	20603.24	0.0041667	0.05886	5.858	0.00217	1.38767	1.6720
240	56.90410	106.63	7.120	17869.23	0.0044803	0.05661	5.647	0.00208	1.37846	1.7155
245	55.58594	101.02	6.834	15247.30	0.0048920	0.05433	5.431	0.00198	1.36875	1.7782
250	54.17639	95.13	6.517	12781.67	0.0053953	0.05202	5.208	0.00187	1.35842	1.8501
255	52.65111	89.05	6.182	10477.95	0.0060508	0.04964	4.977	0.00175	1.34729	1.9447
260	50.97637	82.54	5.792	8320.59	0.0069176	0.04719	4.734	0.00162	1.33515	2.0621
265	49.09376	75.59	5.377	6316.54	0.0081822	0.04462	4.474	0.00147	1.32159	2.2325
270	46.91898	68.08	4.906	4513.49	0.0100779	0.04189	4.191	0.00130	1.30604	2.4712
275	44.25487	59.93	4.410	2880.63	0.0136278	0.04019	3.866	0.00111	1.28715	2.8283
280	40.66603	50.29	3.741	1486.28	0.0213836	0.03913	3.467	0.00089	1.26201	3.4294
285	34.49153	39.50	2.925	432.73	0.0531750	0.04006	2.871	0.00055	1.21953	5.4172
290	23.19902	34.28	2.372	190.98	0.0696939	0.03403	2.032	0.00061	1.14438	5.1349
295	18.34607	36.30	2.466	303.96	0.0326842	0.02574	1.754	0.00118	1.11308	2.9095
300	16.10226	38.27	2.485	388.40	0.0213182	0.02200	1.643	0.00167	1.09880	2.1931
310	13.63834	42.42	2.514	498.36	0.0132941	0.01903	1.538	0.00247	1.08327	1.6414
320	12.16100	46.26	2.523	570.81	0.0099463	0.01773	1.488	0.00317	1.07403	1.3902
330	11.12008	49.85	2.520	621.57	0.0081010	0.01705	1.461	0.00380	1.06755	1.2459
340	10.31999	53.29	2.513	660.24	0.0069090	0.01665	1.446	0.00438	1.06259	1.1513
350	9.67380	56.61	2.504	690.90	0.0060672	0.01641	1.439	0.00494	1.05860	1.0842
360	9.13435	59.83	2.493	715.87	0.0054366	0.01628	1.437	0.00548	1.05527	1.0340
370	8.67315	62.98	2.483	736.64	0.0049441	0.01619	1.439	0.00599	1.05243	0.9962
380	8.27172	66.05	2.473	754.18	0.0045471	0.01615	1.443	0.00650	1.04996	0.9659
390	7.91738	69.05	2.463	769.19	0.0042193	0.01616	1.450	0.00700	1.04779	0.9410
400	7.60103	72.00	2.453	782.15	0.0039434	0.01619	1.458	0.00750	1.04585	0.9202
410	7.31596	74.90	2.444	793.46	0.0037075	0.01625	1.467	0.00800	1.04410	0.9025
420	7.05706	77.75	2.436	803.38	0.0035031	0.01633	1.478	0.00850	1.04252	0.8873
430	6.82036	80.57	2.428	812.16	0.0033240	0.01643	1.489	0.00899	1.04108	0.8741
440	6.60271	83.34	2.420	819.96	0.0031657	0.01653	1.501	0.00949	1.03975	0.8626
450	6.40156	86.09	2.413	826.92	0.0030245	0.01665	1.514	0.00999	1.03852	0.8524
460	6.21485	88.80	2.406	833.18	0.0028977	0.01677	1.527	0.01049	1.03738	0.8434
470	6.04087	91.49	2.400	838.81	0.0027831	0.01691	1.541	0.01099	1.03632	0.8354
480	5.87817	94.16	2.394	843.91	0.0026789	0.01704	1.555	0.01150	1.03533	0.8283
490	5.72556	96.81	2.388	848.55	0.0025837	0.01719	1.569	0.01200	1.03441	0.8218
500	5.58200	99.45	2.382	852.77	0.0024962	0.01734	1.583	0.01251	1.03353	0.8161
510	5.44661	102.07	2.376	856.62	0.0024157	0.01746	1.598	0.01300	1.03271	0.8124
520	5.31862	104.68	2.370	860.16	0.0023411	0.01762	1.613	0.01352	1.03193	0.8072
530	5.19737	107.28	2.365	863.41	0.0022719	0.01779	1.627	0.01405	1.03120	0.8026
540	5.08228	109.88	2.359	866.40	0.0022073	0.01796	1.642	0.01457	1.03050	0.7984
550	4.97284	112.47	2.354	869.17	0.0021470	0.01813	1.658	0.01510	1.02984	0.7946
560	4.86860	115.05	2.348	871.73	0.0020905	0.01831	1.673	0.01563	1.02921	0.7912
570	4.76916	117.64	2.343	874.11	0.0020375	0.01848	1.688	0.01617	1.02860	0.7882
580	4.67415	120.22	2.337	876.32	0.0019875	0.01866	1.703	0.01670	1.02803	0.7854
590	4.58326	122.81	2.332	878.39	0.0019403	0.01883	1.719	0.01724	1.02748	0.7830
600	4.49620	125.40	2.326	880.31	0.0018956	0.01901	1.734	0.01779	1.02695	0.7808

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

900 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.109	0.01222	2146.12	318.4	-83.076	-81.038	0.50262	0.267	0.396	3844
100	0.01224	2129.11	316.1	-82.726	-80.685	0.50617	0.266	0.396	3834
105	0.01236	2035.24	303.5	-80.765	-78.706	0.52549	0.261	0.396	3778
110	0.01247	1944.02	291.2	-78.806	-76.727	0.54390	0.257	0.396	3721
115	0.01259	1855.39	279.4	-76.848	-74.749	0.56148	0.253	0.395	3663
120	0.01271	1769.30	268.0	-74.890	-72.772	0.57831	0.250	0.395	3603
125	0.01284	1685.68	256.9	-72.934	-70.795	0.59445	0.246	0.395	3542
130	0.01296	1604.48	246.2	-70.978	-68.818	0.60996	0.243	0.395	3480
135	0.01309	1525.63	235.8	-69.022	-66.840	0.62489	0.239	0.396	3417
140	0.01323	1449.09	225.8	-67.065	-64.861	0.63928	0.236	0.396	3353
145	0.01337	1374.79	216.1	-65.107	-62.880	0.65318	0.233	0.396	3289
150	0.01351	1302.67	206.7	-63.148	-60.897	0.66663	0.231	0.397	3223
155	0.01366	1232.68	197.7	-61.186	-58.911	0.67965	0.228	0.397	3156
160	0.01381	1164.75	188.9	-59.222	-56.921	0.69228	0.225	0.398	3089
165	0.01396	1098.83	180.5	-57.254	-54.927	0.70455	0.223	0.399	3021
170	0.01413	1034.86	172.3	-55.281	-52.927	0.71649	0.220	0.401	2952
175	0.01430	972.78	164.4	-53.303	-50.920	0.72813	0.218	0.402	2883
180	0.01447	912.54	156.7	-51.318	-48.906	0.73948	0.216	0.404	2813
185	0.01466	854.08	149.4	-49.325	-46.882	0.75057	0.214	0.406	2742
190	0.01485	797.34	142.2	-47.322	-44.847	0.76142	0.211	0.408	2670
195	0.01505	742.27	135.3	-45.308	-42.800	0.77206	0.209	0.411	2598
200	0.01526	688.82	128.6	-43.280	-40.736	0.78251	0.207	0.414	2525
205	0.01549	636.94	122.0	-41.236	-38.655	0.79279	0.205	0.418	2451
210	0.01572	586.58	115.7	-39.174	-36.553	0.80292	0.203	0.423	2377
215	0.01597	537.70	109.5	-37.089	-34.427	0.81293	0.201	0.428	2301
220	0.01624	490.27	103.5	-34.978	-32.271	0.82284	0.199	0.434	2224
225	0.01653	444.25	97.5	-32.836	-30.081	0.83268	0.198	0.441	2145
230	0.01684	399.64	91.7	-30.657	-27.850	0.84248	0.196	0.450	2064
235	0.01719	355.80	86.0	-28.404	-25.540	0.85242	0.199	0.466	1965
240	0.01756	315.54	80.2	-26.105	-23.178	0.86237	0.198	0.477	1879
245	0.01798	275.88	74.7	-23.745	-20.749	0.87238	0.196	0.493	1792
250	0.01844	237.57	69.1	-21.309	-18.235	0.88254	0.195	0.512	1699
255	0.01897	200.72	63.6	-18.777	-15.615	0.89292	0.195	0.537	1602
260	0.01959	165.03	57.8	-16.120	-12.855	0.90364	0.195	0.569	1493
265	0.02034	130.56	51.9	-13.287	-9.898	0.91490	0.196	0.615	1379
270	0.02127	98.20	45.8	-10.211	-6.667	0.92698	0.197	0.680	1252
275	0.02252	67.23	39.6	-6.733	-2.980	0.94051	0.201	0.804	1117
280	0.02443	38.84	32.3	-2.517	1.554	0.95684	0.208	1.040	949
285	0.02839	14.72	23.9	3.622	8.353	0.98089	0.225	1.881	755
290	0.04090	7.79	14.2	14.716	21.532	1.02670	0.243	2.572	618
295	0.05272	15.63	10.4	21.648	30.434	1.05718	0.221	1.264	643
300	0.06052	23.23	8.6	25.453	35.538	1.07435	0.208	0.849	663
310	0.07187	35.79	6.8	30.448	42.425	1.09696	0.194	0.576	702
320	0.08080	46.30	5.8	34.124	47.590	1.11338	0.185	0.467	735
330	0.08850	55.33	5.1	37.192	51.941	1.12677	0.180	0.408	762
340	0.09545	63.47	4.6	39.919	55.826	1.13837	0.176	0.371	787
350	0.10189	70.96	4.3	42.423	59.404	1.14874	0.173	0.346	810
360	0.10796	77.96	4.0	44.772	62.765	1.15821	0.171	0.327	831
370	0.11375	84.56	3.7	47.005	65.962	1.16697	0.169	0.313	851
380	0.11931	90.83	3.5	49.149	69.033	1.17516	0.168	0.302	870
390	0.12468	96.84	3.3	51.223	72.002	1.18287	0.167	0.292	888
400	0.12990	102.61	3.1	53.239	74.887	1.19018	0.166	0.285	905
410	0.13498	108.19	3.0	55.208	77.704	1.19713	0.165	0.279	921
420	0.13996	113.60	2.9	57.137	80.461	1.20378	0.164	0.273	937
430	0.14483	118.86	2.7	59.031	83.169	1.21015	0.163	0.268	952
440	0.14963	123.98	2.6	60.897	85.833	1.21628	0.163	0.264	967
450	0.15434	128.99	2.5	62.737	88.460	1.22218	0.162	0.261	981
460	0.15900	133.89	2.4	64.555	91.053	1.22788	0.161	0.258	995
470	0.16359	138.70	2.4	66.354	93.617	1.23339	0.161	0.255	1009
480	0.16813	143.42	2.3	68.136	96.156	1.23874	0.161	0.253	1022
490	0.17262	148.07	2.2	69.903	98.672	1.24393	0.160	0.251	1035
500	0.17707	152.65	2.2	71.657	101.167	1.24897	0.160	0.249	1048
510	0.18148	157.17	2.1	73.400	103.644	1.25387	0.160	0.247	1060
520	0.18586	161.63	2.0	75.132	106.106	1.25865	0.160	0.245	1072
530	0.19020	166.04	2.0	76.854	108.553	1.26331	0.160	0.244	1084
540	0.19452	170.40	1.9	78.569	110.987	1.26786	0.160	0.243	1096
550	0.19880	174.72	1.9	80.277	113.409	1.27231	0.159	0.242	1108
560	0.20307	179.00	1.8	81.979	115.822	1.27665	0.159	0.241	1119
570	0.20731	183.24	1.8	83.676	118.225	1.28091	0.159	0.240	1130
580	0.21153	187.44	1.8	85.368	120.620	1.28507	0.159	0.239	1141
590	0.21573	191.62	1.7	87.056	123.008	1.28916	0.159	0.238	1152
600	0.21991	195.77	1.7	88.741	125.390	1.29316	0.160	0.238	1163

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

900 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.109	81.80014	218.40	14.602	175552.59	0.0018136	0.11208	42.892	0.00346	1.57056	5.4569
100	81.66791	217.86	14.563	173879.64	0.0018178	0.11183	42.169	0.00346	1.56949	5.3762
105	80.92402	214.81	14.343	164699.48	0.0018426	0.11039	38.358	0.00345	1.56352	4.9510
110	80.17674	211.71	14.116	155864.89	0.0018686	0.10887	34.925	0.00343	1.55753	4.5685
115	79.42573	208.57	13.882	147365.63	0.0018961	0.10728	31.834	0.00342	1.55152	4.2245
120	78.67064	205.39	13.642	139191.61	0.0019252	0.10563	29.050	0.00340	1.54550	3.9147
125	77.91107	202.15	13.396	131332.93	0.0019560	0.10391	26.542	0.00337	1.53946	3.6358
130	77.14657	198.86	13.146	123779.86	0.0019887	0.10214	24.284	0.00335	1.53340	3.3847
135	76.37668	195.52	12.892	116522.84	0.0020236	0.10033	22.249	0.00332	1.52730	3.1587
140	75.60084	192.11	12.634	109552.49	0.0020608	0.09847	20.416	0.00329	1.52118	2.9552
145	74.81847	188.65	12.374	102859.64	0.0021007	0.09657	18.765	0.00326	1.51502	2.7723
150	74.02890	185.12	12.111	96435.27	0.0021435	0.09463	17.277	0.00322	1.50882	2.6080
155	73.23140	181.53	11.846	90270.60	0.0021896	0.09267	15.936	0.00318	1.50258	2.4607
160	72.42514	177.86	11.580	84357.01	0.0022394	0.09068	14.728	0.00314	1.49628	2.3288
165	71.60920	174.12	11.314	78686.14	0.0022933	0.08867	13.638	0.00310	1.48993	2.2111
170	70.78254	170.30	11.047	73249.80	0.0023520	0.08664	12.656	0.00306	1.48351	2.1064
175	69.94401	166.39	10.780	68040.08	0.0024160	0.08458	11.769	0.00301	1.47702	2.0137
180	69.09226	162.40	10.515	63049.29	0.0024860	0.08252	10.969	0.00296	1.47044	1.9322
185	68.22581	158.32	10.250	58270.00	0.0025631	0.08044	10.247	0.00291	1.46377	1.8610
190	67.34294	154.14	9.986	53695.09	0.0026483	0.07834	9.594	0.00285	1.45700	1.7997
195	66.44167	149.85	9.724	49317.74	0.0027429	0.07624	9.004	0.00279	1.45010	1.7476
200	65.51973	145.45	9.463	45131.47	0.0028484	0.07412	8.470	0.00273	1.44307	1.7045
205	64.57447	140.94	9.203	41130.23	0.0029668	0.07199	7.986	0.00267	1.43589	1.6699
210	63.60279	136.31	8.944	37308.38	0.0031007	0.06985	7.547	0.00260	1.42853	1.6439
215	62.60102	131.54	8.686	33660.87	0.0032530	0.06770	7.148	0.00253	1.42096	1.6264
220	61.56477	126.64	8.427	30183.32	0.0034278	0.06554	6.784	0.00245	1.41317	1.6176
225	60.48879	121.60	8.165	26872.17	0.0036301	0.06336	6.452	0.00237	1.40511	1.6180
230	59.36661	116.41	7.898	23725.03	0.0038668	0.06116	6.147	0.00229	1.39673	1.6285
235	58.17646	112.22	7.426	20699.32	0.0041532	0.05892	5.863	0.00217	1.38788	1.6697
240	56.93587	106.87	7.128	17965.35	0.0044642	0.05667	5.652	0.00209	1.37870	1.7130
245	55.62229	101.28	6.842	15345.01	0.0048702	0.05440	5.437	0.00198	1.36902	1.7747
250	54.21863	95.42	6.527	12880.79	0.0053664	0.05209	5.215	0.00188	1.35872	1.8457
255	52.70114	89.37	6.195	10578.22	0.0060110	0.04972	4.985	0.00176	1.34766	1.9389
260	51.03730	82.91	5.806	8422.51	0.0068573	0.04728	4.743	0.00163	1.33559	2.0531
265	49.17092	76.02	5.397	6419.64	0.0080901	0.04473	4.485	0.00148	1.32214	2.2200
270	47.02186	68.59	4.931	4617.60	0.0099146	0.04202	4.204	0.00131	1.30677	2.4498
275	44.40603	60.56	4.444	2985.31	0.0132724	0.04025	3.885	0.00113	1.28822	2.7932
280	40.93141	51.16	3.797	1589.57	0.0203262	0.03912	3.496	0.00092	1.26386	3.3452
285	35.22676	40.73	3.023	518.45	0.0461752	0.03969	2.937	0.00060	1.22454	5.0101
290	24.45112	34.48	2.388	190.54	0.0745883	0.03517	2.113	0.00056	1.15255	5.5615
295	18.96747	36.17	2.467	296.54	0.0349344	0.02660	1.789	0.00111	1.11705	3.0596
300	16.52468	38.11	2.489	383.94	0.0222909	0.02249	1.666	0.00160	1.10148	2.2646
310	13.91486	42.24	2.520	498.03	0.0136456	0.01928	1.553	0.00240	1.08501	1.6716
320	12.37552	46.10	2.528	572.96	0.0101293	0.01790	1.499	0.00310	1.07537	1.4077
330	11.29990	49.69	2.525	625.23	0.0082154	0.01718	1.470	0.00372	1.06867	1.2577
340	10.47692	53.13	2.518	664.99	0.0069879	0.01676	1.454	0.00431	1.06356	1.1599
350	9.81427	56.46	2.508	696.46	0.0061251	0.01650	1.446	0.00486	1.05946	1.0909
360	9.26228	59.69	2.498	722.08	0.0054811	0.01636	1.443	0.00540	1.05606	1.0393
370	8.79115	62.84	2.487	743.36	0.0049792	0.01626	1.445	0.00591	1.05315	1.0007
380	8.38161	65.92	2.477	761.33	0.0045756	0.01622	1.449	0.00642	1.05064	0.9697
390	8.02048	68.93	2.467	776.68	0.0042429	0.01622	1.455	0.00692	1.04842	0.9443
400	7.69835	71.89	2.457	789.95	0.0039632	0.01625	1.463	0.00741	1.04645	0.9230
410	7.40828	74.79	2.448	801.51	0.0037243	0.01631	1.472	0.00790	1.04467	0.9050
420	7.14500	77.65	2.439	811.66	0.0035175	0.01638	1.482	0.00839	1.04306	0.8896
430	6.90442	80.46	2.431	820.63	0.0033366	0.01647	1.493	0.00889	1.04159	0.8762
440	6.68330	83.25	2.423	828.59	0.0031766	0.01658	1.505	0.00938	1.04024	0.8645
450	6.47903	85.99	2.416	835.71	0.0030341	0.01669	1.518	0.00987	1.03899	0.8541
460	6.28949	88.71	2.409	842.10	0.0029062	0.01682	1.531	0.01037	1.03784	0.8450
470	6.11292	91.41	2.403	847.86	0.0027907	0.01695	1.544	0.01087	1.03676	0.8368
480	5.94786	94.08	2.397	853.06	0.0026857	0.01708	1.558	0.01137	1.03576	0.8296
490	5.79306	96.73	2.391	857.79	0.0025898	0.01723	1.572	0.01187	1.03482	0.8231
500	5.64748	99.37	2.385	862.10	0.0025018	0.01737	1.586	0.01237	1.03393	0.8172
510	5.51021	102.00	2.379	866.04	0.0024207	0.01749	1.601	0.01286	1.03310	0.8135
520	5.38047	104.61	2.373	869.64	0.0023457	0.01766	1.616	0.01337	1.03231	0.8082
530	5.25758	107.21	2.368	872.96	0.0022760	0.01783	1.630	0.01389	1.03156	0.8035
540	5.14096	109.81	2.362	876.02	0.0022112	0.01799	1.645	0.01442	1.03086	0.7992
550	5.03007	112.40	2.357	878.84	0.0021506	0.01817	1.660	0.01494	1.03018	0.7954
560	4.92446	114.99	2.351	881.46	0.0020938	0.01834	1.676	0.01547	1.02954	0.7920
570	4.82372	117.57	2.346	883.88	0.0020405	0.01851	1.691	0.01600	1.02893	0.7889
580	4.72749	120.16	2.340	886.14	0.0019902	0.01869	1.706	0.01653	1.02835	0.7861
590	4.63544	122.75	2.335	888.24	0.0019429	0.01886	1.721	0.01706	1.02779	0.7836
600	4.54728	125.34	2.329	890.21	0.0018980	0.01904	1.737	0.01760	1.02726	0.7814

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

910 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.123	0.01222	2146.73	318.4	-83.074	-81.014	0.50264	0.267	0.396	3844
100	0.01224	2129.99	316.1	-82.730	-80.667	0.50613	0.266	0.396	3835
105	0.01236	2036.14	303.5	-80.769	-78.687	0.52544	0.261	0.396	3779
110	0.01247	1944.93	291.3	-78.810	-76.709	0.54385	0.257	0.396	3722
115	0.01259	1856.32	279.5	-76.853	-74.731	0.56143	0.253	0.395	3663
120	0.01271	1770.24	268.0	-74.896	-72.754	0.57826	0.250	0.395	3604
125	0.01283	1686.63	256.9	-72.940	-70.777	0.59440	0.246	0.395	3543
130	0.01296	1605.45	246.2	-70.984	-68.800	0.60991	0.243	0.395	3481
135	0.01309	1526.62	235.8	-69.028	-66.822	0.62484	0.239	0.396	3418
140	0.01323	1450.09	225.8	-67.072	-64.843	0.63923	0.236	0.396	3354
145	0.01336	1375.81	216.1	-65.115	-62.863	0.65313	0.233	0.396	3289
150	0.01351	1303.71	206.8	-63.156	-60.880	0.66657	0.231	0.397	3224
155	0.01365	1233.73	197.7	-61.195	-58.894	0.67959	0.228	0.397	3157
160	0.01381	1165.82	189.0	-59.231	-56.905	0.69222	0.225	0.398	3090
165	0.01396	1099.92	180.5	-57.264	-54.911	0.70450	0.223	0.399	3022
170	0.01413	1035.97	172.3	-55.292	-52.911	0.71643	0.220	0.400	2953
175	0.01430	973.92	164.4	-53.314	-50.905	0.72806	0.218	0.402	2884
180	0.01447	913.70	156.8	-51.330	-48.891	0.73941	0.216	0.404	2814
185	0.01465	855.26	149.4	-49.337	-46.868	0.75050	0.214	0.406	2743
190	0.01485	798.55	142.3	-47.335	-44.834	0.76135	0.211	0.408	2672
195	0.01505	743.51	135.4	-45.322	-42.787	0.77199	0.209	0.411	2600
200	0.01526	690.09	128.6	-43.296	-40.724	0.78243	0.207	0.414	2527
205	0.01548	638.24	122.1	-41.253	-38.644	0.79271	0.205	0.418	2453
210	0.01572	587.92	115.8	-39.192	-36.543	0.80283	0.203	0.422	2379
215	0.01597	539.07	109.6	-37.109	-34.418	0.81284	0.201	0.428	2303
220	0.01624	491.68	103.6	-35.000	-32.264	0.82274	0.199	0.434	2226
225	0.01653	445.70	97.7	-32.860	-30.075	0.83257	0.198	0.441	2147
230	0.01684	401.13	91.9	-30.684	-27.846	0.84236	0.196	0.450	2067
235	0.01718	357.28	86.1	-28.434	-25.539	0.85229	0.199	0.465	1968
240	0.01755	317.05	80.3	-26.138	-23.180	0.86222	0.198	0.476	1882
245	0.01797	277.45	74.9	-23.783	-20.755	0.87222	0.196	0.492	1795
250	0.01843	239.21	69.3	-21.352	-18.247	0.88236	0.195	0.511	1703
255	0.01896	202.43	63.8	-18.828	-15.633	0.89271	0.195	0.536	1606
260	0.01957	166.82	58.0	-16.180	-12.883	0.90339	0.195	0.566	1498
265	0.02031	132.44	52.2	-13.362	-9.940	0.91460	0.196	0.612	1385
270	0.02122	100.19	46.1	-10.309	-6.733	0.92659	0.197	0.674	1260
275	0.02245	69.34	40.0	-6.870	-3.088	0.93996	0.200	0.792	1127
280	0.02428	41.09	32.8	-2.744	1.347	0.95594	0.207	1.008	963
285	0.02789	16.90	24.8	3.065	7.764	0.97864	0.222	1.714	777
290	0.03884	7.66	15.2	13.434	19.978	1.02109	0.244	2.678	624
295	0.05095	14.75	10.8	20.927	29.513	1.05373	0.223	1.347	642
300	0.05895	22.37	8.8	24.957	34.891	1.07182	0.209	0.885	662
310	0.07044	35.05	7.0	30.122	41.991	1.09514	0.194	0.589	701
320	0.07941	45.66	5.9	33.872	47.254	1.11186	0.186	0.474	734
330	0.08710	54.77	5.2	36.983	51.659	1.12542	0.180	0.413	762
340	0.09403	62.97	4.7	39.737	55.582	1.13714	0.176	0.374	787
350	0.10045	70.51	4.3	42.262	59.188	1.14759	0.173	0.348	810
360	0.10649	77.55	4.0	44.626	62.570	1.15712	0.171	0.329	831
370	0.11224	84.18	3.8	46.872	65.785	1.16593	0.169	0.314	851
380	0.11776	90.49	3.5	49.026	68.869	1.17415	0.168	0.303	870
390	0.12309	96.53	3.3	51.108	71.850	1.18190	0.167	0.294	887
400	0.12827	102.33	3.2	53.132	74.747	1.18923	0.166	0.286	905
410	0.13332	107.93	3.0	55.107	77.572	1.19621	0.165	0.279	921
420	0.13825	113.36	2.9	57.041	80.338	1.20287	0.164	0.274	937
430	0.14309	118.63	2.8	58.941	83.052	1.20926	0.163	0.269	952
440	0.14784	123.78	2.7	60.811	85.723	1.21540	0.163	0.265	967
450	0.15252	128.80	2.6	62.655	88.355	1.22132	0.162	0.261	981
460	0.15713	133.72	2.5	64.476	90.954	1.22703	0.162	0.258	995
470	0.16168	138.54	2.4	66.279	93.523	1.23255	0.161	0.256	1009
480	0.16618	143.28	2.3	68.063	96.066	1.23791	0.161	0.253	1022
490	0.17063	147.94	2.3	69.833	98.586	1.24310	0.160	0.251	1035
500	0.17504	152.53	2.2	71.589	101.085	1.24815	0.160	0.249	1048
510	0.17941	157.06	2.1	73.334	103.566	1.25306	0.160	0.247	1061
520	0.18374	161.53	2.1	75.068	106.030	1.25785	0.160	0.246	1073
530	0.18805	165.95	2.0	76.793	108.480	1.26252	0.160	0.244	1085
540	0.19232	170.33	2.0	78.509	110.917	1.26707	0.160	0.243	1097
550	0.19657	174.65	1.9	80.219	113.342	1.27152	0.159	0.242	1108
560	0.20079	178.94	1.9	81.922	115.757	1.27587	0.159	0.241	1120
570	0.20499	183.19	1.8	83.620	118.162	1.28013	0.159	0.240	1131
580	0.20917	187.41	1.8	85.313	120.560	1.28430	0.159	0.239	1142
590	0.21333	191.59	1.7	87.003	122.950	1.28838	0.159	0.239	1153
600	0.21747	195.75	1.7	88.689	125.334	1.29239	0.160	0.238	1163

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

910 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.123	81.80270	218.46	14.602	175608.31	0.0018130	0.11208	42.906	0.00346	1.57058	5.4581
100	81.67261	217.93	14.564	173962.03	0.0018172	0.11184	42.195	0.00346	1.56953	5.3787
105	80.92893	214.88	14.343	164782.27	0.0018419	0.11040	38.382	0.00345	1.56356	4.9533
110	80.18188	211.78	14.116	155948.09	0.0018679	0.10889	34.948	0.00343	1.55757	4.5707
115	79.43112	208.64	13.882	147449.25	0.0018953	0.10730	31.855	0.00342	1.55157	4.2265
120	78.67629	205.46	13.642	139275.66	0.0019243	0.10564	29.070	0.00340	1.54555	3.9166
125	77.91700	202.23	13.397	131417.41	0.0019551	0.10393	26.561	0.00337	1.53951	3.6376
130	77.15280	198.94	13.147	123864.79	0.0019877	0.10216	24.301	0.00335	1.53345	3.3864
135	76.38323	195.60	12.892	116608.23	0.0020225	0.10034	22.266	0.00332	1.52736	3.1602
140	75.60774	192.20	12.635	109638.36	0.0020597	0.09848	20.432	0.00329	1.52124	2.9566
145	74.82574	188.74	12.374	102946.00	0.0020995	0.09659	18.780	0.00326	1.51508	2.7736
150	74.03657	185.22	12.111	96522.14	0.0021422	0.09465	17.291	0.00322	1.50888	2.6092
155	73.23950	181.62	11.847	90357.98	0.0021881	0.09269	15.949	0.00318	1.50264	2.4618
160	72.43372	177.96	11.581	84444.94	0.0022378	0.09070	14.740	0.00314	1.49635	2.3298
165	71.61829	174.22	11.314	78774.62	0.0022915	0.08869	13.650	0.00310	1.49000	2.2120
170	70.79220	170.41	11.048	73338.87	0.0023500	0.08666	12.667	0.00306	1.48359	2.1072
175	69.95428	166.51	10.782	68129.75	0.0024138	0.08461	11.780	0.00301	1.47710	2.0144
180	69.10321	162.52	10.516	63139.58	0.0024836	0.08255	10.979	0.00296	1.47053	1.9328
185	68.23751	158.44	10.251	58360.96	0.0025604	0.08047	10.256	0.00291	1.46386	1.8615
190	67.35547	154.27	9.988	53786.74	0.0026452	0.07837	9.603	0.00285	1.45710	1.8001
195	66.45513	149.99	9.726	49410.11	0.0027393	0.07627	9.013	0.00279	1.45021	1.7479
200	65.53423	145.60	9.466	45224.60	0.0028444	0.07415	8.478	0.00273	1.44318	1.7046
205	64.59015	141.09	9.206	41224.15	0.0029622	0.07203	7.994	0.00267	1.43601	1.6699
210	63.61982	136.47	8.948	37403.15	0.0030953	0.06989	7.555	0.00260	1.42866	1.6437
215	62.61959	131.71	8.690	33756.52	0.0032467	0.06775	7.155	0.00253	1.42110	1.6260
220	61.58514	126.82	8.432	30279.89	0.0034203	0.06559	6.791	0.00246	1.41332	1.6170
225	60.51126	121.79	8.171	26969.70	0.0036212	0.06341	6.458	0.00238	1.40527	1.6171
230	59.39158	116.62	7.905	23823.55	0.0038559	0.06122	6.153	0.00229	1.39691	1.6272
235	58.20450	112.44	7.432	20795.32	0.0041399	0.05897	5.859	0.00218	1.38809	1.6677
240	56.96749	107.10	7.136	18061.33	0.0044483	0.05673	5.658	0.00209	1.37893	1.7106
245	55.65844	101.53	6.850	15442.54	0.0048487	0.05446	5.443	0.00199	1.36928	1.7713
250	54.26058	95.70	6.537	12979.68	0.0053379	0.05216	5.222	0.00188	1.35903	1.8413
255	52.75075	89.69	6.208	10678.19	0.0059720	0.04980	4.993	0.00176	1.34802	1.9331
260	51.09757	83.26	5.820	8524.09	0.0067986	0.04737	4.752	0.00164	1.33603	2.0443
265	49.24696	76.45	5.417	6522.35	0.0080010	0.04484	4.496	0.00149	1.32269	2.2079
270	47.12267	69.09	4.957	4721.17	0.0097584	0.04214	4.218	0.00133	1.30749	2.4292
275	44.55248	61.18	4.477	3089.32	0.0129412	0.04030	3.903	0.00114	1.28925	2.7602
280	41.18171	51.99	3.850	1691.99	0.0193949	0.03911	3.523	0.00094	1.26560	3.2697
285	35.86035	41.90	3.112	605.99	0.0408976	0.03939	2.996	0.00064	1.22887	4.6922
290	25.74987	34.82	2.417	197.28	0.0769204	0.03606	2.200	0.00052	1.16107	5.8819
295	19.62601	36.07	2.468	289.56	0.0373392	0.02750	1.827	0.00104	1.12128	3.2220
300	16.96334	37.95	2.493	379.42	0.0233240	0.02301	1.690	0.00153	1.10426	2.3403
310	14.19720	42.07	2.525	497.60	0.0140100	0.01953	1.568	0.00233	1.08678	1.7029
320	12.59301	45.94	2.533	575.04	0.0103164	0.01807	1.510	0.00303	1.07673	1.4257
330	11.48155	49.53	2.530	628.84	0.0083317	0.01731	1.479	0.00365	1.06980	1.2696
340	10.63509	52.98	2.523	669.70	0.0070677	0.01686	1.462	0.00423	1.06454	1.1687
350	9.95564	56.31	2.513	702.00	0.0061836	0.01660	1.453	0.00479	1.06034	1.0976
360	9.39089	59.55	2.502	728.26	0.0055258	0.01644	1.450	0.00532	1.05685	1.0447
370	8.90968	62.71	2.492	750.06	0.0050146	0.01634	1.450	0.00583	1.05388	1.0051
380	8.49191	65.79	2.481	768.45	0.0046043	0.01629	1.454	0.00633	1.05131	0.9735
390	8.12391	68.81	2.471	784.16	0.0042666	0.01628	1.460	0.00683	1.04905	0.9476
400	7.79594	71.77	2.461	797.73	0.0039830	0.01631	1.467	0.00732	1.04704	0.9259
410	7.50082	74.68	2.451	809.55	0.0037412	0.01636	1.476	0.00781	1.04524	0.9076
420	7.23312	77.54	2.443	819.92	0.0035320	0.01643	1.487	0.00830	1.04360	0.8919
430	6.98863	80.36	2.434	829.09	0.0033491	0.01652	1.498	0.00878	1.04210	0.8782
440	6.76402	83.15	2.427	837.23	0.0031876	0.01662	1.509	0.00927	1.04073	0.8663
450	6.55661	85.90	2.419	844.50	0.0030438	0.01674	1.522	0.00976	1.03947	0.8558
460	6.36423	88.62	2.413	851.02	0.0029148	0.01686	1.535	0.01025	1.03829	0.8465
470	6.18506	91.32	2.406	856.89	0.0027983	0.01699	1.548	0.01075	1.03720	0.8383
480	6.01762	94.00	2.400	862.21	0.0026925	0.01712	1.561	0.01124	1.03618	0.8309
490	5.86063	96.65	2.394	867.04	0.0025959	0.01726	1.575	0.01174	1.03523	0.8243
500	5.71302	99.29	2.388	871.43	0.0025073	0.01741	1.590	0.01224	1.03433	0.8183
510	5.57386	101.92	2.382	875.45	0.0024257	0.01753	1.604	0.01272	1.03348	0.8146
520	5.44236	104.54	2.376	879.13	0.0023502	0.01769	1.619	0.01323	1.03269	0.8092
530	5.31782	107.14	2.371	882.51	0.0022802	0.01786	1.633	0.01375	1.03193	0.8044
540	5.19965	109.74	2.365	885.63	0.0022150	0.01803	1.648	0.01426	1.03121	0.8001
550	5.08731	112.33	2.360	888.51	0.0021541	0.01820	1.663	0.01478	1.03053	0.7962
560	4.98034	114.92	2.354	891.18	0.0020970	0.01837	1.678	0.01530	1.02988	0.7927
570	4.87831	117.51	2.349	893.66	0.0020435	0.01854	1.693	0.01583	1.02926	0.7896
580	4.78085	120.10	2.343	895.96	0.0019930	0.01871	1.709	0.01635	1.02867	0.7868
590	4.68764	122.69	2.337	898.11	0.0019454	0.01889	1.724	0.01688	1.02811	0.7842
600	4.59837	125.28	2.332	900.11	0.0019004	0.01906	1.739	0.01741	1.02757	0.7820

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

920 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.137	0.01222	2147.34	318.4	-83.072	-80.990	0.50266	0.267	0.396	3845
100	0.01224	2130.88	316.2	-82.734	-80.648	0.50609	0.266	0.396	3835
105	0.01236	2037.03	303.6	-80.774	-78.669	0.52540	0.261	0.396	3779
110	0.01247	1945.84	291.3	-78.815	-76.690	0.54381	0.257	0.396	3722
115	0.01259	1857.24	279.5	-76.857	-74.713	0.56139	0.253	0.395	3664
120	0.01271	1771.18	268.1	-74.901	-72.736	0.57822	0.250	0.395	3604
125	0.01283	1687.59	257.0	-72.945	-70.759	0.59436	0.246	0.395	3544
130	0.01296	1606.42	246.3	-70.990	-68.782	0.60986	0.243	0.395	3482
135	0.01309	1527.61	235.9	-69.035	-66.804	0.62479	0.240	0.396	3419
140	0.01322	1451.10	225.9	-67.079	-64.826	0.63918	0.236	0.396	3355
145	0.01336	1376.83	216.2	-65.122	-62.845	0.65308	0.233	0.396	3290
150	0.01351	1304.75	206.8	-63.164	-60.863	0.66652	0.231	0.397	3225
155	0.01365	1234.79	197.8	-61.203	-58.877	0.67954	0.228	0.397	3158
160	0.01380	1166.90	189.0	-59.240	-56.888	0.69217	0.225	0.398	3091
165	0.01396	1101.02	180.6	-57.273	-54.895	0.70444	0.223	0.399	3023
170	0.01412	1037.09	172.4	-55.302	-52.896	0.71637	0.220	0.400	2954
175	0.01429	975.06	164.5	-53.325	-50.890	0.72800	0.218	0.402	2885
180	0.01447	914.86	156.9	-51.341	-48.876	0.73934	0.216	0.404	2815
185	0.01465	856.45	149.5	-49.350	-46.854	0.75043	0.214	0.406	2745
190	0.01484	799.76	142.4	-47.349	-44.820	0.76128	0.212	0.408	2673
195	0.01504	744.75	135.4	-45.337	-42.774	0.77191	0.209	0.411	2601
200	0.01526	691.36	128.7	-43.311	-40.712	0.78235	0.207	0.414	2528
205	0.01548	639.54	122.2	-41.270	-38.633	0.79262	0.205	0.418	2455
210	0.01571	589.25	115.9	-39.210	-36.533	0.80274	0.203	0.422	2380
215	0.01596	540.44	109.7	-37.129	-34.409	0.81274	0.201	0.427	2305
220	0.01623	493.08	103.7	-35.022	-32.256	0.82264	0.199	0.433	2228
225	0.01652	447.14	97.8	-32.884	-30.070	0.83246	0.198	0.441	2150
230	0.01683	402.61	92.0	-30.710	-27.843	0.84224	0.196	0.449	2069
235	0.01717	358.76	86.2	-28.464	-25.538	0.85216	0.199	0.465	1970
240	0.01754	318.55	80.5	-26.171	-23.182	0.86208	0.198	0.476	1885
245	0.01796	279.02	75.0	-23.820	-20.761	0.87206	0.196	0.491	1798
250	0.01842	240.84	69.4	-21.395	-18.258	0.88217	0.195	0.510	1706
255	0.01894	204.13	64.0	-18.878	-15.651	0.89250	0.195	0.534	1611
260	0.01955	168.60	58.1	-16.240	-12.910	0.90314	0.195	0.564	1503
265	0.02027	134.31	52.4	-13.436	-9.982	0.91430	0.196	0.608	1392
270	0.02118	102.16	46.4	-10.404	-6.796	0.92621	0.197	0.669	1267
275	0.02237	71.43	40.3	-7.004	-3.192	0.93943	0.200	0.760	1136
280	0.02414	43.30	33.3	-2.960	1.153	0.95509	0.206	0.980	977
285	0.02746	19.08	25.6	2.574	7.252	0.97666	0.220	1.583	798
290	0.03698	7.87	16.2	12.189	18.489	1.01571	0.243	2.685	635
295	0.04920	13.94	11.3	20.172	28.554	1.05017	0.225	1.435	642
300	0.05741	21.52	9.2	24.445	34.225	1.06925	0.210	0.923	661
310	0.06903	34.32	7.2	29.791	41.552	1.09330	0.195	0.603	701
320	0.07804	45.04	6.1	33.618	46.914	1.11034	0.186	0.481	734
330	0.08573	54.21	5.3	36.772	51.376	1.12408	0.181	0.417	762
340	0.09264	62.47	4.8	39.555	55.337	1.13591	0.177	0.378	787
350	0.09903	70.06	4.4	42.100	58.971	1.14644	0.174	0.351	809
360	0.10504	77.14	4.1	44.480	62.375	1.15603	0.171	0.331	831
370	0.11076	83.81	3.8	46.738	65.607	1.16489	0.170	0.316	851
380	0.11624	90.15	3.6	48.903	68.706	1.17315	0.168	0.304	870
390	0.12154	96.22	3.4	50.993	71.699	1.18093	0.167	0.295	887
400	0.12668	102.04	3.2	53.024	74.606	1.18829	0.166	0.287	905
410	0.13169	107.67	3.1	55.006	77.440	1.19529	0.165	0.280	921
420	0.13659	113.12	2.9	56.945	80.214	1.20197	0.164	0.275	937
430	0.14138	118.41	2.8	58.850	82.936	1.20838	0.163	0.270	952
440	0.14609	123.57	2.7	60.724	85.613	1.21453	0.163	0.266	967
450	0.15073	128.62	2.6	62.572	88.251	1.22046	0.162	0.262	981
460	0.15530	133.55	2.5	64.397	90.855	1.22618	0.162	0.259	995
470	0.15981	138.39	2.4	66.203	93.429	1.23172	0.161	0.256	1009
480	0.16427	143.14	2.4	67.991	95.976	1.23708	0.161	0.254	1022
490	0.16868	147.81	2.3	69.763	98.500	1.24228	0.160	0.251	1035
500	0.17305	152.42	2.2	71.522	101.003	1.24734	0.160	0.249	1048
510	0.17738	156.96	2.2	73.268	103.487	1.25226	0.160	0.248	1061
520	0.18168	161.44	2.1	75.004	105.955	1.25705	0.160	0.246	1073
530	0.18594	165.87	2.0	76.731	108.407	1.26172	0.160	0.245	1085
540	0.19017	170.25	2.0	78.449	110.847	1.26628	0.160	0.243	1097
550	0.19438	174.59	1.9	80.160	113.275	1.27074	0.159	0.242	1108
560	0.19856	178.88	1.9	81.865	115.692	1.27510	0.159	0.241	1120
570	0.20272	183.14	1.8	83.565	118.100	1.27936	0.159	0.240	1131
580	0.20686	187.37	1.8	85.259	120.499	1.28353	0.159	0.240	1142
590	0.21098	191.56	1.8	86.950	122.892	1.28762	0.159	0.239	1153
600	0.21508	195.72	1.7	88.637	125.277	1.29163	0.160	0.238	1164

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

920 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DV)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.137	81.80526	218.51	14.601	175664.02	0.0018125	0.11209	42.920	0.00346	1.57060	5.4594
100	81.67730	217.99	14.564	174044.41	0.0018166	0.11185	42.220	0.00346	1.56957	5.3813
105	80.93384	214.94	14.344	164865.05	0.0018412	0.11041	38.406	0.00345	1.56360	4.9557
110	80.18702	211.85	14.116	156031.28	0.0018672	0.10890	34.970	0.00343	1.55761	4.5729
115	79.43650	208.72	13.882	147532.85	0.0018945	0.10731	31.876	0.00342	1.55161	4.2285
120	78.68194	205.53	13.642	139359.68	0.0019235	0.10566	29.089	0.00340	1.54559	3.9185
125	77.92292	202.30	13.397	131501.88	0.0019542	0.10394	26.579	0.00337	1.53956	3.6394
130	77.15903	199.02	13.147	123949.71	0.0019868	0.10217	24.319	0.00335	1.53350	3.3880
135	76.38978	195.68	12.893	116693.61	0.0020215	0.10036	22.282	0.00332	1.52741	3.1617
140	75.61463	192.29	12.635	109724.21	0.0020586	0.09850	20.447	0.00329	1.52129	2.9581
145	74.83300	188.83	12.375	103032.33	0.0020982	0.09661	18.794	0.00326	1.51514	2.7749
150	74.04424	185.31	12.112	96608.98	0.0021408	0.09467	17.305	0.00322	1.50894	2.6104
155	73.24761	181.72	11.847	90445.34	0.0021866	0.09271	15.962	0.00319	1.50271	2.4629
160	72.44229	178.06	11.582	84532.83	0.0022361	0.09073	14.752	0.00315	1.49642	2.3308
165	71.62738	174.33	11.315	78863.07	0.0022897	0.08872	13.662	0.00310	1.49007	2.2129
170	70.80185	170.52	11.049	73427.90	0.0023480	0.08669	12.678	0.00306	1.48366	2.1080
175	69.96454	166.62	10.783	68219.38	0.0024116	0.08464	11.790	0.00301	1.47718	2.0151
180	69.11415	162.64	10.517	63229.84	0.0024811	0.08257	10.989	0.00296	1.47061	1.9333
185	68.24920	158.57	10.253	58451.86	0.0025576	0.08050	10.266	0.00291	1.46395	1.8620
190	67.36798	154.40	9.990	53878.33	0.0026421	0.07840	9.612	0.00285	1.45719	1.8004
195	66.46857	150.13	9.728	49502.41	0.0027358	0.07630	9.021	0.00279	1.45031	1.7481
200	65.54871	145.74	9.468	45317.66	0.0028404	0.07419	8.487	0.00273	1.44329	1.7047
205	64.60581	141.25	9.209	41318.00	0.0029576	0.07207	8.002	0.00267	1.43613	1.6699
210	63.63681	136.63	8.952	37497.83	0.0030900	0.06993	7.562	0.00260	1.42878	1.6435
215	62.63812	131.88	8.694	33852.08	0.0032405	0.06779	7.162	0.00253	1.42124	1.6256
220	61.60545	127.00	8.437	30375.36	0.0034130	0.06563	6.798	0.00246	1.41347	1.6163
225	60.53366	121.98	8.177	27067.12	0.0036123	0.06346	6.465	0.00238	1.40544	1.6162
230	59.41647	116.82	7.912	23921.94	0.0038452	0.06127	6.160	0.00230	1.39710	1.6259
235	58.23244	112.65	7.439	20891.24	0.0041267	0.05903	5.876	0.00218	1.38830	1.6659
240	56.99895	107.34	7.144	18157.17	0.0044326	0.05679	5.664	0.00209	1.37916	1.7082
245	55.69438	101.79	6.859	15539.87	0.0048275	0.05453	5.449	0.00199	1.36955	1.7679
250	54.30224	95.99	6.547	13078.35	0.0053098	0.05223	5.229	0.00189	1.35934	1.8370
255	52.79994	90.01	6.221	10777.89	0.0059337	0.04988	5.001	0.00177	1.34837	1.9275
260	51.15720	83.62	5.835	8625.32	0.0067414	0.04746	4.761	0.00165	1.33646	2.0357
265	49.32194	76.87	5.437	6624.67	0.0079147	0.04494	4.507	0.00150	1.32323	2.1962
270	47.22151	69.59	4.981	4824.24	0.0096090	0.04227	4.231	0.00134	1.30819	2.4094
275	44.69456	61.79	4.509	3192.68	0.0126313	0.04036	3.920	0.00116	1.29026	2.7290
280	41.41873	52.79	3.901	1793.59	0.0185683	0.03912	3.549	0.00096	1.26726	3.2017
285	36.41696	43.01	3.194	694.69	0.0367935	0.03914	3.048	0.00068	1.23267	4.4370
290	27.04273	35.31	2.461	212.70	0.0760383	0.03672	2.290	0.00051	1.16960	6.0285
295	20.32349	36.00	2.471	283.32	0.0398623	0.02842	1.868	0.00097	1.12576	3.3960
300	17.41912	37.82	2.497	374.92	0.0244185	0.02355	1.715	0.00146	1.10716	2.4204
310	14.48554	41.90	2.530	497.09	0.0143872	0.01980	1.583	0.00227	1.08859	1.7352
320	12.81352	45.78	2.538	577.07	0.0105077	0.01825	1.522	0.00296	1.07810	1.4441
330	11.66507	49.37	2.535	632.41	0.0084499	0.01744	1.489	0.00358	1.07094	1.2818
340	10.79453	52.83	2.528	674.37	0.0071486	0.01697	1.470	0.00416	1.06553	1.1775
350	10.09791	56.17	2.518	707.50	0.0062426	0.01669	1.460	0.00471	1.06122	1.1044
360	9.52018	59.42	2.507	734.41	0.0055709	0.01652	1.456	0.00524	1.05765	1.0502
370	9.02872	62.58	2.496	756.73	0.0050502	0.01641	1.456	0.00575	1.05462	1.0097
380	8.60262	65.67	2.485	775.56	0.0046330	0.01636	1.460	0.00625	1.05200	0.9773
390	8.22768	68.69	2.475	791.63	0.0042903	0.01635	1.465	0.00674	1.04969	0.9509
400	7.89380	71.66	2.465	805.50	0.0040029	0.01637	1.472	0.00723	1.04764	0.9288
410	7.59359	74.57	2.455	817.58	0.0037580	0.01642	1.481	0.00771	1.04580	0.9101
420	7.32143	77.44	2.446	828.18	0.0035465	0.01649	1.491	0.00820	1.04414	0.8941
430	7.07300	80.27	2.438	837.54	0.0033617	0.01657	1.502	0.00868	1.04262	0.8803
440	6.84488	83.06	2.430	845.85	0.0031986	0.01667	1.513	0.00917	1.04123	0.8682
450	6.63431	85.81	2.423	853.27	0.0030534	0.01678	1.525	0.00965	1.03994	0.8575
460	6.43906	88.54	2.416	859.93	0.0029233	0.01690	1.538	0.01014	1.03875	0.8481
470	6.25728	91.24	2.409	865.93	0.0028059	0.01703	1.551	0.01063	1.03764	0.8397
480	6.08745	93.92	2.403	871.35	0.0026993	0.01716	1.565	0.01112	1.03661	0.8322
490	5.92825	96.58	2.396	876.28	0.0026020	0.01730	1.579	0.01161	1.03564	0.8255
500	5.77860	99.22	2.391	880.76	0.0025128	0.01745	1.593	0.01211	1.03473	0.8195
510	5.63755	101.85	2.385	884.86	0.0024307	0.01756	1.607	0.01258	1.03387	0.8156
520	5.50428	104.46	2.379	888.62	0.0023548	0.01773	1.622	0.01309	1.03306	0.8102
530	5.37810	107.07	2.373	892.07	0.0022844	0.01789	1.636	0.01360	1.03230	0.8053
540	5.25838	109.67	2.368	895.25	0.0022188	0.01806	1.651	0.01411	1.03157	0.8010
550	5.14458	112.27	2.362	898.19	0.0021576	0.01823	1.666	0.01463	1.03088	0.7970
560	5.03623	114.86	2.357	900.91	0.0021003	0.01840	1.681	0.01514	1.03022	0.7935
570	4.93290	117.45	2.351	903.43	0.0020464	0.01857	1.696	0.01566	1.02960	0.7903
580	4.83421	120.04	2.346	905.78	0.0019958	0.01874	1.711	0.01618	1.02900	0.7874
590	4.73983	122.63	2.340	907.97	0.0019480	0.01892	1.727	0.01671	1.02843	0.7849
600	4.64946	125.22	2.334	910.01	0.0019028	0.01909	1.742	0.01723	1.02788	0.7826

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

930 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.151	0.01222	2147.96	318.4	-83.071	-80.966	0.50267	0.267	0.396	3845
100	0.01224	2131.76	316.2	-82.738	-80.630	0.50605	0.266	0.396	3836
105	0.01236	2037.93	303.6	-80.778	-78.650	0.52536	0.262	0.396	3780
110	0.01247	1946.75	291.4	-78.820	-76.672	0.54377	0.257	0.396	3723
115	0.01259	1858.17	279.6	-76.862	-74.695	0.56135	0.253	0.395	3665
120	0.01271	1772.12	268.1	-74.906	-72.718	0.57817	0.250	0.395	3605
125	0.01283	1688.54	257.0	-72.951	-70.741	0.59431	0.246	0.395	3544
130	0.01296	1607.39	246.3	-70.996	-68.764	0.60982	0.243	0.395	3482
135	0.01309	1528.59	235.9	-69.041	-66.787	0.62474	0.240	0.396	3420
140	0.01322	1452.10	225.9	-67.086	-64.808	0.63913	0.236	0.396	3356
145	0.01336	1377.85	216.2	-65.129	-62.828	0.65303	0.233	0.396	3291
150	0.01350	1305.78	206.9	-63.171	-60.846	0.66647	0.231	0.397	3226
155	0.01365	1235.84	197.8	-61.211	-58.861	0.67948	0.228	0.397	3159
160	0.01380	1167.97	189.1	-59.249	-56.872	0.69211	0.225	0.398	3092
165	0.01396	1102.11	180.6	-57.282	-54.879	0.70438	0.223	0.399	3024
170	0.01412	1038.21	172.5	-55.312	-52.880	0.71631	0.220	0.400	2956
175	0.01429	976.19	164.6	-53.336	-50.875	0.72794	0.218	0.402	2886
180	0.01447	916.02	157.0	-51.353	-48.862	0.73928	0.216	0.403	2816
185	0.01465	857.63	149.6	-49.362	-46.839	0.75036	0.214	0.405	2746
190	0.01484	800.97	142.4	-47.362	-44.806	0.76121	0.212	0.408	2675
195	0.01504	745.99	135.5	-45.351	-42.761	0.77184	0.209	0.411	2603
200	0.01525	692.62	128.8	-43.326	-40.700	0.78227	0.207	0.414	2530
205	0.01547	640.84	122.3	-41.287	-38.622	0.79254	0.205	0.418	2457
210	0.01571	590.58	116.0	-39.228	-36.523	0.80265	0.203	0.422	2382
215	0.01596	541.80	109.8	-37.148	-34.400	0.81265	0.201	0.427	2307
220	0.01623	494.48	103.8	-35.043	-32.249	0.82254	0.199	0.433	2230
225	0.01651	448.58	97.9	-32.908	-30.064	0.83235	0.198	0.440	2152
230	0.01682	404.10	92.1	-30.736	-27.839	0.84212	0.196	0.449	2072
235	0.01716	360.23	86.3	-28.493	-25.537	0.85203	0.199	0.464	1973
240	0.01753	320.06	80.6	-26.204	-23.184	0.86193	0.198	0.475	1888
245	0.01794	280.58	75.2	-23.857	-20.767	0.87190	0.196	0.490	1802
250	0.01840	242.47	69.6	-21.438	-18.269	0.88199	0.195	0.509	1710
255	0.01892	205.82	64.1	-18.928	-15.669	0.89229	0.195	0.533	1615
260	0.01953	170.38	58.3	-16.300	-12.937	0.90290	0.195	0.561	1508
265	0.02024	136.18	52.7	-13.509	-10.023	0.91400	0.195	0.605	1398
270	0.02113	104.12	46.6	-10.498	-6.858	0.92583	0.197	0.663	1275
275	0.02231	73.51	40.7	-7.133	-3.292	0.93892	0.200	0.770	1146
280	0.02401	45.49	33.8	-3.166	0.970	0.95427	0.205	0.955	990
285	0.02709	21.24	26.3	2.135	6.801	0.97490	0.218	1.477	817
290	0.03536	8.40	17.2	11.026	17.116	1.01075	0.241	2.601	648
295	0.04748	13.21	11.8	19.385	27.562	1.04650	0.227	1.526	642
300	0.05589	20.71	9.5	23.918	33.542	1.06662	0.212	0.964	661
310	0.06766	33.59	7.3	29.454	41.105	1.09146	0.196	0.617	700
320	0.07670	44.42	6.2	33.361	46.571	1.10882	0.187	0.488	733
330	0.08438	53.66	5.4	36.560	51.092	1.12274	0.181	0.422	761
340	0.09128	61.98	4.9	39.372	55.091	1.13468	0.177	0.381	786
350	0.09765	69.62	4.5	41.938	58.753	1.14530	0.174	0.353	809
360	0.10363	76.74	4.2	44.333	62.179	1.15495	0.172	0.333	831
370	0.10931	83.45	3.9	46.604	65.428	1.16386	0.170	0.318	851
380	0.11476	89.82	3.6	48.779	68.542	1.17216	0.168	0.306	869
390	0.12002	95.91	3.4	50.878	71.547	1.17997	0.167	0.296	887
400	0.12513	101.76	3.3	52.916	74.465	1.18735	0.166	0.288	905
410	0.13010	107.41	3.1	54.904	77.308	1.19437	0.165	0.281	921
420	0.13495	112.88	3.0	56.850	80.090	1.20108	0.164	0.275	937
430	0.13971	118.20	2.9	58.759	82.819	1.20750	0.163	0.271	952
440	0.14439	123.37	2.7	60.638	85.503	1.21367	0.163	0.266	967
450	0.14898	128.43	2.6	62.490	88.146	1.21961	0.162	0.263	982
460	0.15352	133.38	2.5	64.318	90.756	1.22535	0.162	0.259	996
470	0.15799	138.23	2.5	66.127	93.334	1.23089	0.161	0.256	1009
480	0.16241	143.00	2.4	67.918	95.886	1.23626	0.161	0.254	1023
490	0.16678	147.69	2.3	69.693	98.414	1.24148	0.161	0.252	1036
500	0.17111	152.30	2.2	71.454	100.921	1.24654	0.160	0.250	1049
510	0.17540	156.85	2.2	73.203	103.408	1.25147	0.160	0.248	1061
520	0.17965	161.35	2.1	74.941	105.879	1.25626	0.160	0.246	1073
530	0.18388	165.79	2.1	76.669	108.335	1.26094	0.160	0.245	1085
540	0.18807	170.18	2.0	78.389	110.777	1.26551	0.160	0.244	1097
550	0.19224	174.53	2.0	80.102	113.208	1.26997	0.159	0.242	1109
560	0.19638	178.83	1.9	81.808	115.627	1.27433	0.159	0.241	1120
570	0.20050	183.10	1.9	83.509	118.037	1.27859	0.159	0.241	1131
580	0.20460	187.33	1.8	85.205	120.439	1.28277	0.159	0.240	1143
590	0.20868	191.53	1.8	86.896	122.833	1.28686	0.159	0.239	1153
600	0.21274	195.70	1.8	88.584	125.221	1.29087	0.160	0.238	1164

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

930 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.151	81.80782	218.57	14.601	175719.72	0.0018119	0.11210	42.934	0.00346	1.57062	5.4607
100	81.68199	218.06	14.564	174126.78	0.0018160	0.11186	42.246	0.00346	1.56961	5.3838
105	80.93875	215.01	14.344	164947.82	0.0018406	0.11042	38.430	0.00345	1.56364	4.9580
110	80.19216	211.92	14.116	156114.45	0.0018665	0.10891	34.993	0.00343	1.55765	4.5751
115	79.44189	208.79	13.882	147616.44	0.0018938	0.10732	31.897	0.00342	1.55165	4.2306
120	78.68758	205.61	13.642	139443.70	0.0019227	0.10567	29.109	0.00340	1.54564	3.9204
125	77.92885	202.38	13.397	131586.33	0.0019533	0.10396	26.598	0.00337	1.53960	3.6411
130	77.16525	199.10	13.147	124034.60	0.0019858	0.10219	24.336	0.00335	1.53354	3.3896
135	76.39632	195.76	12.893	116778.96	0.0020204	0.10038	22.299	0.00332	1.52746	3.1632
140	75.62152	192.37	12.636	109810.04	0.0020574	0.09852	20.463	0.00329	1.52134	2.9595
145	74.84026	188.92	12.375	103118.64	0.0020970	0.09662	18.809	0.00326	1.51519	2.7762
150	74.05190	185.40	12.112	96695.79	0.0021395	0.09469	17.319	0.00322	1.50900	2.6116
155	73.25570	181.82	11.848	90532.67	0.0021852	0.09274	15.975	0.00319	1.50277	2.4639
160	72.45086	178.16	11.582	84620.70	0.0022345	0.09075	14.765	0.00315	1.49648	2.3318
165	71.63646	174.43	11.316	78951.49	0.0022880	0.08874	13.673	0.00310	1.49014	2.2138
170	70.81149	170.63	11.050	73516.89	0.0023460	0.08671	12.689	0.00306	1.48374	2.1088
175	69.97479	166.74	10.784	68308.96	0.0024094	0.08466	11.801	0.00301	1.47726	2.0158
180	69.12508	162.76	10.519	63320.05	0.0024787	0.08260	10.999	0.00296	1.47070	1.9339
185	68.26087	158.69	10.255	58542.72	0.0025549	0.08053	10.275	0.00291	1.46404	1.8625
190	67.38048	154.53	9.992	53969.86	0.0026390	0.07844	9.621	0.00285	1.45729	1.8008
195	66.48199	150.26	9.731	49594.66	0.0027324	0.07634	9.030	0.00280	1.45041	1.7484
200	65.56316	145.89	9.471	45410.65	0.0028364	0.07423	8.495	0.00274	1.44340	1.7048
205	64.62143	141.40	9.213	41411.78	0.0029531	0.07210	8.010	0.00267	1.43624	1.6698
210	63.65376	136.79	8.955	37592.43	0.0030847	0.06997	7.570	0.00261	1.42891	1.6433
215	62.65660	132.05	8.699	33947.54	0.0032343	0.06783	7.170	0.00253	1.42138	1.6252
220	61.62570	127.18	8.442	30472.73	0.0034056	0.06567	6.805	0.00246	1.41363	1.6157
225	60.55599	122.17	8.183	27164.43	0.0036036	0.06350	6.472	0.00238	1.40561	1.6152
230	59.44126	117.02	7.919	24020.20	0.0038345	0.06132	6.167	0.00230	1.39728	1.6246
235	58.26025	112.87	7.445	20987.08	0.0041136	0.05908	5.882	0.00218	1.38850	1.6641
240	57.03027	107.58	7.152	18252.87	0.0044170	0.05685	5.669	0.00210	1.37939	1.7058
245	55.73012	102.04	6.867	15637.02	0.0048065	0.05459	5.456	0.00200	1.36981	1.7645
250	54.34362	96.27	6.557	13176.78	0.0052823	0.05230	5.236	0.00189	1.35964	1.8327
255	52.84873	90.32	6.233	10877.31	0.0058961	0.04996	5.008	0.00178	1.34873	1.9219
260	51.21620	83.97	5.849	8726.22	0.0066855	0.04755	4.770	0.00165	1.33688	2.0273
265	49.39588	77.28	5.457	6726.62	0.0078310	0.04505	4.517	0.00151	1.32376	2.1848
270	47.31847	70.08	5.005	4926.83	0.0094658	0.04240	4.244	0.00135	1.30888	2.3904
275	44.83256	62.38	4.540	3295.44	0.0123409	0.04042	3.937	0.00117	1.29123	2.6995
280	41.64403	53.57	3.949	1894.47	0.0178274	0.03914	3.575	0.00098	1.26883	3.1397
285	36.91346	44.07	3.270	784.13	0.0335154	0.03894	3.096	0.00071	1.23608	4.2268
290	28.27696	35.95	2.519	237.45	0.0723378	0.03719	2.379	0.00051	1.17777	5.9905
295	21.06075	35.96	2.474	278.19	0.0424375	0.02935	1.912	0.00091	1.13051	3.5798
300	17.89284	37.69	2.502	370.50	0.0255727	0.02412	1.741	0.00140	1.11018	2.5051
310	14.78007	41.75	2.536	496.51	0.0147776	0.02007	1.598	0.00220	1.09045	1.7687
320	13.03711	45.63	2.544	579.06	0.0107032	0.01843	1.533	0.00289	1.07950	1.4629
330	11.85047	49.22	2.541	635.93	0.0085700	0.01758	1.498	0.00352	1.07209	1.2943
340	10.95523	52.68	2.533	679.00	0.0072304	0.01708	1.478	0.00409	1.06653	1.1865
350	10.24109	56.03	2.523	712.97	0.0063022	0.01679	1.467	0.00464	1.06210	1.1113
360	9.65015	59.28	2.512	740.54	0.0056163	0.01661	1.463	0.00517	1.05845	1.0557
370	9.14830	62.45	2.500	763.39	0.0050859	0.01649	1.462	0.00567	1.05535	1.0142
380	8.71375	65.54	2.489	782.65	0.0046619	0.01642	1.465	0.00617	1.05268	0.9812
390	8.33178	68.57	2.479	799.08	0.0043141	0.01641	1.470	0.00666	1.05033	0.9542
400	7.99193	71.55	2.468	813.26	0.0040229	0.01643	1.477	0.00714	1.04824	0.9317
410	7.68658	74.47	2.459	825.60	0.0037749	0.01647	1.486	0.00762	1.04637	0.9127
420	7.40993	77.34	2.450	836.43	0.0035610	0.01654	1.495	0.00810	1.04468	0.8964
430	7.15753	80.17	2.441	845.99	0.0033742	0.01662	1.506	0.00858	1.04314	0.8823
440	6.92587	82.96	2.433	854.47	0.0032095	0.01672	1.517	0.00906	1.04172	0.8700
450	6.71211	85.72	2.426	862.05	0.0030631	0.01682	1.529	0.00955	1.04041	0.8592
460	6.51398	88.45	2.419	868.84	0.0029318	0.01694	1.542	0.01003	1.03921	0.8496
470	6.32958	91.16	2.412	874.95	0.0028135	0.01707	1.555	0.01051	1.03808	0.8411
480	6.15734	93.84	2.406	880.50	0.0027061	0.01720	1.568	0.01100	1.03703	0.8335
490	5.99593	96.50	2.399	885.52	0.0026081	0.01734	1.582	0.01149	1.03605	0.8267
500	5.84423	99.14	2.393	890.09	0.0025184	0.01748	1.596	0.01198	1.03513	0.8206
510	5.70128	101.77	2.388	894.27	0.0024357	0.01760	1.610	0.01245	1.03426	0.8167
520	5.56624	104.39	2.382	898.10	0.0023594	0.01776	1.625	0.01295	1.03344	0.8112
530	5.43840	107.00	2.376	901.62	0.0022885	0.01792	1.639	0.01346	1.03266	0.8063
540	5.31713	109.60	2.371	904.86	0.0022226	0.01809	1.654	0.01397	1.03193	0.8018
550	5.20187	112.20	2.365	907.86	0.0021611	0.01826	1.669	0.01448	1.03123	0.7978
560	5.09214	114.79	2.360	910.63	0.0021035	0.01843	1.684	0.01499	1.03056	0.7942
570	4.98751	117.38	2.354	913.21	0.0020494	0.01860	1.699	0.01550	1.02993	0.7910
580	4.88759	119.97	2.349	915.60	0.0019985	0.01877	1.714	0.01602	1.02932	0.7881
590	4.79204	122.56	2.343	917.83	0.0019506	0.01895	1.729	0.01654	1.02874	0.7855
600	4.70055	125.16	2.337	919.92	0.0019052	0.01912	1.744	0.01706	1.02819	0.7832

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

940 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	Cp BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.166	0.01222	2148.57	318.4	-83.069	-80.942	0.50269	0.267	0.396	3846
100	0.01224	2132.65	316.3	-82.742	-80.611	0.50600	0.266	0.396	3836
105	0.01235	2038.83	303.6	-80.782	-78.632	0.52532	0.262	0.396	3781
110	0.01247	1947.67	291.4	-78.824	-76.654	0.54372	0.257	0.396	3724
115	0.01259	1859.09	279.6	-76.867	-74.676	0.56130	0.254	0.395	3665
120	0.01271	1773.06	268.2	-74.912	-72.700	0.57813	0.250	0.395	3606
125	0.01283	1689.50	257.1	-72.957	-70.723	0.59426	0.246	0.395	3545
130	0.01296	1608.36	246.4	-71.002	-68.746	0.60977	0.243	0.395	3483
135	0.01309	1529.58	236.0	-69.047	-66.769	0.62469	0.240	0.395	3420
140	0.01322	1453.10	226.0	-67.092	-64.791	0.63908	0.236	0.396	3357
145	0.01336	1378.87	216.3	-65.136	-62.811	0.65297	0.234	0.396	3292
150	0.01350	1306.82	206.9	-63.179	-60.829	0.66641	0.231	0.397	3226
155	0.01365	1236.90	197.9	-61.220	-58.844	0.67943	0.228	0.397	3160
160	0.01380	1169.05	189.1	-59.258	-56.855	0.69205	0.225	0.398	3093
165	0.01396	1103.21	180.7	-57.292	-54.862	0.70432	0.223	0.399	3025
170	0.01412	1039.32	172.5	-55.322	-52.864	0.71625	0.220	0.400	2957
175	0.01429	977.33	164.6	-53.346	-50.859	0.72787	0.218	0.402	2887
180	0.01446	917.18	157.0	-51.364	-48.847	0.73921	0.216	0.403	2818
185	0.01465	858.82	149.6	-49.375	-46.825	0.75029	0.214	0.405	2747
190	0.01484	802.18	142.5	-47.375	-44.793	0.76113	0.212	0.406	2676
195	0.01504	747.22	135.6	-45.365	-42.748	0.77176	0.210	0.410	2604
200	0.01525	693.89	128.9	-43.342	-40.688	0.78219	0.207	0.414	2532
205	0.01547	642.13	122.4	-41.303	-38.610	0.79245	0.205	0.417	2458
210	0.01571	591.90	116.1	-39.246	-36.513	0.80257	0.203	0.422	2384
215	0.01596	543.17	109.9	-37.168	-34.391	0.81255	0.201	0.427	2309
220	0.01622	495.88	103.9	-35.065	-32.241	0.82243	0.200	0.433	2232
225	0.01651	450.02	98.0	-32.931	-30.058	0.83224	0.198	0.440	2155
230	0.01682	405.58	92.2	-30.763	-27.836	0.84200	0.196	0.448	2075
235	0.01716	361.70	86.5	-28.522	-25.536	0.85189	0.199	0.464	1976
240	0.01752	321.56	80.8	-26.237	-23.186	0.86179	0.198	0.475	1891
245	0.01793	282.14	75.3	-23.894	-20.773	0.87174	0.196	0.490	1805
250	0.01839	244.09	69.8	-21.481	-18.280	0.88181	0.195	0.507	1714
255	0.01890	207.51	64.3	-18.977	-15.687	0.89209	0.195	0.531	1619
260	0.01950	172.15	58.5	-16.359	-12.964	0.90266	0.195	0.559	1513
265	0.02021	138.03	52.9	-13.581	-10.063	0.91371	0.195	0.602	1404
270	0.02109	106.07	46.9	-10.590	-6.919	0.92546	0.197	0.658	1282
275	0.02224	75.56	41.0	-7.260	-3.389	0.93842	0.199	0.760	1155
280	0.02389	47.65	34.2	-3.362	0.796	0.95349	0.205	0.932	1003
285	0.02677	23.39	27.0	1.738	6.397	0.97331	0.216	1.390	835
290	0.03400	9.22	18.2	9.971	15.888	1.00629	0.239	2.458	663
295	0.04579	12.58	12.3	18.568	26.539	1.04273	0.228	1.617	643
300	0.05439	19.92	9.8	23.374	32.841	1.06394	0.213	1.007	661
310	0.06631	32.88	7.5	29.111	40.653	1.08960	0.196	0.631	700
320	0.07539	43.80	6.3	33.102	46.225	1.10730	0.187	0.496	733
330	0.08307	53.12	5.6	36.345	50.805	1.12140	0.181	0.427	761
340	0.08995	61.49	5.0	39.187	54.844	1.13346	0.177	0.384	786
350	0.09629	69.18	4.6	41.774	58.535	1.14416	0.174	0.356	809
360	0.10224	76.34	4.2	44.186	61.982	1.15388	0.172	0.335	830
370	0.10789	83.08	3.9	46.469	65.250	1.16283	0.170	0.319	850
380	0.11331	89.48	3.7	48.655	68.378	1.17117	0.168	0.307	869
390	0.11854	95.60	3.5	50.763	71.396	1.17901	0.167	0.297	887
400	0.12360	101.48	3.3	52.808	74.323	1.18642	0.166	0.289	905
410	0.12854	107.15	3.2	54.803	77.176	1.19347	0.165	0.282	921
420	0.13336	112.64	3.0	56.754	79.966	1.20019	0.164	0.276	937
430	0.13808	117.98	2.9	58.668	82.702	1.20663	0.163	0.271	952
440	0.14271	123.18	2.8	60.551	85.392	1.21281	0.163	0.267	967
450	0.14727	128.25	2.7	62.407	88.042	1.21877	0.162	0.263	982
460	0.15177	133.21	2.6	64.239	90.656	1.22452	0.162	0.260	996
470	0.15620	138.08	2.5	66.051	93.240	1.23007	0.161	0.257	1009
480	0.16058	142.86	2.4	67.845	95.796	1.23545	0.161	0.254	1023
490	0.16492	147.56	2.3	69.622	98.328	1.24067	0.161	0.252	1036
500	0.16921	152.19	2.3	71.386	100.838	1.24575	0.160	0.250	1049
510	0.17346	156.75	2.2	73.137	103.330	1.25068	0.160	0.248	1061
520	0.17768	161.26	2.1	74.877	105.804	1.25548	0.160	0.247	1074
530	0.18186	165.71	2.1	76.607	108.262	1.26017	0.160	0.245	1086
540	0.18602	170.11	2.0	78.329	110.708	1.26474	0.160	0.244	1098
550	0.19014	174.46	2.0	80.044	113.141	1.26920	0.159	0.243	1109
560	0.19425	178.78	1.9	81.751	115.563	1.27357	0.159	0.242	1121
570	0.19833	183.05	1.9	83.453	117.975	1.27784	0.159	0.241	1132
580	0.20239	187.30	1.9	85.150	120.379	1.28202	0.159	0.240	1143
590	0.20643	191.51	1.8	86.843	122.775	1.28611	0.159	0.239	1154
600	0.21045	195.69	1.8	88.532	125.164	1.29013	0.160	0.239	1165

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

940 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.166	81.81039	218.62	14.600	175775.42	0.0018114	0.11210	42.949	0.00346	1.57064	5.4620
100	81.68668	218.12	14.564	174209.14	0.0018154	0.11187	42.271	0.00346	1.56964	5.3863
105	80.94366	215.07	14.344	165030.57	0.0018399	0.11044	38.454	0.00345	1.56367	4.9604
110	80.19729	211.99	14.117	156197.61	0.0018657	0.10892	35.015	0.00343	1.55769	4.5773
115	79.44727	208.86	13.883	147700.00	0.0018930	0.10733	31.918	0.00342	1.55170	4.2326
120	78.69322	205.68	13.643	139527.69	0.0019218	0.10568	29.129	0.00340	1.54568	3.9223
125	77.93477	202.46	13.397	131670.75	0.0019524	0.10397	26.617	0.00338	1.53965	3.6429
130	77.17147	199.18	13.148	124119.47	0.0019849	0.10221	24.354	0.00335	1.53359	3.3913
135	76.40286	195.85	12.894	116864.29	0.0020194	0.10039	22.315	0.00332	1.52751	3.1647
140	75.62840	192.46	12.636	109895.84	0.0020563	0.09854	20.478	0.00329	1.52140	2.9609
145	74.84752	189.01	12.376	103204.93	0.0020958	0.09664	18.824	0.00326	1.51525	2.7775
150	74.05956	185.49	12.113	96782.57	0.0021381	0.09472	17.332	0.00322	1.50906	2.6128
155	73.26379	181.91	11.849	90619.97	0.0021837	0.09276	15.989	0.00319	1.50283	2.4650
160	72.45941	178.26	11.583	84708.52	0.0022329	0.09077	14.777	0.00315	1.49655	2.3328
165	71.64553	174.54	11.317	79039.87	0.0022862	0.08876	13.685	0.00310	1.49021	2.2146
170	70.82111	170.74	11.051	73605.84	0.0023441	0.08674	12.700	0.00306	1.48381	2.1096
175	69.98503	166.85	10.785	68398.51	0.0024072	0.08469	11.811	0.00301	1.47734	2.0165
180	69.13599	162.88	10.520	63410.21	0.0024763	0.08263	11.009	0.00296	1.47078	1.9345
185	68.27252	158.82	10.257	58633.53	0.0025522	0.08056	10.285	0.00291	1.46413	1.8630
190	67.39295	154.66	9.994	54061.34	0.0026360	0.07847	9.630	0.00286	1.45738	1.8012
195	66.49538	150.40	9.733	49686.85	0.0027289	0.07637	9.038	0.00280	1.45051	1.7487
200	65.57759	146.03	9.474	45503.58	0.0028324	0.07426	8.503	0.00274	1.44351	1.7050
205	64.63702	141.55	9.216	41505.48	0.0029485	0.07214	8.018	0.00267	1.43636	1.6698
210	63.67067	136.95	8.959	37686.95	0.0030795	0.07001	7.577	0.00261	1.42904	1.6431
215	62.67503	132.22	8.703	34042.92	0.0032282	0.06787	7.177	0.00254	1.42152	1.6248
220	61.64590	127.36	8.447	30569.00	0.0033984	0.06572	6.812	0.00246	1.41378	1.6151
225	60.57824	122.36	8.188	27261.62	0.0035949	0.06355	6.479	0.00239	1.40577	1.6143
230	59.46596	117.23	7.925	24118.34	0.0038239	0.06137	6.173	0.00230	1.39747	1.6234
235	58.28796	113.08	7.452	21082.83	0.0041006	0.05914	5.889	0.00219	1.38871	1.6623
240	57.06144	107.81	7.160	18348.44	0.0044016	0.05691	5.675	0.00210	1.37962	1.7035
245	55.76566	102.30	6.875	15733.99	0.0047859	0.05466	5.462	0.00200	1.37007	1.7612
250	54.38473	96.55	6.567	13275.00	0.0052551	0.05237	5.243	0.00190	1.35994	1.8285
255	52.89712	90.64	6.245	10976.46	0.0058593	0.05004	5.016	0.00178	1.34908	1.9164
260	51.27459	84.32	5.862	8826.79	0.0066311	0.04764	4.779	0.00166	1.33731	2.0191
265	49.46882	77.70	5.476	6828.20	0.0077497	0.04515	4.528	0.00152	1.32428	2.1737
270	47.41362	70.56	5.029	5028.94	0.0093284	0.04252	4.257	0.00136	1.30956	2.3721
275	44.96673	62.96	4.571	3397.61	0.0120680	0.04048	3.954	0.00118	1.29218	2.6715
280	41.85877	54.32	3.995	1994.62	0.0171597	0.03917	3.599	0.00100	1.27033	3.0831
285	37.36185	45.07	3.341	874.02	0.0308387	0.03878	3.139	0.00075	1.23916	4.0503
290	29.41581	36.72	2.586	271.27	0.0669387	0.03750	2.465	0.00052	1.18535	5.8150
295	21.83710	35.96	2.480	274.63	0.0449622	0.03026	1.960	0.00086	1.13554	3.7695
300	18.38523	37.59	2.507	366.26	0.0267835	0.02472	1.769	0.00134	1.11333	2.5942
310	15.08096	41.59	2.541	495.88	0.0151811	0.02035	1.614	0.00214	1.09235	1.8033
320	13.26382	45.48	2.549	581.00	0.0109029	0.01861	1.545	0.00283	1.08092	1.4822
330	12.03777	49.08	2.546	639.42	0.0086919	0.01771	1.508	0.00345	1.07326	1.3069
340	11.11722	52.54	2.538	683.60	0.0073132	0.01720	1.486	0.00403	1.06753	1.1956
350	10.38519	55.89	2.528	718.41	0.0063623	0.01688	1.475	0.00457	1.06299	1.1183
360	9.78081	59.15	2.516	745.64	0.0056620	0.01669	1.469	0.00510	1.05926	1.0613
370	9.26840	62.32	2.505	770.03	0.0051219	0.01656	1.468	0.00560	1.05609	1.0188
380	8.82530	65.42	2.493	789.72	0.0046909	0.01649	1.471	0.00609	1.05336	0.9851
390	8.43621	68.46	2.483	806.52	0.0043380	0.01647	1.475	0.00657	1.05097	0.9575
400	8.09034	71.44	2.472	821.01	0.0040428	0.01649	1.482	0.00706	1.04885	0.9346
410	7.77979	74.36	2.462	833.62	0.0037919	0.01653	1.490	0.00753	1.04694	0.9153
420	7.49861	77.24	2.453	844.67	0.0035755	0.01659	1.500	0.00801	1.04522	0.8987
430	7.24222	80.07	2.445	854.43	0.0033868	0.01667	1.510	0.00849	1.04365	0.8844
440	7.00699	82.87	2.437	863.09	0.0032205	0.01676	1.521	0.00896	1.04222	0.8719
450	6.79003	85.63	2.429	870.82	0.0030727	0.01687	1.533	0.00944	1.04089	0.8609
460	6.58900	88.37	2.422	877.75	0.0029404	0.01698	1.546	0.00992	1.03966	0.8512
470	6.40196	91.07	2.415	884.00	0.0028211	0.01711	1.558	0.01040	1.03852	0.8425
480	6.22731	93.76	2.409	889.64	0.0027129	0.01724	1.572	0.01088	1.03746	0.8348
490	6.06367	96.42	2.402	894.76	0.0026142	0.01738	1.585	0.01137	1.03646	0.8279
500	5.90992	99.07	2.396	899.43	0.0025239	0.01752	1.599	0.01186	1.03553	0.8217
510	5.76505	101.70	2.391	903.69	0.0024407	0.01763	1.613	0.01232	1.03465	0.8178
520	5.62824	104.32	2.385	907.59	0.0023639	0.01779	1.628	0.01282	1.03381	0.8122
530	5.49873	106.93	2.379	911.18	0.0022927	0.01796	1.642	0.01332	1.03303	0.8072
540	5.37590	109.54	2.374	914.48	0.0022264	0.01812	1.657	0.01382	1.03228	0.8027
550	5.25918	112.14	2.368	917.54	0.0021646	0.01829	1.672	0.01433	1.03157	0.7986
560	5.14807	114.73	2.362	920.36	0.0021067	0.01846	1.687	0.01484	1.03090	0.7950
570	5.04213	117.32	2.357	922.99	0.0020524	0.01863	1.702	0.01534	1.03026	0.7917
580	4.94098	119.91	2.351	925.43	0.0020013	0.01880	1.717	0.01586	1.02964	0.7888
590	4.84425	122.50	2.346	927.70	0.0019531	0.01897	1.732	0.01637	1.02906	0.7861
600	4.75165	125.10	2.340	929.83	0.0019076	0.01915	1.747	0.01689	1.02850	0.7838

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

950 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.180	0.01222	2149.18	318.4	-83.068	-80.917	0.50270	0.267	0.396	3845
100	0.01224	2133.54	316.3	-82.746	-80.593	0.50596	0.266	0.396	3837
105	0.01235	2039.73	303.7	-80.787	-78.613	0.52528	0.262	0.396	3781
110	0.01247	1948.58	291.5	-78.829	-76.635	0.54368	0.257	0.395	3724
115	0.01259	1860.02	279.6	-76.872	-74.658	0.56126	0.254	0.395	3666
120	0.01271	1774.00	268.2	-74.917	-72.682	0.57808	0.250	0.395	3605
125	0.01283	1690.45	257.1	-72.962	-70.705	0.59422	0.246	0.395	3546
130	0.01296	1609.33	246.4	-71.008	-68.729	0.60972	0.243	0.395	3484
135	0.01309	1530.57	236.0	-69.054	-66.752	0.62464	0.240	0.395	3421
140	0.01322	1454.10	226.0	-67.099	-64.773	0.63903	0.236	0.396	3357
145	0.01336	1379.89	216.3	-65.144	-62.794	0.65292	0.234	0.396	3293
150	0.01350	1307.86	207.0	-63.187	-60.812	0.66636	0.231	0.397	3227
155	0.01365	1237.95	197.9	-61.228	-58.827	0.67937	0.228	0.397	3161
160	0.01380	1170.12	189.2	-59.266	-56.839	0.69200	0.225	0.398	3094
165	0.01396	1104.30	180.8	-57.301	-54.846	0.70426	0.223	0.399	3026
170	0.01412	1040.43	172.6	-55.332	-52.848	0.71619	0.220	0.400	2958
175	0.01429	978.47	164.7	-53.357	-50.844	0.72781	0.218	0.402	2889
180	0.01446	918.34	157.1	-51.376	-48.832	0.73914	0.216	0.403	2819
185	0.01464	860.00	149.7	-49.387	-46.811	0.75022	0.214	0.405	2748
190	0.01484	803.39	142.6	-47.389	-44.779	0.76106	0.212	0.408	2677
195	0.01504	748.46	135.7	-45.379	-42.734	0.77168	0.210	0.410	2606
200	0.01525	695.15	129.0	-43.357	-40.675	0.78211	0.207	0.413	2533
205	0.01547	643.43	122.5	-41.320	-38.599	0.79237	0.205	0.417	2460
210	0.01570	593.23	116.1	-39.264	-36.502	0.80248	0.203	0.421	2386
215	0.01595	544.53	110.0	-37.188	-34.382	0.81246	0.202	0.427	2311
220	0.01622	497.28	104.0	-35.086	-32.234	0.82233	0.200	0.432	2235
225	0.01650	451.46	98.1	-32.955	-30.052	0.83213	0.198	0.439	2157
230	0.01681	407.06	92.3	-30.789	-27.832	0.84189	0.196	0.448	2077
235	0.01715	363.17	86.6	-28.552	-25.535	0.85176	0.199	0.463	1979
240	0.01752	323.05	80.9	-26.269	-23.188	0.86165	0.198	0.474	1894
245	0.01792	283.70	75.4	-23.931	-20.779	0.87158	0.196	0.489	1808
250	0.01837	245.71	69.9	-21.523	-18.291	0.88164	0.195	0.506	1718
255	0.01889	209.19	64.5	-19.026	-15.704	0.89188	0.195	0.530	1624
260	0.01948	173.91	58.7	-16.417	-12.990	0.90242	0.195	0.557	1518
265	0.02019	139.87	53.2	-13.653	-10.102	0.91342	0.195	0.599	1410
270	0.02105	108.00	47.2	-10.680	-6.977	0.92510	0.197	0.653	1289
275	0.02217	77.59	41.3	-7.383	-3.483	0.93793	0.199	0.750	1164
280	0.02377	49.78	34.7	-3.551	0.631	0.95275	0.204	0.911	1015
285	0.02648	25.53	27.6	1.374	6.031	0.97185	0.214	1.317	852
290	0.03285	10.29	19.1	9.032	14.810	1.00236	0.236	2.291	680
295	0.04415	12.06	12.9	17.725	25.491	1.03890	0.229	1.703	644
300	0.05292	19.17	10.2	22.813	32.122	1.06121	0.214	1.052	661
310	0.06498	32.18	7.7	28.763	44.194	1.08772	0.197	0.647	699
320	0.07408	43.04	6.5	32.834	45.866	1.10575	0.188	0.506	733
330	0.08179	52.58	5.7	36.129	50.517	1.12007	0.182	0.431	760
340	0.08865	61.01	5.1	39.001	54.596	1.13225	0.177	0.388	786
350	0.09496	68.74	4.6	41.610	58.316	1.14303	0.174	0.358	809
360	0.10089	75.94	4.3	44.038	61.786	1.15281	0.172	0.337	830
370	0.10651	82.72	4.0	46.334	65.071	1.16181	0.170	0.321	850
380	0.11189	89.15	3.8	48.530	68.214	1.17019	0.168	0.308	869
390	0.11708	95.30	3.6	50.647	71.244	1.17806	0.167	0.298	887
400	0.12211	101.20	3.4	52.700	74.182	1.18550	0.166	0.290	905
410	0.12701	106.90	3.2	54.701	77.044	1.19257	0.165	0.283	921
420	0.13180	112.41	3.1	56.657	79.842	1.19931	0.164	0.277	937
430	0.13648	117.76	2.9	58.577	82.586	1.20577	0.164	0.272	952
440	0.14108	122.98	2.8	60.464	85.282	1.21197	0.163	0.267	967
450	0.14560	128.07	2.7	62.324	87.938	1.21793	0.162	0.264	982
460	0.15006	133.05	2.6	64.160	90.557	1.22369	0.162	0.260	996
470	0.15445	137.93	2.5	65.975	93.146	1.22926	0.161	0.257	1010
480	0.15880	142.72	2.4	67.772	95.706	1.23465	0.161	0.255	1023
490	0.16309	147.44	2.4	69.552	98.242	1.23988	0.161	0.252	1036
500	0.16735	152.08	2.3	71.318	100.756	1.24496	0.160	0.250	1049
510	0.17156	156.65	2.2	73.071	103.251	1.24990	0.160	0.249	1062
520	0.17574	161.17	2.2	74.813	105.728	1.25471	0.160	0.247	1074
530	0.17989	165.63	2.1	76.546	108.190	1.25940	0.160	0.245	1086
540	0.18400	170.04	2.1	78.269	110.638	1.26397	0.160	0.244	1098
550	0.18809	174.40	2.0	79.985	113.073	1.26844	0.159	0.243	1109
560	0.19216	178.73	2.0	81.694	115.498	1.27281	0.159	0.242	1121
570	0.19620	183.01	1.9	83.398	117.913	1.27708	0.159	0.241	1132
580	0.20023	187.25	1.9	85.096	120.319	1.28127	0.159	0.240	1143
590	0.20423	191.48	1.8	86.790	122.717	1.28537	0.159	0.239	1154
600	0.20821	195.67	1.8	88.480	125.108	1.28939	0.160	0.239	1165

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

950 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.180	81.81295	218.68	14.600	175831.11	0.0018108	0.11211	42.963	0.00346	1.57066	5.4632
100	81.69137	218.18	14.565	174291.48	0.0018147	0.11188	42.297	0.00346	1.56968	5.3889
105	80.94856	215.14	14.344	165113.30	0.0018392	0.11045	38.477	0.00345	1.56371	4.9627
110	80.20243	212.06	14.117	156280.75	0.0018650	0.10893	35.038	0.00343	1.55773	4.5795
115	79.45265	208.93	13.883	147783.56	0.0018923	0.10735	31.939	0.00342	1.55174	4.2346
120	78.69886	205.76	13.643	139611.66	0.0019210	0.10570	29.149	0.00340	1.54573	3.9242
125	77.94069	202.53	13.398	131755.16	0.0019515	0.10399	26.635	0.00338	1.53970	3.6446
130	77.17769	199.26	13.148	124204.32	0.0019839	0.10222	24.371	0.00335	1.53364	3.3929
135	76.40940	195.93	12.894	116949.60	0.0020184	0.10041	22.332	0.00332	1.52756	3.1662
140	75.63528	192.54	12.636	109981.61	0.0020552	0.09856	20.494	0.00329	1.52145	2.9623
145	74.85477	189.10	12.376	103291.19	0.0020945	0.09666	18.838	0.00326	1.51531	2.7788
150	74.06720	185.59	12.114	96869.32	0.0021368	0.09474	17.346	0.00323	1.50912	2.6140
155	73.27187	182.01	11.849	90707.23	0.0021822	0.09278	16.002	0.00319	1.50290	2.4661
160	72.46796	178.37	11.584	84796.32	0.0022313	0.09080	14.789	0.00315	1.49662	2.3338
165	71.65459	174.65	11.318	79128.21	0.0022844	0.08879	13.696	0.00311	1.49028	2.2155
170	70.83073	170.85	11.052	73694.75	0.0023421	0.08676	12.711	0.00306	1.48389	2.1104
175	69.99525	166.97	10.787	68488.01	0.0024050	0.08472	11.821	0.00301	1.47742	2.0172
180	69.14688	163.00	10.522	63500.33	0.0024738	0.08266	11.019	0.00296	1.47086	1.9351
185	68.28415	158.94	10.258	58724.29	0.0025495	0.08059	10.294	0.00291	1.46422	1.8635
190	67.40541	154.79	9.996	54152.77	0.0026329	0.07850	9.639	0.00286	1.45748	1.8016
195	66.50875	150.54	9.735	49778.97	0.0027254	0.07640	9.047	0.00280	1.45062	1.7489
200	65.59199	146.18	9.476	45596.44	0.0028285	0.07430	8.511	0.00274	1.44362	1.7051
205	64.65257	141.70	9.219	41599.11	0.0029440	0.07218	8.025	0.00268	1.43648	1.6698
210	63.68755	137.11	8.963	37781.39	0.0030742	0.07005	7.585	0.00261	1.42917	1.6429
215	62.69342	132.39	8.707	34138.20	0.0032220	0.06791	7.184	0.00254	1.42166	1.6244
220	61.66604	127.54	8.451	30665.16	0.0033911	0.06576	6.819	0.00247	1.41393	1.6144
225	60.60043	122.55	8.194	27358.70	0.0035862	0.06360	6.486	0.00239	1.40594	1.6134
230	59.49057	117.43	7.932	24216.35	0.0038134	0.06142	6.180	0.00231	1.39765	1.6221
235	58.31555	113.29	7.458	21178.51	0.0040878	0.05919	5.895	0.00219	1.38891	1.6605
240	57.09247	108.04	7.168	18443.88	0.0043864	0.05697	5.680	0.00211	1.37985	1.7012
245	55.80100	102.55	6.883	15830.78	0.0047655	0.05472	5.468	0.00201	1.37033	1.7579
250	54.42556	96.83	6.577	13373.00	0.0052283	0.05244	5.249	0.00190	1.36024	1.8244
255	52.94512	90.95	6.257	11075.34	0.0058231	0.05012	5.023	0.00179	1.34943	1.9110
260	51.33238	84.67	5.876	8927.04	0.0065778	0.04773	4.788	0.00167	1.33772	2.0111
265	49.54079	78.10	5.495	6929.44	0.0076709	0.04525	4.538	0.00152	1.32480	2.1629
270	47.50706	71.03	5.052	5130.61	0.0091965	0.04264	4.269	0.00137	1.31023	2.3545
275	45.09733	63.53	4.601	3499.24	0.0118109	0.04055	3.970	0.00120	1.29310	2.6449
280	42.06406	55.05	4.040	2094.13	0.0165541	0.03920	3.622	0.00102	1.27177	3.0311
285	37.77091	46.04	3.407	964.18	0.0286117	0.03866	3.179	0.00078	1.24197	3.8994
290	30.44380	37.56	2.659	313.23	0.0609808	0.03769	2.544	0.00054	1.19222	5.5671
295	22.64969	36.01	2.488	273.18	0.0472947	0.03113	2.010	0.00081	1.14081	3.9587
300	18.89695	37.50	2.512	362.33	0.0280442	0.02533	1.798	0.00127	1.11660	2.6878
310	15.38837	41.45	2.547	495.22	0.0155978	0.02064	1.631	0.00207	1.09429	1.8390
320	13.49818	45.31	2.560	580.98	0.0111716	0.01882	1.557	0.00275	1.08239	1.5078
330	12.22700	48.93	2.551	642.87	0.0088157	0.01785	1.517	0.00338	1.07444	1.3197
340	11.28049	52.40	2.543	688.17	0.0073969	0.01731	1.495	0.00396	1.06855	1.2048
350	10.53021	55.76	2.532	723.83	0.0064230	0.01698	1.482	0.00450	1.06389	1.1253
360	9.91215	59.02	2.521	752.73	0.0057081	0.01678	1.476	0.00502	1.06007	1.0669
370	9.38903	62.20	2.509	776.65	0.0051581	0.01664	1.474	0.00552	1.05684	1.0234
380	8.93726	65.30	2.498	796.78	0.0047201	0.01656	1.476	0.00601	1.05405	0.9890
390	8.54097	68.35	2.487	813.95	0.0043619	0.01654	1.480	0.00649	1.05162	0.9609
400	8.18902	71.33	2.476	828.75	0.0040629	0.01654	1.487	0.00697	1.04945	0.9376
410	7.87323	74.26	2.466	841.62	0.0038089	0.01658	1.495	0.00745	1.04752	0.9179
420	7.58748	77.14	2.457	852.91	0.0035901	0.01664	1.504	0.00792	1.04577	0.9010
430	7.32705	79.98	2.448	862.86	0.0033994	0.01672	1.514	0.00839	1.04417	0.8865
440	7.08824	82.78	2.440	871.70	0.0032315	0.01681	1.525	0.00887	1.04271	0.8738
450	6.86806	85.54	2.432	879.59	0.0030824	0.01691	1.537	0.00934	1.04137	0.8626
460	6.66412	88.28	2.425	886.66	0.0029489	0.01703	1.549	0.00981	1.04012	0.8527
470	6.47443	90.99	2.418	893.02	0.0028287	0.01715	1.562	0.01029	1.03896	0.8440
480	6.29734	93.68	2.412	898.78	0.0027197	0.01728	1.575	0.01077	1.03789	0.8361
490	6.13147	96.35	2.405	904.00	0.0026203	0.01741	1.589	0.01125	1.03688	0.8291
500	5.97565	99.00	2.399	908.76	0.0025294	0.01756	1.603	0.01173	1.03593	0.8229
510	5.82887	101.63	2.393	913.10	0.0024457	0.01767	1.617	0.01219	1.03503	0.8188
520	5.69027	104.25	2.388	917.08	0.0023684	0.01783	1.631	0.01269	1.03419	0.8132
530	5.55909	106.87	2.382	920.73	0.0022968	0.01799	1.645	0.01318	1.03339	0.8081
540	5.43470	109.47	2.376	924.10	0.0022302	0.01815	1.660	0.01368	1.03264	0.8036
550	5.31651	112.07	2.371	927.21	0.0021681	0.01832	1.675	0.01418	1.03192	0.7994
560	5.20401	114.67	2.365	930.10	0.0021099	0.01849	1.689	0.01469	1.03124	0.7958
570	5.09677	117.26	2.360	932.77	0.0020554	0.01866	1.704	0.01519	1.03059	0.7924
580	4.99437	119.85	2.354	935.26	0.0020040	0.01883	1.719	0.01570	1.02997	0.7894
590	4.89648	122.44	2.348	937.57	0.0019557	0.01900	1.734	0.01621	1.02937	0.7868
600	4.80275	125.04	2.343	939.74	0.0019100	0.01918	1.749	0.01672	1.02881	0.7843

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

960 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.194	0.01222	2149.80	318.4	-83.066	-80.893	0.50272	0.267	0.396	3846
100	0.01224	2134.42	316.3	-82.750	-80.574	0.50592	0.266	0.396	3838
105	0.01235	2040.63	303.7	-80.791	-78.595	0.52523	0.262	0.396	3782
110	0.01247	1949.49	291.5	-78.833	-76.617	0.54364	0.257	0.395	3725
115	0.01259	1860.95	279.7	-76.877	-74.640	0.56121	0.254	0.395	3666
120	0.01271	1774.94	268.2	-74.922	-72.663	0.57804	0.250	0.395	3607
125	0.01283	1691.41	257.2	-72.968	-70.687	0.59417	0.246	0.395	3546
130	0.01296	1610.30	246.5	-71.014	-68.711	0.60967	0.243	0.395	3485
135	0.01309	1531.55	236.1	-69.060	-66.734	0.62459	0.240	0.395	3422
140	0.01322	1455.11	226.1	-67.106	-64.756	0.63898	0.237	0.396	3358
145	0.01336	1380.91	216.4	-65.151	-62.776	0.65287	0.234	0.396	3294
150	0.01350	1308.89	207.0	-63.195	-60.795	0.66631	0.231	0.397	3228
155	0.01365	1239.01	198.0	-61.236	-58.810	0.67932	0.228	0.397	3162
160	0.01380	1171.19	189.3	-59.275	-56.823	0.69194	0.225	0.398	3095
165	0.01395	1105.39	180.8	-57.311	-54.830	0.70420	0.223	0.399	3027
170	0.01412	1041.55	172.7	-55.342	-52.833	0.71613	0.221	0.400	2959
175	0.01428	979.60	164.8	-53.368	-50.829	0.72774	0.218	0.401	2890
180	0.01446	919.50	157.2	-51.387	-48.817	0.73908	0.216	0.403	2820
185	0.01464	861.18	149.8	-49.399	-46.796	0.75015	0.214	0.405	2750
190	0.01483	804.60	142.7	-47.402	-44.765	0.76099	0.212	0.407	2679
195	0.01503	749.69	135.7	-45.394	-42.721	0.77161	0.210	0.410	2607
200	0.01524	696.41	129.1	-43.373	-40.663	0.78203	0.208	0.413	2535
205	0.01546	644.72	122.6	-41.336	-38.588	0.79228	0.206	0.417	2462
210	0.01570	594.55	116.2	-39.282	-36.492	0.80239	0.204	0.421	2388
215	0.01595	545.88	110.1	-37.207	-34.373	0.81236	0.202	0.426	2313
220	0.01621	498.67	104.1	-35.108	-32.226	0.82223	0.200	0.432	2237
225	0.01650	452.90	98.2	-32.979	-30.046	0.83202	0.198	0.439	2159
230	0.01680	408.54	92.5	-30.815	-27.828	0.84177	0.196	0.447	2080
235	0.01714	364.64	86.7	-28.581	-25.534	0.85164	0.199	0.463	1981
240	0.01751	324.55	81.0	-26.302	-23.190	0.86150	0.198	0.473	1897
245	0.01791	285.25	75.6	-23.968	-20.784	0.87142	0.196	0.488	1812
250	0.01836	247.32	70.1	-21.565	-18.301	0.88146	0.195	0.505	1721
255	0.01887	210.86	64.7	-19.075	-15.720	0.89168	0.195	0.528	1628
260	0.01946	175.66	58.9	-16.474	-13.015	0.90218	0.195	0.555	1523
265	0.02016	141.71	53.4	-13.723	-10.140	0.91314	0.195	0.596	1416
270	0.02101	109.92	47.5	-10.769	-7.035	0.92475	0.196	0.648	1297
275	0.02211	79.61	41.6	-7.504	-3.573	0.93745	0.199	0.741	1172
280	0.02366	51.89	35.1	-3.732	0.475	0.95203	0.203	0.892	1027
285	0.02621	27.64	28.2	1.037	5.697	0.97051	0.213	1.255	869
290	0.03189	11.55	20.0	8.200	13.868	0.99891	0.233	2.124	698
295	0.04257	11.68	13.5	16.863	24.430	1.03503	0.230	1.779	647
300	0.05147	18.47	10.5	22.236	31.386	1.05843	0.215	1.099	661
310	0.06368	31.49	7.9	28.408	39.729	1.08584	0.198	0.662	699
320	0.07282	42.43	6.6	32.567	45.512	1.10422	0.188	0.514	733
330	0.08053	52.04	5.8	35.912	50.227	1.11873	0.182	0.436	760
340	0.08737	60.53	5.2	38.815	54.347	1.13103	0.178	0.391	785
350	0.09367	68.30	4.7	41.445	58.096	1.14190	0.175	0.361	809
360	0.09956	75.55	4.4	43.890	61.588	1.15174	0.172	0.339	830
370	0.10515	82.36	4.1	46.199	64.891	1.16079	0.170	0.322	850
380	0.11050	88.82	3.8	48.406	68.049	1.16922	0.169	0.310	869
390	0.11566	95.00	3.6	50.531	71.092	1.17712	0.167	0.299	887
400	0.12066	100.93	3.4	52.592	74.041	1.18459	0.166	0.291	905
410	0.12552	106.64	3.3	54.599	76.912	1.19168	0.165	0.284	921
420	0.13027	112.18	3.1	56.561	79.718	1.19844	0.164	0.278	937
430	0.13492	117.55	3.0	58.486	82.469	1.20491	0.164	0.273	953
440	0.13948	122.78	2.9	60.378	85.172	1.21113	0.163	0.268	967
450	0.14396	127.89	2.7	62.241	87.833	1.21711	0.162	0.264	982
460	0.14838	132.89	2.6	64.081	90.458	1.22288	0.162	0.261	996
470	0.15274	137.78	2.6	65.899	93.051	1.22845	0.161	0.258	1010
480	0.15705	142.59	2.5	67.698	95.616	1.23385	0.161	0.255	1023
490	0.16131	147.31	2.4	69.481	98.157	1.23909	0.161	0.253	1036
500	0.16552	151.97	2.3	71.250	100.674	1.24418	0.160	0.251	1049
510	0.16970	156.55	2.3	73.005	103.172	1.24912	0.160	0.249	1062
520	0.17384	161.08	2.2	74.750	105.653	1.25394	0.160	0.247	1074
530	0.17795	165.55	2.1	76.484	108.118	1.25864	0.160	0.246	1086
540	0.18203	169.97	2.1	78.209	110.568	1.26322	0.160	0.244	1098
550	0.18609	174.34	2.0	79.927	113.006	1.26769	0.160	0.243	1110
560	0.19012	178.68	2.0	81.637	115.433	1.27206	0.159	0.242	1121
570	0.19412	182.97	1.9	83.342	117.850	1.27634	0.159	0.241	1133
580	0.19811	187.23	1.9	85.042	120.258	1.28053	0.159	0.240	1144
590	0.20207	191.45	1.9	86.737	122.659	1.28463	0.159	0.240	1155
600	0.20602	195.65	1.8	88.428	125.052	1.28865	0.160	0.239	1165

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

960 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.194	81.81551	218.73	14.600	175886.79	0.0018103	0.11211	42.977	0.00346	1.57068	5.4645
100	81.69606	218.25	14.565	174373.80	0.0018141	0.11189	42.323	0.00346	1.56972	5.3914
105	80.95346	215.21	14.344	165196.03	0.0018386	0.11046	38.501	0.00345	1.56375	4.9651
110	80.20756	212.13	14.117	156363.87	0.0018643	0.10894	35.060	0.00343	1.55777	4.5817
115	79.45802	209.00	13.883	147867.09	0.0018915	0.10736	31.961	0.00342	1.55178	4.2367
120	78.70450	205.83	13.643	139695.62	0.0019202	0.10571	29.169	0.00340	1.54577	3.9261
125	77.94660	202.61	13.398	131839.55	0.0019506	0.10400	26.654	0.00338	1.53974	3.6464
130	77.18390	199.34	13.148	124289.15	0.0019829	0.10224	24.389	0.00335	1.53369	3.3945
135	76.41593	196.01	12.894	117034.88	0.0020173	0.10043	22.348	0.00332	1.52761	3.1678
140	75.64216	192.63	12.637	110067.36	0.0020540	0.09857	20.510	0.00329	1.52151	2.9637
145	74.86201	189.19	12.377	103377.42	0.0020933	0.09668	18.853	0.00326	1.51536	2.7801
150	74.07485	185.68	12.114	96956.05	0.0021354	0.09476	17.360	0.00323	1.50918	2.6152
155	73.27995	182.11	11.850	90794.47	0.0021808	0.09280	16.015	0.00319	1.50296	2.4672
160	72.47651	178.47	11.585	84884.09	0.0022297	0.09082	14.802	0.00315	1.49668	2.3347
165	71.66364	174.75	11.319	79216.52	0.0022826	0.08881	13.708	0.00311	1.49035	2.2164
170	70.84033	170.96	11.053	73783.62	0.0023402	0.08679	12.722	0.00306	1.48396	2.1112
175	70.00547	167.08	10.788	68577.47	0.0024028	0.08475	11.832	0.00302	1.47749	2.0179
180	69.15776	163.12	10.523	63590.40	0.0024714	0.08269	11.029	0.00297	1.47095	1.9357
185	68.29577	159.07	10.260	58814.99	0.0025468	0.08061	10.303	0.00291	1.46431	1.8640
190	67.41785	154.92	9.998	54244.14	0.0026299	0.07853	9.648	0.00286	1.45757	1.8020
195	66.52210	150.67	9.738	49871.04	0.0027220	0.07644	9.055	0.00280	1.45072	1.7492
200	65.60636	146.32	9.479	45689.24	0.0028246	0.07433	8.519	0.00274	1.44373	1.7052
205	64.66810	141.85	9.222	41692.67	0.0029395	0.07222	8.033	0.00268	1.43660	1.6698
210	63.70439	137.27	8.966	37875.75	0.0030690	0.07009	7.592	0.00261	1.42930	1.6427
215	62.71176	132.56	8.711	34233.40	0.0032160	0.06796	7.191	0.00254	1.42180	1.6240
220	61.68612	127.71	8.456	30761.23	0.0033839	0.06581	6.826	0.00247	1.41408	1.6138
225	60.62254	122.74	8.200	27455.67	0.0035776	0.06365	6.492	0.00239	1.40611	1.6125
230	59.51509	117.63	7.939	24314.23	0.0038030	0.06147	6.187	0.00231	1.39783	1.6209
235	58.34303	113.51	7.465	21274.10	0.0040751	0.05925	5.902	0.00220	1.38912	1.6588
240	57.12335	108.28	7.176	18539.18	0.0043713	0.05703	5.686	0.00211	1.38008	1.6989
245	55.83616	102.80	6.892	15927.39	0.0047453	0.05479	5.474	0.00201	1.37059	1.7546
250	54.46613	97.11	6.586	13470.79	0.0052020	0.05251	5.256	0.00191	1.36054	1.8203
255	52.99273	91.26	6.269	11173.97	0.0057875	0.05019	5.031	0.00179	1.34978	1.9057
260	51.38959	85.01	5.890	9026.99	0.0065259	0.04782	4.796	0.00168	1.33814	2.0034
265	49.61181	78.51	5.514	7030.32	0.0075943	0.04535	4.548	0.00153	1.32531	2.1525
270	47.59884	71.50	5.075	5231.83	0.0090697	0.04276	4.281	0.00139	1.31088	2.3375
275	45.22456	64.09	4.630	3600.33	0.0115681	0.04061	3.986	0.00121	1.29400	2.6197
280	42.26079	55.76	4.083	2193.02	0.0160021	0.03925	3.644	0.00104	1.27314	2.9831
285	38.14725	46.96	3.470	1054.47	0.0267294	0.03857	3.217	0.00081	1.24456	3.7686
290	31.36194	38.46	2.733	362.11	0.0552190	0.03778	2.618	0.00057	1.19838	5.2979
295	23.49299	36.11	2.499	274.44	0.0492641	0.03194	2.064	0.00076	1.14630	4.1383
300	19.42844	37.44	2.518	358.82	0.0293441	0.02597	1.829	0.00122	1.12001	2.7853
310	15.70249	41.31	2.553	494.55	0.0160276	0.02094	1.647	0.00201	1.09627	1.8758
320	13.73218	45.16	2.565	582.67	0.0113847	0.01901	1.569	0.00269	1.08386	1.5282
330	12.41816	48.79	2.556	646.29	0.0089413	0.01799	1.527	0.00332	1.07563	1.3328
340	11.44506	52.26	2.548	692.71	0.0074816	0.01742	1.503	0.00389	1.06957	1.2142
350	10.67615	55.62	2.537	729.23	0.0064841	0.01707	1.489	0.00443	1.06480	1.1324
360	10.04417	58.89	2.526	758.79	0.0057544	0.01686	1.482	0.00495	1.06088	1.0725
370	9.51018	62.08	2.514	783.25	0.0051944	0.01671	1.480	0.00545	1.05759	1.0281
380	9.04963	65.19	2.502	803.83	0.0047493	0.01663	1.482	0.00594	1.05475	0.9929
390	8.64607	68.23	2.491	821.37	0.0043860	0.01660	1.486	0.00642	1.05226	0.9643
400	8.28796	71.22	2.480	836.48	0.0040829	0.01660	1.492	0.00689	1.05006	0.9405
410	7.96689	74.15	2.470	849.62	0.0038259	0.01664	1.499	0.00736	1.04809	0.9205
420	7.67653	77.04	2.460	861.14	0.0036046	0.01669	1.508	0.00783	1.04631	0.9033
430	7.41205	79.88	2.452	871.30	0.0034119	0.01677	1.518	0.00830	1.04469	0.8886
440	7.16962	82.69	2.443	880.31	0.0032424	0.01686	1.529	0.00877	1.04321	0.8756
450	6.94620	85.46	2.436	888.35	0.0030920	0.01696	1.541	0.00924	1.04184	0.8643
460	6.73932	88.20	2.428	895.56	0.0029574	0.01707	1.553	0.00971	1.04058	0.8543
470	6.54696	90.91	2.421	902.05	0.0028362	0.01719	1.566	0.01018	1.03941	0.8454
480	6.36744	93.60	2.415	907.92	0.0027264	0.01732	1.579	0.01066	1.03831	0.8375
490	6.19932	96.27	2.408	913.24	0.0026264	0.01745	1.592	0.01113	1.03729	0.8304
500	6.04143	98.92	2.402	918.09	0.0025349	0.01759	1.606	0.01161	1.03633	0.8240
510	5.89272	101.56	2.396	922.51	0.0024507	0.01770	1.620	0.01207	1.03542	0.8199
520	5.75233	104.18	2.391	926.57	0.0023730	0.01786	1.634	0.01256	1.03457	0.8142
530	5.61949	106.80	2.385	930.29	0.0023010	0.01802	1.648	0.01305	1.03376	0.8091
540	5.49352	109.41	2.379	933.72	0.0022340	0.01819	1.663	0.01355	1.03300	0.8044
550	5.37385	112.01	2.374	936.89	0.0021715	0.01835	1.677	0.01404	1.03227	0.8003
560	5.25997	114.60	2.368	939.83	0.0021131	0.01852	1.692	0.01454	1.03158	0.7965
570	5.15141	117.20	2.362	942.55	0.0020583	0.01869	1.707	0.01504	1.03092	0.7931
580	5.04778	119.79	2.357	945.09	0.0020068	0.01886	1.722	0.01554	1.03029	0.7901
590	4.94870	122.38	2.351	947.45	0.0019582	0.01903	1.737	0.01605	1.02969	0.7874
600	4.85386	124.98	2.346	949.65	0.0019123	0.01920	1.752	0.01655	1.02912	0.7849

* TWO-PHASE BOUNDARY

3 ⊕

THERMODYNAMIC PROPERTIES OF OXYGEN

970 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	Cp BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.208	0.01222	2150.41	318.4	-83.064	-80.869	0.50273	0.267	0.396	3847
100	0.01224	2135.31	316.4	-82.754	-80.555	0.50588	0.266	0.396	3838
105	0.01235	2041.53	303.8	-80.795	-78.576	0.52519	0.262	0.396	3782
110	0.01247	1950.40	291.6	-78.838	-76.599	0.54359	0.257	0.395	3725
115	0.01258	1861.87	279.7	-76.882	-74.622	0.56117	0.254	0.395	3667
120	0.01270	1775.88	268.3	-74.927	-72.645	0.57799	0.250	0.395	3608
125	0.01283	1692.36	257.2	-72.973	-70.669	0.59412	0.246	0.395	3547
130	0.01296	1611.27	246.5	-71.020	-68.693	0.60963	0.243	0.395	3485
135	0.01309	1532.54	236.1	-69.067	-66.716	0.62454	0.240	0.395	3423
140	0.01322	1456.11	226.1	-67.113	-64.739	0.63893	0.237	0.396	3359
145	0.01336	1381.92	216.5	-65.158	-62.759	0.65282	0.234	0.396	3295
150	0.01350	1309.93	207.1	-63.202	-60.778	0.66625	0.231	0.396	3229
155	0.01364	1240.06	198.1	-61.245	-58.794	0.67926	0.228	0.397	3163
160	0.01380	1172.27	189.3	-59.284	-56.806	0.69188	0.225	0.398	3096
165	0.01395	1106.49	180.9	-57.320	-54.814	0.70414	0.223	0.399	3028
170	0.01411	1042.66	172.7	-55.352	-52.817	0.71607	0.221	0.400	2960
175	0.01428	980.74	164.8	-53.379	-50.813	0.72768	0.218	0.401	2891
180	0.01446	920.65	157.2	-51.399	-48.802	0.73901	0.216	0.403	2821
185	0.01464	862.36	149.9	-49.412	-46.782	0.75008	0.214	0.405	2751
190	0.01483	805.80	142.7	-47.415	-44.751	0.76092	0.212	0.407	2680
195	0.01503	750.92	135.8	-45.408	-42.708	0.77153	0.210	0.410	2609
200	0.01524	697.68	129.1	-43.388	-40.651	0.78195	0.208	0.413	2536
205	0.01546	646.01	122.6	-41.353	-38.576	0.79220	0.206	0.417	2464
210	0.01569	595.88	116.3	-39.300	-36.482	0.80230	0.204	0.421	2390
215	0.01594	547.24	110.2	-37.227	-34.364	0.81227	0.202	0.426	2315
220	0.01621	500.07	104.2	-35.129	-32.218	0.82213	0.200	0.432	2239
225	0.01649	454.33	98.3	-33.002	-30.040	0.83191	0.198	0.439	2162
230	0.01680	410.01	92.6	-30.841	-27.824	0.84165	0.196	0.447	2083
235	0.01713	366.10	86.8	-28.610	-25.532	0.85151	0.199	0.462	1984
240	0.01750	326.04	81.2	-26.334	-23.191	0.86136	0.198	0.473	1900
245	0.01790	286.80	75.7	-24.005	-20.790	0.87127	0.196	0.487	1815
250	0.01835	248.93	70.2	-21.607	-18.311	0.88128	0.195	0.504	1725
255	0.01885	212.53	64.8	-19.123	-15.737	0.89148	0.195	0.527	1632
260	0.01944	177.40	59.1	-16.531	-13.040	0.90195	0.195	0.553	1528
265	0.02013	143.53	53.6	-13.792	-10.177	0.91286	0.195	0.593	1422
270	0.02097	111.82	47.7	-10.857	-7.091	0.92439	0.196	0.644	1304
275	0.02205	81.61	42.0	-7.622	-3.661	0.93698	0.199	0.733	1181
280	0.02356	53.98	35.5	-3.906	0.325	0.95134	0.203	0.875	1039
285	0.02598	29.74	26.6	0.725	5.391	0.96927	0.212	1.202	884
290	0.03108	12.95	20.8	7.464	13.045	0.99587	0.231	1.970	716
295	0.04105	11.45	14.1	15.993	23.367	1.03116	0.231	1.839	650
300	0.05005	17.81	10.9	21.643	30.633	1.05561	0.216	1.147	662
310	0.06241	30.82	8.1	28.048	39.257	1.08394	0.198	0.678	699
320	0.07158	41.83	6.8	32.297	45.155	1.10268	0.189	0.522	732
330	0.07929	51.52	5.9	35.693	49.935	1.11740	0.182	0.441	760
340	0.08613	60.05	5.3	38.627	54.096	1.12983	0.178	0.394	785
350	0.09240	67.87	4.8	41.280	57.875	1.14078	0.175	0.363	808
360	0.09826	75.15	4.4	43.741	61.390	1.15069	0.172	0.341	830
370	0.10382	82.00	4.1	46.063	64.712	1.15979	0.170	0.324	850
380	0.10914	88.50	3.9	48.281	67.884	1.16825	0.169	0.311	869
390	0.11427	94.70	3.7	50.415	70.939	1.17618	0.167	0.300	887
400	0.11923	100.65	3.5	52.483	73.899	1.18368	0.166	0.292	905
410	0.12406	106.39	3.3	54.497	76.780	1.19079	0.165	0.285	921
420	0.12877	111.95	3.1	56.465	79.594	1.19757	0.164	0.278	937
430	0.13338	117.34	3.0	58.394	82.352	1.20406	0.164	0.273	953
440	0.13791	122.59	2.9	60.291	85.062	1.21029	0.163	0.269	968
450	0.14236	127.71	2.8	62.159	87.729	1.21629	0.162	0.265	982
460	0.14674	132.72	2.7	64.002	90.359	1.22207	0.162	0.261	996
470	0.15107	137.63	2.6	65.823	92.957	1.22765	0.161	0.258	1010
480	0.15534	142.45	2.5	67.625	95.527	1.23306	0.161	0.256	1024
490	0.15956	147.19	2.4	69.411	98.071	1.23831	0.161	0.253	1037
500	0.16374	151.86	2.4	71.182	100.592	1.24340	0.160	0.251	1050
510	0.16788	156.45	2.3	72.940	103.094	1.24836	0.160	0.249	1062
520	0.17199	160.99	2.2	74.686	105.578	1.25318	0.160	0.248	1074
530	0.17606	165.47	2.2	76.422	108.045	1.25788	0.160	0.246	1087
540	0.18010	169.90	2.1	78.149	110.499	1.26247	0.160	0.245	1098
550	0.18412	174.28	2.1	79.868	112.940	1.26695	0.160	0.243	1110
560	0.18811	178.63	2.0	81.580	115.369	1.27132	0.159	0.242	1122
570	0.19208	182.93	2.0	83.286	117.788	1.27561	0.159	0.241	1133
580	0.19603	187.20	1.9	84.987	120.198	1.27980	0.159	0.241	1144
590	0.19996	191.43	1.9	86.684	122.601	1.28390	0.159	0.240	1155
600	0.20387	195.63	1.8	88.376	124.996	1.28793	0.160	0.239	1166

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

970 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.208	81.81807	218.79	14.599	175942.47	0.0018098	0.11212	42.991	0.00346	1.57070	5.4658
100	81.70074	218.31	14.565	174456.11	0.0018135	0.11190	42.348	0.00346	1.56976	5.3939
105	80.95836	215.27	14.345	165278.73	0.0018379	0.11047	38.525	0.00345	1.56379	4.9674
110	80.21269	212.19	14.117	156446.98	0.0018636	0.10896	35.083	0.00343	1.55782	4.5839
115	79.46339	209.07	13.883	147950.61	0.0018907	0.10737	31.982	0.00342	1.55183	4.2387
120	78.71013	205.90	13.644	139779.56	0.0019194	0.10572	29.189	0.00340	1.54582	3.9280
125	77.95251	202.69	13.398	131923.92	0.0019497	0.10402	26.673	0.00338	1.53979	3.6482
130	77.19011	199.42	13.149	124373.97	0.0019820	0.10225	24.406	0.00335	1.53374	3.3962
135	76.42246	196.10	12.895	117120.15	0.0020163	0.10044	22.365	0.00332	1.52767	3.1693
140	75.64903	192.72	12.637	110153.09	0.0020529	0.09859	20.525	0.00329	1.52156	2.9651
145	74.86925	189.28	12.377	103463.62	0.0020921	0.09670	18.868	0.00326	1.51542	2.7814
150	74.08248	185.77	12.115	97042.75	0.0021341	0.09478	17.374	0.00323	1.50924	2.6164
155	73.28801	182.21	11.851	90881.68	0.0021793	0.09282	16.028	0.00319	1.50302	2.4683
160	72.48504	178.57	11.586	84971.82	0.0022281	0.09084	14.814	0.00315	1.49675	2.3357
165	71.67268	174.86	11.320	79304.80	0.0022809	0.08884	13.720	0.00311	1.49042	2.2173
170	70.84993	171.07	11.054	73872.46	0.0023382	0.08681	12.733	0.00306	1.48403	2.1120
175	70.01567	167.20	10.789	68666.89	0.0024007	0.08477	11.842	0.00302	1.47757	2.0186
180	69.16863	163.24	10.525	63680.43	0.0024690	0.08272	11.039	0.00297	1.47103	1.9363
185	68.30738	159.19	10.262	58905.65	0.0025441	0.08064	10.313	0.00292	1.46440	1.8645
190	67.43027	155.05	10.000	54335.46	0.0026268	0.07856	9.657	0.00286	1.45767	1.8024
195	66.53543	150.81	9.740	49963.05	0.0027185	0.07647	9.064	0.00280	1.45082	1.7494
200	65.62070	146.46	9.482	45781.97	0.0028207	0.07437	8.527	0.00274	1.44384	1.7053
205	64.68359	142.00	9.225	41786.16	0.0029350	0.07225	8.041	0.00268	1.43672	1.6698
210	63.72119	137.43	8.970	37970.02	0.0030638	0.07013	7.600	0.00261	1.42942	1.6425
215	62.73006	132.72	8.715	34328.50	0.0032099	0.06800	7.198	0.00254	1.42194	1.6236
220	61.70614	127.89	8.461	30857.20	0.0033768	0.06585	6.833	0.00247	1.41423	1.6132
225	60.64459	122.93	8.206	27552.53	0.0035691	0.06369	6.499	0.00239	1.40627	1.6117
230	59.53952	117.83	7.946	24411.99	0.0037927	0.06152	6.193	0.00231	1.39802	1.6196
235	58.37040	113.72	7.471	21369.61	0.0040624	0.05930	5.908	0.00220	1.38932	1.6570
240	57.15409	108.51	7.184	18634.36	0.0043564	0.05709	5.691	0.00211	1.38031	1.6966
245	55.87112	103.05	6.900	16023.83	0.0047254	0.05485	5.480	0.00202	1.37085	1.7514
250	54.50643	97.39	6.596	13568.37	0.0051760	0.05258	5.263	0.00191	1.36083	1.8163
255	53.03997	91.56	6.281	11272.34	0.0057525	0.05027	5.039	0.00180	1.35012	1.9005
260	51.44624	85.36	5.903	9126.63	0.0064752	0.04790	4.805	0.00168	1.33855	1.9957
265	49.68193	78.91	5.532	7130.87	0.0075199	0.04545	4.558	0.00154	1.32581	2.1423
270	47.68904	71.96	5.097	5332.64	0.0089476	0.04288	4.294	0.00140	1.31153	2.3212
275	45.34861	64.64	4.658	3700.92	0.0113386	0.04068	4.002	0.00122	1.29488	2.5956
280	42.44970	56.46	4.124	2291.32	0.0154962	0.03929	3.666	0.00106	1.27446	2.9386
285	38.49593	47.84	3.529	1144.81	0.0251164	0.03850	3.252	0.00083	1.24697	3.6537
290	32.18002	39.39	2.807	416.69	0.0500115	0.03780	2.685	0.00060	1.20389	5.0368
295	24.35844	36.28	2.515	279.02	0.0506939	0.03266	2.120	0.00073	1.15195	4.2974
300	19.97987	37.40	2.526	355.90	0.0306673	0.02662	1.861	0.00116	1.12355	2.8863
310	16.02345	41.19	2.559	493.88	0.0164701	0.02124	1.665	0.00195	1.09830	1.9138
320	13.96955	45.03	2.571	584.33	0.0116021	0.01920	1.582	0.00263	1.08535	1.5491
330	12.61129	48.66	2.562	649.69	0.0090686	0.01814	1.537	0.00326	1.07684	1.3461
340	11.61093	52.13	2.553	697.23	0.0075672	0.01754	1.511	0.00383	1.07060	1.2236
350	10.82302	55.49	2.542	734.60	0.0065458	0.01717	1.497	0.00437	1.06571	1.1396
360	10.17689	58.76	2.530	764.84	0.0058010	0.01695	1.489	0.00488	1.06171	1.0782
370	9.63187	61.95	2.518	789.84	0.0052309	0.01679	1.486	0.00538	1.05834	1.0328
380	9.16242	65.07	2.506	810.86	0.0047787	0.01670	1.487	0.00586	1.05544	0.9968
390	8.75150	68.12	2.495	828.77	0.0044101	0.01666	1.491	0.00634	1.05291	0.9677
400	8.38718	71.11	2.484	844.20	0.0041031	0.01666	1.497	0.00681	1.05067	0.9435
410	8.06077	74.05	2.474	857.61	0.0038429	0.01669	1.504	0.00728	1.04867	0.9231
420	7.76577	76.94	2.464	869.36	0.0036192	0.01674	1.513	0.00774	1.04686	0.9057
430	7.49719	79.79	2.455	879.72	0.0034245	0.01682	1.523	0.00821	1.04521	0.8906
440	7.25112	82.60	2.447	888.91	0.0032534	0.01690	1.533	0.00867	1.04371	0.8775
450	7.02444	85.37	2.439	897.11	0.0031016	0.01700	1.545	0.00914	1.04232	0.8660
460	6.81462	88.12	2.431	904.46	0.0029659	0.01711	1.557	0.00961	1.04104	0.8559
470	6.61958	90.83	2.424	911.08	0.0028438	0.01723	1.569	0.01008	1.03985	0.8468
480	6.43760	93.52	2.418	917.06	0.0027332	0.01736	1.582	0.01055	1.03874	0.8388
490	6.26723	96.20	2.411	922.48	0.0026325	0.01749	1.595	0.01102	1.03770	0.8316
500	6.10726	98.85	2.405	927.42	0.0025404	0.01763	1.609	0.01149	1.03673	0.8251
510	5.95662	101.49	2.399	931.93	0.0024557	0.01773	1.623	0.01195	1.03581	0.8210
520	5.81443	104.12	2.393	936.06	0.0023775	0.01789	1.637	0.01243	1.03495	0.8152
530	5.67991	106.73	2.388	939.85	0.0023051	0.01806	1.651	0.01292	1.03413	0.8100
540	5.55237	109.34	2.382	943.35	0.0022378	0.01822	1.666	0.01341	1.03335	0.8053
550	5.43122	111.94	2.376	946.58	0.0021750	0.01838	1.680	0.01390	1.03262	0.8011
560	5.31595	114.54	2.371	949.57	0.0021163	0.01855	1.695	0.01440	1.03192	0.7973
570	5.20607	117.14	2.365	952.34	0.0020613	0.01872	1.710	0.01489	1.03125	0.7938
580	5.10119	119.73	2.360	954.92	0.0020095	0.01889	1.724	0.01539	1.03062	0.7908
590	5.00094	122.33	2.354	957.33	0.0019608	0.01906	1.739	0.01589	1.03001	0.7880
600	4.90498	124.92	2.348	959.57	0.0019147	0.01923	1.754	0.01639	1.02943	0.7855

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

980 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.222	0.01222	2151.02	318.4	-83.063	-80.845	0.50275	0.267	0.396	3847
100	0.01224	2136.19	316.4	-82.758	-80.537	0.50584	0.266	0.396	3839
105	0.01235	2042.43	303.8	-80.799	-78.558	0.52515	0.262	0.396	3783
110	0.01247	1951.31	291.6	-78.843	-76.580	0.54355	0.257	0.395	3726
115	0.01258	1862.80	279.8	-76.887	-74.603	0.56112	0.254	0.395	3668
120	0.01270	1776.82	268.3	-74.933	-72.627	0.57795	0.250	0.395	3608
125	0.01283	1693.32	257.3	-72.979	-70.651	0.59408	0.246	0.395	3548
130	0.01295	1612.24	246.6	-71.026	-68.675	0.60958	0.243	0.395	3486
135	0.01308	1533.52	236.2	-69.073	-66.699	0.62450	0.240	0.395	3423
140	0.01322	1457.11	226.2	-67.120	-64.721	0.63888	0.237	0.396	3360
145	0.01336	1382.94	216.5	-65.166	-62.742	0.65277	0.234	0.396	3295
150	0.01350	1310.96	207.2	-63.210	-60.761	0.66620	0.231	0.396	3230
155	0.01364	1241.11	198.1	-61.253	-58.777	0.67921	0.228	0.397	3164
160	0.01379	1173.34	189.4	-59.293	-56.790	0.69183	0.225	0.398	3097
165	0.01395	1107.58	180.9	-57.330	-54.798	0.70408	0.223	0.399	3029
170	0.01411	1043.77	172.8	-55.362	-52.801	0.71600	0.221	0.400	2961
175	0.01428	981.87	164.9	-53.389	-50.798	0.72762	0.218	0.401	2892
180	0.01446	921.81	157.3	-51.410	-48.787	0.73895	0.216	0.403	2823
185	0.01464	863.54	149.9	-49.424	-46.768	0.75001	0.214	0.405	2752
190	0.01483	807.01	142.8	-47.428	-44.738	0.76084	0.212	0.407	2682
195	0.01503	752.16	135.9	-45.422	-42.695	0.77146	0.210	0.410	2610
200	0.01524	698.94	129.2	-43.403	-40.638	0.78187	0.208	0.413	2538
205	0.01546	647.30	122.7	-41.370	-38.565	0.79212	0.206	0.417	2465
210	0.01569	597.20	116.4	-39.318	-36.471	0.80221	0.204	0.421	2392
215	0.01594	548.60	110.3	-37.247	-34.355	0.81217	0.202	0.426	2317
220	0.01620	501.46	104.3	-35.150	-32.211	0.82203	0.200	0.432	2241
225	0.01648	455.76	98.4	-33.026	-30.034	0.83180	0.198	0.438	2164
230	0.01679	411.48	92.7	-30.867	-27.820	0.84153	0.196	0.446	2085
235	0.01712	367.57	86.9	-28.638	-25.531	0.85138	0.199	0.461	1987
240	0.01749	327.52	81.3	-26.366	-23.193	0.86122	0.198	0.472	1903
245	0.01789	288.34	75.9	-24.041	-20.795	0.87111	0.196	0.486	1818
250	0.01833	250.53	70.4	-21.648	-18.321	0.88111	0.195	0.503	1729
255	0.01884	214.19	65.0	-19.171	-15.753	0.89128	0.195	0.525	1637
260	0.01942	179.14	59.3	-16.588	-13.065	0.90172	0.195	0.551	1533
265	0.02010	145.35	53.9	-13.861	-10.214	0.91258	0.195	0.591	1428
270	0.02093	113.71	48.0	-10.943	-7.145	0.92405	0.196	0.639	1310
275	0.02199	83.59	42.3	-7.737	-3.746	0.93652	0.198	0.725	1190
280	0.02346	56.04	35.9	-4.074	0.183	0.95068	0.202	0.859	1050
285	0.02576	31.82	29.3	0.433	5.107	0.96810	0.210	1.155	899
290	0.03039	14.46	21.6	6.808	12.322	0.99318	0.228	1.833	733
295	0.03963	11.39	14.8	15.124	22.315	1.02735	0.231	1.878	655
300	0.04866	17.21	11.3	21.034	29.864	1.05274	0.217	1.196	662
310	0.06116	30.17	8.3	27.681	38.779	1.08202	0.199	0.695	699
320	0.07037	41.24	6.9	32.025	44.795	1.10114	0.189	0.531	732
330	0.07809	51.00	6.0	35.472	49.642	1.11607	0.183	0.446	760
340	0.08490	59.58	5.4	38.438	53.845	1.12862	0.178	0.398	785
350	0.09115	67.45	4.9	41.113	57.654	1.13966	0.175	0.366	808
360	0.09699	74.77	4.5	43.591	61.192	1.14963	0.172	0.343	830
370	0.10252	81.65	4.2	45.927	64.532	1.15878	0.171	0.326	850
380	0.10781	88.18	3.9	48.155	67.719	1.16729	0.169	0.312	869
390	0.11290	94.40	3.7	50.299	70.787	1.17525	0.168	0.302	887
400	0.11783	100.38	3.5	52.375	73.758	1.18278	0.166	0.293	905
410	0.12263	106.14	3.3	54.395	76.648	1.18991	0.165	0.285	921
420	0.12730	111.72	3.2	56.368	79.470	1.19671	0.165	0.279	937
430	0.13188	117.13	3.1	58.303	82.236	1.20322	0.164	0.274	953
440	0.13637	122.40	2.9	60.204	84.952	1.20946	0.163	0.269	968
450	0.14079	127.54	2.8	62.076	87.625	1.21547	0.162	0.265	982
460	0.14514	132.56	2.7	63.922	90.260	1.22126	0.162	0.262	996
470	0.14943	137.49	2.6	65.747	92.863	1.22686	0.161	0.259	1010
480	0.15366	142.32	2.5	67.552	95.437	1.23228	0.161	0.256	1024
490	0.15785	147.07	2.5	69.341	97.985	1.23754	0.161	0.254	1037
500	0.16199	151.75	2.4	71.114	100.511	1.24264	0.160	0.251	1050
510	0.16610	156.35	2.3	72.874	103.016	1.24760	0.160	0.250	1062
520	0.17017	160.90	2.3	74.622	105.502	1.25243	0.160	0.248	1075
530	0.17421	165.39	2.2	76.360	107.973	1.25713	0.160	0.246	1087
540	0.17821	169.83	2.1	78.089	110.429	1.26172	0.160	0.245	1099
550	0.18220	174.23	2.1	79.810	112.873	1.26621	0.160	0.244	1111
560	0.18615	178.58	2.0	81.523	115.304	1.27059	0.159	0.243	1122
570	0.19009	182.89	2.0	83.231	117.726	1.27488	0.159	0.242	1133
580	0.19400	187.16	1.9	84.933	120.138	1.27907	0.159	0.241	1144
590	0.19790	191.41	1.9	86.631	122.543	1.28318	0.159	0.240	1155
600	0.20177	195.62	1.9	88.324	124.940	1.28721	0.160	0.239	1166

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

980 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC $\times 10^5$	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.222	81.82063	218.84	14.599	175998.15	0.0018092	0.11212	43.005	0.00346	1.57072	5.4671
100	81.70542	218.38	14.565	174538.41	0.0018129	0.11191	42.374	0.00346	1.56980	5.3965
105	80.96326	215.34	14.345	165361.42	0.0018373	0.11048	38.549	0.00345	1.56383	4.9698
110	80.21781	212.26	14.118	156530.07	0.0018629	0.10897	35.105	0.00344	1.55786	4.5861
115	79.46876	209.14	13.884	148034.11	0.0018900	0.10739	32.003	0.00342	1.55187	4.2407
120	78.71576	205.98	13.644	139863.48	0.0019186	0.10574	29.208	0.00340	1.54586	3.9299
125	77.95842	202.76	13.399	132008.27	0.0019489	0.10403	26.691	0.00338	1.53984	3.6499
130	77.19631	199.50	13.149	124458.76	0.0019810	0.10227	24.424	0.00335	1.53379	3.3978
135	76.42898	196.18	12.895	117205.39	0.0020153	0.10046	22.381	0.00332	1.52772	3.1708
140	75.65589	192.80	12.638	110238.80	0.0020518	0.09861	20.541	0.00329	1.52162	2.9665
145	74.87649	189.37	12.378	103549.81	0.0020909	0.09672	18.882	0.00326	1.51548	2.7827
150	74.09012	185.87	12.115	97129.42	0.0021328	0.09480	17.388	0.00323	1.50930	2.6176
155	73.29607	182.30	11.851	90968.86	0.0021778	0.09284	16.041	0.00319	1.50309	2.4694
160	72.49357	178.67	11.586	85059.52	0.0022265	0.09086	14.826	0.00315	1.49682	2.3367
165	71.68171	174.96	11.321	79393.04	0.0022791	0.08886	13.731	0.00311	1.49049	2.2182
170	70.85952	171.18	11.055	73961.26	0.0023363	0.08684	12.744	0.00306	1.48411	2.1128
175	70.02586	167.31	10.790	68756.27	0.0023985	0.08480	11.853	0.00302	1.47765	2.0193
180	69.17949	163.36	10.526	63770.41	0.0024666	0.08274	11.048	0.00297	1.47112	1.9369
185	68.31897	159.32	10.263	58996.26	0.0025414	0.08067	10.322	0.00292	1.46449	1.8650
190	67.44267	155.18	10.002	54426.73	0.0026238	0.07859	9.666	0.00286	1.45776	1.8027
195	66.54873	150.95	9.742	50055.00	0.0027151	0.07650	9.072	0.00280	1.45092	1.7497
200	65.63502	146.61	9.484	45874.63	0.0028168	0.07440	8.535	0.00274	1.44395	1.7055
205	64.69906	142.15	9.228	41879.57	0.0029305	0.07229	8.049	0.00268	1.43683	1.6698
210	63.73795	137.58	8.973	38064.22	0.0030587	0.07017	7.607	0.00262	1.42955	1.6424
215	62.74831	132.89	8.720	34423.52	0.0032039	0.06804	7.206	0.00255	1.42207	1.6233
220	61.72611	128.07	8.466	30953.07	0.0033697	0.06590	6.840	0.00247	1.41438	1.6126
225	60.66657	123.12	8.211	27649.27	0.0035606	0.06374	6.506	0.00240	1.40644	1.6108
230	59.56387	118.03	7.952	24509.62	0.0037825	0.06157	6.200	0.00232	1.39820	1.6184
235	58.39766	113.93	7.478	21465.04	0.0040499	0.05936	5.915	0.00220	1.38952	1.6554
240	57.18469	108.74	7.192	18729.41	0.0043416	0.05714	5.697	0.00212	1.38054	1.6943
245	55.90589	103.30	6.908	16120.11	0.0047058	0.05491	5.486	0.00202	1.37110	1.7483
250	54.54647	97.66	6.605	13665.75	0.0051505	0.05265	5.269	0.00192	1.36112	1.8124
255	53.08684	91.87	6.293	11370.47	0.0057182	0.05035	5.046	0.00181	1.35046	1.8954
260	51.50234	85.70	5.917	9225.97	0.0064256	0.04799	4.813	0.00169	1.33895	1.9883
265	49.75117	79.30	5.551	7231.09	0.0074475	0.04555	4.568	0.00155	1.32631	2.1323
270	47.77771	72.42	5.119	5433.03	0.0088300	0.04299	4.306	0.00141	1.31216	2.3054
275	45.46968	65.18	4.686	3801.03	0.0111210	0.04075	4.017	0.00124	1.29574	2.5726
280	42.63151	57.13	4.163	2389.07	0.0150304	0.03934	3.687	0.00107	1.27574	2.8971
285	38.82095	48.70	3.586	1235.12	0.0237189	0.03846	3.285	0.00086	1.24921	3.5521
290	32.91087	40.32	2.880	475.89	0.0454601	0.03778	2.746	0.00063	1.20882	4.7968
295	25.23489	36.51	2.535	287.50	0.0514408	0.03328	2.178	0.00070	1.15769	4.4245
300	20.55110	37.39	2.534	353.75	0.0319922	0.02729	1.895	0.00111	1.12723	2.9900
310	16.35141	41.07	2.565	493.25	0.0169247	0.02156	1.682	0.00190	1.10038	1.9529
320	14.21033	44.89	2.577	585.97	0.0118238	0.01940	1.594	0.00257	1.08686	1.5704
330	12.80640	48.53	2.567	653.06	0.0091977	0.01828	1.547	0.00320	1.07806	1.3596
340	11.77812	52.00	2.558	701.73	0.0076536	0.01765	1.520	0.00377	1.07164	1.2332
350	10.97081	55.36	2.547	739.95	0.0066080	0.01727	1.504	0.00430	1.06663	1.1469
360	10.31029	58.64	2.535	770.87	0.0058480	0.01703	1.496	0.00482	1.06253	1.0840
370	9.75408	61.83	2.523	796.41	0.0052676	0.01687	1.492	0.00531	1.05909	1.0375
380	9.27562	64.96	2.510	817.88	0.0048082	0.01677	1.493	0.00579	1.05614	1.0008
390	8.85727	68.01	2.499	836.17	0.0044343	0.01673	1.496	0.00626	1.05356	0.9711
400	8.48666	71.01	2.488	851.91	0.0041232	0.01672	1.502	0.00673	1.05128	0.9464
410	8.15487	73.95	2.477	865.59	0.0038599	0.01675	1.509	0.00719	1.04924	0.9257
420	7.85519	76.85	2.468	877.58	0.0036338	0.01680	1.517	0.00766	1.04741	0.9080
430	7.58249	79.70	2.458	888.14	0.0034371	0.01687	1.527	0.00812	1.04574	0.8927
440	7.33276	82.51	2.450	897.51	0.0032644	0.01695	1.537	0.00858	1.04421	0.8794
450	7.10280	85.29	2.442	905.87	0.0031113	0.01705	1.548	0.00904	1.04280	0.8677
460	6.89001	88.03	2.435	913.36	0.0029744	0.01715	1.560	0.00951	1.04150	0.8574
470	6.69228	90.75	2.428	920.10	0.0028514	0.01727	1.573	0.00997	1.04029	0.8483
480	6.50783	93.45	2.421	926.19	0.0027400	0.01740	1.586	0.01044	1.03917	0.8401
490	6.33520	96.12	2.414	931.72	0.0026386	0.01753	1.599	0.01091	1.03812	0.8328
500	6.17313	98.78	2.408	936.75	0.0025458	0.01766	1.612	0.01138	1.03713	0.8263
510	6.02056	101.42	2.402	941.34	0.0024606	0.01777	1.626	0.01183	1.03620	0.8221
520	5.87655	104.05	2.396	945.55	0.0023820	0.01793	1.640	0.01231	1.03532	0.8162
530	5.74035	106.67	2.391	949.41	0.0023092	0.01809	1.654	0.01279	1.03450	0.8109
540	5.61124	109.28	2.385	952.97	0.0022415	0.01825	1.668	0.01328	1.03371	0.8061
550	5.48861	111.88	2.379	956.26	0.0021785	0.01842	1.683	0.01377	1.03297	0.8019
560	5.37194	114.48	2.374	959.31	0.0021195	0.01858	1.698	0.01426	1.03226	0.7980
570	5.26075	117.08	2.368	962.13	0.0020642	0.01875	1.712	0.01475	1.03158	0.7946
580	5.15462	119.67	2.362	964.76	0.0020122	0.01892	1.727	0.01524	1.03094	0.7914
590	5.05318	122.27	2.357	967.21	0.0019633	0.01909	1.742	0.01574	1.03032	0.7886
600	4.95610	124.86	2.351	969.50	0.0019171	0.01926	1.757	0.01623	1.02974	0.7861

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

990 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.236	0.01222	2151.64	318.4	-83.061	-80.821	0.50276	0.267	0.396	3848
100	0.01224	2137.08	316.5	-82.762	-80.518	0.50580	0.266	0.396	3839
105	0.01235	2043.32	303.9	-80.804	-78.540	0.52511	0.262	0.396	3784
110	0.01247	1952.22	291.6	-78.847	-76.562	0.54351	0.258	0.395	3727
115	0.01258	1863.72	279.8	-76.892	-74.585	0.56108	0.254	0.395	3668
120	0.01270	1777.76	268.4	-74.938	-72.609	0.57790	0.250	0.395	3609
125	0.01283	1694.27	257.3	-72.985	-70.633	0.59403	0.246	0.395	3549
130	0.01295	1613.21	246.6	-71.032	-68.657	0.60953	0.243	0.395	3487
135	0.01308	1534.50	236.2	-69.079	-66.681	0.62445	0.240	0.395	3424
140	0.01322	1458.11	226.2	-67.126	-64.704	0.63883	0.237	0.396	3361
145	0.01335	1383.96	216.6	-65.173	-62.725	0.65272	0.234	0.396	3296
150	0.01350	1312.00	207.2	-63.218	-60.744	0.66615	0.231	0.396	3231
155	0.01364	1242.17	198.2	-61.261	-58.760	0.67915	0.228	0.397	3165
160	0.01379	1174.41	189.4	-59.302	-56.773	0.69177	0.226	0.398	3098
165	0.01395	1108.67	181.0	-57.339	-54.782	0.70402	0.223	0.399	3030
170	0.01411	1044.88	172.9	-55.372	-52.785	0.71594	0.221	0.400	2962
175	0.01428	983.00	165.0	-53.400	-50.783	0.72755	0.218	0.401	2893
180	0.01445	922.97	157.4	-51.422	-48.772	0.73888	0.216	0.403	2824
185	0.01463	864.72	150.0	-49.436	-46.753	0.74995	0.214	0.405	2754
190	0.01482	808.21	142.9	-47.442	-44.724	0.76077	0.212	0.407	2683
195	0.01502	753.39	136.0	-45.436	-42.682	0.77138	0.210	0.410	2612
200	0.01523	700.19	129.3	-43.419	-40.626	0.78179	0.208	0.413	2540
205	0.01545	648.59	122.8	-41.386	-38.553	0.79203	0.206	0.416	2467
210	0.01569	598.52	116.5	-39.336	-36.461	0.80212	0.204	0.421	2393
215	0.01593	549.95	110.4	-37.266	-34.345	0.81208	0.202	0.426	2319
220	0.01620	502.85	104.4	-35.172	-32.203	0.82193	0.200	0.431	2243
225	0.01648	457.19	98.6	-33.049	-30.028	0.83170	0.198	0.438	2167
230	0.01678	412.95	92.8	-30.892	-27.816	0.84141	0.196	0.446	2088
235	0.01712	369.03	87.1	-28.667	-25.529	0.85125	0.199	0.461	1989
240	0.01748	329.01	81.5	-26.398	-23.194	0.86108	0.198	0.472	1906
245	0.01788	289.88	76.0	-24.077	-20.800	0.87095	0.196	0.485	1821
250	0.01832	252.13	70.5	-21.689	-18.331	0.88093	0.195	0.502	1732
255	0.01882	215.84	65.2	-19.219	-15.768	0.89108	0.195	0.524	1641
260	0.01940	180.87	59.5	-16.644	-13.089	0.90149	0.195	0.549	1537
265	0.02007	147.15	54.1	-13.929	-10.249	0.91230	0.195	0.588	1434
270	0.02089	115.60	48.2	-11.028	-7.198	0.92371	0.196	0.635	1317
275	0.02194	85.56	42.6	-7.849	-3.828	0.93608	0.198	0.717	1198
280	0.02336	58.08	36.3	-4.236	0.046	0.95003	0.202	0.844	1061
285	0.02556	33.87	29.8	0.158	4.844	0.96701	0.209	1.114	914
290	0.02979	16.05	22.4	6.220	11.682	0.99078	0.226	1.714	751
295	0.03830	11.50	15.4	14.270	21.291	1.02363	0.231	1.893	661
300	0.04730	16.68	11.7	20.411	29.082	1.04984	0.218	1.245	664
310	0.05993	29.53	8.6	27.308	38.295	1.08010	0.200	0.712	699
320	0.06918	40.65	7.1	31.749	44.431	1.09960	0.190	0.539	732
330	0.07690	50.48	6.1	35.249	49.347	1.11474	0.183	0.451	759
340	0.08371	59.11	5.5	38.248	53.593	1.12742	0.178	0.401	785
350	0.08993	67.03	5.0	40.946	57.432	1.13855	0.175	0.368	808
360	0.09575	74.38	4.6	43.441	60.993	1.14859	0.173	0.345	830
370	0.10125	81.30	4.3	45.791	64.351	1.15779	0.171	0.327	850
380	0.10650	87.85	4.0	48.029	67.554	1.16633	0.169	0.314	869
390	0.11157	94.11	3.8	50.182	70.634	1.17433	0.168	0.303	887
400	0.11646	100.11	3.6	52.266	73.616	1.18188	0.166	0.294	905
410	0.12122	105.90	3.4	54.292	76.515	1.18904	0.165	0.286	921
420	0.12587	111.49	3.2	56.272	79.346	1.19586	0.165	0.280	937
430	0.13041	116.92	3.1	58.211	82.119	1.20238	0.164	0.275	953
440	0.13487	122.21	3.0	60.117	84.841	1.20864	0.163	0.270	968
450	0.13925	127.36	2.9	61.993	87.520	1.21466	0.163	0.266	982
460	0.14356	132.40	2.8	63.843	90.161	1.22047	0.162	0.262	997
470	0.14782	137.34	2.7	65.671	92.769	1.22608	0.162	0.259	1011
480	0.15202	142.19	2.6	67.479	95.347	1.23151	0.161	0.256	1024
490	0.15617	146.95	2.5	69.270	97.900	1.23677	0.161	0.254	1037
500	0.16028	151.64	2.4	71.046	100.429	1.24188	0.160	0.252	1050
510	0.16435	156.26	2.3	72.808	102.937	1.24684	0.160	0.250	1063
520	0.16839	160.82	2.3	74.558	105.427	1.25166	0.160	0.248	1075
530	0.17239	165.32	2.2	76.298	107.901	1.25639	0.160	0.247	1087
540	0.17636	169.77	2.2	78.029	110.360	1.26099	0.160	0.245	1099
550	0.18031	174.17	2.1	79.751	112.806	1.26548	0.160	0.244	1111
560	0.18423	178.53	2.1	81.466	115.240	1.26986	0.159	0.243	1122
570	0.18813	182.85	2.0	83.175	117.664	1.27415	0.159	0.242	1134
580	0.19201	187.13	2.0	84.879	120.078	1.27835	0.159	0.241	1145
590	0.19587	191.38	1.9	86.577	122.485	1.28246	0.159	0.240	1156
600	0.19971	195.60	1.9	88.272	124.883	1.28650	0.159	0.240	1167

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

990 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.236	81.82319	218.90	14.598	176053.82	0.0018087	0.11213	43.020	0.00346	1.57074	5.4683
100	81.71010	218.44	14.565	174620.70	0.0018123	0.11192	42.399	0.00346	1.56983	5.3990
105	80.96816	215.41	14.345	165444.10	0.0018366	0.11049	38.573	0.00345	1.56387	4.9722
110	80.22294	212.33	14.118	156613.14	0.0018622	0.10898	35.128	0.00344	1.55790	4.5883
115	79.47413	209.21	13.884	148117.60	0.0018892	0.10740	32.024	0.00342	1.55191	4.2428
120	78.72139	206.05	13.644	139947.38	0.0019177	0.10575	29.228	0.00340	1.54591	3.9318
125	77.96432	202.84	13.399	132092.60	0.0019480	0.10404	26.710	0.00338	1.53989	3.6517
130	77.20251	199.58	13.149	124543.52	0.0019801	0.10229	24.441	0.00335	1.53384	3.3994
135	76.43550	196.26	12.895	117290.61	0.0020142	0.10048	22.398	0.00333	1.52777	3.1723
140	75.66275	192.89	12.638	110324.48	0.0020507	0.09863	20.556	0.00330	1.52167	2.9679
145	74.88371	189.46	12.378	103635.96	0.0020896	0.09674	18.897	0.00326	1.51554	2.7840
150	74.09774	185.96	12.116	97216.07	0.0021314	0.09482	17.402	0.00323	1.50936	2.6188
155	73.30413	182.40	11.852	91056.00	0.0021764	0.09286	16.054	0.00319	1.50315	2.4705
160	72.50209	178.77	11.587	85147.19	0.0022249	0.09089	14.839	0.00315	1.49688	2.3377
165	71.69074	175.07	11.322	79481.24	0.0022773	0.08889	13.743	0.00311	1.49056	2.2191
170	70.86909	171.29	11.056	74050.02	0.0023343	0.08686	12.755	0.00307	1.48418	2.1136
175	70.03604	167.42	10.792	68845.61	0.0023964	0.08483	11.863	0.00302	1.47773	2.0200
180	69.19033	163.48	10.528	63860.35	0.0024642	0.08277	11.058	0.00297	1.47120	1.9375
185	68.33054	159.44	10.265	59086.83	0.0025387	0.08070	10.332	0.00292	1.46458	1.8655
190	67.45505	155.31	10.004	54517.94	0.0026208	0.07863	9.675	0.00286	1.45786	1.8031
195	66.56202	151.08	9.744	50146.89	0.0027117	0.07654	9.081	0.00281	1.45102	1.7500
200	65.64932	146.75	9.487	45967.23	0.0028129	0.07444	8.543	0.00275	1.44406	1.7056
205	64.71449	142.30	9.231	41972.92	0.0029261	0.07233	8.056	0.00268	1.43695	1.6698
210	63.75468	137.74	8.977	38158.34	0.0030535	0.07021	7.615	0.00262	1.42968	1.6422
215	62.76651	133.06	8.724	34518.45	0.0031979	0.06808	7.213	0.00255	1.42221	1.6229
220	61.74603	128.25	8.471	31048.84	0.0033627	0.06594	6.847	0.00248	1.41453	1.6120
225	60.68847	123.30	8.217	27745.91	0.0035522	0.06379	6.513	0.00240	1.40660	1.6099
230	59.58813	118.23	7.959	24607.13	0.0037724	0.06162	6.207	0.00232	1.39838	1.6172
235	58.42481	114.15	7.484	21560.38	0.0040375	0.05941	5.922	0.00221	1.38972	1.6537
240	57.21516	108.97	7.199	18824.33	0.0043271	0.05720	5.702	0.00212	1.38076	1.6921
245	55.94048	103.55	5.916	16216.22	0.0046864	0.05497	5.492	0.00203	1.37136	1.7451
250	54.58626	97.94	5.615	13762.92	0.0051253	0.05272	5.276	0.00192	1.36142	1.8085
255	53.13335	92.17	5.304	11468.35	0.0056845	0.05042	5.053	0.00181	1.35080	1.8904
260	51.55789	86.03	5.930	9325.02	0.0063771	0.04808	4.822	0.00170	1.33936	1.9810
265	49.81954	79.69	5.569	7330.99	0.0073771	0.04565	4.578	0.00156	1.32680	2.1226
270	47.86493	72.87	5.140	5533.03	0.0087168	0.04311	4.318	0.00142	1.31278	2.2901
275	45.58791	65.71	4.713	3900.67	0.0109144	0.04081	4.032	0.00125	1.29658	2.5506
280	42.80677	57.79	4.200	2486.33	0.0145996	0.03940	3.707	0.00109	1.27697	2.8584
285	39.12550	49.52	3.639	1325.37	0.0224951	0.03843	3.317	0.00088	1.25132	3.4611
290	33.56721	41.25	2.950	538.80	0.0415428	0.03773	2.803	0.00066	1.21326	4.5818
295	26.10949	36.81	2.561	300.36	0.0514329	0.03382	2.238	0.00068	1.16344	4.5110
300	21.14148	37.40	2.543	352.58	0.0332908	0.02796	1.930	0.00106	1.13104	3.0950
310	16.68649	40.96	2.571	492.69	0.0173911	0.02188	1.701	0.00184	1.10251	1.9932
320	14.45458	44.76	2.583	587.60	0.0120498	0.01960	1.607	0.00251	1.08840	1.5922
330	13.00349	48.40	2.572	656.43	0.0093284	0.01843	1.557	0.00314	1.07929	1.3733
340	11.94662	51.87	2.564	706.21	0.0077409	0.01777	1.528	0.00371	1.07269	1.2429
350	11.11954	55.24	2.552	745.29	0.0066706	0.01737	1.511	0.00424	1.06755	1.1542
360	10.44439	58.52	2.540	776.88	0.0058952	0.01712	1.502	0.00475	1.06336	1.0898
370	9.87682	61.72	2.527	802.97	0.0053045	0.01694	1.498	0.00524	1.05985	1.0423
380	9.38924	64.84	2.515	824.89	0.0048378	0.01684	1.498	0.00572	1.05684	1.0048
390	8.96336	67.90	2.503	843.55	0.0044585	0.01679	1.501	0.00619	1.05421	0.9745
400	8.58642	70.91	2.491	859.61	0.0041434	0.01678	1.506	0.00665	1.05190	0.9494
410	8.24919	73.85	2.481	873.57	0.0038770	0.01680	1.513	0.00711	1.04982	0.9283
420	7.94479	76.75	2.471	885.79	0.0036484	0.01685	1.522	0.00757	1.04796	0.9103
430	7.66794	79.61	2.462	896.56	0.0034497	0.01691	1.531	0.00803	1.04626	0.8948
440	7.41452	82.42	2.453	906.11	0.0032754	0.01700	1.541	0.00849	1.04471	0.8813
450	7.18126	85.20	2.445	914.63	0.0031209	0.01709	1.552	0.00895	1.04328	0.8695
460	6.96549	87.95	2.438	922.26	0.0029829	0.01720	1.564	0.00941	1.04196	0.8590
470	6.76505	90.68	2.431	929.13	0.0028589	0.01731	1.576	0.00987	1.04074	0.8497
480	6.57813	93.37	2.424	935.33	0.0027467	0.01744	1.589	0.01033	1.03960	0.8414
490	6.40322	96.05	2.417	940.96	0.0026446	0.01757	1.602	0.01080	1.03853	0.8340
500	6.23906	98.71	2.411	946.08	0.0025513	0.01770	1.615	0.01127	1.03753	0.8274
510	6.08454	101.35	2.405	950.76	0.0024656	0.01780	1.629	0.01171	1.03659	0.8231
520	5.93873	103.98	2.399	955.04	0.0023865	0.01796	1.643	0.01219	1.03570	0.8172
530	5.80083	106.60	2.393	958.98	0.0023133	0.01812	1.657	0.01267	1.03486	0.8118
540	5.67013	109.21	2.388	962.60	0.0022453	0.01828	1.671	0.01315	1.03407	0.8070
550	5.54602	111.82	2.382	965.95	0.0021819	0.01845	1.686	0.01363	1.03331	0.8027
560	5.42794	114.42	2.376	969.05	0.0021227	0.01861	1.700	0.01412	1.03260	0.7988
570	5.31543	117.02	2.371	971.92	0.0020671	0.01878	1.715	0.01461	1.03191	0.7953
580	5.20805	119.61	2.365	974.60	0.0020150	0.01895	1.730	0.01509	1.03126	0.7921
590	5.10543	122.21	2.360	977.09	0.0019658	0.01912	1.745	0.01559	1.03064	0.7893
600	5.00722	124.81	2.354	979.42	0.0019194	0.01929	1.759	0.01608	1.03005	0.7867

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1000 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.250	0.01222	2152.25	318.4	-83.060	-80.797	0.50278	0.267	0.396	3848
100	0.01224	2137.96	316.5	-82.766	-80.500	0.50576	0.266	0.396	3840
105	0.01235	2044.22	303.9	-80.808	-78.521	0.52507	0.262	0.396	3784
110	0.01246	1953.13	291.7	-78.852	-76.544	0.54346	0.258	0.395	3727
115	0.01258	1864.65	279.9	-76.897	-74.567	0.56104	0.254	0.395	3669
120	0.01270	1778.69	268.4	-74.943	-72.591	0.57786	0.250	0.395	3610
125	0.01283	1695.22	257.4	-72.990	-70.615	0.59399	0.246	0.395	3549
130	0.01295	1614.17	246.7	-71.038	-68.640	0.60948	0.243	0.395	3488
135	0.01308	1535.49	236.3	-69.086	-66.663	0.62440	0.240	0.395	3425
140	0.01322	1459.11	226.3	-67.133	-64.686	0.63878	0.237	0.396	3361
145	0.01335	1384.98	216.6	-65.180	-62.708	0.65266	0.234	0.396	3297
150	0.01349	1313.03	207.3	-63.226	-60.727	0.66609	0.231	0.396	3232
155	0.01364	1243.22	198.2	-61.269	-58.744	0.67910	0.228	0.397	3166
160	0.01379	1175.48	189.5	-59.310	-56.757	0.69171	0.226	0.398	3099
165	0.01395	1109.76	181.1	-57.348	-54.766	0.70396	0.223	0.399	3031
170	0.01411	1046.00	172.9	-55.382	-52.770	0.71588	0.221	0.400	2963
175	0.01428	984.13	165.0	-53.411	-50.767	0.72749	0.218	0.401	2894
180	0.01445	924.12	157.4	-51.433	-48.757	0.73881	0.216	0.403	2825
185	0.01463	865.90	150.1	-49.448	-46.739	0.74988	0.214	0.405	2755
190	0.01482	809.41	143.0	-47.455	-44.710	0.76070	0.212	0.407	2684
195	0.01502	754.62	136.1	-45.450	-42.669	0.77131	0.210	0.410	2613
200	0.01523	701.45	129.4	-43.434	-40.614	0.78171	0.208	0.413	2541
205	0.01545	649.87	122.9	-41.403	-38.542	0.79195	0.206	0.416	2469
210	0.01568	599.84	116.6	-39.354	-36.450	0.80203	0.204	0.420	2395
215	0.01593	551.30	110.5	-37.285	-34.336	0.81198	0.202	0.425	2321
220	0.01619	504.23	104.5	-35.193	-32.195	0.82183	0.200	0.431	2246
225	0.01647	458.61	98.7	-33.072	-30.022	0.83159	0.198	0.438	2169
230	0.01678	414.42	92.9	-30.918	-27.812	0.84130	0.196	0.446	2091
235	0.01711	370.49	87.2	-28.696	-25.528	0.85112	0.199	0.460	1992
240	0.01747	330.49	81.6	-26.430	-23.195	0.86094	0.198	0.471	1909
245	0.01787	291.42	76.1	-24.113	-20.805	0.87080	0.196	0.484	1825
250	0.01831	253.72	70.7	-21.730	-18.340	0.88076	0.195	0.501	1736
255	0.01880	217.49	65.4	-19.266	-15.784	0.89088	0.195	0.523	1645
260	0.01937	182.59	59.7	-16.700	-13.112	0.90126	0.194	0.547	1542
265	0.02005	148.95	54.3	-13.996	-10.284	0.91203	0.195	0.585	1440
270	0.02085	117.47	48.5	-11.112	-7.250	0.92337	0.196	0.631	1324
275	0.02188	87.52	42.9	-7.959	-3.908	0.93564	0.198	0.710	1206
280	0.02327	60.10	36.7	-4.393	-0.085	0.94941	0.201	0.830	1071
285	0.02537	35.92	30.3	-0.101	4.598	0.96598	0.208	1.078	928
290	0.02927	17.70	23.1	5.689	11.110	0.98862	0.224	1.610	768
295	0.03708	11.79	16.1	13.442	20.308	1.02006	0.230	1.885	668
300	0.04598	16.21	12.2	19.776	28.289	1.04691	0.219	1.293	666
310	0.05872	28.90	8.8	26.930	37.804	1.07816	0.200	0.730	699
320	0.06802	40.08	7.2	31.470	44.065	1.09806	0.190	0.548	732
330	0.07574	49.97	6.2	35.024	49.050	1.11341	0.183	0.457	759
340	0.08253	58.65	5.6	38.056	53.339	1.12622	0.179	0.405	785
350	0.08874	66.61	5.1	40.778	57.210	1.13744	0.175	0.371	808
360	0.09453	74.00	4.7	43.291	60.794	1.14754	0.173	0.347	830
370	0.10000	80.95	4.3	45.654	64.171	1.15679	0.171	0.329	850
380	0.10523	87.54	4.0	47.903	67.389	1.16538	0.169	0.315	869
390	0.11026	93.82	3.8	50.065	70.482	1.17341	0.168	0.304	887
400	0.11512	99.85	3.6	52.157	73.474	1.18099	0.167	0.295	905
410	0.11985	105.65	3.4	54.190	76.383	1.18817	0.166	0.287	921
420	0.12446	111.27	3.3	56.175	79.222	1.19501	0.165	0.281	938
430	0.12897	116.72	3.1	58.120	82.002	1.20155	0.164	0.275	953
440	0.13340	122.02	3.0	60.030	84.731	1.20783	0.163	0.271	968
450	0.13774	127.19	2.9	61.910	87.416	1.21386	0.163	0.266	983
460	0.14202	132.25	2.8	63.763	90.062	1.21968	0.162	0.263	997
470	0.14624	137.20	2.7	65.595	92.675	1.22530	0.162	0.260	1011
480	0.15041	142.06	2.6	67.406	95.258	1.23074	0.161	0.257	1024
490	0.15453	146.83	2.5	69.200	97.814	1.23601	0.161	0.254	1037
500	0.15860	151.53	2.4	70.978	100.347	1.24112	0.160	0.252	1050
510	0.16264	156.16	2.4	72.742	102.859	1.24610	0.160	0.250	1063
520	0.16664	160.73	2.3	74.495	105.352	1.25094	0.160	0.248	1075
530	0.17061	165.24	2.2	76.236	107.829	1.25566	0.160	0.247	1088
540	0.17455	169.70	2.2	77.969	110.291	1.26026	0.160	0.245	1100
550	0.17846	174.11	2.1	79.693	112.739	1.26475	0.160	0.244	1111
560	0.18235	178.48	2.1	81.409	115.176	1.26914	0.159	0.243	1123
570	0.18622	182.81	2.0	83.120	117.602	1.27344	0.159	0.242	1134
580	0.19006	187.10	2.0	84.824	120.018	1.27764	0.159	0.241	1145
590	0.19389	191.36	1.9	86.524	122.427	1.28175	0.159	0.240	1156
600	0.19769	195.59	1.9	88.220	124.827	1.28579	0.159	0.240	1167

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1000 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.250	81.82575	218.95	14.598	176109.48	0.0018081	0.11214	43.034	0.00346	1.57076	5.4696
100	81.71478	218.50	14.566	174702.97	0.0018117	0.11193	42.425	0.00346	1.56987	5.4016
105	80.97305	215.47	14.345	165526.76	0.0018359	0.11050	38.597	0.00345	1.56391	4.9745
110	80.22806	212.40	14.118	156696.21	0.0018615	0.10899	35.150	0.00344	1.55794	4.5904
115	79.47949	209.29	13.884	148201.06	0.0018884	0.10741	32.045	0.00342	1.55195	4.2448
120	78.72701	206.12	13.644	140031.27	0.0019169	0.10576	29.248	0.00340	1.54595	3.9337
125	77.97022	202.92	13.399	132176.91	0.0019471	0.10406	26.729	0.00338	1.53993	3.6534
130	77.20871	199.66	13.150	124628.27	0.0019791	0.10230	24.459	0.00335	1.53389	3.4011
135	76.44201	196.34	12.896	117375.80	0.0020132	0.10049	22.414	0.00333	1.52782	3.1738
140	75.66961	192.97	12.639	110410.14	0.0020495	0.09865	20.572	0.00330	1.52172	2.9693
145	74.89094	189.54	12.379	103722.09	0.0020884	0.09676	18.912	0.00326	1.51559	2.7853
150	74.10536	186.05	12.117	97302.68	0.0021301	0.09484	17.415	0.00323	1.50942	2.6200
155	73.31217	182.50	11.853	91143.12	0.0021749	0.09289	16.067	0.00319	1.50321	2.4716
160	72.51060	178.87	11.588	85234.82	0.0022233	0.09091	14.851	0.00315	1.49695	2.3387
165	71.69975	175.17	11.323	79569.41	0.0022756	0.08891	13.755	0.00311	1.49063	2.2200
170	70.87866	171.39	11.057	74138.75	0.0023324	0.08689	12.766	0.00307	1.48426	2.1144
175	70.04621	167.54	10.793	68934.91	0.0023942	0.08485	11.874	0.00302	1.47781	2.0207
180	69.20116	163.60	10.529	63950.24	0.0024618	0.08280	11.068	0.00297	1.47128	1.9381
185	68.34209	159.57	10.267	59177.34	0.0025360	0.08073	10.341	0.00292	1.46467	1.8660
190	67.46741	155.44	10.006	54609.10	0.0026178	0.07866	9.684	0.00287	1.45795	1.8035
195	66.57528	151.22	9.747	50238.72	0.0027083	0.07657	9.089	0.00281	1.45113	1.7503
200	65.66359	146.89	9.489	46059.77	0.0028090	0.07447	8.552	0.00275	1.44417	1.7058
205	64.72990	142.45	9.234	42066.19	0.0029217	0.07236	8.064	0.00269	1.43707	1.6697
210	63.77137	137.90	8.980	38252.38	0.0030484	0.07025	7.622	0.00262	1.42980	1.6420
215	62.78467	133.22	8.728	34613.29	0.0031920	0.06812	7.220	0.00255	1.42235	1.6226
220	61.76589	128.42	8.476	31144.51	0.0033557	0.06598	6.854	0.00248	1.41468	1.6115
225	60.71031	123.49	8.223	27842.43	0.0035439	0.06384	6.520	0.00240	1.40676	1.6091
230	59.61230	118.43	7.966	24704.52	0.0037623	0.06167	6.213	0.00232	1.39856	1.6160
235	58.45185	114.36	7.490	21655.65	0.0040252	0.05946	5.928	0.00221	1.38992	1.6520
240	57.24548	109.20	7.207	18919.14	0.0043126	0.05726	5.708	0.00212	1.38098	1.6899
245	55.97489	103.80	5.924	16312.16	0.0046672	0.05504	5.498	0.00203	1.37161	1.7421
250	54.62580	98.21	5.624	13859.90	0.0051005	0.05279	5.283	0.00193	1.36171	1.8046
255	53.17950	92.47	5.316	11565.99	0.0056513	0.05050	5.061	0.00182	1.35114	1.8854
260	51.61292	86.37	5.943	9423.79	0.0063298	0.04816	4.830	0.00171	1.33976	1.9739
265	49.88709	80.08	5.586	7430.57	0.0073086	0.04574	4.588	0.00157	1.32729	2.1131
270	47.95075	73.31	5.161	5632.65	0.0086075	0.04322	4.329	0.00143	1.31340	2.2753
275	45.70347	66.23	4.739	3999.87	0.0107181	0.04088	4.047	0.00126	1.29740	2.5296
280	42.97600	58.44	4.237	2583.05	0.0142002	0.03946	3.727	0.00111	1.27816	2.8220
285	39.41214	50.32	3.690	1415.51	0.0214140	0.03842	3.346	0.00090	1.25330	3.3792
290	34.16037	42.17	3.017	604.71	0.0381845	0.03768	2.855	0.00069	1.21728	4.3909
295	26.96927	37.19	2.593	317.91	0.0506917	0.03426	2.298	0.00067	1.16911	4.5528
300	21.74985	37.45	2.554	352.62	0.0345287	0.02862	1.967	0.00102	1.13497	3.1998
310	17.02880	40.86	2.578	492.21	0.0178680	0.02222	1.720	0.00179	1.10468	2.0345
320	14.70234	44.64	2.589	589.22	0.0122800	0.01980	1.620	0.00246	1.08996	1.6144
330	13.20259	48.28	2.578	659.79	0.0094607	0.01858	1.567	0.00308	1.08054	1.3872
340	12.11645	51.74	2.569	710.67	0.0078291	0.01789	1.537	0.00365	1.07375	1.2527
350	11.26921	55.11	2.557	750.61	0.0067337	0.01747	1.519	0.00418	1.06848	1.1616
360	10.57917	58.40	2.544	782.87	0.0059426	0.01721	1.509	0.00469	1.06420	1.0956
370	10.00008	61.60	2.532	809.52	0.0053415	0.01702	1.505	0.00517	1.06061	1.0471
380	9.50327	64.73	2.519	831.89	0.0048674	0.01691	1.504	0.00565	1.05754	1.0088
390	9.06978	67.80	2.507	850.93	0.0044828	0.01686	1.507	0.00612	1.05487	0.9779
400	8.68644	70.80	2.495	867.31	0.0041637	0.01684	1.511	0.00658	1.05251	0.9524
410	8.34373	73.76	2.485	881.54	0.0038941	0.01686	1.518	0.00704	1.05040	0.9310
420	8.03457	76.66	2.475	894.00	0.0036630	0.01690	1.526	0.00749	1.04851	0.9127
430	7.75354	79.52	2.465	904.97	0.0034623	0.01696	1.535	0.00795	1.04678	0.8969
440	7.49642	82.34	2.457	914.71	0.0032863	0.01704	1.545	0.00840	1.04521	0.8832
450	7.25983	85.12	2.449	923.38	0.0031305	0.01714	1.556	0.00886	1.04376	0.8712
460	7.04106	87.87	2.441	931.16	0.0029914	0.01724	1.568	0.00931	1.04242	0.8606
470	6.83790	90.60	2.434	938.15	0.0028665	0.01735	1.580	0.00977	1.04118	0.8512
480	6.64849	93.30	2.427	944.47	0.0027535	0.01748	1.592	0.01023	1.04003	0.8428
490	6.47130	95.98	2.420	950.20	0.0026507	0.01760	1.605	0.01069	1.03895	0.8353
500	6.30502	98.64	2.414	955.41	0.0025568	0.01774	1.619	0.01116	1.03793	0.8285
510	6.14855	101.28	2.408	960.17	0.0024705	0.01784	1.632	0.01160	1.03698	0.8242
520	6.00093	103.92	2.402	964.53	0.0023910	0.01800	1.646	0.01207	1.03608	0.8182
530	5.86133	106.54	2.396	968.54	0.0023174	0.01815	1.660	0.01255	1.03523	0.8128
540	5.72905	109.15	2.391	972.23	0.0022491	0.01831	1.674	0.01302	1.03443	0.8079
550	5.60344	111.76	2.385	975.64	0.0021854	0.01848	1.689	0.01350	1.03366	0.8035
560	5.48396	114.36	2.379	978.79	0.0021259	0.01864	1.703	0.01398	1.03294	0.7995
570	5.37012	116.96	2.374	981.72	0.0020701	0.01881	1.718	0.01447	1.03225	0.7960
580	5.26149	119.55	2.368	984.44	0.0020177	0.01898	1.732	0.01495	1.03159	0.7928
590	5.15768	122.15	2.362	986.98	0.0019683	0.01915	1.747	0.01544	1.03096	0.7899
600	5.05834	124.75	2.357	989.35	0.0019217	0.01932	1.762	0.01593	1.03036	0.7873

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1010 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.264	0.01222	2152.86	318.4	-83.058	-80.772	0.50279	0.267	0.396	3849
100	0.01224	2138.84	316.5	-82.770	-80.481	0.50572	0.266	0.396	3841
105	0.01235	2045.12	303.9	-80.812	-78.503	0.52502	0.262	0.396	3785
110	0.01246	1954.05	291.7	-78.856	-76.525	0.54342	0.258	0.395	3728
115	0.01258	1865.57	279.9	-76.902	-74.549	0.56099	0.254	0.395	3670
120	0.01270	1779.63	268.5	-74.948	-72.573	0.57781	0.250	0.395	3610
125	0.01282	1696.18	257.4	-72.996	-70.597	0.59394	0.246	0.395	3550
130	0.01295	1615.14	246.7	-71.044	-68.622	0.60944	0.243	0.395	3488
135	0.01308	1536.47	236.4	-69.092	-66.646	0.62435	0.240	0.395	3426
140	0.01321	1460.11	226.3	-67.140	-64.669	0.63873	0.237	0.395	3362
145	0.01335	1385.99	216.7	-65.187	-62.690	0.65261	0.234	0.396	3298
150	0.01349	1314.07	207.3	-63.233	-60.710	0.66604	0.231	0.396	3233
155	0.01364	1244.27	198.3	-61.278	-58.727	0.67904	0.228	0.397	3167
160	0.01379	1176.55	189.6	-59.319	-56.740	0.69166	0.226	0.398	3100
165	0.01395	1110.85	181.1	-57.358	-54.750	0.70391	0.223	0.399	3032
170	0.01411	1047.11	173.0	-55.392	-52.754	0.71582	0.221	0.400	2964
175	0.01427	985.27	165.1	-53.421	-50.752	0.72743	0.218	0.401	2896
180	0.01445	925.27	157.5	-51.445	-48.743	0.73875	0.216	0.403	2826
185	0.01463	867.08	150.1	-49.461	-46.725	0.74981	0.214	0.405	2756
190	0.01482	810.62	143.0	-47.468	-44.696	0.76063	0.212	0.407	2686
195	0.01502	755.84	136.1	-45.465	-42.656	0.77123	0.210	0.409	2615
200	0.01523	702.71	129.5	-43.449	-40.601	0.78164	0.208	0.412	2543
205	0.01545	651.16	123.0	-41.419	-38.530	0.79187	0.206	0.416	2470
210	0.01568	601.15	116.7	-39.372	-36.440	0.80194	0.204	0.420	2397
215	0.01592	552.65	110.6	-37.305	-34.327	0.81189	0.202	0.425	2323
220	0.01618	505.62	104.6	-35.214	-32.187	0.82173	0.200	0.431	2248
225	0.01647	460.03	98.8	-33.095	-30.016	0.83148	0.198	0.437	2171
230	0.01677	415.88	93.1	-30.944	-27.807	0.84118	0.196	0.445	2093
235	0.01710	371.94	87.3	-28.724	-25.526	0.85099	0.199	0.460	1995
240	0.01746	331.97	81.7	-26.462	-23.197	0.86080	0.198	0.470	1913
245	0.01785	292.95	76.3	-24.149	-20.810	0.87065	0.196	0.484	1828
250	0.01829	255.31	70.8	-21.771	-18.349	0.88059	0.195	0.500	1740
255	0.01879	219.13	65.5	-19.313	-15.799	0.89069	0.195	0.521	1649
260	0.01935	184.30	59.8	-16.755	-13.135	0.90103	0.194	0.545	1547
265	0.02002	150.74	54.5	-14.063	-10.319	0.91176	0.195	0.583	1445
270	0.02082	119.33	48.7	-11.194	-7.301	0.92304	0.196	0.627	1331
275	0.02183	89.46	43.2	-8.067	-3.985	0.93521	0.198	0.703	1214
280	0.02318	62.11	37.1	-4.546	-0.210	0.94881	0.201	0.817	1081
285	0.02520	37.94	30.8	-0.347	4.366	0.96501	0.208	1.045	941
290	0.02882	19.40	23.8	5.206	10.596	0.98666	0.222	1.520	784
295	0.03597	12.24	16.8	12.648	19.375	1.01667	0.230	1.856	677
300	0.04469	15.83	12.6	19.130	27.489	1.04396	0.220	1.338	668
310	0.05754	28.30	9.0	26.545	37.307	1.07621	0.201	0.748	699
320	0.06687	39.51	7.4	31.188	43.695	1.09651	0.191	0.557	732
330	0.07460	49.33	6.4	34.796	48.747	1.11207	0.184	0.464	760
340	0.08138	58.20	5.7	37.864	53.085	1.12503	0.179	0.409	785
350	0.08757	66.19	5.1	40.609	56.986	1.13634	0.176	0.374	808
360	0.09333	73.62	4.7	43.140	60.595	1.14650	0.173	0.349	830
370	0.09878	80.61	4.4	45.516	63.990	1.15581	0.171	0.331	850
380	0.10397	87.22	4.1	47.777	67.223	1.16443	0.169	0.316	869
390	0.10897	93.53	3.9	49.948	70.329	1.17250	0.168	0.305	887
400	0.11381	99.58	3.7	52.047	73.332	1.18010	0.167	0.296	905
410	0.11850	105.41	3.5	54.087	76.251	1.18731	0.166	0.288	922
420	0.12308	111.05	3.3	56.078	79.098	1.19417	0.165	0.282	938
430	0.12756	116.51	3.2	58.028	81.885	1.20073	0.164	0.276	953
440	0.13195	121.83	3.0	59.942	84.621	1.20702	0.163	0.271	968
450	0.13627	127.02	2.9	61.826	87.312	1.21307	0.163	0.267	983
460	0.14051	132.09	2.8	63.684	89.964	1.21890	0.162	0.263	997
470	0.14470	137.06	2.7	65.518	92.581	1.22452	0.162	0.260	1011
480	0.14883	141.93	2.6	67.333	95.168	1.22997	0.161	0.257	1024
490	0.15292	146.72	2.5	69.129	97.729	1.23525	0.161	0.255	1038
500	0.15696	151.43	2.5	70.910	100.265	1.24038	0.161	0.253	1051
510	0.16096	156.07	2.4	72.677	102.781	1.24536	0.160	0.251	1063
520	0.16493	160.65	2.3	74.431	105.277	1.25020	0.160	0.249	1076
530	0.16887	165.17	2.3	76.175	107.757	1.25493	0.160	0.247	1088
540	0.17277	169.64	2.2	77.909	110.221	1.25953	0.160	0.246	1100
550	0.17665	174.06	2.2	79.634	112.672	1.26403	0.160	0.244	1112
560	0.18051	178.44	2.1	81.352	115.111	1.26843	0.159	0.243	1123
570	0.18434	182.77	2.1	83.064	117.540	1.27272	0.159	0.242	1135
580	0.18815	187.07	2.0	84.770	119.958	1.27693	0.159	0.241	1146
590	0.19194	191.34	2.0	86.471	122.369	1.28105	0.159	0.241	1157
600	0.19571	195.57	1.9	88.168	124.771	1.28509	0.159	0.240	1168

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1010 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^9	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.264	81.82831	219.01	14.598	176165.14	0.0018075	0.11214	43.048	0.00346	1.57078	5.4709
100	81.71946	218.57	14.566	174785.23	0.0018111	0.11194	42.450	0.00346	1.56991	5.4041
105	80.97794	215.54	14.346	165609.41	0.0018353	0.11051	38.621	0.00345	1.56395	4.9769
110	80.23318	212.47	14.118	156779.25	0.0018608	0.10900	35.173	0.00344	1.55798	4.5926
115	79.48486	209.36	13.884	148284.52	0.0018877	0.10742	32.066	0.00342	1.55200	4.2469
120	78.73263	206.20	13.645	140115.13	0.0019161	0.10578	29.268	0.00340	1.54600	3.9356
125	77.97612	202.99	13.400	132261.20	0.0019462	0.10407	26.747	0.00338	1.53998	3.6552
130	77.21490	199.74	13.150	124713.00	0.0019782	0.10232	24.477	0.00335	1.53394	3.4027
135	76.44852	196.43	12.896	117460.98	0.0020122	0.10051	22.431	0.00333	1.52787	3.1754
140	75.67646	193.06	12.639	110495.77	0.0020484	0.09866	20.587	0.00330	1.52178	2.9707
145	74.89816	189.63	12.379	103808.20	0.0020872	0.09678	18.926	0.00326	1.51565	2.7866
150	74.11297	186.15	12.117	97389.27	0.0021288	0.09486	17.429	0.00323	1.50948	2.6212
155	73.32021	182.59	11.853	91230.21	0.0021735	0.09291	16.080	0.00319	1.50327	2.4727
160	72.51910	178.97	11.589	85322.43	0.0022217	0.09093	14.863	0.00315	1.49702	2.3397
165	71.70876	175.27	11.324	79657.55	0.0022738	0.08893	13.766	0.00311	1.49070	2.2209
170	70.88821	171.50	11.059	74227.43	0.0023304	0.08691	12.777	0.00307	1.48433	2.1152
175	70.05636	167.65	10.794	69024.16	0.0023921	0.08488	11.884	0.00302	1.47789	2.0214
180	69.21197	163.72	10.530	64040.09	0.0024594	0.08283	11.078	0.00297	1.47137	1.9388
185	68.35364	159.69	10.268	59267.80	0.0025334	0.08076	10.350	0.00292	1.46475	1.8665
190	67.47976	155.57	10.008	54700.20	0.0026148	0.07869	9.693	0.00287	1.45805	1.8039
195	66.58852	151.36	9.749	50330.50	0.0027049	0.07660	9.098	0.00281	1.45123	1.7505
200	65.67783	147.04	9.492	46152.24	0.0028052	0.07451	8.560	0.00275	1.44428	1.7059
205	64.74527	142.60	9.237	42159.39	0.0029173	0.07240	8.072	0.00269	1.43718	1.6697
210	63.78802	138.06	8.984	38346.34	0.0030433	0.07029	7.629	0.00262	1.42993	1.6419
215	62.80279	133.39	8.732	34708.05	0.0031860	0.06816	7.227	0.00255	1.42249	1.6222
220	61.78569	128.60	8.480	31240.08	0.0033487	0.06603	6.861	0.00248	1.41483	1.6109
225	60.73208	123.68	8.228	27938.85	0.0035356	0.06388	6.526	0.00241	1.40693	1.6082
230	59.63639	118.63	7.972	24801.78	0.0037523	0.06172	6.220	0.00233	1.39874	1.6149
235	58.47879	114.57	7.497	21750.84	0.0040130	0.05952	5.935	0.00221	1.39012	1.6504
240	57.27567	109.43	7.215	19013.82	0.0042983	0.05732	5.713	0.00213	1.38121	1.6877
245	56.00911	104.04	6.932	16407.95	0.0046483	0.05510	5.504	0.00203	1.37186	1.7390
250	54.66509	98.48	6.634	13956.69	0.0050760	0.05286	5.289	0.00193	1.36199	1.8008
255	53.22531	92.77	6.327	11663.41	0.0056187	0.05057	5.068	0.00182	1.35147	1.8805
260	51.66743	86.70	5.956	9522.29	0.0062834	0.04824	4.839	0.00171	1.34015	1.9669
265	49.95383	80.47	5.604	7529.85	0.0072418	0.04584	4.597	0.00157	1.32777	2.1039
270	48.03521	73.75	5.182	5731.90	0.0085019	0.04333	4.341	0.00144	1.31400	2.2610
275	45.81648	66.75	4.765	4098.63	0.0105312	0.04095	4.061	0.00127	1.29820	2.5094
280	43.13964	59.07	4.272	2679.31	0.0138289	0.03952	3.746	0.00112	1.27930	2.7880
285	39.68300	51.10	3.739	1505.52	0.0204519	0.03842	3.375	0.00093	1.25518	3.3049
290	34.69995	43.06	3.081	673.03	0.0353028	0.03763	2.903	0.00071	1.22095	4.2220
295	27.80268	37.63	2.630	340.31	0.0493216	0.03462	2.358	0.00067	1.17463	4.5515
300	22.37437	37.53	2.567	354.12	0.0356665	0.02927	2.006	0.00098	1.13902	3.3025
310	17.37844	40.77	2.584	491.87	0.0183543	0.02256	1.739	0.00173	1.10690	2.0767
320	14.95364	44.53	2.595	590.85	0.0125140	0.02001	1.633	0.00240	1.09154	1.6371
330	13.40568	48.12	2.588	661.28	0.0096417	0.01874	1.579	0.00301	1.08181	1.4060
340	12.28761	51.62	2.574	715.12	0.0079160	0.01801	1.546	0.00359	1.07482	1.2627
350	11.41981	54.99	2.562	755.91	0.0067973	0.01757	1.527	0.00412	1.06941	1.1691
360	10.71465	58.28	2.549	788.86	0.0059904	0.01730	1.516	0.00462	1.06504	1.1015
370	10.12388	61.49	2.536	816.05	0.0053787	0.01710	1.511	0.00511	1.06138	1.0519
380	9.61772	64.62	2.523	838.88	0.0048972	0.01698	1.510	0.00558	1.05825	1.0129
390	9.17653	67.69	2.511	858.29	0.0045071	0.01692	1.512	0.00604	1.05553	0.9814
400	8.78672	70.70	2.499	875.00	0.0041839	0.01690	1.516	0.00650	1.05313	0.9554
410	8.43849	73.66	2.488	889.50	0.0039112	0.01692	1.523	0.00696	1.05099	0.9336
420	8.12453	76.57	2.478	902.20	0.0036776	0.01695	1.530	0.00741	1.04906	0.9150
430	7.83929	79.43	2.469	913.38	0.0034749	0.01701	1.539	0.00786	1.04731	0.8990
440	7.57843	82.25	2.460	923.30	0.0032973	0.01709	1.549	0.00832	1.04571	0.8851
450	7.33850	85.04	2.452	932.14	0.0031401	0.01718	1.560	0.00877	1.04424	0.8729
460	7.11672	87.80	2.444	940.05	0.0029999	0.01728	1.571	0.00922	1.04289	0.8621
470	6.91082	90.52	2.437	947.17	0.0028740	0.01739	1.583	0.00967	1.04163	0.8526
480	6.71892	93.23	2.430	953.61	0.0027602	0.01751	1.596	0.01013	1.04046	0.8441
490	6.53943	95.91	2.423	959.44	0.0026567	0.01764	1.609	0.01059	1.03936	0.8365
500	6.37104	98.57	2.417	964.75	0.0025622	0.01777	1.622	0.01105	1.03833	0.8297
510	6.21261	101.22	2.411	969.59	0.0024754	0.01787	1.635	0.01148	1.03737	0.8253
520	6.06316	103.85	2.405	974.03	0.0023955	0.01803	1.649	0.01195	1.03646	0.8192
530	5.92186	106.47	2.399	978.11	0.0023215	0.01819	1.663	0.01242	1.03560	0.8137
540	5.78798	109.09	2.393	981.86	0.0022528	0.01835	1.677	0.01290	1.03479	0.8087
550	5.66088	111.69	2.388	985.33	0.0021888	0.01851	1.691	0.01337	1.03401	0.8043
560	5.54000	114.30	2.382	988.54	0.0021290	0.01867	1.706	0.01385	1.03328	0.8003
570	5.42483	116.90	2.377	991.52	0.0020730	0.01884	1.720	0.01433	1.03258	0.7967
580	5.31494	119.50	2.371	994.29	0.0020204	0.01901	1.735	0.01481	1.03191	0.7934
590	5.20994	122.09	2.365	996.87	0.0019708	0.01917	1.750	0.01529	1.03127	0.7905
600	5.10947	124.69	2.360	999.28	0.0019241	0.01934	1.764	0.01578	1.03067	0.7879

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1020 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	Cp BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.278	0.01222	2153.48	318.4	-83.056	-80.748	0.50281	0.267	0.396	3849
100	0.01224	2139.73	316.6	-82.774	-80.463	0.50568	0.266	0.396	3841
105	0.01235	2046.01	304.0	-80.816	-78.484	0.52498	0.262	0.396	3786
110	0.01246	1954.96	291.8	-78.861	-76.507	0.54338	0.258	0.395	3729
115	0.01258	1866.49	280.0	-76.907	-74.531	0.56095	0.254	0.395	3670
120	0.01270	1780.57	268.5	-74.954	-72.555	0.57777	0.250	0.395	3611
125	0.01282	1697.13	257.5	-73.001	-70.579	0.59389	0.246	0.395	3551
130	0.01295	1616.11	246.8	-71.050	-68.604	0.60939	0.243	0.395	3489
135	0.01308	1537.45	236.4	-69.098	-66.628	0.62430	0.240	0.395	3427
140	0.01321	1461.11	226.4	-67.147	-64.651	0.63868	0.237	0.395	3363
145	0.01335	1387.01	216.7	-65.195	-62.673	0.65256	0.234	0.396	3299
150	0.01349	1315.10	207.4	-63.241	-60.693	0.66599	0.231	0.396	3234
155	0.01364	1245.32	198.3	-61.286	-58.710	0.67899	0.228	0.397	3168
160	0.01379	1177.62	189.6	-59.328	-56.724	0.69160	0.226	0.398	3101
165	0.01394	1111.94	181.2	-57.367	-54.733	0.70385	0.223	0.398	3033
170	0.01410	1048.21	173.0	-55.402	-52.738	0.71576	0.221	0.400	2965
175	0.01427	986.40	165.2	-53.432	-50.736	0.72736	0.218	0.401	2897
180	0.01445	926.43	157.6	-51.456	-48.728	0.73868	0.216	0.403	2827
185	0.01463	868.25	150.2	-49.473	-46.710	0.74974	0.214	0.404	2758
190	0.01482	811.82	143.1	-47.481	-44.682	0.76056	0.212	0.407	2687
195	0.01501	757.07	136.2	-45.479	-42.643	0.77115	0.210	0.409	2616
200	0.01522	703.96	129.5	-43.464	-40.589	0.78156	0.208	0.412	2544
205	0.01544	652.44	123.1	-41.435	-38.519	0.79178	0.206	0.416	2472
210	0.01567	602.47	116.8	-39.390	-36.429	0.80185	0.204	0.420	2399
215	0.01592	554.00	110.7	-37.324	-34.318	0.81179	0.202	0.425	2325
220	0.01618	507.00	104.7	-35.235	-32.179	0.82162	0.200	0.430	2250
225	0.01646	461.46	98.9	-33.118	-30.010	0.83137	0.198	0.437	2174
230	0.01676	417.34	93.2	-30.969	-27.803	0.84106	0.196	0.445	2096
235	0.01709	373.40	87.4	-28.753	-25.524	0.85087	0.199	0.459	1997
240	0.01745	333.45	81.9	-26.494	-23.198	0.86066	0.198	0.470	1916
245	0.01784	294.48	76.4	-24.184	-20.814	0.87049	0.196	0.483	1831
250	0.01828	256.90	71.0	-21.811	-18.359	0.88041	0.195	0.499	1743
255	0.01877	220.77	65.7	-19.359	-15.814	0.89049	0.195	0.520	1653
260	0.01933	186.01	60.0	-16.810	-13.158	0.90081	0.194	0.543	1551
265	0.01999	152.52	54.8	-14.128	-10.352	0.91149	0.195	0.580	1451
270	0.02078	121.18	49.0	-11.276	-7.350	0.92272	0.196	0.623	1337
275	0.02177	91.38	43.5	-8.173	-4.061	0.93479	0.198	0.696	1222
280	0.02310	64.09	37.4	-4.693	-0.331	0.94823	0.201	0.805	1091
285	0.02504	39.94	31.3	-0.580	4.149	0.96408	0.207	1.016	954
290	0.02841	21.12	24.4	4.763	10.130	0.98487	0.221	1.442	800
295	0.03496	12.85	17.4	11.895	18.499	1.01348	0.228	1.811	687
300	0.04345	15.53	13.1	18.477	26.685	1.04100	0.221	1.380	671
310	0.05638	27.72	9.3	26.154	36.804	1.07425	0.202	0.767	699
320	0.06575	38.96	7.6	30.903	43.323	1.09497	0.191	0.566	732
330	0.07348	48.82	6.5	34.567	48.445	1.11074	0.184	0.470	760
340	0.08026	57.75	5.8	37.671	52.829	1.12383	0.179	0.412	785
350	0.08642	65.78	5.2	40.440	56.763	1.13524	0.176	0.377	808
360	0.09216	73.25	4.8	42.988	60.395	1.14547	0.173	0.351	830
370	0.09758	80.27	4.5	45.378	63.809	1.15483	0.171	0.332	850
380	0.10275	86.91	4.2	47.651	67.057	1.16349	0.169	0.318	869
390	0.10772	93.25	3.9	49.831	70.176	1.17159	0.168	0.306	887
400	0.11252	99.32	3.7	51.938	73.190	1.17922	0.167	0.297	905
410	0.11719	105.17	3.5	53.984	76.118	1.18645	0.166	0.289	922
420	0.12173	110.83	3.4	55.981	78.974	1.19334	0.165	0.282	938
430	0.12618	116.31	3.2	57.936	81.769	1.19991	0.164	0.277	953
440	0.13054	121.65	3.1	59.855	84.511	1.20622	0.163	0.272	968
450	0.13482	126.85	3.0	61.743	87.208	1.21228	0.163	0.268	983
460	0.13903	131.94	2.9	63.604	89.865	1.21812	0.162	0.264	997
470	0.14319	136.92	2.8	65.442	92.487	1.22376	0.162	0.261	1011
480	0.14729	141.80	2.7	67.259	95.079	1.22921	0.161	0.258	1025
490	0.15134	146.60	2.6	69.059	97.643	1.23450	0.161	0.255	1038
500	0.15535	151.32	2.5	70.842	100.184	1.23963	0.161	0.253	1051
510	0.15932	155.98	2.4	72.611	102.702	1.24462	0.160	0.251	1064
520	0.16325	160.56	2.4	74.367	105.202	1.24948	0.160	0.249	1076
530	0.16716	165.10	2.3	76.113	107.685	1.25420	0.160	0.247	1088
540	0.17103	169.57	2.2	77.849	110.152	1.25882	0.160	0.246	1100
550	0.17488	174.01	2.2	79.576	112.606	1.26332	0.160	0.245	1112
560	0.17870	178.39	2.1	81.295	115.047	1.26772	0.159	0.244	1124
570	0.18250	182.74	2.1	83.008	117.478	1.27202	0.159	0.243	1135
580	0.18628	187.05	2.0	84.716	119.899	1.27623	0.159	0.242	1146
590	0.19003	191.32	2.0	86.418	122.311	1.28035	0.159	0.241	1157
600	0.19378	195.56	1.9	88.116	124.715	1.28440	0.159	0.240	1168

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1020 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.278	81.83086	219.06	14.597	176220.79	0.0018071	0.11215	43.062	0.00346	1.57080	5.4722
100	81.72413	218.63	14.566	174867.47	0.0018104	0.11195	42.476	0.00346	1.56995	5.4066
105	80.98283	215.60	14.346	165692.04	0.0018346	0.11052	38.645	0.00345	1.56399	4.9792
110	80.23829	212.54	14.118	156862.28	0.0018601	0.10901	35.195	0.00344	1.55802	4.5948
115	79.49021	209.43	13.885	148367.95	0.0018869	0.10744	32.087	0.00342	1.55204	4.2489
120	78.73825	206.27	13.645	140198.98	0.0019153	0.10579	29.288	0.00340	1.54604	3.9375
125	77.98201	203.07	13.400	132345.48	0.0019453	0.10409	26.766	0.00338	1.54003	3.6570
130	77.22109	199.82	13.150	124797.71	0.0019772	0.10233	24.494	0.00335	1.53399	3.4044
135	76.45503	196.51	12.897	117546.13	0.0020111	0.10053	22.447	0.00333	1.52792	3.1769
140	75.68331	193.15	12.640	110581.38	0.0020473	0.09868	20.603	0.00330	1.52183	2.9721
145	74.90537	189.72	12.380	103894.28	0.0020860	0.09680	18.941	0.00327	1.51571	2.7879
150	74.12058	186.24	12.118	97475.84	0.0021274	0.09488	17.443	0.00323	1.50954	2.6224
155	73.32825	182.69	11.854	91317.27	0.0021720	0.09293	16.093	0.00319	1.50334	2.4738
160	72.52760	179.07	11.590	85410.00	0.0022201	0.09095	14.876	0.00315	1.49708	2.3407
165	71.71776	175.38	11.325	79745.65	0.0022721	0.08896	13.778	0.00311	1.49077	2.2218
170	70.89776	171.61	11.060	74316.08	0.0023285	0.08694	12.788	0.00307	1.48441	2.1160
175	70.06651	167.77	10.795	69113.38	0.0023899	0.08491	11.894	0.00302	1.47797	2.0221
180	69.22277	163.84	10.532	64129.89	0.0024571	0.08286	11.088	0.00297	1.47145	1.9394
185	68.36516	159.82	10.270	59358.22	0.0025307	0.08079	10.360	0.00292	1.46485	1.8670
190	67.49209	155.70	10.009	54791.25	0.0026118	0.07872	9.702	0.00287	1.45814	1.8043
195	66.60174	151.49	9.751	50422.21	0.0027016	0.07663	9.107	0.00281	1.45133	1.7508
200	65.69205	147.18	9.495	46244.65	0.0028014	0.07454	8.558	0.00275	1.44439	1.7061
205	64.76061	142.75	9.240	42252.52	0.0029129	0.07244	8.080	0.00269	1.43730	1.6698
210	63.80464	138.22	8.987	38440.23	0.0030383	0.07033	7.637	0.00262	1.43005	1.6417
215	62.82086	133.56	8.736	34802.71	0.0031802	0.06820	7.234	0.00256	1.42262	1.6219
220	61.80544	128.77	8.485	31335.56	0.0033418	0.06607	6.858	0.00248	1.41498	1.6103
225	60.75379	123.86	8.234	28035.16	0.0035274	0.06393	6.533	0.00241	1.40709	1.6074
230	59.66039	118.83	7.979	24898.93	0.0037424	0.06177	6.226	0.00233	1.39892	1.6137
235	58.50563	114.78	7.503	21845.95	0.0040010	0.05957	5.941	0.00222	1.39032	1.6487
240	57.30573	109.65	7.223	19108.38	0.0042841	0.05738	5.719	0.00213	1.38143	1.6855
245	56.04316	104.29	6.939	16503.57	0.0046296	0.05516	5.510	0.00204	1.37211	1.7360
250	54.70413	98.75	6.643	14053.28	0.0050518	0.05292	5.296	0.00194	1.36228	1.7971
255	53.27077	93.07	6.338	11760.59	0.0055866	0.05065	5.075	0.00183	1.35180	1.8757
260	51.72144	87.03	5.968	9620.51	0.0062380	0.04833	4.847	0.00172	1.34054	1.9601
265	50.01978	80.85	5.621	7628.83	0.0071768	0.04593	4.607	0.00158	1.32825	2.0949
270	48.11837	74.18	5.202	5830.78	0.0083999	0.04345	4.352	0.00145	1.31460	2.2472
275	45.92708	67.25	4.790	4196.99	0.0103530	0.04102	4.075	0.00128	1.29898	2.4901
280	43.29815	59.69	4.306	2775.17	0.0134814	0.03958	3.765	0.00114	1.28042	2.7556
285	39.93984	51.85	3.786	1595.38	0.0195889	0.03843	3.402	0.00095	1.25696	3.2370
290	35.19392	43.94	3.143	743.33	0.0328189	0.03758	2.947	0.00074	1.22432	4.0722
295	28.60077	38.14	2.671	367.52	0.0474806	0.03491	2.417	0.00067	1.17993	4.5132
300	23.01254	37.64	2.581	357.35	0.0366617	0.02989	2.046	0.00094	1.14317	3.4005
310	17.73544	40.69	2.592	491.69	0.0188486	0.02291	1.759	0.00168	1.10918	2.1200
320	15.20852	44.41	2.601	592.50	0.0127519	0.02022	1.647	0.00235	1.09315	1.6602
330	13.60945	48.00	2.594	664.45	0.0097807	0.01890	1.588	0.00296	1.08309	1.4206
340	12.46011	51.50	2.579	719.56	0.0080077	0.01813	1.554	0.00353	1.07590	1.2728
350	11.57136	54.88	2.567	761.21	0.0068613	0.01767	1.534	0.00406	1.07036	1.1767
360	10.85082	58.17	2.554	794.83	0.0060384	0.01738	1.523	0.00456	1.06588	1.1075
370	10.24820	61.38	2.541	822.58	0.0054161	0.01718	1.517	0.00504	1.06215	1.0567
380	9.73257	64.52	2.527	845.85	0.0049271	0.01705	1.516	0.00551	1.05896	1.0170
390	9.28361	67.59	2.515	865.65	0.0045316	0.01699	1.517	0.00597	1.05619	0.9849
400	8.88728	70.60	2.503	882.68	0.0042042	0.01696	1.521	0.00643	1.05375	0.9584
410	8.53346	73.56	2.492	897.46	0.0039283	0.01697	1.527	0.00688	1.05157	0.9363
420	8.21467	76.48	2.482	910.40	0.0036922	0.01701	1.535	0.00733	1.04961	0.9174
430	7.92520	79.34	2.472	921.79	0.0034875	0.01706	1.544	0.00778	1.04784	0.9011
440	7.66058	82.17	2.463	931.89	0.0033083	0.01714	1.553	0.00823	1.04621	0.8870
450	7.41728	84.96	2.455	940.89	0.0031497	0.01723	1.564	0.00868	1.04472	0.8746
460	7.19247	87.72	2.447	948.95	0.0030084	0.01733	1.575	0.00913	1.04335	0.8637
470	6.98382	90.45	2.440	956.20	0.0028815	0.01744	1.587	0.00958	1.04207	0.8540
480	6.78941	93.15	2.433	962.74	0.0027669	0.01755	1.599	0.01003	1.04089	0.8454
490	6.60762	95.84	2.426	968.68	0.0026628	0.01768	1.612	0.01048	1.03978	0.8377
500	6.43710	98.50	2.420	974.08	0.0025676	0.01781	1.625	0.01094	1.03874	0.8308
510	6.27670	101.15	2.414	979.01	0.0024804	0.01791	1.639	0.01137	1.03776	0.8264
520	6.12543	103.79	2.408	983.53	0.0024000	0.01806	1.652	0.01184	1.03684	0.8202
530	5.98242	106.41	2.402	987.68	0.0023256	0.01822	1.666	0.01231	1.03597	0.8146
540	5.84694	109.03	2.396	991.50	0.0022565	0.01838	1.680	0.01278	1.03514	0.8096
550	5.71834	111.63	2.391	995.02	0.0021922	0.01854	1.694	0.01325	1.03436	0.8051
560	5.59605	114.24	2.385	998.29	0.0021322	0.01870	1.709	0.01372	1.03362	0.8010
570	5.47955	116.84	2.379	1001.32	0.0020759	0.01887	1.723	0.01420	1.03291	0.7974
580	5.36840	119.44	2.374	1004.14	0.0020231	0.01903	1.738	0.01467	1.03224	0.7941
590	5.26221	122.04	2.368	1006.77	0.0019734	0.01920	1.752	0.01515	1.03159	0.7911
600	5.16061	124.64	2.362	1009.22	0.0019264	0.01937	1.767	0.01563	1.03098	0.7885

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1030 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.293	0.01222	2154.09	318.4	-83.055	-80.724	0.50282	0.267	0.396	3849
100	0.01224	2140.61	316.6	-82.778	-80.444	0.50564	0.266	0.396	3842
105	0.01235	2046.91	304.0	-80.821	-78.466	0.52494	0.262	0.396	3786
110	0.01246	1955.87	291.8	-78.865	-76.489	0.54334	0.258	0.395	3729
115	0.01258	1867.42	280.0	-76.912	-74.512	0.56090	0.254	0.395	3671
120	0.01270	1781.51	268.6	-74.959	-72.537	0.57772	0.250	0.395	3612
125	0.01282	1698.08	257.5	-73.007	-70.561	0.59385	0.246	0.395	3551
130	0.01295	1617.08	246.8	-71.056	-68.586	0.60934	0.243	0.395	3490
135	0.01308	1538.44	236.5	-69.105	-66.610	0.62425	0.240	0.395	3427
140	0.01321	1462.11	226.4	-67.154	-64.634	0.63863	0.237	0.395	3364
145	0.01335	1388.02	216.8	-65.202	-62.656	0.65251	0.234	0.396	3300
150	0.01349	1316.13	207.4	-63.249	-60.676	0.66593	0.231	0.396	3234
155	0.01364	1246.37	198.4	-61.294	-58.693	0.67893	0.228	0.397	3168
160	0.01379	1178.69	189.7	-59.337	-56.707	0.69154	0.226	0.397	3102
165	0.01394	1113.03	181.3	-57.376	-54.717	0.70379	0.223	0.398	3034
170	0.01410	1049.32	173.1	-55.412	-52.722	0.71570	0.221	0.400	2966
175	0.01427	987.53	165.2	-53.443	-50.721	0.72730	0.218	0.401	2898
180	0.01444	927.58	157.6	-51.468	-48.713	0.73862	0.216	0.402	2829
185	0.01462	869.43	150.3	-49.485	-46.696	0.74967	0.214	0.404	2759
190	0.01481	813.02	143.2	-47.494	-44.669	0.76048	0.212	0.407	2688
195	0.01501	758.30	136.3	-45.493	-42.630	0.77108	0.210	0.409	2618
200	0.01522	705.21	129.6	-43.479	-40.577	0.78148	0.208	0.412	2546
205	0.01544	653.72	123.2	-41.452	-38.507	0.79170	0.206	0.416	2474
210	0.01567	603.78	116.9	-39.407	-36.419	0.80177	0.204	0.420	2401
215	0.01591	555.35	110.8	-37.343	-34.308	0.81170	0.202	0.424	2327
220	0.01617	508.38	104.8	-35.256	-32.171	0.82152	0.200	0.430	2252
225	0.01645	462.87	99.0	-33.142	-30.003	0.83126	0.198	0.437	2176
230	0.01675	418.80	93.3	-30.994	-27.799	0.84095	0.196	0.444	2098
235	0.01708	374.85	87.5	-28.781	-25.522	0.85074	0.199	0.459	2000
240	0.01744	334.92	82.0	-26.525	-23.199	0.86052	0.198	0.469	1919
245	0.01783	296.00	76.5	-24.220	-20.819	0.87034	0.196	0.482	1834
250	0.01827	258.48	71.1	-21.851	-18.367	0.88024	0.195	0.498	1747
255	0.01876	222.40	65.9	-19.406	-15.828	0.89030	0.195	0.519	1657
260	0.01931	187.71	60.2	-16.864	-13.180	0.90058	0.194	0.541	1556
265	0.01997	154.29	55.0	-14.193	-10.385	0.91123	0.195	0.578	1457
270	0.02075	123.01	49.2	-11.356	-7.399	0.92239	0.196	0.619	1344
275	0.02172	93.30	43.7	-8.277	-4.134	0.93438	0.197	0.690	1229
280	0.02301	66.06	37.8	-4.837	-0.448	0.94766	0.200	0.793	1101
285	0.02489	41.93	31.7	-0.803	3.943	0.96320	0.206	0.989	966
290	0.02805	22.87	25.0	4.355	9.705	0.98323	0.219	1.374	815
295	0.03406	13.60	18.1	11.188	17.685	1.01050	0.227	1.755	698
300	0.04226	15.32	13.6	17.821	25.882	1.03806	0.221	1.416	674
310	0.05525	27.17	9.5	25.757	36.295	1.07227	0.202	0.786	699
320	0.06465	38.42	7.7	30.616	42.947	1.09341	0.191	0.576	732
330	0.07238	48.32	6.6	34.336	48.142	1.10941	0.184	0.475	759
340	0.07915	57.31	5.9	37.476	52.573	1.12265	0.180	0.416	784
350	0.08530	65.38	5.3	40.269	56.538	1.13414	0.176	0.379	808
360	0.09101	72.88	4.9	42.836	60.194	1.14444	0.173	0.353	830
370	0.09640	79.93	4.5	45.240	63.627	1.15385	0.171	0.334	850
380	0.10155	86.60	4.2	47.524	66.891	1.16256	0.170	0.319	869
390	0.10648	92.96	4.0	49.713	70.023	1.17069	0.168	0.307	887
400	0.11126	99.06	3.8	51.828	73.048	1.17835	0.167	0.298	905
410	0.11589	104.93	3.6	53.882	75.986	1.18561	0.166	0.290	922
420	0.12041	110.61	3.4	55.884	78.850	1.19251	0.165	0.283	938
430	0.12482	116.11	3.3	57.844	81.652	1.19910	0.164	0.277	953
440	0.12915	121.46	3.1	59.768	84.401	1.20542	0.163	0.272	969
450	0.13340	126.68	3.0	61.660	87.103	1.21149	0.163	0.268	983
460	0.13758	131.78	2.9	63.525	89.766	1.21735	0.162	0.264	998
470	0.14171	136.78	2.8	65.366	92.393	1.22300	0.162	0.261	1011
480	0.14577	141.67	2.7	67.186	94.989	1.22846	0.161	0.258	1025
490	0.14979	146.49	2.6	68.988	97.558	1.23376	0.161	0.256	1038
500	0.15377	151.22	2.5	70.774	100.102	1.23890	0.161	0.253	1051
510	0.15771	155.88	2.5	72.545	102.624	1.24389	0.160	0.251	1064
520	0.16161	160.48	2.4	74.304	105.127	1.24875	0.160	0.249	1076
530	0.16548	165.02	2.3	76.051	107.613	1.25349	0.160	0.248	1089
540	0.16932	169.51	2.3	77.788	110.083	1.25811	0.160	0.246	1101
550	0.17314	173.95	2.2	79.517	112.539	1.26261	0.160	0.245	1112
560	0.17693	178.35	2.2	81.238	114.983	1.26702	0.159	0.244	1124
570	0.18069	182.70	2.1	82.953	117.416	1.27132	0.159	0.243	1135
580	0.18444	187.02	2.1	84.661	119.839	1.27554	0.159	0.242	1146
590	0.18817	191.30	2.0	86.365	122.253	1.27966	0.159	0.241	1158
600	0.19187	195.55	2.0	88.064	124.660	1.28371	0.159	0.240	1168

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1030 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.293	81.83342	219.12	14.597	176276.43	0.0018065	0.11215	43.077	0.00346	1.57082	5.4734
100	81.72880	218.69	14.566	174949.73	0.0018098	0.11196	42.501	0.00346	1.56998	5.4092
105	80.98771	215.67	14.346	165774.66	0.0018340	0.11053	38.669	0.00345	1.56403	4.9816
110	80.24341	212.61	14.119	156945.29	0.0018594	0.10903	35.218	0.00344	1.55806	4.5970
115	79.49557	209.50	13.885	148451.37	0.0018862	0.10745	32.109	0.00342	1.55208	4.2510
120	78.74386	206.35	13.645	140282.82	0.0019145	0.10581	29.308	0.00340	1.54609	3.9394
125	77.98790	203.15	13.400	132429.73	0.0019445	0.10410	26.785	0.00338	1.54007	3.6587
130	77.22728	199.90	13.151	124882.40	0.0019763	0.10235	24.512	0.00335	1.53404	3.4060
135	76.46153	196.59	12.897	117631.26	0.0020101	0.10054	22.464	0.00333	1.52798	3.1784
140	75.69015	193.23	12.640	110666.97	0.0020462	0.09870	20.619	0.00330	1.52189	2.9735
145	74.91257	189.81	12.380	103980.33	0.0020848	0.09681	18.956	0.00327	1.51576	2.7892
150	74.12818	186.33	12.118	97562.37	0.0021261	0.09490	17.457	0.00323	1.50960	2.6236
155	73.33627	182.79	11.855	91404.30	0.0021706	0.09295	16.106	0.00319	1.50340	2.4749
160	72.53608	179.17	11.590	85497.54	0.0022185	0.09098	14.888	0.00316	1.49715	2.3417
165	71.72675	175.48	11.325	79833.72	0.0022704	0.08898	13.790	0.00311	1.49084	2.2228
170	70.90729	171.72	11.061	74404.69	0.0023266	0.08696	12.799	0.00307	1.48448	2.1168
175	70.07664	167.88	10.796	69202.56	0.0023878	0.08493	11.905	0.00302	1.47804	2.0228
180	69.23356	163.95	10.533	64219.65	0.0024547	0.08288	11.098	0.00297	1.47153	1.9400
185	68.37667	159.94	10.271	59448.59	0.0025281	0.08082	10.369	0.00292	1.46493	1.8675
190	67.50440	155.83	10.011	54882.25	0.0026089	0.07875	9.711	0.00287	1.45824	1.8047
195	66.61494	151.63	9.753	50513.87	0.0026982	0.07667	9.115	0.00281	1.45143	1.7511
200	65.70624	147.32	9.497	46336.99	0.0027976	0.07458	8.576	0.00275	1.44449	1.7062
205	64.77592	142.90	9.243	42345.58	0.0029085	0.07247	8.088	0.00269	1.43742	1.6698
210	63.82122	138.37	8.991	38534.03	0.0030333	0.07036	7.644	0.00263	1.43018	1.6416
215	62.83889	133.72	8.740	34897.29	0.0031743	0.06825	7.242	0.00256	1.42276	1.6215
220	61.82514	128.95	8.490	31430.94	0.0033349	0.06612	6.875	0.00249	1.41513	1.6098
225	60.77542	124.05	8.239	28131.36	0.0035193	0.06398	6.540	0.00241	1.40725	1.6066
230	59.68431	119.03	7.985	24995.96	0.0037326	0.06182	6.233	0.00233	1.39910	1.6126
235	58.53235	114.99	7.509	21940.98	0.0039890	0.05962	5.948	0.00222	1.39052	1.6471
240	57.33565	109.88	7.230	19202.82	0.0042701	0.05743	5.724	0.00213	1.38165	1.6834
245	56.07703	104.53	6.947	16599.04	0.0046111	0.05522	5.515	0.00204	1.37236	1.7330
250	54.74294	99.02	6.652	14149.69	0.0050281	0.05299	5.302	0.00194	1.36256	1.7934
255	53.31590	93.37	6.349	11857.56	0.0055551	0.05072	5.083	0.00183	1.35213	1.8709
260	51.77496	87.36	5.981	9718.47	0.0061937	0.04841	4.855	0.00173	1.34093	1.9534
265	50.08497	81.22	5.638	7727.52	0.0071134	0.04603	4.616	0.00159	1.32872	2.0861
270	48.20027	74.61	5.222	5929.32	0.0083012	0.04355	4.363	0.00146	1.31518	2.2338
275	46.03538	67.75	4.815	4294.94	0.0101827	0.04109	4.089	0.00129	1.29975	2.4715
280	43.45180	60.29	4.339	2870.53	0.0131569	0.03964	3.783	0.00115	1.28150	2.7252
285	40.18415	52.58	3.831	1685.09	0.0188108	0.03844	3.428	0.00097	1.25866	3.1748
290	35.64884	44.80	3.202	815.25	0.0306654	0.03754	2.989	0.00077	1.22742	3.9387
295	29.35768	38.70	2.715	399.36	0.0453394	0.03514	2.474	0.00068	1.18496	4.4465
300	23.66114	37.80	2.598	362.57	0.0374722	0.03049	2.088	0.00091	1.14739	3.4914
310	18.09984	40.63	2.599	491.73	0.0193487	0.02327	1.779	0.00164	1.11150	2.1640
320	15.46702	44.31	2.608	594.18	0.0129933	0.02044	1.661	0.00230	1.09478	1.6838
330	13.81532	47.89	2.599	667.62	0.0099214	0.01905	1.599	0.00290	1.08438	1.4355
340	12.63394	51.39	2.585	724.00	0.0080982	0.01826	1.563	0.00347	1.07698	1.2829
350	11.72384	54.76	2.572	766.49	0.0069257	0.01778	1.542	0.00400	1.07131	1.1843
360	10.98769	58.05	2.559	800.80	0.0060866	0.01747	1.530	0.00450	1.06673	1.1135
370	10.37305	61.27	2.545	829.09	0.0054536	0.01726	1.523	0.00498	1.06292	1.0616
380	9.84784	64.41	2.532	852.83	0.0049571	0.01713	1.521	0.00545	1.05967	1.0211
390	9.39102	67.49	2.519	873.01	0.0045560	0.01705	1.523	0.00591	1.05685	0.9884
400	8.98809	70.51	2.507	890.36	0.0042246	0.01702	1.526	0.00636	1.05437	0.9615
410	8.62866	73.47	2.496	905.42	0.0039454	0.01703	1.532	0.00681	1.05216	0.9389
420	8.30500	76.39	2.486	918.59	0.0037068	0.01706	1.539	0.00725	1.05017	0.9198
430	8.01125	79.26	2.476	930.19	0.0035001	0.01711	1.548	0.00770	1.04836	0.9033
440	7.74284	82.09	2.467	940.48	0.0033192	0.01718	1.557	0.00815	1.04672	0.8889
450	7.49617	84.88	2.458	949.64	0.0031593	0.01727	1.568	0.00859	1.04521	0.8764
460	7.26831	87.64	2.451	957.84	0.0030169	0.01737	1.579	0.00904	1.04381	0.8653
470	7.05690	90.37	2.443	965.22	0.0028891	0.01748	1.591	0.00949	1.04252	0.8555
480	6.85996	93.08	2.436	971.88	0.0027736	0.01759	1.603	0.00993	1.04132	0.8468
490	6.67586	95.77	2.429	977.92	0.0026688	0.01772	1.615	0.01038	1.04019	0.8389
500	6.50321	98.43	2.423	983.42	0.0025731	0.01785	1.628	0.01084	1.03914	0.8319
510	6.34083	101.08	2.417	988.43	0.0024853	0.01794	1.642	0.01126	1.03815	0.8275
520	6.18772	103.72	2.411	993.03	0.0024044	0.01810	1.655	0.01173	1.03722	0.8212
530	6.04301	106.35	2.405	997.25	0.0023296	0.01825	1.669	0.01219	1.03634	0.8155
540	5.90593	108.96	2.399	1001.13	0.0022603	0.01841	1.683	0.01266	1.03550	0.8105
550	5.77582	111.57	2.393	1004.72	0.0021957	0.01857	1.697	0.01313	1.03471	0.8059
560	5.65211	114.18	2.388	1008.04	0.0021353	0.01873	1.711	0.01359	1.03396	0.8018
570	5.53428	116.78	2.382	1011.12	0.0020788	0.01890	1.726	0.01407	1.03324	0.7981
580	5.42187	119.38	2.377	1013.99	0.0020258	0.01906	1.740	0.01454	1.03256	0.7948
590	5.31448	121.98	2.371	1016.66	0.0019759	0.01923	1.755	0.01501	1.03191	0.7918
600	5.21174	124.58	2.365	1019.16	0.0019287	0.01940	1.770	0.01549	1.03129	0.7891

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1040 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.307	0.01222	2154.70	318.5	-83.053	-80.700	0.50284	0.267	0.396	3850
100	0.01223	2141.50	316.7	-82.782	-80.426	0.50559	0.266	0.396	3842
105	0.01235	2047.81	304.1	-80.825	-78.447	0.52490	0.262	0.396	3787
110	0.01246	1956.77	291.9	-78.870	-76.470	0.54329	0.258	0.395	3730
115	0.01258	1868.34	280.1	-76.916	-74.494	0.56086	0.254	0.395	3672
120	0.01270	1782.45	268.6	-74.964	-72.519	0.57768	0.250	0.395	3612
125	0.01282	1699.03	257.6	-73.013	-70.543	0.59380	0.246	0.395	3552
130	0.01295	1618.04	246.8	-71.062	-68.568	0.60929	0.243	0.395	3491
135	0.01308	1539.42	236.5	-69.111	-66.593	0.62420	0.240	0.395	3428
140	0.01321	1463.10	226.5	-67.160	-64.616	0.63858	0.237	0.395	3365
145	0.01335	1389.04	216.8	-65.209	-62.639	0.65246	0.234	0.396	3300
150	0.01349	1317.16	207.5	-63.256	-60.659	0.66588	0.231	0.396	3235
155	0.01363	1247.42	198.5	-61.302	-58.676	0.67888	0.228	0.397	3169
160	0.01378	1179.76	189.7	-59.346	-56.691	0.69149	0.226	0.397	3103
165	0.01394	1114.11	181.3	-57.386	-54.701	0.70373	0.223	0.398	3035
170	0.01410	1050.43	173.2	-55.422	-52.706	0.71564	0.221	0.399	2968
175	0.01427	988.66	165.3	-53.453	-50.706	0.72724	0.218	0.401	2899
180	0.01444	928.73	157.7	-51.479	-48.698	0.73855	0.216	0.402	2830
185	0.01462	870.60	150.4	-49.497	-46.681	0.74960	0.214	0.404	2760
190	0.01481	814.22	143.3	-47.507	-44.655	0.76041	0.212	0.406	2690
195	0.01501	759.52	136.4	-45.507	-42.616	0.77100	0.210	0.409	2619
200	0.01522	706.47	129.7	-43.495	-40.564	0.78140	0.208	0.412	2548
205	0.01543	655.01	123.3	-41.468	-38.496	0.79162	0.206	0.415	2475
210	0.01566	605.09	117.0	-39.425	-36.408	0.80168	0.204	0.420	2403
215	0.01591	556.69	110.9	-37.363	-34.299	0.81161	0.202	0.424	2329
220	0.01617	509.76	104.9	-35.277	-32.163	0.82143	0.200	0.430	2254
225	0.01645	464.29	99.1	-33.164	-29.997	0.83116	0.198	0.436	2178
230	0.01675	420.26	93.4	-31.020	-27.794	0.84083	0.196	0.444	2101
235	0.01708	376.30	87.6	-28.809	-25.520	0.85061	0.199	0.458	2003
240	0.01743	336.39	82.1	-26.556	-23.199	0.86039	0.198	0.469	1921
245	0.01782	297.53	76.7	-24.255	-20.823	0.87019	0.196	0.481	1837
250	0.01825	260.05	71.3	-21.891	-18.376	0.88007	0.195	0.497	1750
255	0.01874	224.03	66.0	-19.452	-15.843	0.89011	0.195	0.517	1661
260	0.01929	189.40	60.4	-16.917	-13.202	0.90036	0.194	0.539	1560
265	0.01994	156.05	55.2	-14.258	-10.417	0.91097	0.195	0.575	1462
270	0.02071	124.84	49.5	-11.435	-7.446	0.92208	0.195	0.616	1350
275	0.02167	95.20	44.0	-8.379	-4.205	0.93397	0.197	0.684	1237
280	0.02294	68.02	38.1	-4.977	-0.560	0.94710	0.200	0.782	1110
285	0.02474	43.91	32.1	-1.016	3.749	0.96235	0.205	0.965	978
290	0.02772	24.63	25.6	3.976	9.315	0.98170	0.218	1.314	830
295	0.03326	14.48	18.8	10.527	16.931	1.00773	0.226	1.692	709
300	0.04112	15.22	14.1	17.164	25.084	1.03515	0.221	1.446	679
310	0.05414	26.64	9.8	25.355	35.781	1.07028	0.203	0.805	700
320	0.06358	37.89	7.9	30.325	42.568	1.09186	0.192	0.585	732
330	0.07131	47.83	6.8	34.104	47.836	1.10808	0.185	0.481	759
340	0.07807	56.87	6.0	37.281	52.315	1.12146	0.180	0.420	784
350	0.08419	64.98	5.4	40.099	56.313	1.13305	0.176	0.382	808
360	0.08989	72.52	4.9	42.683	59.993	1.14342	0.174	0.355	830
370	0.09525	79.59	4.6	45.101	63.445	1.15288	0.171	0.336	850
380	0.10037	86.29	4.3	47.396	66.725	1.16163	0.170	0.321	869
390	0.10528	92.68	4.0	49.595	69.870	1.16980	0.168	0.309	888
400	0.11002	98.80	3.8	51.718	72.906	1.17748	0.167	0.299	905
410	0.11463	104.70	3.6	53.778	75.853	1.18476	0.166	0.291	922
420	0.11911	110.39	3.4	55.787	78.726	1.19168	0.165	0.284	938
430	0.12350	115.91	3.3	57.752	81.535	1.19830	0.164	0.278	954
440	0.12779	121.28	3.2	59.681	84.291	1.20463	0.164	0.273	969
450	0.13201	126.52	3.0	61.577	86.999	1.21072	0.163	0.269	983
460	0.13616	131.63	2.9	63.445	89.667	1.21658	0.162	0.265	998
470	0.14025	136.64	2.8	65.290	92.299	1.22224	0.162	0.262	1012
480	0.14429	141.55	2.7	67.113	94.900	1.22772	0.161	0.259	1025
490	0.14828	146.37	2.6	68.917	97.472	1.23302	0.161	0.256	1038
500	0.15222	151.12	2.6	70.705	100.020	1.23817	0.161	0.254	1051
510	0.15613	155.79	2.5	72.479	102.546	1.24317	0.160	0.252	1064
520	0.16000	160.40	2.4	74.240	105.052	1.24804	0.160	0.250	1077
530	0.16384	164.95	2.3	75.989	107.541	1.25278	0.160	0.248	1089
540	0.16765	169.45	2.3	77.728	110.014	1.25740	0.160	0.247	1101
550	0.17143	173.90	2.2	79.459	112.473	1.26191	0.160	0.245	1113
560	0.17519	178.30	2.2	81.181	114.919	1.26632	0.159	0.244	1124
570	0.17892	182.67	2.1	82.897	117.354	1.27063	0.159	0.243	1136
580	0.18264	186.99	2.1	84.607	119.779	1.27485	0.159	0.242	1147
590	0.18633	191.28	2.0	86.311	122.195	1.27898	0.159	0.241	1158
600	0.19001	195.54	2.0	88.012	124.604	1.28302	0.159	0.240	1169

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1040 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC $\times 10^5$	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.307	81.83598	219.17	14.597	176332.07	0.0018060	0.11216	43.091	0.00346	1.57085	5.4747
100	81.73347	218.76	14.567	175031.92	0.0018092	0.11197	42.527	0.00346	1.57002	5.4117
105	80.99260	215.74	14.346	165857.26	0.0018333	0.11054	38.693	0.00345	1.56407	4.9840
110	80.24852	212.67	14.119	157028.29	0.0018587	0.10904	35.240	0.00344	1.55810	4.5992
115	79.50092	209.57	13.885	148534.77	0.0018854	0.10746	32.130	0.00342	1.55213	4.2530
120	78.74947	206.42	13.645	140366.63	0.0019137	0.10582	29.328	0.00340	1.54613	3.9413
125	77.99379	203.22	13.401	132513.97	0.0019436	0.10412	26.804	0.00338	1.54012	3.6605
130	77.23346	199.97	13.151	124967.07	0.0019753	0.10236	24.529	0.00336	1.53409	3.4076
135	76.46803	196.67	12.897	117716.37	0.0020091	0.10056	22.480	0.00333	1.52803	3.1799
140	75.69699	193.32	12.640	110752.53	0.0020451	0.09872	20.634	0.00330	1.52194	2.9749
145	74.91978	189.90	12.381	104066.36	0.0020836	0.09683	18.970	0.00327	1.51582	2.7905
150	74.13578	186.42	12.119	97648.88	0.0021248	0.09492	17.471	0.00323	1.50966	2.6248
155	73.34429	182.88	11.855	91491.30	0.0021691	0.09297	16.119	0.00320	1.50346	2.4760
160	72.54456	179.27	11.591	85585.05	0.0022169	0.09100	14.900	0.00316	1.49722	2.3427
165	71.73573	175.59	11.326	79921.75	0.0022686	0.08900	13.801	0.00311	1.49091	2.2237
170	70.91682	171.83	11.062	74493.27	0.0023247	0.08699	12.810	0.00307	1.48455	2.1176
175	70.08676	167.99	10.798	69291.69	0.0023857	0.08496	11.915	0.00302	1.47812	2.0235
180	69.24433	164.07	10.535	64309.37	0.0024523	0.08291	11.108	0.00298	1.47162	1.9406
185	68.38816	160.06	10.273	59538.90	0.0025254	0.08085	10.379	0.00292	1.46502	1.8680
190	67.51669	155.96	10.013	54973.20	0.0026059	0.07878	9.720	0.00287	1.45833	1.8051
195	66.62812	151.76	9.755	50605.47	0.0026949	0.07670	9.124	0.00281	1.45153	1.7514
200	65.72041	147.46	9.500	46429.27	0.0027938	0.07461	8.584	0.00276	1.44460	1.7064
205	64.79120	143.05	9.246	42438.57	0.0029042	0.07251	8.095	0.00269	1.43753	1.6698
210	63.83776	138.53	8.994	38627.76	0.0030283	0.07040	7.652	0.00263	1.43031	1.6414
215	62.85688	133.89	8.744	34991.79	0.0031685	0.06829	7.249	0.00256	1.42289	1.6212
220	61.84478	129.12	8.495	31526.23	0.0033281	0.06616	6.882	0.00249	1.41527	1.6092
225	60.79700	124.23	8.245	28227.46	0.0035112	0.06402	6.547	0.00241	1.40741	1.6058
230	59.70815	119.22	7.992	25092.86	0.0037229	0.06187	6.240	0.00233	1.39927	1.6114
235	58.55898	115.20	7.516	22035.93	0.0039771	0.05968	5.954	0.00222	1.39072	1.6456
240	57.36545	110.11	7.238	19297.15	0.0042562	0.05749	5.729	0.00214	1.38187	1.6813
245	56.11072	104.77	5.955	15694.36	0.0045929	0.05529	5.521	0.00205	1.37261	1.7301
250	54.78151	99.29	6.661	14245.91	0.0050046	0.05306	5.309	0.00195	1.36285	1.7898
255	53.36070	93.66	5.360	11954.30	0.0055240	0.05080	5.090	0.00184	1.35246	1.8663
260	51.82800	87.68	5.994	9816.17	0.0061502	0.04849	4.863	0.00174	1.34131	1.9469
265	50.14941	81.60	5.654	7825.93	0.0070516	0.04612	4.626	0.00160	1.32918	2.0775
270	48.28097	75.04	5.242	6027.52	0.0082058	0.04366	4.374	0.00147	1.31576	2.2208
275	46.14149	68.25	4.839	4392.51	0.0100200	0.04115	4.103	0.00130	1.30051	2.4536
280	43.60097	60.88	4.371	2965.52	0.0128519	0.03971	3.801	0.00116	1.28255	2.6963
285	40.41716	53.29	3.874	1774.62	0.0181045	0.03847	3.453	0.00099	1.26028	3.1174
290	36.07009	45.64	3.258	888.49	0.0287874	0.03750	3.029	0.00079	1.23030	3.8194
295	30.07047	39.31	2.763	435.55	0.0430528	0.03533	2.528	0.00069	1.18972	4.3604
300	24.31635	37.99	2.617	370.05	0.0380621	0.03104	2.130	0.00088	1.15167	3.5726
310	18.47160	40.57	2.607	492.01	0.0198526	0.02363	1.800	0.00159	1.11388	2.2088
320	15.72915	44.21	2.614	595.91	0.0132378	0.02066	1.675	0.00224	1.09644	1.7077
330	14.02332	47.78	2.605	670.80	0.0100636	0.01921	1.610	0.00285	1.08569	1.4505
340	12.80911	51.28	2.590	728.44	0.0081893	0.01838	1.572	0.00342	1.07808	1.2932
350	11.87726	54.65	2.577	771.77	0.0069905	0.01788	1.550	0.00394	1.07226	1.1920
360	11.12524	57.94	2.564	806.75	0.0061351	0.01756	1.536	0.00444	1.06758	1.1195
370	10.49843	61.16	2.550	835.60	0.0054912	0.01734	1.530	0.00492	1.06370	1.0665
380	9.96352	64.31	2.536	859.79	0.0049871	0.01720	1.527	0.00538	1.06039	1.0252
390	9.49875	67.39	2.523	880.36	0.0045805	0.01712	1.528	0.00584	1.05752	0.9919
400	9.08917	70.41	2.511	898.03	0.0042449	0.01708	1.531	0.00629	1.05499	0.9645
410	8.72406	73.38	2.500	913.37	0.0039626	0.01708	1.537	0.00673	1.05274	0.9416
420	8.39549	76.30	2.489	926.78	0.0037214	0.01711	1.544	0.00718	1.05072	0.9221
430	8.09744	79.17	2.479	938.60	0.0035127	0.01715	1.552	0.00762	1.04889	0.9054
440	7.82523	82.00	2.470	949.06	0.0033302	0.01723	1.561	0.00806	1.04722	0.8908
450	7.57516	84.80	2.462	958.39	0.0031689	0.01732	1.572	0.00851	1.04569	0.8781
460	7.34424	87.57	2.454	966.73	0.0030254	0.01741	1.583	0.00895	1.04428	0.8669
470	7.13005	90.30	2.446	974.24	0.0028966	0.01752	1.594	0.00939	1.04297	0.8569
480	6.93058	93.01	2.439	981.02	0.0027803	0.01763	1.606	0.00984	1.04175	0.8481
490	6.74415	95.70	2.432	987.16	0.0026748	0.01776	1.619	0.01028	1.04061	0.8402
500	6.56936	98.37	2.426	992.75	0.0025785	0.01788	1.632	0.01073	1.03954	0.8331
510	6.40500	101.02	2.420	997.86	0.0024902	0.01798	1.645	0.01116	1.03854	0.8265
520	6.25005	103.66	2.414	1002.53	0.0024089	0.01813	1.658	0.01162	1.03760	0.8222
530	6.10361	106.29	2.408	1006.82	0.0023337	0.01829	1.672	0.01208	1.03671	0.8165
540	5.96493	108.90	2.402	1010.77	0.0022640	0.01844	1.686	0.01254	1.03586	0.8113
550	5.83332	111.51	2.396	1014.42	0.0021991	0.01860	1.700	0.01300	1.03506	0.8067
560	5.70819	114.12	2.391	1017.80	0.0021385	0.01876	1.714	0.01347	1.03430	0.8025
570	5.58902	116.72	2.385	1020.93	0.0020817	0.01893	1.728	0.01394	1.03358	0.7988
580	5.47534	119.32	2.379	1023.85	0.0020285	0.01909	1.743	0.01441	1.03289	0.7954
590	5.36676	121.93	2.374	1026.57	0.0019783	0.01926	1.757	0.01488	1.03223	0.7924
600	5.26288	124.53	2.368	1029.11	0.0019311	0.01943	1.772	0.01535	1.03160	0.7897

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1050 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.323	0.01222	2155.28	318.5	-83.051	-80.675	0.50286	0.267	0.396	3850
100	0.01223	2142.38	316.7	-82.786	-80.407	0.50555	0.266	0.396	3843
105	0.01235	2048.70	304.1	-80.829	-78.429	0.52486	0.262	0.395	3787
110	0.01246	1957.68	291.9	-78.875	-76.452	0.54325	0.258	0.395	3730
115	0.01258	1869.26	280.1	-76.921	-74.476	0.56082	0.254	0.395	3672
120	0.01270	1783.38	268.7	-74.969	-72.500	0.57763	0.250	0.395	3613
125	0.01282	1699.98	257.6	-73.018	-70.525	0.59375	0.246	0.395	3553
130	0.01295	1619.01	246.9	-71.068	-68.551	0.60925	0.243	0.395	3491
135	0.01308	1540.40	236.6	-69.118	-66.575	0.62415	0.240	0.395	3429
140	0.01321	1464.10	226.5	-67.167	-64.599	0.63853	0.237	0.395	3366
145	0.01335	1390.05	216.9	-65.216	-62.621	0.65241	0.234	0.396	3301
150	0.01349	1318.19	207.5	-63.264	-60.642	0.66583	0.231	0.396	3236
155	0.01363	1248.47	198.5	-61.310	-58.660	0.67882	0.228	0.397	3170
160	0.01378	1180.83	189.8	-59.354	-56.674	0.69143	0.226	0.397	3104
165	0.01394	1115.20	181.4	-57.395	-54.685	0.70367	0.223	0.398	3036
170	0.01410	1051.54	173.2	-55.432	-52.691	0.71558	0.221	0.399	2969
175	0.01427	989.78	165.4	-53.464	-50.690	0.72718	0.218	0.401	2900
180	0.01444	929.88	157.8	-51.490	-48.683	0.73849	0.216	0.402	2831
185	0.01462	871.78	150.4	-49.509	-46.667	0.74953	0.214	0.404	2761
190	0.01481	815.41	143.3	-47.520	-44.641	0.76034	0.212	0.406	2691
195	0.01501	760.74	136.5	-45.521	-42.603	0.77093	0.210	0.409	2620
200	0.01521	707.72	129.8	-43.510	-40.552	0.78132	0.208	0.412	2549
205	0.01543	656.28	123.3	-41.484	-38.484	0.79153	0.206	0.415	2477
210	0.01566	606.40	117.1	-39.443	-36.398	0.80159	0.204	0.419	2404
215	0.01590	558.03	111.0	-37.382	-34.289	0.81151	0.202	0.424	2331
220	0.01616	511.14	105.0	-35.298	-32.155	0.82133	0.200	0.429	2256
225	0.01644	465.70	99.2	-33.187	-29.990	0.83105	0.198	0.436	2181
230	0.01674	421.71	93.5	-31.045	-27.790	0.84072	0.196	0.443	2104
235	0.01707	377.75	87.8	-28.837	-25.518	0.85049	0.199	0.458	2005
240	0.01742	337.86	82.3	-26.588	-23.200	0.86025	0.198	0.468	1924
245	0.01781	299.04	76.8	-24.290	-20.827	0.87004	0.196	0.480	1841
250	0.01824	261.62	71.4	-21.931	-18.384	0.87990	0.195	0.496	1754
255	0.01872	225.65	66.2	-19.497	-15.857	0.88992	0.195	0.516	1665
260	0.01928	191.09	60.5	-16.971	-13.223	0.90014	0.194	0.537	1565
265	0.01992	157.81	55.4	-14.321	-10.449	0.91071	0.195	0.573	1467
270	0.02068	126.66	49.7	-11.513	-7.492	0.92176	0.195	0.612	1356
275	0.02162	97.08	44.3	-8.479	-4.274	0.93357	0.197	0.678	1244
280	0.02286	69.95	38.5	-5.113	-0.668	0.94657	0.200	0.772	1120
285	0.02461	45.87	32.5	-1.221	3.564	0.96154	0.205	0.943	990
290	0.02743	26.41	26.1	3.623	8.956	0.98029	0.216	1.261	844
295	0.03253	15.48	19.4	9.911	16.237	1.00517	0.224	1.628	721
300	0.04004	15.22	14.6	16.512	24.297	1.03227	0.221	1.468	684
310	0.05305	26.13	10.0	24.947	35.261	1.06829	0.203	0.825	701
320	0.06252	37.37	8.1	30.031	42.187	1.09030	0.192	0.595	732
330	0.07026	47.35	6.9	33.869	47.530	1.10676	0.185	0.487	759
340	0.07701	56.44	6.1	37.084	52.057	1.12028	0.180	0.424	784
350	0.08311	64.58	5.5	39.927	56.087	1.13196	0.176	0.385	808
360	0.08878	72.15	5.0	42.530	59.792	1.14240	0.174	0.358	830
370	0.09412	79.26	4.7	44.962	63.263	1.15191	0.172	0.338	850
380	0.09921	85.99	4.3	47.269	66.558	1.16070	0.170	0.322	869
390	0.10409	92.40	4.1	49.477	69.716	1.16891	0.168	0.310	888
400	0.10881	98.55	3.9	51.608	72.764	1.17662	0.167	0.300	905
410	0.11338	104.46	3.7	53.675	75.720	1.18392	0.166	0.292	922
420	0.11784	110.18	3.5	55.690	78.602	1.19087	0.165	0.285	938
430	0.12219	115.72	3.3	57.660	81.419	1.19749	0.164	0.279	954
440	0.12646	121.10	3.2	59.593	84.181	1.20384	0.164	0.274	969
450	0.13065	126.35	3.1	61.493	86.895	1.20995	0.163	0.269	984
460	0.13477	131.48	3.0	63.366	89.568	1.21582	0.162	0.265	998
470	0.13883	136.50	2.9	65.213	92.205	1.22149	0.162	0.262	1012
480	0.14283	141.43	2.8	67.039	94.810	1.22698	0.161	0.259	1025
490	0.14679	146.26	2.7	68.847	97.387	1.23229	0.161	0.256	1039
500	0.15070	151.02	2.6	70.637	99.939	1.23744	0.161	0.254	1052
510	0.15458	155.70	2.5	72.413	102.468	1.24245	0.160	0.252	1065
520	0.15842	160.32	2.4	74.176	104.978	1.24733	0.160	0.250	1077
530	0.16223	164.89	2.4	75.927	107.469	1.25207	0.160	0.248	1089
540	0.16600	169.39	2.3	77.668	109.945	1.25670	0.160	0.247	1101
550	0.16976	173.85	2.3	79.400	112.406	1.26122	0.160	0.245	1113
560	0.17348	178.26	2.2	81.124	114.855	1.26563	0.159	0.244	1125
570	0.17719	182.63	2.1	82.841	117.292	1.26994	0.159	0.243	1136
580	0.18087	186.97	2.1	84.553	119.719	1.27416	0.159	0.242	1147
590	0.18453	191.27	2.1	86.258	122.138	1.27830	0.159	0.241	1158
600	0.18818	195.53	2.0	87.959	124.548	1.28235	0.159	0.241	1169

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1050 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.323	81.83827	219.23	14.596	176384.37	0.0018054	0.11216	43.104	0.00346	1.57086	5.4758
100	81.73814	218.82	14.567	175114.12	0.0018086	0.11198	42.553	0.00346	1.57006	5.4143
105	80.99748	215.80	14.346	165939.85	0.0018327	0.11055	38.717	0.00345	1.56411	4.9863
110	80.25363	212.74	14.119	157111.27	0.0018580	0.10905	35.263	0.00344	1.55814	4.6014
115	79.50628	209.64	13.885	148618.16	0.0018847	0.10747	32.151	0.00342	1.55217	4.2550
120	78.75508	206.49	13.646	140450.43	0.0019129	0.10583	29.348	0.00340	1.54618	3.9432
125	77.99967	203.30	13.401	132598.18	0.0019427	0.10413	26.822	0.00338	1.54017	3.6623
130	77.23964	200.05	13.151	125051.71	0.0019744	0.10238	24.547	0.00336	1.53413	3.4093
135	76.47452	196.76	12.898	117801.46	0.0020080	0.10058	22.497	0.00333	1.52808	3.1815
140	75.70382	193.40	12.641	110838.07	0.0020440	0.09873	20.650	0.00330	1.52199	2.9763
145	74.92697	189.99	12.381	104152.36	0.0020823	0.09685	18.985	0.00327	1.51588	2.7918
150	74.14336	186.52	12.119	97735.36	0.0021235	0.09494	17.485	0.00323	1.50972	2.6260
155	73.35231	182.98	11.856	91578.27	0.0021677	0.09299	16.132	0.00320	1.50353	2.4771
160	72.55304	179.37	11.592	85672.52	0.0022154	0.09102	14.913	0.00316	1.49728	2.3437
165	71.74470	175.69	11.327	80009.75	0.0022669	0.08903	13.813	0.00312	1.49098	2.2246
170	70.92633	171.94	11.063	74581.80	0.0023228	0.08702	12.821	0.00307	1.48463	2.1184
175	70.09687	168.11	10.799	69380.78	0.0023836	0.08499	11.926	0.00303	1.47820	2.0242
180	69.25509	164.19	10.536	64399.04	0.0024500	0.08294	11.118	0.00298	1.47170	1.9412
185	68.39964	160.19	10.275	59629.18	0.0025228	0.08088	10.388	0.00293	1.46511	1.8685
190	67.52896	156.09	10.015	55064.10	0.0026029	0.07881	9.728	0.00287	1.45842	1.8055
195	66.64127	151.90	9.758	50697.01	0.0026916	0.07673	9.132	0.00282	1.45163	1.7516
200	65.73455	147.60	9.502	46521.49	0.0027900	0.07464	8.592	0.00276	1.44471	1.7065
205	64.80646	143.20	9.249	42531.49	0.0028999	0.07255	8.103	0.00270	1.43765	1.6698
210	63.85427	138.69	8.998	38721.41	0.0030233	0.07044	7.659	0.00263	1.43043	1.6413
215	62.87482	134.05	8.748	35086.20	0.0031627	0.06833	7.256	0.00256	1.42303	1.6209
220	61.86437	129.30	8.499	31621.42	0.0033213	0.06620	6.889	0.00249	1.41542	1.6087
225	60.81850	124.42	8.250	28323.45	0.0035031	0.06407	6.553	0.00242	1.40757	1.6050
230	59.73190	119.42	7.998	25189.65	0.0037132	0.06192	6.246	0.00234	1.39945	1.6103
235	58.58550	115.40	7.522	22130.80	0.0039653	0.05973	5.961	0.00223	1.39092	1.6440
240	57.39511	110.33	7.245	19391.36	0.0042424	0.05755	5.735	0.00214	1.38209	1.6792
245	56.14425	105.02	6.963	16789.53	0.0045748	0.05535	5.527	0.00205	1.37286	1.7271
250	54.81985	99.55	6.670	14341.96	0.0049815	0.05313	5.315	0.00195	1.36313	1.7862
255	53.40518	93.95	6.371	12050.83	0.0054935	0.05087	5.097	0.00185	1.35278	1.8616
260	51.88056	88.00	6.006	9913.62	0.0061077	0.04857	4.871	0.00174	1.34170	1.9405
265	50.21314	81.97	5.671	7924.05	0.0069913	0.04621	4.635	0.00161	1.32964	2.0691
270	48.36049	75.45	5.261	6125.39	0.0081133	0.04377	4.385	0.00148	1.31633	2.2082
275	46.24550	68.73	4.863	4489.71	0.0098642	0.04123	4.116	0.00132	1.30124	2.4364
280	43.74596	61.46	4.402	3060.14	0.0125648	0.03977	3.818	0.00118	1.28357	2.6688
285	40.63998	53.98	3.915	1863.98	0.0174610	0.03850	3.477	0.00101	1.26183	3.0644
290	36.46212	46.46	3.312	962.84	0.0271381	0.03748	3.066	0.00082	1.23298	3.7121
295	30.73862	39.95	2.811	475.75	0.0407408	0.03547	2.581	0.00071	1.19420	4.2630
300	24.97388	38.23	2.638	380.01	0.0384037	0.03155	2.174	0.00086	1.15598	3.6415
310	18.85066	40.53	2.615	492.61	0.0203577	0.02401	1.822	0.00154	1.11630	2.2542
320	15.99493	44.12	2.621	597.69	0.0134854	0.02089	1.689	0.00219	1.09812	1.7321
330	14.23344	47.67	2.611	673.98	0.0102072	0.01937	1.621	0.00280	1.08701	1.4657
340	12.98563	51.17	2.595	732.88	0.0082811	0.01850	1.581	0.00336	1.07918	1.3036
350	12.03163	54.54	2.583	777.05	0.0070556	0.01799	1.558	0.00388	1.07322	1.1997
360	11.26349	57.83	2.569	812.70	0.0061838	0.01765	1.543	0.00438	1.06844	1.1256
370	10.62433	61.05	2.554	842.10	0.0055289	0.01742	1.536	0.00486	1.06448	1.0715
380	10.07960	64.20	2.541	866.75	0.0050172	0.01727	1.533	0.00532	1.06110	1.0293
390	9.60681	67.29	2.527	887.70	0.0046051	0.01718	1.533	0.00577	1.05818	0.9954
400	9.19052	70.32	2.515	905.70	0.0042653	0.01714	1.536	0.00622	1.05561	0.9676
410	8.81968	73.29	2.503	921.32	0.0039798	0.01714	1.541	0.00666	1.05333	0.9443
420	8.48617	76.21	2.493	934.97	0.0037361	0.01717	1.548	0.00710	1.05128	0.9245
430	8.18379	79.09	2.483	947.00	0.0035253	0.01721	1.556	0.00754	1.04942	0.9075
440	7.90775	81.92	2.474	957.65	0.0033411	0.01728	1.566	0.00798	1.04773	0.8928
450	7.65425	84.72	2.465	967.14	0.0031785	0.01736	1.576	0.00842	1.04617	0.8798
460	7.42025	87.49	2.457	975.63	0.0030338	0.01745	1.586	0.00886	1.04474	0.8685
470	7.20327	90.23	2.449	983.25	0.0029041	0.01755	1.598	0.00930	1.04341	0.8584
480	7.00125	92.94	2.442	990.16	0.0027870	0.01767	1.610	0.00974	1.04218	0.8494
490	6.81249	95.63	2.435	996.41	0.0026808	0.01779	1.622	0.01019	1.04103	0.8414
500	6.63555	98.30	2.429	1002.09	0.0025839	0.01792	1.635	0.01063	1.03995	0.8342
510	6.46921	100.96	2.423	1007.28	0.0024951	0.01801	1.648	0.01105	1.03893	0.8296
520	6.31241	103.60	2.417	1012.03	0.0024133	0.01815	1.661	0.01151	1.03798	0.8232
530	6.16425	106.22	2.411	1016.40	0.0023378	0.01832	1.675	0.01197	1.03707	0.8174
540	6.02395	108.84	2.405	1020.41	0.0022677	0.01848	1.689	0.01243	1.03622	0.8122
550	5.89083	111.46	2.399	1024.12	0.0022025	0.01863	1.703	0.01289	1.03541	0.8075
560	5.76428	114.06	2.394	1027.56	0.0021416	0.01879	1.717	0.01335	1.03464	0.8033
570	5.64377	116.67	2.388	1030.75	0.0020846	0.01896	1.731	0.01381	1.03391	0.7995
580	5.52883	119.27	2.382	1033.71	0.0020312	0.01912	1.745	0.01428	1.03321	0.7961
590	5.41904	121.87	2.377	1036.47	0.0019808	0.01929	1.760	0.01474	1.03254	0.7930
600	5.31402	124.47	2.371	1039.06	0.0019334	0.01945	1.775	0.01521	1.03191	0.7902

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1100 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.393	0.01222	2158.35	318.5	-83.043	-80.555	0.50294	0.267	0.396	3852
100	0.01223	2146.79	316.9	-82.805	-80.314	0.50535	0.266	0.396	3846
105	0.01234	2053.18	304.3	-80.850	-78.336	0.52465	0.262	0.395	3790
110	0.01246	1962.23	292.1	-78.897	-76.360	0.54304	0.258	0.395	3734
115	0.01257	1873.87	280.3	-76.946	-74.385	0.56060	0.254	0.395	3676
120	0.01269	1788.06	268.9	-74.995	-72.410	0.57741	0.250	0.395	3617
125	0.01282	1704.74	257.8	-73.046	-70.436	0.59352	0.247	0.395	3556
130	0.01294	1623.84	247.1	-71.097	-68.461	0.60901	0.243	0.395	3495
135	0.01307	1545.31	236.8	-69.149	-66.487	0.62391	0.240	0.395	3433
140	0.01320	1469.08	226.8	-67.201	-64.512	0.63828	0.237	0.395	3370
145	0.01334	1395.12	217.1	-65.252	-62.535	0.65215	0.234	0.395	3305
150	0.01348	1323.35	207.8	-63.303	-60.557	0.66556	0.231	0.396	3241
155	0.01363	1253.71	198.8	-61.351	-58.576	0.67855	0.228	0.396	3175
160	0.01377	1186.16	190.1	-59.398	-56.592	0.69115	0.226	0.397	3109
165	0.01393	1120.63	181.7	-57.442	-54.604	0.70338	0.223	0.398	3042
170	0.01409	1057.07	173.6	-55.482	-52.612	0.71528	0.221	0.399	2974
175	0.01426	995.42	165.7	-53.517	-50.613	0.72686	0.219	0.400	2906
180	0.01443	935.62	158.1	-51.547	-48.608	0.73816	0.216	0.402	2837
185	0.01461	877.63	150.8	-49.570	-46.595	0.74919	0.214	0.404	2768
190	0.01480	821.39	143.7	-47.585	-44.571	0.75999	0.212	0.406	2698
195	0.01499	766.85	136.8	-45.591	-42.537	0.77056	0.210	0.408	2628
200	0.01520	713.95	130.2	-43.585	-40.489	0.78093	0.208	0.411	2557
205	0.01541	662.66	123.8	-41.565	-38.426	0.79112	0.206	0.414	2486
210	0.01564	612.93	117.5	-39.530	-36.345	0.80115	0.204	0.418	2413
215	0.01588	564.72	111.4	-37.477	-34.242	0.81105	0.202	0.423	2341
220	0.01614	518.00	105.5	-35.402	-32.114	0.82083	0.200	0.428	2267
225	0.01641	472.74	99.8	-33.301	-29.958	0.83052	0.198	0.434	2192
230	0.01671	428.94	94.1	-31.170	-27.766	0.84015	0.196	0.441	2116
235	0.01703	384.97	88.3	-28.976	-25.507	0.84987	0.199	0.455	2018
240	0.01738	345.16	82.9	-26.742	-23.202	0.85957	0.198	0.465	1939
245	0.01776	306.58	77.5	-24.463	-20.845	0.86929	0.197	0.477	1856
250	0.01818	269.41	72.2	-22.127	-18.424	0.87907	0.195	0.491	1771
255	0.01865	233.68	67.0	-19.721	-15.922	0.88898	0.195	0.510	1685
260	0.01918	199.42	61.4	-17.231	-13.324	0.89907	0.194	0.529	1587
265	0.01979	166.48	56.4	-14.630	-10.598	0.90946	0.194	0.562	1494
270	0.02052	135.61	50.8	-11.888	-7.709	0.92026	0.195	0.596	1385
275	0.02140	106.35	45.6	-8.953	-4.595	0.93168	0.196	0.652	1260
280	0.02251	79.43	40.0	-5.745	-1.159	0.94406	0.198	0.729	1163
285	0.02402	55.44	34.5	-2.134	2.758	0.95793	0.202	0.854	1043
290	0.02625	35.33	28.6	2.146	7.493	0.97439	0.211	1.068	909
295	0.02987	21.63	22.3	7.408	13.492	0.99489	0.217	1.336	785
300	0.03553	16.79	17.2	13.447	20.684	1.01907	0.220	1.458	718
310	0.04796	24.09	11.4	22.834	32.604	1.05821	0.206	0.923	707
320	0.05754	34.99	9.0	28.520	40.240	1.08248	0.194	0.646	734
330	0.06529	45.07	7.6	32.672	45.971	1.10013	0.187	0.517	760
340	0.07199	54.21	6.6	36.081	50.746	1.11439	0.181	0.446	785
350	0.07802	62.69	5.9	39.057	54.949	1.12658	0.177	0.399	808
360	0.08358	70.41	5.4	41.755	58.779	1.13737	0.175	0.369	830
370	0.08880	77.66	5.0	44.261	62.349	1.14715	0.172	0.346	850
380	0.09375	84.52	4.7	46.627	65.724	1.15616	0.170	0.329	870
390	0.09850	91.05	4.4	48.884	68.948	1.16453	0.169	0.316	888
400	0.10308	97.31	4.1	51.055	72.052	1.17239	0.168	0.305	906
410	0.10752	103.33	3.9	53.157	75.057	1.17981	0.167	0.296	923
420	0.11183	109.13	3.7	55.202	77.980	1.18686	0.166	0.289	939
430	0.11604	114.76	3.5	57.199	80.835	1.19357	0.165	0.282	955
440	0.12016	120.23	3.4	59.155	83.631	1.20000	0.164	0.277	970
450	0.12420	125.56	3.3	61.076	86.375	1.20617	0.163	0.272	985
460	0.12816	130.76	3.1	62.967	89.075	1.21210	0.163	0.268	999
470	0.13209	135.84	3.0	64.831	91.737	1.21783	0.162	0.264	1013
480	0.13595	140.83	2.9	66.672	94.364	1.22336	0.162	0.261	1027
490	0.13976	145.72	2.8	68.493	96.962	1.22872	0.161	0.258	1040
500	0.14353	150.54	2.7	70.297	99.532	1.23391	0.161	0.256	1053
510	0.14726	155.28	2.7	72.084	102.079	1.23895	0.160	0.254	1066
520	0.15095	159.95	2.6	73.857	104.604	1.24386	0.160	0.252	1079
530	0.15461	164.56	2.5	75.618	107.111	1.24863	0.160	0.250	1091
540	0.15824	169.11	2.4	77.368	109.600	1.25328	0.160	0.248	1103
550	0.16185	173.61	2.4	79.108	112.075	1.25782	0.160	0.247	1115
560	0.16543	178.07	2.3	80.839	114.536	1.26226	0.160	0.245	1127
570	0.16899	182.48	2.3	82.563	116.984	1.26659	0.159	0.244	1138
580	0.17252	186.85	2.2	84.281	119.422	1.27083	0.159	0.243	1149
590	0.17604	191.19	2.2	85.992	121.850	1.27498	0.159	0.242	1161
600	0.17954	195.50	2.1	87.699	124.270	1.27905	0.159	0.242	1172

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1100 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.393	81.85109	219.50	14.594	176663.12	0.0018028	0.11219	43.175	0.00346	1.57097	5.4822
100	81.76146	219.14	14.568	175524.93	0.0018056	0.11202	42.681	0.00346	1.57025	5.4270
105	81.02186	216.13	14.348	166352.58	0.0018294	0.11061	38.838	0.00345	1.56430	4.9981
110	80.27914	213.09	14.120	157525.95	0.0018545	0.10911	35.376	0.00344	1.55835	4.6124
115	79.53299	210.00	13.887	149034.83	0.0018809	0.10754	32.257	0.00342	1.55238	4.2653
120	78.78308	206.86	13.647	140869.14	0.0019088	0.10590	29.447	0.00340	1.54640	3.9527
125	78.02905	203.68	13.402	133018.98	0.0019383	0.10421	26.916	0.00338	1.54040	3.6711
130	77.27048	200.45	13.153	125474.64	0.0019697	0.10246	24.635	0.00336	1.53438	3.4175
135	76.50693	197.17	12.900	118226.57	0.0020029	0.10066	22.580	0.00333	1.52833	3.1891
140	75.73791	193.83	12.643	111265.42	0.0020384	0.09882	20.728	0.00330	1.52226	2.9834
145	74.96288	190.43	12.384	104582.01	0.0020763	0.09695	19.059	0.00327	1.51616	2.7984
150	74.18122	186.98	12.122	98167.36	0.0021169	0.09504	17.554	0.00324	1.51002	2.6320
155	73.39227	183.46	11.859	92012.69	0.0021605	0.09310	16.198	0.00320	1.50384	2.4826
160	72.59528	179.87	11.596	86109.43	0.0022075	0.09113	14.974	0.00316	1.49761	2.3488
165	71.78942	176.21	11.332	80449.22	0.0022583	0.08915	13.871	0.00312	1.49133	2.2291
170	70.97376	172.48	11.068	75023.93	0.0023133	0.08714	12.876	0.00308	1.48499	2.1225
175	70.14724	168.67	10.805	69825.65	0.0023731	0.08512	11.978	0.00303	1.47859	2.0278
180	69.30870	164.78	10.543	64846.74	0.0024383	0.08308	11.167	0.00298	1.47211	1.9443
185	68.45680	160.81	10.283	60079.82	0.0025098	0.08103	10.435	0.00293	1.46555	1.8711
190	67.59005	156.74	10.025	55517.79	0.0025883	0.07897	9.773	0.00288	1.45889	1.8075
195	66.70674	152.57	9.769	51153.87	0.0026751	0.07690	9.175	0.00282	1.45213	1.7531
200	65.80489	148.31	9.515	46981.64	0.0027713	0.07482	8.633	0.00277	1.44525	1.7073
205	64.88227	143.94	9.264	42995.06	0.0028786	0.07273	8.142	0.00271	1.43823	1.6699
210	63.93628	139.47	9.015	39188.53	0.0029988	0.07063	7.697	0.00264	1.43105	1.6406
215	62.96389	134.87	8.768	35556.98	0.0031343	0.06853	7.292	0.00257	1.42370	1.6193
220	61.96154	130.16	8.523	32095.93	0.0032880	0.06642	6.923	0.00250	1.41615	1.6060
225	60.92506	125.33	8.277	28801.83	0.0034637	0.06430	6.587	0.00243	1.40837	1.6011
230	59.84946	120.39	8.030	25671.85	0.0036661	0.06217	6.279	0.00235	1.40033	1.6049
235	58.71662	116.44	7.552	22603.99	0.0039079	0.05999	5.993	0.00225	1.39189	1.6364
240	57.54152	111.44	7.283	19860.76	0.0041755	0.05783	5.761	0.00216	1.38317	1.6689
245	56.30937	106.21	7.000	17263.17	0.0044877	0.05565	5.556	0.00207	1.37407	1.7131
250	55.00817	100.87	6.714	14819.56	0.0048704	0.05346	5.347	0.00198	1.36451	1.7689
255	53.62290	95.39	6.423	12530.42	0.0053478	0.05123	5.132	0.00187	1.35437	1.8396
260	52.13666	89.59	6.067	10397.22	0.0059075	0.04897	4.911	0.00177	1.34355	1.9104
265	50.52155	83.77	5.750	8410.69	0.0067103	0.04667	4.680	0.00164	1.33186	2.0296
270	48.74186	77.48	5.353	6610.08	0.0076914	0.04429	4.438	0.00152	1.31906	2.1502
275	46.73729	71.06	4.976	4970.55	0.0091746	0.04180	4.180	0.00137	1.30474	2.3470
280	44.41603	64.20	4.547	3527.77	0.0113491	0.04012	3.899	0.00124	1.28829	2.5493
285	41.62946	57.21	4.104	2308.05	0.0149357	0.03874	3.586	0.00109	1.26873	2.8480
290	38.09348	50.25	3.551	1345.72	0.0212452	0.03750	3.225	0.00092	1.24419	3.3048
295	33.47913	43.42	3.060	724.03	0.0307730	0.03588	2.808	0.00080	1.21266	3.7644
300	28.14366	40.02	2.784	472.57	0.0364355	0.03339	2.396	0.00081	1.17689	3.7665
310	20.84863	40.54	2.663	502.24	0.0227728	0.02595	1.939	0.00135	1.12915	2.4833
320	17.37859	43.75	2.656	608.14	0.0147517	0.02206	1.765	0.00197	1.10691	1.8591
330	15.31608	47.21	2.641	690.32	0.0109433	0.02020	1.678	0.00255	1.09383	1.5449
340	13.89042	50.65	2.629	753.02	0.0087967	0.01917	1.628	0.00310	1.08485	1.3625
350	12.81756	54.04	2.609	803.48	0.0073861	0.01852	1.598	0.00362	1.07813	1.2396
360	11.96506	57.33	2.593	842.43	0.0064300	0.01812	1.579	0.00411	1.07281	1.1567
370	11.26168	60.56	2.578	874.57	0.0057194	0.01783	1.568	0.00457	1.06843	1.0967
380	10.66614	63.72	2.563	901.50	0.0051688	0.01764	1.562	0.00502	1.06474	1.0503
390	10.15194	66.82	2.548	924.37	0.0047284	0.01752	1.560	0.00546	1.06155	1.0133
400	9.70113	69.87	2.535	944.01	0.0043675	0.01745	1.562	0.00590	1.05876	0.9830
410	9.30097	72.85	2.522	961.03	0.0040657	0.01743	1.565	0.00633	1.05630	0.9578
420	8.94216	75.79	2.511	975.90	0.0038092	0.01743	1.571	0.00675	1.05408	0.9365
430	8.61769	78.69	2.500	988.99	0.0035883	0.01747	1.578	0.00718	1.05209	0.9182
440	8.32213	81.54	2.491	1000.57	0.0033957	0.01752	1.586	0.00760	1.05027	0.9024
450	8.05123	84.35	2.481	1010.88	0.0032263	0.01759	1.595	0.00803	1.04861	0.8886
460	7.80159	87.13	2.473	1020.11	0.0030759	0.01767	1.605	0.00845	1.04708	0.8764
470	7.57046	89.88	2.465	1028.40	0.0029414	0.01777	1.616	0.00888	1.04566	0.8657
480	7.35555	92.60	2.458	1035.88	0.0028203	0.01787	1.627	0.00930	1.04435	0.8561
490	7.15498	95.30	2.451	1042.66	0.0027107	0.01798	1.639	0.00973	1.04312	0.8476
500	6.96717	97.98	2.444	1048.82	0.0026108	0.01810	1.651	0.01016	1.04197	0.8399
510	6.79078	100.64	2.438	1054.44	0.0025194	0.01819	1.664	0.01056	1.04089	0.8350
520	6.62465	103.29	2.431	1059.59	0.0024354	0.01833	1.677	0.01100	1.03988	0.8282
530	6.46780	105.93	2.425	1064.32	0.0023579	0.01848	1.690	0.01144	1.03892	0.8220
540	6.31937	108.55	2.419	1068.67	0.0022861	0.01864	1.703	0.01188	1.03802	0.8165
550	6.17863	111.17	2.414	1072.69	0.0022194	0.01879	1.717	0.01233	1.03716	0.8115
560	6.04492	113.78	2.408	1076.41	0.0021572	0.01895	1.731	0.01277	1.03635	0.8071
570	5.91765	116.39	2.402	1079.86	0.0020990	0.01911	1.745	0.01322	1.03557	0.8030
580	5.79634	118.99	2.397	1083.07	0.0020444	0.01927	1.759	0.01366	1.03484	0.7994
590	5.68051	121.60	2.391	1086.07	0.0019932	0.01943	1.773	0.01411	1.03413	0.7961
600	5.56976	124.21	2.385	1088.87	0.0019449	0.01959	1.787	0.01456	1.03346	0.7932

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1150 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.463	0.01222	2161.41	318.5	-83.035	-80.434	0.50301	0.267	0.396	3855
100	0.01223	2151.20	317.1	-82.825	-80.221	0.50514	0.266	0.396	3849
105	0.01234	2057.65	304.5	-80.872	-78.244	0.52444	0.262	0.395	3793
110	0.01245	1966.76	292.3	-78.920	-76.268	0.54282	0.258	0.395	3737
115	0.01257	1878.48	280.5	-76.970	-74.293	0.56038	0.254	0.395	3679
120	0.01269	1792.74	269.1	-75.021	-72.319	0.57718	0.250	0.395	3620
125	0.01281	1709.48	258.1	-73.074	-70.346	0.59329	0.247	0.395	3560
130	0.01294	1628.66	247.4	-71.127	-68.372	0.60877	0.243	0.395	3499
135	0.01307	1550.20	237.1	-69.181	-66.399	0.62367	0.240	0.395	3437
140	0.01320	1474.06	227.1	-67.235	-64.424	0.63803	0.237	0.395	3374
145	0.01333	1400.17	217.4	-65.288	-62.449	0.65189	0.234	0.395	3310
150	0.01347	1328.48	208.1	-63.341	-60.471	0.66530	0.231	0.396	3245
155	0.01362	1258.94	199.1	-61.392	-58.492	0.67828	0.229	0.396	3180
160	0.01377	1191.47	190.4	-59.441	-56.509	0.69087	0.226	0.397	3113
165	0.01392	1126.04	182.0	-57.488	-54.523	0.70309	0.223	0.398	3047
170	0.01408	1062.58	173.9	-55.531	-52.532	0.71497	0.221	0.399	2979
175	0.01425	1001.03	166.0	-53.570	-50.536	0.72655	0.219	0.400	2911
180	0.01442	941.34	158.5	-51.603	-48.533	0.73783	0.217	0.401	2843
185	0.01460	883.46	151.1	-49.630	-46.522	0.74885	0.214	0.403	2774
190	0.01478	827.34	144.1	-47.649	-44.502	0.75963	0.212	0.405	2705
195	0.01498	772.92	137.2	-45.660	-42.470	0.77019	0.210	0.407	2635
200	0.01518	720.16	130.6	-43.659	-40.426	0.78054	0.208	0.410	2565
205	0.01539	669.01	124.2	-41.646	-38.367	0.79071	0.206	0.413	2494
210	0.01562	619.42	118.0	-39.617	-36.291	0.80072	0.204	0.417	2422
215	0.01586	571.37	111.9	-37.571	-34.194	0.81059	0.202	0.422	2350
220	0.01611	524.81	106.0	-35.504	-32.072	0.82034	0.200	0.427	2278
225	0.01639	479.73	100.3	-33.413	-29.923	0.83000	0.198	0.432	2204
230	0.01668	436.11	94.7	-31.293	-27.741	0.83958	0.196	0.439	2129
235	0.01699	392.13	88.9	-29.112	-25.493	0.84925	0.199	0.453	2031
240	0.01734	352.39	83.6	-26.893	-23.201	0.85890	0.198	0.463	1953
245	0.01771	314.03	78.1	-24.631	-20.860	0.86856	0.197	0.473	1871
250	0.01812	277.09	72.9	-22.317	-18.458	0.87826	0.195	0.487	1788
255	0.01858	241.58	67.8	-19.937	-15.982	0.88807	0.195	0.505	1704
260	0.01909	207.61	62.3	-17.480	-13.415	0.89804	0.194	0.522	1608
265	0.01968	174.97	57.4	-14.924	-10.733	0.90826	0.194	0.552	1519
270	0.02037	144.36	51.9	-12.241	-7.904	0.91883	0.194	0.582	1415
275	0.02119	115.36	46.8	-9.391	-4.878	0.92994	0.195	0.630	1313
280	0.02222	88.59	41.5	-6.311	-1.580	0.94182	0.197	0.694	1202
285	0.02355	64.71	36.2	-2.912	2.103	0.95486	0.200	0.792	1090
290	0.02541	44.19	30.7	0.990	6.401	0.96980	0.208	0.946	965
295	0.02819	28.87	24.8	5.587	11.589	0.98753	0.212	1.135	846
300	0.03242	20.65	19.8	10.910	17.814	1.00845	0.216	1.322	765
310	0.04352	23.04	13.0	20.647	29.914	1.04816	0.208	1.007	719
320	0.05305	33.05	10.0	26.943	38.240	1.07463	0.196	0.698	738
330	0.06078	43.05	8.3	31.435	44.378	1.09353	0.188	0.548	762
340	0.06743	52.28	7.2	35.051	49.411	1.10856	0.183	0.467	786
350	0.07338	60.78	6.4	38.170	53.796	1.12129	0.179	0.416	810
360	0.07884	68.78	5.8	40.968	57.758	1.13245	0.175	0.380	831
370	0.08395	76.15	5.4	43.551	61.428	1.14251	0.173	0.355	851
380	0.08879	83.13	5.0	45.977	64.885	1.15173	0.171	0.337	871
390	0.09341	89.78	4.7	48.284	68.177	1.16028	0.170	0.322	889
400	0.09787	96.13	4.4	50.498	71.338	1.16828	0.168	0.310	907
410	0.10217	102.25	4.2	52.635	74.393	1.17583	0.167	0.301	924
420	0.10636	108.15	3.9	54.711	77.359	1.18297	0.166	0.293	940
430	0.11043	113.86	3.8	56.735	80.252	1.18978	0.165	0.286	955
440	0.11442	119.40	3.6	58.715	83.081	1.19629	0.164	0.280	971
450	0.11833	124.80	3.5	60.657	85.856	1.20252	0.164	0.275	986
460	0.12217	130.07	3.3	62.567	88.584	1.20852	0.163	0.271	1000
470	0.12595	135.22	3.2	64.448	91.270	1.21429	0.162	0.267	1015
480	0.12968	140.27	3.1	66.305	93.920	1.21987	0.162	0.263	1028
490	0.13336	145.22	3.0	68.140	96.538	1.22527	0.161	0.260	1042
500	0.13699	150.09	2.9	69.955	99.127	1.23050	0.161	0.258	1055
510	0.14058	154.88	2.8	71.754	101.691	1.23558	0.161	0.255	1068
520	0.14414	159.60	2.7	73.538	104.233	1.24052	0.160	0.253	1080
530	0.14767	164.26	2.6	75.308	106.754	1.24532	0.160	0.251	1093
540	0.15117	168.85	2.6	77.067	109.258	1.25000	0.160	0.249	1105
550	0.15464	173.40	2.5	78.815	111.745	1.25456	0.160	0.248	1117
560	0.15808	177.90	2.4	80.554	114.218	1.25902	0.160	0.247	1129
570	0.16151	182.35	2.4	82.285	116.678	1.26337	0.159	0.245	1140
580	0.16491	186.77	2.3	84.009	119.126	1.26763	0.159	0.244	1152
590	0.16829	191.14	2.3	85.726	121.564	1.27180	0.159	0.243	1163
600	0.17166	195.48	2.2	87.439	123.993	1.27588	0.159	0.242	1174

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1150 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.463	81.86390	219.78	14.592	176941.65	0.0018001	0.11222	43.247	0.00346	1.57107	5.4887
100	81.78472	219.46	14.569	175935.40	0.0018025	0.11207	42.809	0.00346	1.57043	5.4397
105	81.04619	216.46	14.349	166764.94	0.0018262	0.11066	38.958	0.00345	1.56450	5.0100
110	80.30459	213.43	14.122	157940.25	0.0018510	0.10916	35.489	0.00344	1.55855	4.6234
115	79.55964	210.35	13.888	149451.69	0.0018772	0.10760	32.363	0.00343	1.55259	4.2755
120	78.81101	207.23	13.648	141287.41	0.0019048	0.10597	29.547	0.00341	1.54662	3.9622
125	78.05833	204.06	13.404	133439.31	0.0019340	0.10428	27.010	0.00338	1.54063	3.6800
130	77.30122	200.85	13.155	125897.06	0.0019650	0.10254	24.723	0.00336	1.53462	3.4258
135	76.53924	197.58	12.902	118651.14	0.0019979	0.10074	22.663	0.00333	1.52859	3.1967
140	75.77189	194.26	12.645	111692.18	0.0020329	0.09891	20.806	0.00331	1.52253	2.9905
145	74.99865	190.88	12.386	105011.02	0.0020704	0.09704	19.132	0.00327	1.51644	2.8049
150	74.21893	187.44	12.125	98598.68	0.0021104	0.09514	17.623	0.00324	1.51031	2.6380
155	73.43207	183.94	11.863	92446.38	0.0021535	0.09320	16.263	0.00320	1.50415	2.4882
160	72.63734	180.37	11.599	86545.56	0.0021998	0.09125	15.036	0.00317	1.49794	2.3538
165	71.83393	176.73	11.336	80887.86	0.0022498	0.08927	13.930	0.00313	1.49168	2.2337
170	71.02093	173.02	11.073	75465.14	0.0023039	0.08727	12.932	0.00308	1.48536	2.1266
175	70.19733	169.24	10.811	70269.53	0.0023627	0.08525	12.030	0.00304	1.47898	2.0314
180	69.36198	165.37	10.550	65293.37	0.0024268	0.08322	11.217	0.00299	1.47252	1.9474
185	68.51359	161.42	10.291	60529.28	0.0024970	0.08118	10.482	0.00294	1.46599	1.8737
190	67.65071	157.38	10.034	55970.19	0.0025740	0.07912	9.818	0.00289	1.45936	1.8096
195	66.77168	153.25	9.779	51609.32	0.0026589	0.07706	9.217	0.00283	1.45263	1.7546
200	65.87462	149.01	9.527	47440.24	0.0027530	0.07499	8.674	0.00277	1.44578	1.7082
205	64.95737	144.68	9.278	43456.92	0.0028577	0.07291	8.181	0.00271	1.43880	1.6701
210	64.01743	140.24	9.031	39653.77	0.0029749	0.07083	7.734	0.00265	1.43167	1.6400
215	63.05191	135.69	8.787	36025.69	0.0031066	0.06873	7.328	0.00259	1.42437	1.6178
220	62.05744	131.02	8.545	32568.23	0.0032557	0.06663	6.958	0.00252	1.41687	1.6036
225	61.03005	126.24	8.304	29277.67	0.0034257	0.06453	6.621	0.00244	1.40916	1.5974
230	59.96506	121.35	8.061	26151.22	0.0036207	0.06241	6.312	0.00237	1.40119	1.5998
235	58.84530	117.46	7.582	23075.26	0.0038529	0.06025	6.025	0.00226	1.39285	1.6292
240	57.68489	112.54	7.319	20327.53	0.0041116	0.05811	5.787	0.00218	1.38424	1.6590
245	56.47051	107.39	7.037	17733.39	0.0044053	0.05595	5.584	0.00209	1.37526	1.6997
250	55.19116	102.15	6.757	15293.08	0.0047664	0.05378	5.378	0.00200	1.36585	1.7527
255	53.83332	96.78	6.473	13005.23	0.0052127	0.05158	5.166	0.00190	1.35591	1.8189
260	52.38236	91.13	6.126	10875.19	0.0057260	0.04936	4.949	0.00181	1.34534	1.8832
265	50.81445	85.50	5.824	8891.14	0.0064592	0.04710	4.724	0.00168	1.33398	1.9940
270	49.09912	79.42	5.438	7087.73	0.0073260	0.04478	4.489	0.00157	1.32162	2.0995
275	47.18849	73.25	5.079	5443.66	0.0086036	0.04238	4.240	0.00142	1.30796	2.2701
280	45.01164	66.73	4.676	3987.74	0.0104014	0.04048	3.973	0.00130	1.29250	2.4521
285	42.46308	60.13	4.265	2747.58	0.0131677	0.03904	3.681	0.00116	1.27456	2.6876
290	39.35608	53.64	3.751	1738.95	0.0176426	0.03769	3.354	0.00101	1.25292	3.0318
295	35.47779	46.92	3.289	1024.14	0.0241866	0.03613	2.987	0.00090	1.22625	3.3767
300	30.84702	42.57	2.970	637.05	0.0310480	0.03433	2.603	0.00084	1.19492	3.6074
310	22.97932	40.96	2.728	529.40	0.0245829	0.02788	2.070	0.00120	1.14295	2.6919
320	18.85046	43.60	2.697	622.92	0.0160098	0.02331	1.848	0.00177	1.11630	1.9917
330	16.45173	46.87	2.673	708.18	0.0116953	0.02108	1.739	0.00234	1.10102	1.6281
340	14.82985	50.24	2.657	775.30	0.0092874	0.01985	1.678	0.00287	1.09076	1.4199
350	13.62721	53.58	2.642	828.30	0.0077591	0.01909	1.640	0.00337	1.08320	1.2853
360	12.68368	56.89	2.618	872.32	0.0066794	0.01859	1.616	0.00386	1.07729	1.1887
370	11.91193	60.11	2.601	907.09	0.0059117	0.01824	1.601	0.00431	1.07248	1.1226
380	11.26268	63.28	2.585	936.26	0.0053214	0.01801	1.592	0.00475	1.06844	1.0718
390	10.70500	66.40	2.569	961.04	0.0048523	0.01786	1.588	0.00518	1.06498	1.0315
400	10.21811	69.45	2.555	982.31	0.0044699	0.01776	1.587	0.00560	1.06196	0.9988
410	9.78744	72.45	2.542	1000.75	0.0041516	0.01772	1.590	0.00602	1.05930	0.9716
420	9.40242	75.41	2.529	1016.84	0.0038822	0.01770	1.594	0.00643	1.05692	0.9486
430	9.05511	78.31	2.518	1030.99	0.0036510	0.01772	1.599	0.00684	1.05478	0.9291
440	8.73944	81.18	2.508	1043.52	0.0034501	0.01776	1.607	0.00726	1.05284	0.9121
450	8.45067	84.00	2.498	1054.66	0.0032738	0.01782	1.615	0.00767	1.05106	0.8974
460	8.18500	86.79	2.489	1064.63	0.0031177	0.01789	1.624	0.00808	1.04943	0.8844
470	7.93938	89.55	2.481	1073.58	0.0029784	0.01797	1.634	0.00849	1.04792	0.8730
480	7.71131	92.29	2.473	1081.65	0.0028533	0.01807	1.645	0.00890	1.04652	0.8628
490	7.49870	95.00	2.466	1088.97	0.0027402	0.01818	1.656	0.00931	1.04522	0.8538
500	7.29982	97.68	2.459	1095.61	0.0026374	0.01829	1.668	0.00972	1.04401	0.8457
510	7.11320	100.35	2.452	1101.68	0.0025434	0.01836	1.680	0.01011	1.04286	0.8404
520	6.93760	103.00	2.446	1107.23	0.0024572	0.01850	1.692	0.01054	1.04179	0.8332
530	6.77193	105.64	2.440	1112.33	0.0023778	0.01865	1.705	0.01096	1.04078	0.8267
540	6.61527	108.27	2.434	1117.02	0.0023043	0.01880	1.718	0.01139	1.03982	0.8208
550	6.46681	110.90	2.428	1121.35	0.0022361	0.01895	1.731	0.01182	1.03892	0.8156
560	6.32584	113.51	2.422	1125.36	0.0021725	0.01910	1.744	0.01224	1.03806	0.8108
570	6.19175	116.12	2.417	1129.08	0.0021132	0.01926	1.758	0.01267	1.03724	0.8065
580	6.06399	118.73	2.411	1132.55	0.0020576	0.01941	1.772	0.01310	1.03646	0.8027
590	5.94206	121.34	2.405	1135.77	0.0020054	0.01957	1.786	0.01354	1.03572	0.7992
600	5.82553	123.95	2.400	1138.79	0.0019562	0.01973	1.800	0.01397	1.03501	0.7961

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1200 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	CP BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.533	0.01221	2164.47	318.5	-83.027	-80.313	0.50309	0.267	0.396	3857
100	0.01222	2155.60	317.3	-82.845	-80.129	0.50494	0.266	0.395	3852
105	0.01233	2062.12	304.8	-80.893	-78.152	0.52423	0.262	0.395	3796
110	0.01245	1971.30	292.6	-78.943	-76.176	0.54261	0.258	0.395	3740
115	0.01256	1883.08	280.8	-76.994	-74.202	0.56016	0.254	0.395	3682
120	0.01268	1797.40	269.4	-75.047	-72.229	0.57696	0.250	0.395	3623
125	0.01281	1714.22	258.3	-73.101	-70.256	0.59307	0.247	0.395	3563
130	0.01293	1633.47	247.6	-71.156	-68.283	0.60854	0.243	0.394	3502
135	0.01306	1555.09	237.3	-69.212	-66.310	0.62343	0.240	0.395	3440
140	0.01319	1479.02	227.3	-67.268	-64.337	0.63778	0.237	0.395	3377
145	0.01333	1405.22	217.7	-65.324	-62.362	0.65164	0.234	0.395	3314
150	0.01347	1333.61	208.4	-63.379	-60.386	0.66504	0.231	0.395	3249
155	0.01361	1264.15	199.4	-61.432	-58.408	0.67801	0.229	0.396	3184
160	0.01376	1196.78	190.7	-59.484	-56.427	0.69059	0.226	0.396	3118
165	0.01391	1131.44	182.3	-57.534	-54.442	0.70280	0.224	0.397	3052
170	0.01407	1068.07	174.2	-55.580	-52.453	0.71467	0.221	0.398	2985
175	0.01424	1006.62	166.3	-53.622	-50.459	0.72624	0.219	0.399	2917
180	0.01441	947.04	158.8	-51.659	-48.458	0.73751	0.217	0.401	2849
185	0.01458	889.28	151.5	-49.690	-46.449	0.74852	0.215	0.403	2780
190	0.01477	833.27	144.4	-47.713	-44.432	0.75928	0.212	0.405	2712
195	0.01496	778.97	137.6	-45.728	-42.404	0.76982	0.210	0.407	2642
200	0.01516	726.34	131.0	-43.733	-40.363	0.78015	0.208	0.409	2572
205	0.01538	675.32	124.6	-41.725	-38.308	0.79031	0.206	0.413	2502
210	0.01560	625.88	118.4	-39.703	-36.236	0.80029	0.204	0.416	2431
215	0.01584	577.97	112.4	-37.664	-34.144	0.81014	0.202	0.420	2360
220	0.01609	531.57	106.5	-35.605	-32.030	0.81986	0.200	0.425	2288
225	0.01636	486.66	100.8	-33.523	-29.888	0.82948	0.198	0.431	2215
230	0.01664	443.22	95.2	-31.413	-27.715	0.83903	0.196	0.437	2141
235	0.01696	399.25	89.5	-29.245	-25.477	0.84865	0.199	0.450	2044
240	0.01729	359.56	84.2	-27.041	-23.198	0.85825	0.198	0.460	1967
245	0.01766	321.40	78.8	-24.796	-20.872	0.86784	0.197	0.470	1886
250	0.01805	284.69	73.6	-22.502	-18.489	0.87747	0.196	0.483	1805
255	0.01851	249.38	68.6	-20.147	-16.035	0.88719	0.195	0.499	1722
260	0.01900	215.67	63.1	-17.721	-13.498	0.89704	0.194	0.515	1629
265	0.01957	183.31	58.4	-15.205	-10.856	0.90711	0.194	0.543	1543
270	0.02023	152.91	53.0	-12.575	-8.080	0.91748	0.194	0.569	1441
275	0.02101	124.14	48.0	-9.798	-5.131	0.92831	0.195	0.612	1344
280	0.02195	97.50	42.8	-6.826	-1.948	0.93978	0.196	0.666	1238
285	0.02316	73.70	37.7	-3.592	1.554	0.95217	0.198	0.745	1133
290	0.02476	52.90	32.5	0.035	5.537	0.96602	0.205	0.863	1015
295	0.02702	36.55	26.9	4.181	10.184	0.98191	0.208	1.000	901
300	0.03030	26.02	22.1	8.912	15.644	1.00025	0.212	1.171	817
310	0.03976	23.21	14.7	18.479	27.314	1.03853	0.208	1.056	738
320	0.04902	31.63	11.1	25.317	36.210	1.06681	0.198	0.749	745
330	0.05670	41.32	9.1	30.161	42.759	1.08697	0.190	0.580	765
340	0.06328	50.55	7.8	33.996	48.058	1.10280	0.184	0.488	789
350	0.06915	59.14	6.9	37.263	52.628	1.11606	0.180	0.431	811
360	0.07453	67.15	6.3	40.170	56.731	1.12762	0.176	0.393	833
370	0.07952	74.74	5.7	42.832	60.503	1.13796	0.174	0.365	852
380	0.08425	81.83	5.3	45.322	64.043	1.14741	0.172	0.344	872
390	0.08876	88.57	5.0	47.680	67.404	1.15614	0.170	0.328	890
400	0.09310	95.03	4.7	49.937	70.624	1.16429	0.169	0.316	908
410	0.09729	101.23	4.4	52.111	73.729	1.17195	0.167	0.305	925
420	0.10135	107.21	4.2	54.218	76.739	1.17921	0.166	0.297	941
430	0.10531	113.00	4.0	56.269	79.670	1.18611	0.165	0.290	957
440	0.10918	118.62	3.8	58.273	82.533	1.19269	0.165	0.283	972
450	0.11296	124.09	3.6	60.237	85.338	1.19899	0.164	0.278	987
460	0.11668	129.43	3.5	62.166	88.093	1.20505	0.163	0.273	1002
470	0.12034	134.64	3.4	64.065	90.805	1.21088	0.163	0.269	1016
480	0.12394	139.74	3.3	65.937	93.477	1.21651	0.162	0.265	1030
490	0.12749	144.75	3.1	67.786	96.116	1.22195	0.162	0.262	1043
500	0.13100	149.67	3.0	69.614	98.724	1.22722	0.161	0.259	1057
510	0.13447	154.51	2.9	71.424	101.306	1.23233	0.161	0.257	1070
520	0.13791	159.28	2.9	73.219	103.863	1.23729	0.160	0.255	1082
530	0.14131	163.98	2.8	74.999	106.399	1.24213	0.160	0.253	1095
540	0.14468	168.63	2.7	76.767	108.917	1.24683	0.160	0.251	1107
550	0.14803	173.22	2.6	78.523	111.417	1.25142	0.160	0.249	1119
560	0.15135	177.75	2.6	80.269	113.902	1.25589	0.160	0.248	1131
570	0.15465	182.25	2.5	82.007	116.373	1.26027	0.159	0.246	1142
580	0.15793	186.70	2.4	83.737	118.831	1.26454	0.159	0.245	1154
590	0.16119	191.11	2.4	85.461	121.279	1.26873	0.159	0.244	1165
600	0.16444	195.49	2.3	87.178	123.718	1.27283	0.159	0.243	1176

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1200 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.533	81.87669	220.05	14.590	177219.97	0.0017974	0.11225	43.319	0.00347	1.57117	5.4951
100	81.80794	219.78	14.570	176345.53	0.0017995	0.11212	42.937	0.00347	1.57062	5.4525
105	81.07046	216.79	14.350	167176.94	0.0018229	0.11071	39.078	0.00346	1.56469	5.0219
110	80.32998	213.77	14.123	158354.16	0.0018475	0.10922	35.602	0.00344	1.55876	4.6345
115	79.58623	210.70	13.889	149866.95	0.0018735	0.10766	32.469	0.00343	1.55281	4.2858
120	78.83886	207.60	13.650	141705.25	0.0019008	0.10604	29.647	0.00341	1.54684	3.9718
125	78.08754	204.44	13.405	133859.17	0.0019297	0.10435	27.104	0.00339	1.54086	3.6889
130	77.33188	201.24	13.156	126318.99	0.0019603	0.10261	24.812	0.00336	1.53487	3.4340
135	76.57144	197.99	12.903	119075.17	0.0019929	0.10083	22.746	0.00334	1.52884	3.2044
140	75.80575	194.68	12.647	112118.37	0.0020275	0.09900	20.884	0.00331	1.52280	2.9976
145	75.03430	191.32	12.388	105439.42	0.0020645	0.09714	19.206	0.00328	1.51672	2.8115
150	74.25650	187.90	12.128	99029.34	0.0021040	0.09524	17.693	0.00324	1.51061	2.6441
155	73.47171	184.42	11.866	92879.36	0.0021464	0.09331	16.329	0.00321	1.50446	2.4937
160	72.67921	180.87	11.603	86980.91	0.0021921	0.09136	15.098	0.00317	1.49827	2.3589
165	71.87823	177.25	11.340	81325.65	0.0022413	0.08938	13.988	0.00313	1.49202	2.2383
170	71.06787	173.56	11.078	75905.45	0.0022946	0.08739	12.987	0.00309	1.48573	2.1307
175	70.24714	169.80	10.817	70712.42	0.0023525	0.08538	12.083	0.00304	1.47936	2.0351
180	69.41493	165.96	10.557	65738.92	0.0024155	0.08336	11.267	0.00300	1.47293	1.9506
185	68.57000	162.03	10.299	60977.59	0.0024843	0.08132	10.529	0.00295	1.46642	1.8763
190	67.71093	158.02	10.043	56421.33	0.0025599	0.07928	9.863	0.00289	1.45982	1.8117
195	66.83612	153.91	9.790	52063.39	0.0026431	0.07722	9.260	0.00284	1.45312	1.7562
200	65.94375	149.71	9.540	47897.33	0.0027351	0.07516	8.714	0.00278	1.44630	1.7092
205	65.03175	145.41	9.292	43917.13	0.0028373	0.07309	8.220	0.00272	1.43936	1.6704
210	64.09773	141.01	9.048	40117.17	0.0029515	0.07102	7.771	0.00266	1.43227	1.6396
215	63.13891	136.49	8.807	36492.38	0.0030797	0.06893	7.364	0.00260	1.42502	1.6165
220	62.15210	131.87	8.567	33038.26	0.0032244	0.06685	6.993	0.00253	1.41758	1.6013
225	61.13353	127.14	8.330	29751.03	0.0033888	0.06475	6.654	0.00246	1.40993	1.5940
230	60.07879	122.30	8.091	26627.86	0.0035770	0.06265	6.345	0.00238	1.40204	1.5949
235	58.97166	118.47	7.612	23544.65	0.0038000	0.06051	6.057	0.00228	1.39379	1.6224
240	57.82535	113.62	7.354	20791.83	0.0040504	0.05838	5.813	0.00219	1.38528	1.6495
245	56.62789	108.54	7.072	18200.42	0.0043273	0.05624	5.612	0.00211	1.37642	1.6871
250	55.36917	103.41	6.798	15762.79	0.0046689	0.05410	5.408	0.00202	1.36716	1.7375
255	54.03701	98.15	6.521	13475.68	0.0050870	0.05193	5.199	0.00192	1.35740	1.7996
260	52.61863	92.62	6.182	11348.03	0.0055604	0.04974	4.986	0.00184	1.34706	1.8584
265	51.09359	87.17	5.893	9365.98	0.0062330	0.04752	4.765	0.00171	1.33600	1.9617
270	49.43558	81.27	5.518	7559.10	0.0070057	0.04525	4.536	0.00161	1.32404	2.0547
275	47.60615	75.33	5.175	5910.06	0.0081213	0.04292	4.296	0.00147	1.31094	2.2046
280	45.54928	69.07	4.791	4441.20	0.0096377	0.04084	4.040	0.00135	1.29630	2.3708
285	43.18640	62.82	4.407	3182.83	0.0118525	0.03938	3.765	0.00122	1.27963	2.5627
290	40.38858	56.72	3.922	2136.68	0.0152161	0.03797	3.463	0.00109	1.26008	2.8341
295	37.01460	50.22	3.491	1352.79	0.0199097	0.03641	3.132	0.00098	1.23677	3.0962
300	33.00797	45.46	3.166	858.88	0.0257638	0.03487	2.781	0.00090	1.20948	3.3630
310	25.15195	41.85	2.812	583.67	0.0252232	0.02958	2.212	0.00111	1.15715	2.8420
320	20.39931	43.67	2.744	645.15	0.0171527	0.02461	1.938	0.00161	1.12625	2.1232
330	17.63792	46.66	2.709	728.87	0.0124383	0.02200	1.805	0.00215	1.10856	1.7139
340	15.80272	49.94	2.688	798.90	0.0097813	0.02056	1.730	0.00266	1.09691	1.4795
350	14.46131	53.23	2.669	855.27	0.0081048	0.01967	1.683	0.00315	1.08844	1.3290
360	13.41823	56.49	2.651	901.09	0.0069601	0.01909	1.654	0.00362	1.08189	1.2256
370	12.57474	59.73	2.626	939.88	0.0061046	0.01867	1.635	0.00407	1.07661	1.1491
380	11.86897	62.90	2.608	971.20	0.0054742	0.01839	1.623	0.00450	1.07221	1.0937
390	11.26575	66.01	2.591	997.83	0.0049762	0.01820	1.616	0.00492	1.06846	1.0501
400	10.74126	69.08	2.575	1020.71	0.0045721	0.01808	1.614	0.00533	1.06520	1.0147
410	10.27892	72.09	2.561	1040.54	0.0042372	0.01801	1.614	0.00574	1.06234	0.9855
420	9.86678	75.05	2.548	1057.85	0.0039549	0.01798	1.617	0.00614	1.05979	0.9609
430	9.49593	77.97	2.536	1073.08	0.0037133	0.01798	1.621	0.00654	1.05750	0.9400
440	9.15958	80.85	2.525	1086.54	0.0035040	0.01800	1.627	0.00694	1.05542	0.9219
450	8.85246	83.68	2.515	1098.52	0.0033209	0.01805	1.635	0.00734	1.05353	0.9063
460	8.57037	86.48	2.506	1109.22	0.0031591	0.01811	1.643	0.00773	1.05180	0.8925
470	8.30995	89.25	2.497	1118.84	0.0030151	0.01818	1.652	0.00813	1.05020	0.8803
480	8.06844	91.99	2.489	1127.51	0.0028859	0.01827	1.662	0.00853	1.04871	0.8696
490	7.84356	94.71	2.481	1135.37	0.0027694	0.01837	1.673	0.00893	1.04733	0.8600
500	7.63343	97.40	2.474	1142.50	0.0026636	0.01847	1.684	0.00933	1.04605	0.8514
510	7.43642	100.08	2.468	1149.01	0.0025672	0.01854	1.696	0.00970	1.04484	0.8438
520	7.25120	102.73	2.461	1154.97	0.0024787	0.01868	1.707	0.01011	1.04371	0.8382
530	7.07659	105.38	2.455	1160.44	0.0023974	0.01881	1.720	0.01052	1.04264	0.8313
540	6.91158	108.01	2.449	1165.47	0.0023222	0.01896	1.732	0.01094	1.04163	0.8251
550	6.75532	110.64	2.443	1170.12	0.0022525	0.01910	1.745	0.01135	1.04068	0.8196
560	6.60702	113.26	2.437	1174.43	0.0021876	0.01925	1.758	0.01176	1.03977	0.8145
570	6.46603	115.87	2.431	1178.42	0.0021271	0.01940	1.771	0.01218	1.03891	0.8100
580	6.33175	118.48	2.426	1182.14	0.0020705	0.01956	1.785	0.01259	1.03810	0.8060
590	6.20367	121.09	2.420	1185.60	0.0020174	0.01971	1.798	0.01301	1.03731	0.8023
600	6.08131	123.70	2.414	1188.84	0.0019674	0.01987	1.812	0.01343	1.03657	0.7990

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1250 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.603	0.01221	2167.53	318.6	-83.019	-80.193	0.50316	0.267	0.395	3859
100	0.01222	2160.00	317.5	-82.864	-80.036	0.50474	0.266	0.395	3855
105	0.01233	2066.58	305.0	-80.914	-78.059	0.52402	0.262	0.395	3799
110	0.01244	1975.82	292.8	-78.965	-76.085	0.54240	0.258	0.395	3743
115	0.01256	1887.67	281.0	-77.018	-74.111	0.55994	0.254	0.395	3685
120	0.01268	1802.06	269.6	-75.073	-72.138	0.57674	0.250	0.394	3627
125	0.01280	1718.95	258.5	-73.129	-70.166	0.59284	0.247	0.394	3567
130	0.01293	1638.27	247.9	-71.186	-68.194	0.60830	0.244	0.394	3506
135	0.01305	1559.96	237.5	-69.243	-66.222	0.62319	0.240	0.394	3444
140	0.01319	1483.98	227.6	-67.301	-64.249	0.63753	0.237	0.395	3381
145	0.01332	1410.25	217.9	-65.359	-62.276	0.65138	0.234	0.395	3318
150	0.01346	1338.73	208.6	-63.416	-60.301	0.66477	0.231	0.395	3254
155	0.01360	1269.35	199.6	-61.472	-58.324	0.67774	0.229	0.396	3189
160	0.01375	1202.07	191.0	-59.527	-56.344	0.69031	0.226	0.396	3123
165	0.01390	1136.82	182.6	-57.579	-54.361	0.70251	0.224	0.397	3057
170	0.01406	1073.55	174.5	-55.628	-52.373	0.71438	0.221	0.398	2990
175	0.01423	1012.20	166.7	-53.674	-50.381	0.72593	0.219	0.399	2923
180	0.01440	952.72	159.1	-51.714	-48.382	0.73719	0.217	0.400	2855
185	0.01457	895.06	151.8	-49.749	-46.376	0.74818	0.215	0.402	2787
190	0.01476	839.17	144.8	-47.777	-44.361	0.75893	0.213	0.404	2718
195	0.01495	784.99	138.0	-45.796	-42.336	0.76946	0.210	0.406	2649
200	0.01515	732.48	131.4	-43.806	-40.299	0.77977	0.208	0.409	2580
205	0.01536	681.60	125.0	-41.803	-38.248	0.78990	0.206	0.412	2510
210	0.01558	632.29	118.8	-39.787	-36.181	0.79987	0.204	0.415	2440
215	0.01582	584.53	112.8	-37.755	-34.094	0.80969	0.202	0.419	2369
220	0.01607	538.29	107.0	-35.704	-31.986	0.81938	0.200	0.424	2298
225	0.01633	493.54	101.3	-33.631	-29.852	0.82897	0.198	0.429	2226
230	0.01661	450.27	95.8	-31.532	-27.687	0.83848	0.196	0.436	2153
235	0.01692	406.33	90.0	-29.377	-25.460	0.84806	0.199	0.448	2056
240	0.01725	366.68	84.8	-27.186	-23.193	0.85760	0.198	0.458	1981
245	0.01761	328.71	79.4	-24.957	-20.881	0.86714	0.197	0.466	1900
250	0.01800	292.19	74.3	-22.682	-18.515	0.87670	0.196	0.479	1821
255	0.01844	257.07	69.3	-20.351	-16.083	0.88633	0.195	0.494	1740
260	0.01892	223.60	63.9	-17.954	-13.574	0.89607	0.194	0.509	1649
265	0.01947	191.50	59.3	-15.474	-10.967	0.90600	0.194	0.535	1566
270	0.02010	161.29	53.9	-12.892	-8.240	0.91620	0.194	0.558	1467
275	0.02084	132.73	49.1	-10.180	-5.358	0.92678	0.194	0.596	1373
280	0.02172	106.19	44.0	-7.300	-2.273	0.93789	0.195	0.642	1271
285	0.02282	82.46	39.1	-4.198	1.083	0.94977	0.197	0.707	1171
290	0.02423	61.46	34.2	-0.782	4.827	0.96279	0.203	0.802	1060
295	0.02614	44.38	28.8	3.039	9.090	0.97736	0.206	0.905	952
300	0.02879	32.25	24.2	7.321	13.985	0.99381	0.208	1.047	867
310	0.03670	24.68	16.5	16.434	24.928	1.02969	0.208	1.060	764
320	0.04545	30.84	12.2	23.667	34.187	1.05912	0.199	0.794	755
330	0.05300	39.96	9.9	28.858	41.125	1.08048	0.191	0.612	770
340	0.05950	49.06	8.5	32.920	46.692	1.09711	0.185	0.511	792
350	0.06528	57.68	7.5	36.340	51.451	1.11092	0.181	0.447	814
360	0.07057	65.75	6.7	39.359	55.693	1.12288	0.177	0.405	835
370	0.07547	73.45	6.1	42.106	59.575	1.13352	0.174	0.374	854
380	0.08010	80.62	5.7	44.660	63.200	1.14318	0.172	0.352	873
390	0.08450	87.45	5.3	47.071	66.631	1.15210	0.171	0.335	892
400	0.08873	93.99	5.0	49.372	69.909	1.16040	0.169	0.321	909
410	0.09281	100.28	4.7	51.584	73.065	1.16819	0.168	0.310	926
420	0.09676	106.34	4.4	53.723	76.119	1.17555	0.167	0.301	943
430	0.10060	112.20	4.2	55.802	79.089	1.18254	0.166	0.293	959
440	0.10436	117.89	4.0	57.831	81.986	1.18920	0.165	0.287	974
450	0.10803	123.43	3.8	59.816	84.822	1.19557	0.164	0.281	989
460	0.11164	128.82	3.7	61.764	87.605	1.20169	0.163	0.276	1004
470	0.11518	134.09	3.6	63.680	90.341	1.20757	0.163	0.271	1018
480	0.11867	139.26	3.4	65.568	93.036	1.21325	0.162	0.268	1032
490	0.12211	144.32	3.3	67.431	95.695	1.21873	0.162	0.264	1045
500	0.12550	149.29	3.2	69.273	98.322	1.22404	0.161	0.261	1058
510	0.12886	154.18	3.1	71.095	100.921	1.22918	0.161	0.259	1072
520	0.13218	158.99	3.0	72.900	103.495	1.23418	0.161	0.256	1084
530	0.13547	163.74	2.9	74.690	106.046	1.23904	0.160	0.254	1097
540	0.13873	168.43	2.8	76.466	108.577	1.24377	0.160	0.252	1109
550	0.14196	173.06	2.8	78.231	111.090	1.24838	0.160	0.250	1121
560	0.14517	177.64	2.7	79.985	113.587	1.25288	0.160	0.249	1133
570	0.14836	182.17	2.6	81.729	116.069	1.25728	0.159	0.248	1145
580	0.15152	186.66	2.6	83.466	118.539	1.26157	0.159	0.246	1156
590	0.15467	191.11	2.5	85.195	120.996	1.26577	0.159	0.245	1168
600	0.15780	195.52	2.5	86.918	123.444	1.26989	0.159	0.244	1179

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1250 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.603	81.88945	220.33	14.588	177498.08	0.0017947	0.11228	43.390	0.00347	1.57128	5.5015
100	81.83111	220.10	14.571	176755.33	0.0017965	0.11217	43.066	0.00347	1.57081	5.4653
105	81.09468	217.12	14.351	167588.59	0.0018197	0.11076	39.199	0.00346	1.56489	5.0337
110	80.35532	214.11	14.124	158767.68	0.0018441	0.10928	35.715	0.00344	1.55896	4.6455
115	79.61275	211.06	13.890	150282.39	0.0018698	0.10772	32.576	0.00343	1.55302	4.2961
120	78.86664	207.96	13.651	142122.65	0.0018968	0.10610	29.747	0.00341	1.54707	3.9813
125	78.11667	204.82	13.407	134278.56	0.0019254	0.10442	27.198	0.00339	1.54110	3.6978
130	77.36244	201.64	13.158	126740.41	0.0019557	0.10269	24.900	0.00337	1.53511	3.4423
135	76.60354	198.40	12.905	119498.67	0.0019879	0.10091	22.829	0.00334	1.52910	3.2121
140	75.83950	195.11	12.649	112543.99	0.0020221	0.09909	20.963	0.00331	1.52306	3.0047
145	75.06982	191.76	12.391	105867.20	0.0020586	0.09723	19.280	0.00328	1.51700	2.8181
150	74.29392	188.36	12.131	99459.33	0.0020976	0.09534	17.763	0.00325	1.51090	2.6502
155	73.51118	184.89	11.869	93311.62	0.0021395	0.09342	16.394	0.00321	1.50477	2.4993
160	72.72090	181.37	11.607	87415.50	0.0021845	0.09147	15.160	0.00317	1.49859	2.3640
165	71.92232	177.77	11.345	81762.62	0.0022330	0.08950	14.047	0.00313	1.49237	2.2429
170	71.11456	174.10	11.083	76344.86	0.0022855	0.08751	13.042	0.00309	1.48609	2.1348
175	70.29667	170.36	10.822	71154.34	0.0023424	0.08551	12.135	0.00305	1.47975	2.0388
180	69.46757	166.54	10.563	66183.43	0.0024043	0.08349	11.316	0.00300	1.47334	1.9537
185	68.62604	162.64	10.306	61424.75	0.0024719	0.08147	10.577	0.00295	1.46685	1.8790
190	67.77072	158.65	10.052	56871.23	0.0025460	0.07943	9.908	0.00290	1.46028	1.8139
195	66.90006	154.58	9.800	52516.10	0.0026275	0.07738	9.303	0.00285	1.45361	1.7578
200	66.01230	150.41	9.552	48352.93	0.0027175	0.07533	8.755	0.00279	1.44683	1.7102
205	65.10545	146.14	9.306	44375.70	0.0028174	0.07327	8.259	0.00273	1.43992	1.6708
210	64.17721	141.77	9.064	40578.79	0.0029287	0.07120	7.809	0.00267	1.43288	1.6392
215	63.22494	137.29	8.825	36957.10	0.0030535	0.06913	7.400	0.00261	1.42567	1.6153
220	62.24557	132.71	8.589	33506.11	0.0031940	0.06706	7.027	0.00254	1.41829	1.5991
225	61.23555	128.02	8.355	30222.00	0.0033532	0.06497	6.688	0.00247	1.41070	1.5907
230	60.19071	123.23	8.121	27101.84	0.0035348	0.06288	6.377	0.00240	1.40288	1.5904
235	59.09580	119.47	7.641	24012.20	0.0037491	0.06076	6.089	0.00230	1.39471	1.6159
240	57.96304	114.68	7.388	21253.83	0.0039916	0.05865	5.838	0.00221	1.38630	1.6403
245	56.78171	109.68	7.107	18664.48	0.0042533	0.05653	5.639	0.00213	1.37756	1.6752
250	55.54252	104.64	5.839	16228.99	0.0045770	0.05441	5.437	0.00205	1.36843	1.7231
255	54.23447	99.48	6.566	13942.13	0.0049697	0.05226	5.232	0.00195	1.35884	1.7815
260	52.84629	94.08	5.236	11816.18	0.0054085	0.05011	5.022	0.00186	1.34871	1.8358
265	51.36042	88.78	5.959	9835.69	0.0060279	0.04792	4.806	0.00174	1.33793	1.9320
270	49.75389	83.04	5.593	8024.86	0.0067220	0.04570	4.582	0.00165	1.32633	2.0148
275	47.99554	77.31	5.264	6370.51	0.0077074	0.04343	4.349	0.00152	1.31372	2.1480
280	46.04045	71.28	4.895	4889.18	0.0090054	0.04120	4.103	0.00139	1.29979	2.3011
285	43.82729	65.32	4.534	3614.12	0.0108307	0.03974	3.841	0.00128	1.28414	2.4618
290	41.26441	59.55	4.071	2536.18	0.0134668	0.03329	3.559	0.00116	1.26618	2.6831
295	38.25428	53.29	3.669	1697.91	0.0169900	0.03673	3.254	0.00106	1.24530	2.8877
300	34.73374	48.39	3.351	1120.25	0.0216386	0.03527	2.932	0.00097	1.22118	3.1340
310	27.25023	43.21	2.917	672.65	0.0245257	0.03091	2.358	0.00107	1.17097	2.9099
320	22.00321	43.99	2.799	678.56	0.0180456	0.02591	2.035	0.00148	1.13661	2.2446
330	18.86930	46.62	2.748	753.96	0.0131381	0.02296	1.874	0.00199	1.11642	1.8001
340	16.80704	49.74	2.721	824.63	0.0102664	0.02129	1.784	0.00248	1.10327	1.5405
350	15.31761	52.96	2.698	883.45	0.0084483	0.02027	1.729	0.00296	1.09384	1.3738
360	14.17079	56.18	2.678	931.80	0.0072150	0.01960	1.693	0.00341	1.08661	1.2602
370	13.24965	59.40	2.650	973.17	0.0062964	0.01911	1.669	0.00386	1.08083	1.1761
380	12.48464	62.56	2.631	1006.47	0.0056264	0.01878	1.654	0.00427	1.07605	1.1160
390	11.83391	65.67	2.613	1034.88	0.0050994	0.01856	1.645	0.00468	1.07199	1.0689
400	11.27035	68.74	2.596	1059.31	0.0046737	0.01840	1.640	0.00508	1.06849	1.0309
410	10.77521	71.76	2.581	1080.50	0.0043223	0.01831	1.639	0.00548	1.06541	0.9995
420	10.33507	74.73	2.567	1099.01	0.0040270	0.01826	1.640	0.00587	1.06268	0.9733
430	9.93998	77.66	2.554	1115.29	0.0037750	0.01824	1.643	0.00626	1.06024	0.9510
440	9.58240	80.54	2.542	1129.69	0.0035575	0.01825	1.648	0.00665	1.05803	0.9318
450	9.25648	83.38	2.532	1142.49	0.0033675	0.01828	1.655	0.00703	1.05602	0.9152
460	8.95761	86.19	2.522	1153.94	0.0032001	0.01833	1.662	0.00742	1.05418	0.9006
470	8.68208	88.97	2.513	1164.22	0.0030513	0.01839	1.671	0.00780	1.05248	0.8877
480	8.42687	91.72	2.505	1173.49	0.0029181	0.01847	1.680	0.00819	1.05091	0.8763
490	8.18951	94.44	2.497	1181.88	0.0027982	0.01856	1.690	0.00858	1.04946	0.8662
500	7.96793	97.14	2.490	1189.51	0.0026895	0.01866	1.700	0.00896	1.04810	0.8571
510	7.76038	99.82	2.483	1196.47	0.0025905	0.01872	1.711	0.00933	1.04683	0.8542
520	7.56540	102.48	2.476	1202.83	0.0025000	0.01885	1.723	0.00972	1.04563	0.8432
530	7.38173	105.13	2.470	1208.67	0.0024167	0.01898	1.735	0.01012	1.04451	0.8359
540	7.20828	107.77	2.464	1214.05	0.0023399	0.01912	1.747	0.01052	1.04345	0.8294
550	7.04411	110.39	2.458	1219.02	0.0022687	0.01926	1.759	0.01092	1.04244	0.8235
560	6.88840	113.01	2.452	1223.62	0.0022026	0.01941	1.772	0.01132	1.04149	0.8183
570	6.74044	115.63	2.446	1227.89	0.0021409	0.01955	1.785	0.01172	1.04059	0.8135
580	6.59960	118.24	2.441	1231.87	0.0020832	0.01970	1.798	0.01212	1.03973	0.8092
590	6.46530	120.85	2.435	1235.57	0.0020292	0.01986	1.811	0.01252	1.03891	0.8053
600	6.33705	123.46	2.429	1239.04	0.0019784	0.02001	1.825	0.01293	1.03813	0.8019

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1300 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.673	0.01221	2170.59	318.6	-83.011	-80.072	0.50324	0.267	0.395	3861
100	0.01222	2164.39	317.8	-82.884	-79.943	0.50453	0.266	0.395	3858
105	0.01233	2071.03	305.2	-80.935	-77.967	0.52381	0.262	0.395	3802
110	0.01244	1980.34	293.0	-78.987	-75.993	0.54218	0.258	0.395	3746
115	0.01256	1892.25	281.2	-77.042	-74.019	0.55973	0.254	0.395	3689
120	0.01268	1806.71	269.8	-75.099	-72.047	0.57651	0.250	0.394	3630
125	0.01280	1723.67	258.8	-73.156	-70.076	0.59261	0.247	0.394	3570
130	0.01292	1643.06	248.1	-71.215	-68.105	0.60807	0.244	0.394	3510
135	0.01305	1564.83	237.8	-69.274	-66.133	0.62295	0.240	0.394	3448
140	0.01318	1488.92	227.8	-67.334	-64.162	0.63729	0.237	0.394	3385
145	0.01331	1415.27	218.2	-65.394	-62.189	0.65113	0.234	0.395	3322
150	0.01345	1343.83	208.9	-63.454	-60.215	0.66451	0.232	0.395	3258
155	0.01360	1274.54	199.9	-61.512	-58.240	0.67747	0.229	0.395	3193
160	0.01374	1207.34	191.2	-59.570	-56.261	0.69003	0.226	0.396	3128
165	0.01390	1142.19	182.9	-57.624	-54.279	0.70222	0.224	0.397	3062
170	0.01405	1079.01	174.8	-55.677	-52.294	0.71408	0.222	0.398	2995
175	0.01422	1017.76	167.0	-53.725	-50.303	0.72562	0.219	0.399	2928
180	0.01438	958.39	159.5	-51.769	-48.306	0.73687	0.217	0.400	2861
185	0.01456	900.83	152.2	-49.808	-46.303	0.74785	0.215	0.402	2793
190	0.01474	845.05	145.2	-47.840	-44.291	0.75859	0.213	0.403	2725
195	0.01493	790.99	138.4	-45.863	-42.269	0.76909	0.211	0.406	2656
200	0.01513	738.60	131.8	-43.878	-40.235	0.77939	0.209	0.408	2587
205	0.01534	687.84	125.4	-41.881	-38.188	0.78950	0.206	0.411	2518
210	0.01556	638.68	119.3	-39.871	-36.125	0.79945	0.204	0.414	2449
215	0.01580	591.06	113.3	-37.846	-34.044	0.80924	0.202	0.418	2379
220	0.01604	544.96	107.5	-35.803	-31.941	0.81891	0.200	0.423	2308
225	0.01630	500.37	101.9	-33.739	-29.814	0.82847	0.198	0.428	2237
230	0.01658	457.26	96.3	-31.649	-27.657	0.83794	0.196	0.434	2165
235	0.01689	413.35	90.6	-29.506	-25.441	0.84747	0.199	0.445	2069
240	0.01721	373.74	85.4	-27.329	-23.185	0.85697	0.198	0.455	1995
245	0.01756	335.94	80.0	-25.115	-20.887	0.86645	0.197	0.463	1914
250	0.01795	299.61	75.0	-22.858	-18.537	0.87594	0.196	0.475	1836
255	0.01837	264.67	70.0	-20.549	-16.126	0.88549	0.195	0.490	1757
260	0.01884	231.41	64.7	-18.179	-13.642	0.89514	0.194	0.503	1668
265	0.01937	199.56	60.2	-15.733	-11.069	0.90494	0.194	0.528	1587
270	0.01998	169.52	54.9	-13.194	-8.385	0.91498	0.194	0.548	1491
275	0.02068	141.14	50.2	-10.540	-5.562	0.92533	0.194	0.582	1401
280	0.02151	114.69	45.2	-7.739	-2.562	0.93615	0.195	0.621	1302
285	0.02252	91.02	40.5	-4.748	0.673	0.94760	0.196	0.677	1207
290	0.02379	69.86	35.7	-1.499	4.229	0.95996	0.202	0.755	1100
295	0.02545	52.25	30.6	2.077	8.204	0.97355	0.203	0.836	998
300	0.02767	38.96	26.1	6.019	12.679	0.98859	0.205	0.951	914
310	0.03427	27.38	18.3	14.587	22.837	1.02189	0.206	1.028	795
320	0.04232	30.78	13.5	22.026	32.214	1.05168	0.199	0.828	769
330	0.04966	39.00	10.8	27.537	39.491	1.07409	0.192	0.643	778
340	0.05606	47.84	9.2	31.826	45.320	1.09150	0.186	0.533	796
350	0.06175	56.40	8.0	35.404	50.269	1.10586	0.182	0.464	817
360	0.06694	64.51	7.2	38.538	54.652	1.11821	0.178	0.418	837
370	0.07175	72.16	6.5	41.371	58.642	1.12915	0.175	0.384	856
380	0.07628	79.51	6.0	43.993	62.356	1.13906	0.173	0.360	875
390	0.08059	86.41	5.6	46.459	65.858	1.14816	0.171	0.341	893
400	0.08471	93.03	5.2	48.804	69.196	1.15661	0.170	0.327	911
410	0.08868	99.39	4.9	51.054	72.402	1.16452	0.168	0.315	928
420	0.09253	105.52	4.7	53.226	75.500	1.17199	0.167	0.305	944
430	0.09627	111.45	4.4	55.333	78.509	1.17907	0.166	0.297	960
440	0.09992	117.21	4.2	57.387	81.441	1.18581	0.165	0.290	975
450	0.10349	122.81	4.1	59.394	84.307	1.19225	0.164	0.284	991
460	0.10699	128.26	3.9	61.362	87.118	1.19843	0.164	0.278	1005
470	0.11043	133.59	3.7	63.296	89.879	1.20437	0.163	0.274	1020
480	0.11381	138.80	3.6	65.200	92.597	1.21009	0.162	0.270	1033
490	0.11714	143.92	3.5	67.077	95.277	1.21562	0.162	0.266	1047
500	0.12043	148.94	3.4	68.931	97.923	1.22096	0.161	0.263	1060
510	0.12369	153.87	3.3	70.765	100.539	1.22614	0.161	0.260	1074
520	0.12690	158.73	3.2	72.581	103.129	1.23117	0.161	0.258	1086
530	0.13008	163.52	3.1	74.380	105.695	1.23606	0.160	0.255	1099
540	0.13324	168.25	3.0	76.166	108.240	1.24082	0.160	0.253	1111
550	0.13637	172.92	2.9	77.938	110.765	1.24545	0.160	0.252	1123
560	0.13947	177.54	2.8	79.700	113.274	1.24997	0.160	0.250	1135
570	0.14255	182.11	2.8	81.451	115.767	1.25438	0.159	0.249	1147
580	0.14561	186.64	2.7	83.194	118.247	1.25870	0.159	0.247	1159
590	0.14866	191.13	2.6	84.929	120.715	1.26292	0.159	0.246	1170
600	0.15168	195.58	2.6	86.658	123.171	1.26704	0.159	0.245	1181

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1300 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.673	81.90220	220.61	14.586	177775.97	0.0017921	0.11230	43.462	0.00347	1.57138	5.5080
100	81.85424	220.41	14.572	177164.79	0.0017936	0.11222	43.195	0.00347	1.57099	5.4781
105	81.11885	217.45	14.352	167999.87	0.0018165	0.11082	39.320	0.00346	1.56508	5.0457
110	80.38060	214.45	14.125	159180.83	0.0018407	0.10934	35.828	0.00345	1.55916	4.6566
115	79.63920	211.41	13.891	150697.43	0.0018661	0.10779	32.682	0.00343	1.55323	4.3064
120	78.89435	208.33	13.652	142539.61	0.0018929	0.10617	29.847	0.00341	1.54729	3.9909
125	78.14572	205.20	13.408	134697.49	0.0019212	0.10449	27.292	0.00339	1.54133	3.7067
130	77.39292	202.03	13.159	127161.34	0.0019511	0.10277	24.989	0.00337	1.53535	3.4506
135	76.63554	198.81	12.907	119921.64	0.0019829	0.10099	22.913	0.00334	1.52935	3.2198
140	75.87314	195.53	12.651	112969.04	0.0020167	0.09918	21.041	0.00331	1.52333	3.0119
145	75.10521	192.20	12.393	106294.37	0.0020528	0.09732	19.354	0.00328	1.51728	2.8247
150	74.33119	188.82	12.133	99888.67	0.0020913	0.09544	17.832	0.00325	1.51120	2.6563
155	73.55049	185.37	11.872	93743.18	0.0021326	0.09352	16.460	0.00322	1.50508	2.5049
160	72.76241	181.86	11.610	87849.32	0.0021770	0.09158	15.223	0.00318	1.49892	2.3691
165	71.96620	178.28	11.349	82198.77	0.0022248	0.08962	14.106	0.00314	1.49271	2.2475
170	71.16102	174.64	11.088	76783.39	0.0022764	0.08764	13.098	0.00310	1.48645	2.1390
175	70.34594	170.92	10.828	71595.31	0.0023324	0.08564	12.188	0.00305	1.48013	2.0425
180	69.51990	167.12	10.570	66626.89	0.0023933	0.08363	11.366	0.00301	1.47374	1.9570
185	68.68172	163.25	10.314	61870.78	0.0024597	0.08161	10.624	0.00296	1.46728	1.8817
190	67.83009	159.28	10.061	57319.89	0.0025323	0.07958	9.953	0.00291	1.46074	1.8161
195	66.96351	155.24	9.810	52967.47	0.0026122	0.07754	9.346	0.00286	1.45409	1.7594
200	66.08028	151.10	9.563	48807.08	0.0027003	0.07550	8.796	0.00280	1.44735	1.7113
205	65.17847	146.86	9.320	44832.68	0.0027979	0.07345	8.298	0.00274	1.44048	1.6712
210	64.25589	142.52	9.080	41038.66	0.0029065	0.07139	7.846	0.00268	1.43347	1.6389
215	63.31000	138.08	8.844	37419.90	0.0030279	0.06933	7.435	0.00262	1.42631	1.6143
220	62.33789	133.54	8.611	33971.84	0.0031644	0.06726	7.062	0.00255	1.41898	1.5971
225	61.33617	128.89	8.380	30690.64	0.0033187	0.06519	6.721	0.00248	1.41145	1.5876
230	60.30090	124.10	8.150	27573.26	0.0034942	0.06312	6.410	0.00241	1.40370	1.5860
235	59.21780	120.45	7.669	24477.94	0.0037001	0.06101	6.121	0.00231	1.39562	1.6098
240	58.09811	115.72	7.422	21713.67	0.0039352	0.05891	5.853	0.00223	1.38730	1.6313
245	56.93217	110.80	7.140	19125.78	0.0041829	0.05682	5.666	0.00215	1.37867	1.6638
250	55.71150	105.84	6.878	16691.92	0.0044903	0.05471	5.466	0.00207	1.36967	1.7094
255	54.42615	100.78	6.610	14404.90	0.0048598	0.05259	5.263	0.00197	1.36024	1.7644
260	53.06609	95.50	6.288	12280.00	0.0052688	0.05046	5.056	0.00189	1.35031	1.8150
265	51.61615	90.34	6.021	10300.66	0.0058407	0.04831	4.844	0.00177	1.33978	1.9047
270	50.05622	84.75	5.664	8485.54	0.0064686	0.04613	4.626	0.00168	1.32851	1.9789
275	48.36075	79.20	5.347	6825.66	0.0073474	0.04392	4.399	0.00156	1.31633	2.0984
280	46.49333	73.36	4.991	5332.29	0.0084719	0.04164	4.162	0.00144	1.30301	2.2360
285	44.40407	67.66	4.650	4041.77	0.0100103	0.04010	3.911	0.00133	1.28821	2.3780
290	42.02678	62.17	4.204	2936.07	0.0121424	0.03864	3.645	0.00122	1.27150	2.5631
295	39.29136	56.15	3.827	2053.04	0.0148895	0.03709	3.360	0.00113	1.25247	2.7271
300	36.14333	51.25	3.520	1408.08	0.0185658	0.03565	3.062	0.00104	1.23080	2.9418
310	29.17953	44.97	3.035	799.00	0.0228697	0.03189	2.499	0.00106	1.18378	2.9018
320	23.62951	44.60	2.863	727.24	0.0185598	0.02715	2.138	0.00139	1.14719	2.3458
330	20.13706	46.74	2.793	785.30	0.0137542	0.02393	1.948	0.00185	1.12456	1.8839
340	17.83954	49.67	2.757	853.43	0.0107281	0.02205	1.841	0.00232	1.10984	1.6017
350	16.19451	52.78	2.728	913.39	0.0087836	0.02088	1.776	0.00278	1.09939	1.4193
360	14.93866	55.95	2.705	963.62	0.0074656	0.02012	1.733	0.00322	1.09145	1.2952
370	13.93737	59.10	2.678	1005.75	0.0065022	0.01956	1.705	0.00365	1.08515	1.2055
380	13.10924	62.27	2.655	1042.26	0.0057767	0.01918	1.686	0.00407	1.07995	1.1386
390	12.40913	65.38	2.635	1072.30	0.0052213	0.01891	1.674	0.00447	1.07558	1.0879
400	11.80509	68.44	2.617	1098.21	0.0047743	0.01873	1.667	0.00486	1.07181	1.0472
410	11.27609	71.46	2.601	1120.70	0.0044064	0.01861	1.664	0.00524	1.06852	1.0137
420	10.80711	74.44	2.586	1140.38	0.0040983	0.01854	1.664	0.00562	1.06561	0.9858
430	10.38712	77.37	2.572	1157.69	0.0038361	0.01850	1.666	0.00600	1.06301	0.9621
440	10.00777	80.26	2.560	1173.00	0.0036102	0.01849	1.670	0.00638	1.06066	0.9417
450	9.66262	83.11	2.549	1186.63	0.0034135	0.01851	1.675	0.00675	1.05853	0.9241
460	9.34660	85.93	2.538	1198.81	0.0032405	0.01855	1.682	0.00713	1.05658	0.9087
470	9.05566	88.71	2.529	1209.75	0.0030870	0.01860	1.689	0.00750	1.05478	0.8951
480	8.78651	91.46	2.520	1219.61	0.0029499	0.01867	1.698	0.00788	1.05313	0.8831
490	8.53646	94.19	2.512	1228.54	0.0028266	0.01875	1.707	0.00825	1.05159	0.8724
500	8.30325	96.89	2.505	1236.66	0.0027150	0.01885	1.717	0.00863	1.05016	0.8629
510	8.08501	99.58	2.498	1244.06	0.0026136	0.01889	1.727	0.00898	1.04882	0.8566
520	7.88015	102.24	2.491	1250.83	0.0025209	0.01902	1.738	0.00936	1.04756	0.8481
530	7.68730	104.89	2.485	1257.05	0.0024357	0.01915	1.750	0.00975	1.04638	0.8405
540	7.50530	107.53	2.479	1262.78	0.0023572	0.01928	1.762	0.01013	1.04526	0.8337
550	7.33315	110.16	2.473	1268.06	0.0022846	0.01942	1.774	0.01052	1.04421	0.8275
560	7.16996	112.79	2.467	1272.96	0.0022172	0.01956	1.786	0.01091	1.04321	0.8220
570	7.01496	115.40	2.461	1277.51	0.0021544	0.01970	1.798	0.01130	1.04226	0.8170
580	6.86748	118.02	2.456	1281.74	0.0020958	0.01985	1.811	0.01169	1.04136	0.8125
590	6.72692	120.63	2.450	1285.69	0.0020408	0.02000	1.824	0.01208	1.04050	0.8084
600	6.59275	123.24	2.444	1289.38	0.0019892	0.02015	1.837	0.01247	1.03969	0.8047

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1350 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.743	0.01221	2173.64	318.6	-83.003	-79.952	0.50332	0.267	0.395	3863
100	0.01221	2168.78	318.0	-82.903	-79.850	0.50433	0.266	0.395	3860
105	0.01232	2075.48	305.4	-80.955	-77.875	0.52361	0.262	0.395	3805
110	0.01244	1984.85	293.2	-79.010	-75.901	0.54197	0.258	0.395	3749
115	0.01255	1896.83	281.4	-77.066	-73.928	0.55951	0.254	0.394	3692
120	0.01267	1811.36	270.0	-75.124	-71.957	0.57629	0.251	0.394	3633
125	0.01279	1728.38	259.0	-73.183	-69.986	0.59238	0.247	0.394	3574
130	0.01292	1647.85	248.3	-71.244	-68.015	0.60784	0.244	0.394	3513
135	0.01304	1569.69	238.0	-69.305	-66.045	0.62271	0.241	0.394	3452
140	0.01317	1493.85	228.1	-67.367	-64.074	0.63704	0.237	0.394	3389
145	0.01331	1420.29	218.5	-65.429	-62.103	0.65088	0.235	0.394	3326
150	0.01345	1348.93	209.2	-63.491	-60.130	0.66425	0.232	0.395	3262
155	0.01359	1279.72	200.2	-61.552	-58.155	0.67720	0.229	0.395	3198
160	0.01374	1212.61	191.5	-59.612	-56.178	0.68975	0.227	0.396	3132
165	0.01389	1147.54	183.2	-57.670	-54.198	0.70194	0.224	0.396	3067
170	0.01404	1084.45	175.1	-55.725	-52.214	0.71378	0.222	0.397	3000
175	0.01421	1023.30	167.3	-53.776	-50.225	0.72531	0.219	0.398	2934
180	0.01437	964.03	159.8	-51.824	-48.231	0.73655	0.217	0.400	2867
185	0.01455	906.58	152.5	-49.866	-46.229	0.74752	0.215	0.401	2799
190	0.01473	850.91	145.5	-47.902	-44.220	0.75824	0.213	0.403	2731
195	0.01492	796.96	138.7	-45.930	-42.201	0.76873	0.211	0.405	2663
200	0.01512	744.69	132.2	-43.949	-40.170	0.77902	0.209	0.407	2595
205	0.01533	694.06	125.8	-41.958	-38.127	0.78911	0.207	0.410	2526
210	0.01554	645.02	119.7	-39.954	-36.069	0.79903	0.205	0.413	2457
215	0.01577	597.54	113.8	-37.936	-33.992	0.80880	0.202	0.417	2388
220	0.01602	551.59	108.0	-35.900	-31.896	0.81844	0.200	0.421	2318
225	0.01628	507.15	102.4	-33.844	-29.775	0.82797	0.198	0.426	2248
230	0.01655	464.20	96.9	-31.765	-27.627	0.83741	0.196	0.432	2177
235	0.01685	420.34	91.1	-29.632	-25.419	0.84690	0.199	0.444	2081
240	0.01717	380.75	86.0	-27.469	-23.176	0.85635	0.198	0.453	2008
245	0.01752	343.11	80.6	-25.269	-20.890	0.86577	0.197	0.461	1928
250	0.01790	306.96	75.6	-23.030	-18.556	0.87520	0.196	0.472	1852
255	0.01831	272.18	70.7	-20.741	-16.164	0.88468	0.195	0.485	1773
260	0.01877	239.12	65.5	-18.396	-13.704	0.89423	0.194	0.498	1687
265	0.01928	207.50	61.0	-15.982	-11.162	0.90392	0.193	0.521	1609
270	0.01986	177.61	55.8	-13.483	-8.517	0.91380	0.193	0.539	1515
275	0.02053	149.39	51.2	-10.880	-5.748	0.92397	0.194	0.570	1427
280	0.02132	123.02	46.3	-8.149	-2.821	0.93451	0.194	0.604	1331
285	0.02226	99.40	41.7	-5.252	0.312	0.94560	0.195	0.652	1241
290	0.02342	78.11	37.0	-2.139	3.715	0.95744	0.201	0.718	1138
295	0.02489	60.09	32.1	1.244	7.465	0.97025	0.202	0.783	1040
300	0.02679	45.92	27.9	4.923	11.621	0.98422	0.203	0.878	958
310	0.03237	31.08	20.0	12.962	21.053	1.01514	0.205	0.978	830
320	0.03962	31.50	14.8	20.429	30.334	1.04462	0.200	0.847	787
330	0.04667	38.49	11.7	26.210	37.876	1.06784	0.193	0.670	787
340	0.05292	46.91	9.9	30.720	43.950	1.08599	0.187	0.554	802
350	0.05851	55.34	8.6	34.458	49.086	1.10089	0.182	0.480	821
360	0.06361	63.42	7.7	37.708	53.610	1.11364	0.179	0.430	841
370	0.06833	71.10	7.0	40.629	57.710	1.12488	0.176	0.394	859
380	0.07277	78.43	6.4	43.322	61.513	1.13502	0.174	0.366	876
390	0.07698	85.46	5.9	45.842	65.085	1.14430	0.172	0.348	895
400	0.08100	92.14	5.5	48.233	68.483	1.15291	0.170	0.332	913
410	0.08488	98.57	5.2	50.522	71.740	1.16095	0.169	0.320	930
420	0.08863	104.77	4.9	52.727	74.883	1.16853	0.168	0.309	946
430	0.09228	110.76	4.7	54.863	77.931	1.17570	0.167	0.300	962
440	0.09583	116.58	4.5	56.942	80.897	1.18252	0.166	0.293	977
450	0.09930	122.23	4.3	58.972	83.795	1.18903	0.165	0.287	993
460	0.10270	127.74	4.1	60.960	86.633	1.19527	0.164	0.281	1007
470	0.10604	133.13	3.9	62.911	89.419	1.20126	0.163	0.276	1021
480	0.10932	138.39	3.8	64.831	92.159	1.20703	0.163	0.272	1035
490	0.11256	143.55	3.6	66.722	94.860	1.21260	0.162	0.268	1049
500	0.11575	148.62	3.5	68.590	97.525	1.21798	0.162	0.265	1062
510	0.11890	153.60	3.4	70.435	100.159	1.22320	0.161	0.262	1076
520	0.12202	158.50	3.3	72.262	102.765	1.22826	0.161	0.259	1088
530	0.12511	163.34	3.2	74.071	105.346	1.23317	0.160	0.257	1101
540	0.12816	168.10	3.1	75.865	107.904	1.23795	0.160	0.255	1114
550	0.13119	172.82	3.0	77.646	110.442	1.24261	0.160	0.253	1126
560	0.13420	177.47	3.0	79.415	112.963	1.24715	0.160	0.251	1138
570	0.13718	182.08	2.9	81.174	115.467	1.25159	0.159	0.250	1150
580	0.14015	186.64	2.8	82.923	117.957	1.25592	0.159	0.248	1161
590	0.14309	191.17	2.7	84.664	120.435	1.26015	0.159	0.247	1173
600	0.14602	195.65	2.7	86.397	122.900	1.26430	0.159	0.246	1184

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1350 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.743	81.91493	220.88	14.584	178053.65	0.0017894	0.11233	43.534	0.00347	1.57148	5.5144
100	81.87732	220.73	14.573	177573.92	0.0017906	0.11226	43.323	0.00347	1.57118	5.4909
105	81.14296	217.78	14.353	168410.81	0.0018134	0.11087	39.441	0.00346	1.56527	5.0576
110	80.40581	214.79	14.126	159593.60	0.0018373	0.10939	35.942	0.00345	1.55936	4.6677
115	79.66559	211.76	13.893	151112.07	0.0018624	0.10785	32.789	0.00343	1.55344	4.3167
120	78.92199	208.69	13.654	142956.15	0.0018889	0.10624	29.947	0.00341	1.54751	4.0005
125	78.17469	205.58	13.409	135115.95	0.0019169	0.10457	27.386	0.00339	1.54156	3.7157
130	77.42330	202.42	13.161	127581.78	0.0019466	0.10284	25.077	0.00337	1.53559	3.4589
135	76.66745	199.22	12.909	120344.08	0.0019780	0.10107	22.996	0.00335	1.52960	3.2275
140	75.90666	195.96	12.653	113393.52	0.0020114	0.09926	21.120	0.00332	1.52359	3.0190
145	75.14047	192.64	12.395	106720.94	0.0020470	0.09741	19.428	0.00329	1.51756	2.8313
150	74.36833	189.27	12.136	100317.36	0.0020851	0.09553	17.902	0.00326	1.51149	2.6624
155	73.58964	185.85	11.875	94174.04	0.0021258	0.09362	16.526	0.00322	1.50538	2.5105
160	72.80373	182.35	11.614	88282.40	0.0021695	0.09169	15.285	0.00318	1.49924	2.3743
165	72.00987	178.80	11.353	82634.10	0.0022166	0.08973	14.165	0.00314	1.49305	2.2522
170	71.20724	175.17	11.093	77221.04	0.0022675	0.08776	13.154	0.00310	1.48681	2.1432
175	70.39493	171.47	10.834	72035.33	0.0023226	0.08577	12.241	0.00306	1.48051	2.0462
180	69.57191	167.70	10.576	67069.34	0.0023824	0.08377	11.416	0.00301	1.47414	1.9602
185	68.73705	163.85	10.321	62315.70	0.0024476	0.08175	10.671	0.00297	1.46771	1.8845
190	67.88906	159.91	10.069	57767.36	0.0025189	0.07973	9.998	0.00292	1.46119	1.8184
195	67.02648	155.89	9.820	53417.53	0.0025972	0.07770	9.388	0.00286	1.45458	1.7611
200	66.14770	151.78	9.575	49259.79	0.0026834	0.07566	8.837	0.00281	1.44786	1.7124
205	65.25084	147.57	9.333	45288.10	0.0027787	0.07362	8.337	0.00275	1.44103	1.6717
210	64.33379	143.27	9.096	41496.82	0.0028847	0.07157	7.883	0.00269	1.43406	1.6387
215	63.39413	138.87	8.862	37880.82	0.0030030	0.06952	7.471	0.00263	1.42695	1.6133
220	62.42908	134.36	8.632	34435.52	0.0031357	0.06747	7.096	0.00257	1.41967	1.5953
225	61.43542	129.76	8.404	31157.01	0.0032853	0.06541	6.754	0.00250	1.41220	1.5847
230	60.40942	125.07	8.178	28042.19	0.0034550	0.06335	6.442	0.00243	1.40451	1.5819
235	59.33775	121.43	7.697	24941.92	0.0036530	0.06126	6.153	0.00233	1.39651	1.6040
240	58.23065	116.75	7.454	22171.47	0.0038809	0.05918	5.889	0.00224	1.38828	1.6233
245	57.07944	111.90	7.173	19584.49	0.0041159	0.05710	5.692	0.00217	1.37976	1.6530
250	55.87637	107.03	6.916	17151.79	0.0044083	0.05501	5.495	0.00209	1.37089	1.6966
255	54.61243	102.05	6.652	14864.25	0.0047565	0.05291	5.294	0.00200	1.36161	1.7483
260	53.27862	96.89	6.339	12739.82	0.0051395	0.05081	5.090	0.00192	1.35186	1.7959
265	51.86183	91.85	6.080	10761.27	0.0056689	0.04869	4.882	0.00180	1.34156	1.8794
270	50.34433	86.40	5.732	8941.58	0.0062405	0.04655	4.668	0.00171	1.33059	1.9463
275	48.70501	81.02	5.426	7276.02	0.0070308	0.04438	4.447	0.00160	1.31880	2.0545
280	46.91414	75.34	5.078	5771.17	0.0080142	0.04217	4.217	0.00149	1.30600	2.1735
285	44.92947	69.87	4.756	4466.07	0.0093350	0.04047	3.976	0.00138	1.29192	2.3070
290	42.70316	64.63	4.324	3335.61	0.0111918	0.03901	3.722	0.00127	1.27624	2.4648
295	40.18291	58.83	3.969	2414.49	0.0133104	0.03746	3.455	0.00119	1.25865	2.5994
300	37.32459	53.97	3.674	1713.88	0.0162587	0.03603	3.175	0.00110	1.23890	2.7837
310	30.89654	46.99	3.162	960.35	0.0208246	0.03262	2.633	0.00108	1.19526	2.8430
320	25.23887	45.48	2.937	794.90	0.0186230	0.02829	2.244	0.00132	1.15772	2.4186
330	21.42889	47.05	2.843	824.85	0.0142443	0.02490	2.025	0.00173	1.13289	1.9622
340	18.89559	49.71	2.795	886.34	0.0111498	0.02282	1.901	0.00218	1.11659	1.6621
350	17.08978	52.70	2.760	945.69	0.0091037	0.02151	1.825	0.00262	1.10507	1.4649
360	15.72057	55.79	2.733	996.95	0.0077086	0.02065	1.775	0.00305	1.09639	1.3305
370	14.63550	58.89	2.704	1040.61	0.0066908	0.02002	1.742	0.00347	1.08954	1.2338
380	13.74208	62.00	2.670	1077.85	0.0059097	0.01957	1.719	0.00389	1.08392	1.1585
390	12.99101	65.12	2.658	1110.25	0.0053413	0.01928	1.704	0.00427	1.07921	1.1071
400	12.34518	68.18	2.638	1137.51	0.0048733	0.01906	1.695	0.00465	1.07518	1.0636
410	11.78128	71.20	2.621	1161.25	0.0044894	0.01891	1.690	0.00502	1.07166	1.0280
420	11.28268	74.18	2.605	1182.03	0.0041685	0.01882	1.688	0.00539	1.06856	0.9983
430	10.83715	77.12	2.591	1200.34	0.0038963	0.01876	1.688	0.00576	1.06580	0.9732
440	10.43552	80.01	2.578	1216.55	0.0036623	0.01874	1.691	0.00613	1.06331	0.9517
450	10.07073	82.87	2.566	1230.97	0.0034588	0.01875	1.695	0.00649	1.06105	0.9331
460	9.73723	85.69	2.555	1243.87	0.0032803	0.01877	1.701	0.00686	1.05899	0.9168
470	9.43060	88.47	2.545	1255.46	0.0031222	0.01882	1.708	0.00722	1.05709	0.9025
480	9.14728	91.23	2.536	1265.91	0.0029812	0.01888	1.716	0.00759	1.05535	0.8899
490	8.88433	93.96	2.528	1275.37	0.0028545	0.01895	1.724	0.00795	1.05373	0.8786
500	8.63933	96.67	2.521	1283.97	0.0027402	0.01903	1.734	0.00832	1.05222	0.8686
510	8.41025	99.35	2.513	1291.82	0.0026362	0.01907	1.744	0.00866	1.05081	0.8620
520	8.19537	102.02	2.507	1299.00	0.0025414	0.01919	1.754	0.00903	1.04949	0.8531
530	7.99324	104.67	2.500	1305.59	0.0024544	0.01931	1.765	0.00941	1.04825	0.8451
540	7.80261	107.32	2.494	1311.66	0.0023743	0.01944	1.776	0.00978	1.04708	0.8379
550	7.62239	109.95	2.488	1317.26	0.0023003	0.01958	1.788	0.01015	1.04598	0.8315
560	7.45164	112.57	2.482	1322.46	0.0022316	0.01971	1.800	0.01053	1.04493	0.8257
570	7.28954	115.19	2.476	1327.28	0.0021677	0.01985	1.812	0.01091	1.04394	0.8204
580	7.13538	117.80	2.471	1331.77	0.0021081	0.02000	1.824	0.01128	1.04300	0.8157
590	6.98850	120.41	2.465	1335.96	0.0020523	0.02014	1.837	0.01166	1.04210	0.8114
600	6.84836	123.02	2.459	1339.88	0.0019999	0.02029	1.850	0.01204	1.04125	0.8075

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1400 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.814	0.01221	2176.69	318.6	-82.995	-79.831	0.50339	0.267	0.395	3865
100	0.01221	2173.16	318.2	-82.923	-79.757	0.50413	0.267	0.395	3863
105	0.01232	2079.93	305.6	-80.976	-77.782	0.52340	0.262	0.395	3808
110	0.01243	1989.36	293.4	-79.032	-75.809	0.54176	0.258	0.395	3752
115	0.01255	1901.40	281.7	-77.090	-73.837	0.55929	0.254	0.394	3695
120	0.01267	1816.00	270.3	-75.149	-71.866	0.57607	0.251	0.394	3637
125	0.01279	1733.09	259.2	-73.211	-69.896	0.59215	0.247	0.394	3577
130	0.01291	1652.62	248.6	-71.273	-67.926	0.60760	0.244	0.394	3517
135	0.01304	1574.54	238.3	-69.336	-65.956	0.62247	0.241	0.394	3455
140	0.01317	1498.78	228.3	-67.400	-63.986	0.63680	0.238	0.394	3393
145	0.01330	1425.29	218.7	-65.464	-62.016	0.65063	0.235	0.394	3330
150	0.01344	1354.01	209.4	-63.528	-60.044	0.66399	0.232	0.394	3266
155	0.01358	1284.88	200.5	-61.592	-58.071	0.67693	0.229	0.395	3202
160	0.01373	1217.86	191.8	-59.654	-56.095	0.68948	0.227	0.395	3137
165	0.01388	1152.88	183.5	-57.714	-54.116	0.70165	0.224	0.396	3072
170	0.01403	1089.88	175.4	-55.772	-52.134	0.71349	0.222	0.397	3006
175	0.01420	1028.83	167.6	-53.827	-50.147	0.72501	0.220	0.398	2939
180	0.01436	969.65	160.1	-51.878	-48.154	0.73624	0.217	0.399	2872
185	0.01454	912.31	152.9	-49.924	-46.155	0.74719	0.215	0.401	2805
190	0.01472	856.74	145.9	-47.964	-44.148	0.75790	0.213	0.402	2738
195	0.01491	802.91	139.1	-45.996	-42.132	0.76838	0.211	0.404	2670
200	0.01510	750.76	132.6	-44.020	-40.105	0.77864	0.209	0.407	2602
205	0.01531	700.25	126.2	-42.034	-38.066	0.78872	0.207	0.409	2534
210	0.01553	651.34	120.1	-40.036	-36.011	0.79862	0.205	0.412	2466
215	0.01575	603.99	114.2	-38.024	-33.940	0.80837	0.203	0.416	2397
220	0.01600	558.18	108.4	-35.996	-31.849	0.81798	0.200	0.420	2328
225	0.01625	513.89	102.9	-33.948	-29.735	0.82748	0.198	0.425	2258
230	0.01652	471.09	97.4	-31.878	-27.594	0.83688	0.196	0.430	2188
235	0.01682	427.28	91.6	-29.757	-25.397	0.84633	0.200	0.442	2093
240	0.01713	387.72	86.6	-27.606	-23.164	0.85573	0.198	0.451	2021
245	0.01748	350.22	81.2	-25.421	-20.890	0.86511	0.197	0.458	1942
250	0.01785	314.23	76.3	-23.198	-18.572	0.87448	0.196	0.469	1867
255	0.01825	279.60	71.4	-20.929	-16.198	0.88388	0.195	0.481	1790
260	0.01870	246.72	66.2	-18.608	-13.761	0.89335	0.194	0.493	1705
265	0.01919	215.32	61.8	-16.223	-11.247	0.90292	0.193	0.514	1629
270	0.01976	185.57	56.7	-13.760	-8.638	0.91267	0.193	0.531	1537
275	0.02040	157.49	52.1	-11.204	-5.917	0.92266	0.193	0.559	1452
280	0.02114	131.19	47.3	-8.535	-3.055	0.93298	0.194	0.588	1359
285	0.02202	107.62	42.9	-5.719	-0.010	0.94375	0.194	0.631	1272
290	0.02309	86.22	38.3	-2.717	3.268	0.95515	0.200	0.687	1173
295	0.02441	67.86	33.6	0.508	6.836	0.96735	0.200	0.741	1079
310	0.03086	35.54	21.6	11.546	19.547	1.00934	0.203	0.924	866
320	0.03732	33.00	16.1	18.910	28.586	1.03804	0.200	0.851	808
330	0.04400	38.48	12.7	24.892	36.298	1.06179	0.193	0.693	799
340	0.05008	46.30	10.6	29.609	42.591	1.08059	0.188	0.574	810
350	0.05555	54.50	9.2	33.504	47.906	1.09600	0.183	0.495	826
360	0.06055	62.50	8.2	36.872	52.569	1.10915	0.180	0.442	844
370	0.06517	70.18	7.4	39.883	56.779	1.12069	0.177	0.404	862
380	0.06953	77.54	6.8	42.646	60.670	1.13107	0.174	0.374	879
390	0.07364	84.57	6.3	45.222	64.312	1.14053	0.172	0.355	898
400	0.07758	91.34	5.9	47.660	67.772	1.14930	0.171	0.338	915
410	0.08136	97.82	5.5	49.988	71.081	1.15747	0.169	0.324	932
420	0.08502	104.07	5.2	52.227	74.268	1.16515	0.168	0.313	948
430	0.08857	110.13	4.9	54.393	77.355	1.17241	0.167	0.304	964
440	0.09203	116.00	4.7	56.497	80.356	1.17931	0.166	0.296	979
450	0.09541	121.71	4.5	58.549	83.284	1.18589	0.165	0.290	995
460	0.09872	127.27	4.3	60.557	86.150	1.19219	0.164	0.284	1009
470	0.10197	132.70	4.1	62.526	88.961	1.19824	0.164	0.279	1023
480	0.10516	138.02	4.0	64.462	91.724	1.20405	0.163	0.274	1037
490	0.10831	143.22	3.8	66.368	94.446	1.20967	0.162	0.270	1051
500	0.11141	148.34	3.7	68.248	97.130	1.21509	0.162	0.267	1065
510	0.11447	153.36	3.6	70.106	99.781	1.22034	0.161	0.264	1078
520	0.11749	158.31	3.5	71.943	102.403	1.22543	0.161	0.261	1091
530	0.12049	163.18	3.3	73.762	104.998	1.23037	0.160	0.258	1103
540	0.12345	167.99	3.3	75.566	107.570	1.23518	0.160	0.256	1116
550	0.12639	172.73	3.2	77.355	110.121	1.23986	0.160	0.254	1128
560	0.12931	177.43	3.1	79.131	112.654	1.24442	0.160	0.252	1140
570	0.13220	182.07	3.0	80.896	115.169	1.24888	0.159	0.251	1152
580	0.13508	186.67	2.9	82.652	117.669	1.25322	0.159	0.249	1164
590	0.13793	191.23	2.9	84.399	120.156	1.25748	0.159	0.248	1175
600	0.14077	195.75	2.8	86.137	122.631	1.26163	0.159	0.247	1187

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1400 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.814	81.92764	221.16	14.582	178331.12	0.0017868	0.11236	43.606	0.00347	1.57158	5.5208
100	81.90035	221.05	14.574	177982.71	0.0017876	0.11231	43.453	0.00347	1.57136	5.5037
105	81.16703	218.11	14.354	168821.39	0.0018102	0.11092	39.562	0.00346	1.56547	5.0695
110	80.43098	215.13	14.127	160005.99	0.0018339	0.10945	36.056	0.00345	1.55956	4.6788
115	79.69192	212.12	13.894	151526.30	0.0018588	0.10791	32.896	0.00343	1.55365	4.3271
120	78.94956	209.06	13.655	143372.26	0.0018850	0.10630	30.048	0.00342	1.54773	4.0102
125	78.20358	205.96	13.411	135533.97	0.0019127	0.10464	27.481	0.00340	1.54179	3.7246
130	77.45360	202.82	13.162	128001.72	0.0019421	0.10292	25.166	0.00337	1.53583	3.4672
135	76.69925	199.62	12.910	120766.00	0.0019731	0.10116	23.080	0.00335	1.52986	3.2353
140	75.94008	196.38	12.655	113817.45	0.0020061	0.09935	21.199	0.00332	1.52386	3.0262
145	75.17562	193.08	12.398	107146.90	0.0020413	0.09751	19.502	0.00329	1.51783	2.8380
150	74.40533	189.73	12.138	100745.41	0.0020789	0.09563	17.972	0.00326	1.51178	2.6685
155	73.62863	186.32	11.878	94604.20	0.0021191	0.09373	16.592	0.00322	1.50569	2.5162
160	72.84487	182.85	11.617	88714.73	0.0021622	0.09180	15.347	0.00319	1.49956	2.3794
165	72.05334	179.31	11.357	83068.64	0.0022086	0.08985	14.224	0.00315	1.49339	2.2569
170	71.25323	175.70	11.097	77657.83	0.0022587	0.08788	13.209	0.00311	1.48716	2.1474
175	70.44366	172.03	10.839	72474.41	0.0023129	0.08590	12.293	0.00306	1.48089	2.0499
180	69.62363	168.29	10.583	67510.77	0.0023717	0.08390	11.466	0.00302	1.47454	1.9635
185	68.79203	164.45	10.329	62759.53	0.0024357	0.08189	10.719	0.00297	1.46813	1.8873
190	67.94762	160.54	10.078	58213.63	0.0025057	0.07988	10.043	0.00292	1.46164	1.8206
195	67.08899	156.54	9.830	53866.29	0.0025824	0.07786	9.431	0.00287	1.45505	1.7629
200	66.21457	152.46	9.586	49711.09	0.0026668	0.07583	8.877	0.00282	1.44837	1.7136
205	65.32256	148.29	9.347	45741.98	0.0027600	0.07379	8.376	0.00276	1.44157	1.6723
210	64.41093	144.02	9.111	41953.30	0.0028635	0.07176	7.920	0.00270	1.43465	1.6386
215	63.47736	139.65	8.879	38339.90	0.0029787	0.06972	7.507	0.00264	1.42758	1.6124
220	62.51919	135.18	8.652	34897.18	0.0031077	0.06767	7.131	0.00258	1.42035	1.5936
225	61.53336	130.62	8.428	31621.18	0.0032528	0.06562	6.788	0.00251	1.41293	1.5820
230	60.51634	125.97	8.206	28508.71	0.0034170	0.06357	6.474	0.00244	1.40531	1.5780
235	59.45573	122.39	7.724	25404.16	0.0036075	0.06150	6.185	0.00234	1.39739	1.5985
240	58.36078	117.77	7.485	22627.36	0.0038286	0.05943	5.920	0.00226	1.38925	1.6168
245	57.22367	112.99	7.205	20040.78	0.0040519	0.05737	5.718	0.00219	1.38082	1.6426
250	56.03735	108.19	6.953	17608.81	0.0043306	0.05530	5.522	0.00211	1.37207	1.6843
255	54.79367	103.29	6.693	15320.44	0.0046593	0.05323	5.324	0.00202	1.36294	1.7331
260	53.48446	98.24	6.389	13195.93	0.0050195	0.05115	5.123	0.00194	1.35336	1.7782
265	52.09836	93.32	6.136	11217.82	0.0055107	0.04906	4.918	0.00183	1.34328	1.8558
270	50.61971	88.00	5.795	9393.38	0.0060338	0.04696	4.708	0.00175	1.33257	1.9167
275	49.03092	82.77	5.500	7722.03	0.0067497	0.04483	4.493	0.00164	1.32114	2.0154
280	47.30758	77.23	5.160	6206.24	0.0076164	0.04268	4.269	0.00153	1.30880	2.1185
285	45.41271	71.97	4.854	4887.30	0.0087678	0.04083	4.037	0.00142	1.29534	2.2458
290	43.31210	66.95	4.434	3734.38	0.0102605	0.03938	3.793	0.00132	1.28052	2.3824
295	40.96535	61.35	4.096	2780.05	0.0120804	0.03785	3.539	0.00125	1.26409	2.4950
300	38.33732	56.57	3.813	2032.23	0.0144878	0.03642	3.276	0.00116	1.24587	2.6533
310	32.40219	49.15	3.291	1151.61	0.0187975	0.03322	2.756	0.00111	1.20538	2.7597
320	26.79269	46.63	3.020	884.24	0.0182532	0.02929	2.351	0.00128	1.16795	2.4595
330	22.72948	47.54	2.898	874.64	0.0145715	0.02585	2.106	0.00164	1.14133	2.0314
340	19.96917	49.88	2.837	924.48	0.0115143	0.02360	1.963	0.00206	1.12348	1.7201
350	18.00058	52.70	2.795	981.01	0.0094010	0.02215	1.875	0.00248	1.11087	1.5100
360	16.51493	55.70	2.763	1032.22	0.0079400	0.02119	1.818	0.00290	1.10142	1.3658
370	15.34344	58.75	2.731	1076.82	0.0068730	0.02049	1.779	0.00331	1.09400	1.2621
380	14.38330	61.81	2.695	1115.29	0.0060559	0.01999	1.753	0.00371	1.08795	1.1818
390	13.57990	64.91	2.681	1148.47	0.0054629	0.01965	1.735	0.00408	1.08290	1.1270
400	12.89024	67.97	2.660	1177.36	0.0049704	0.01940	1.723	0.00445	1.07858	1.0801
410	12.29052	70.98	2.641	1202.23	0.0045708	0.01922	1.716	0.00482	1.07484	1.0424
420	11.76154	73.96	2.624	1224.05	0.0042376	0.01911	1.712	0.00518	1.07154	1.0109
430	11.28989	76.89	2.609	1243.31	0.0039554	0.01903	1.711	0.00554	1.06861	0.9844
440	10.86551	79.79	2.595	1260.37	0.0037134	0.01899	1.712	0.00590	1.06597	0.9617
450	10.48068	82.65	2.583	1275.57	0.0035034	0.01898	1.716	0.00626	1.06359	0.9421
460	10.12937	85.47	2.572	1289.17	0.0033194	0.01900	1.720	0.00661	1.06141	0.9250
470	9.80679	88.26	2.562	1301.39	0.0031567	0.01903	1.727	0.00697	1.05942	0.9099
480	9.50907	91.02	2.552	1312.42	0.0030119	0.01908	1.734	0.00732	1.05758	0.8966
490	9.23304	93.75	2.544	1322.40	0.0028820	0.01914	1.742	0.00767	1.05588	0.8848
500	8.97608	96.46	2.536	1331.48	0.0027648	0.01922	1.750	0.00803	1.05429	0.8743
510	8.73603	99.15	2.529	1339.76	0.0026585	0.01925	1.760	0.00836	1.05282	0.8674
520	8.51103	101.82	2.522	1347.34	0.0025616	0.01936	1.770	0.00872	1.05143	0.8581
530	8.29951	104.47	2.515	1354.30	0.0024728	0.01948	1.780	0.00909	1.05013	0.8497
540	8.10015	107.11	2.509	1360.71	0.0023911	0.01961	1.791	0.00945	1.04891	0.8422
550	7.91179	109.74	2.503	1366.64	0.0023157	0.01973	1.802	0.00981	1.04775	0.8354
560	7.73341	112.36	2.497	1372.13	0.0022458	0.01987	1.814	0.01018	1.04666	0.8293
570	7.56416	114.98	2.492	1377.22	0.0021808	0.02000	1.825	0.01055	1.04562	0.8238
580	7.40325	117.59	2.486	1381.97	0.0021202	0.02014	1.838	0.01091	1.04464	0.8189
590	7.25002	120.20	2.480	1386.41	0.0020635	0.02028	1.850	0.01128	1.04370	0.8144
600	7.10385	122.81	2.475	1390.56	0.0020103	0.02043	1.862	0.01165	1.04281	0.8104

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1450 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.884	0.01220	2179.74	318.7	-82.987	-79.710	0.50347	0.267	0.395	3868
100	0.01221	2177.54	318.4	-82.942	-79.664	0.50393	0.267	0.395	3866
105	0.01232	2084.36	305.8	-80.997	-77.690	0.52319	0.262	0.395	3811
110	0.01243	1993.86	293.6	-79.054	-75.717	0.54155	0.258	0.394	3755
115	0.01254	1905.97	281.9	-77.114	-73.745	0.55908	0.254	0.394	3698
120	0.01266	1820.63	270.5	-75.175	-71.775	0.57585	0.251	0.394	3640
125	0.01278	1737.79	259.5	-73.238	-69.806	0.59193	0.247	0.394	3581
130	0.01291	1657.39	248.8	-71.302	-67.837	0.60737	0.244	0.394	3520
135	0.01303	1579.38	238.5	-69.367	-65.868	0.62223	0.241	0.394	3459
140	0.01316	1503.70	228.6	-67.433	-63.899	0.63655	0.238	0.394	3397
145	0.01330	1430.28	219.0	-65.499	-61.929	0.65037	0.235	0.394	3334
150	0.01343	1359.08	209.7	-63.565	-59.959	0.66373	0.232	0.394	3271
155	0.01357	1290.04	200.7	-61.631	-57.986	0.67667	0.229	0.395	3207
160	0.01372	1223.10	192.1	-59.696	-56.012	0.68920	0.227	0.395	3142
165	0.01387	1158.20	183.8	-57.759	-54.035	0.70137	0.224	0.396	3077
170	0.01403	1095.30	175.7	-55.820	-52.054	0.71320	0.222	0.397	3011
175	0.01419	1034.34	167.9	-53.878	-50.069	0.72471	0.220	0.397	2945
180	0.01435	975.26	160.4	-51.932	-48.078	0.73592	0.217	0.399	2878
185	0.01453	918.02	153.2	-49.981	-46.081	0.74687	0.215	0.400	2811
190	0.01470	862.56	146.2	-48.025	-44.077	0.75756	0.213	0.402	2744
195	0.01489	808.83	139.5	-46.062	-42.064	0.76802	0.211	0.404	2677
200	0.01509	756.79	133.0	-44.091	-40.040	0.77827	0.209	0.406	2609
205	0.01529	706.40	126.6	-42.110	-38.004	0.78833	0.207	0.408	2542
210	0.01551	657.62	120.6	-40.118	-35.954	0.79821	0.205	0.411	2474
215	0.01573	610.41	114.6	-38.112	-33.887	0.80793	0.203	0.415	2406
220	0.01597	564.73	108.9	-36.091	-31.802	0.81752	0.201	0.419	2337
225	0.01623	520.58	103.4	-34.051	-29.694	0.82699	0.198	0.423	2269
230	0.01650	477.93	97.9	-31.990	-27.561	0.83636	0.196	0.429	2200
235	0.01679	434.18	92.2	-29.880	-25.373	0.84577	0.200	0.440	2105
240	0.01710	394.63	87.2	-27.741	-23.150	0.85513	0.198	0.449	2034
245	0.01743	357.27	81.8	-25.569	-20.888	0.86446	0.197	0.455	1955
250	0.01780	321.44	76.9	-23.362	-18.584	0.87377	0.196	0.465	1882
255	0.01819	286.95	72.0	-21.112	-16.227	0.88310	0.195	0.477	1805
260	0.01863	254.24	67.0	-18.813	-13.811	0.89249	0.194	0.489	1723
265	0.01911	223.03	62.6	-16.455	-11.324	0.90196	0.193	0.508	1648
270	0.01965	193.41	57.5	-14.026	-8.749	0.91159	0.193	0.523	1559
275	0.02027	165.46	53.0	-11.512	-6.071	0.92142	0.193	0.549	1476
280	0.02097	139.23	48.2	-8.898	-3.267	0.93152	0.193	0.574	1385
285	0.02181	115.69	44.0	-6.153	-0.298	0.94203	0.194	0.613	1302
290	0.02280	94.20	39.5	-3.248	2.873	0.95306	0.199	0.661	1205
295	0.02400	75.57	34.9	-0.153	6.292	0.96474	0.199	0.707	1115
300	0.02550	60.16	30.9	3.149	9.995	0.97719	0.200	0.773	1038
310	0.02966	40.55	23.2	10.311	18.274	1.00433	0.201	0.872	902
320	0.03538	35.26	17.5	17.491	26.992	1.03201	0.199	0.842	831
330	0.04163	38.99	13.8	23.600	34.777	1.05598	0.194	0.710	813
340	0.04750	46.03	11.4	28.499	41.253	1.07532	0.189	0.592	818
350	0.05284	53.90	9.9	32.546	46.735	1.09122	0.184	0.511	832
360	0.05774	61.77	8.7	36.031	51.534	1.10475	0.180	0.454	849
370	0.06227	69.41	7.9	39.132	55.851	1.11658	0.177	0.413	866
380	0.06653	76.77	7.2	41.967	59.829	1.12720	0.175	0.382	882
390	0.07055	83.83	6.6	44.601	63.544	1.13685	0.173	0.361	901
400	0.07440	90.61	6.2	47.085	67.062	1.14576	0.171	0.343	917
410	0.07810	97.14	5.8	49.453	70.424	1.15406	0.170	0.329	934
420	0.08168	103.44	5.5	51.726	73.656	1.16185	0.168	0.318	950
430	0.08514	109.55	5.2	53.921	76.781	1.16921	0.167	0.308	966
440	0.08851	115.47	4.9	56.051	79.817	1.17619	0.166	0.300	982
450	0.09181	121.23	4.7	58.126	82.776	1.18284	0.165	0.292	997
460	0.09503	126.84	4.5	60.154	85.670	1.18920	0.165	0.286	1011
470	0.09819	132.32	4.3	62.141	88.506	1.19530	0.164	0.281	1026
480	0.10130	137.68	4.1	64.093	91.292	1.20116	0.163	0.276	1040
490	0.10436	142.93	4.0	66.013	94.033	1.20682	0.162	0.272	1053
500	0.10737	148.09	3.8	67.907	96.736	1.21228	0.162	0.268	1067
510	0.11035	153.15	3.7	69.776	99.405	1.21756	0.161	0.265	1080
520	0.11329	158.14	3.6	71.624	102.042	1.22268	0.161	0.262	1093
530	0.11620	163.05	3.5	73.454	104.653	1.22765	0.160	0.260	1106
540	0.11908	167.89	3.4	75.266	107.238	1.23249	0.160	0.257	1118
550	0.12193	172.68	3.3	77.063	109.802	1.23719	0.160	0.255	1131
560	0.12476	177.41	3.2	78.847	112.346	1.24178	0.160	0.253	1143
570	0.12757	182.09	3.1	80.619	114.872	1.24625	0.159	0.252	1155
580	0.13036	186.72	3.1	82.381	117.383	1.25061	0.159	0.250	1166
590	0.13313	191.31	3.0	84.133	119.879	1.25488	0.159	0.249	1178
600	0.13588	195.87	2.9	85.878	122.363	1.25905	0.159	0.248	1189

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1450 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DV)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.884	81.94033	221.43	14.580	178608.39	0.0017842	0.11239	43.677	0.00347	1.57169	5.5273
100	81.92333	221.36	14.575	178391.17	0.0017847	0.11236	43.582	0.00347	1.57155	5.5166
105	81.19104	218.43	14.355	169231.61	0.0018071	0.11097	39.683	0.00346	1.56566	5.0815
110	80.45608	215.47	14.128	160418.01	0.0018305	0.10951	36.170	0.00345	1.55977	4.6900
115	79.71819	212.47	13.895	151940.14	0.0018552	0.10797	33.003	0.00344	1.55386	4.3374
120	78.97706	209.42	13.656	143787.94	0.0018812	0.10637	30.148	0.00342	1.54795	4.0198
125	78.23239	206.34	13.412	135951.52	0.0019086	0.10471	27.575	0.00340	1.54202	3.7336
130	77.48381	203.21	13.164	128421.19	0.0019376	0.10300	25.255	0.00338	1.53607	3.4756
135	76.73096	200.03	12.912	121187.40	0.0019683	0.10124	23.164	0.00335	1.53011	3.2430
140	75.97339	196.80	12.657	114240.81	0.0020009	0.09944	21.278	0.00332	1.52412	3.0334
145	75.21064	193.52	12.400	107572.28	0.0020356	0.09760	19.577	0.00329	1.51811	2.8446
150	74.44219	190.18	12.141	101172.82	0.0020727	0.09573	18.042	0.00326	1.51207	2.6747
155	73.66747	186.79	11.881	95033.69	0.0021124	0.09383	16.658	0.00323	1.50599	2.5218
160	72.88584	183.34	11.621	89146.32	0.0021549	0.09191	15.410	0.00319	1.49988	2.3846
165	72.09661	179.82	11.361	83502.38	0.0022006	0.08996	14.283	0.00315	1.49372	2.2616
170	71.29899	176.23	11.102	78093.76	0.0022499	0.08800	13.265	0.00311	1.48752	2.1517
175	70.49213	172.58	10.844	72912.58	0.0023033	0.08603	12.346	0.00307	1.48126	2.0537
180	69.67504	168.85	10.589	67951.21	0.0023611	0.08404	11.516	0.00303	1.47494	1.9668
185	68.84666	165.05	10.336	63202.28	0.0024240	0.08204	10.766	0.00298	1.46855	1.8901
190	68.00578	161.16	10.086	58658.74	0.0024927	0.08003	10.088	0.00293	1.46208	1.8230
195	67.15103	157.19	9.840	54313.79	0.0025679	0.07801	9.474	0.00288	1.45553	1.7647
200	66.28090	153.14	9.598	50161.02	0.0026505	0.07599	8.918	0.00282	1.44888	1.7149
205	65.39365	148.99	9.360	46194.35	0.0027417	0.07397	8.415	0.00277	1.44211	1.6729
210	64.48733	144.75	9.126	42408.14	0.0028427	0.07194	7.958	0.00271	1.43523	1.6386
215	63.55970	140.42	8.897	38797.20	0.0029550	0.06991	7.543	0.00265	1.42820	1.6117
220	62.60824	135.99	8.672	35356.89	0.0030805	0.06787	7.165	0.00259	1.42102	1.5920
225	61.63003	131.46	8.452	32083.20	0.0032214	0.06584	6.821	0.00252	1.41366	1.5795
230	60.62172	126.86	8.233	28972.89	0.0033803	0.06380	6.506	0.00245	1.40610	1.5743
235	59.57181	123.35	7.751	25864.71	0.0035636	0.06174	6.216	0.00236	1.39826	1.5932
240	58.48860	118.77	7.515	23081.45	0.0037781	0.05969	5.951	0.00227	1.39020	1.6106
245	57.36502	114.06	7.236	20494.80	0.0039908	0.05764	5.743	0.00221	1.38187	1.6327
250	56.19467	109.33	6.989	18063.13	0.0042568	0.05559	5.550	0.00213	1.37323	1.6727
255	54.97018	104.52	6.732	15773.67	0.0045676	0.05354	5.354	0.00204	1.36423	1.7187
260	53.68409	99.57	6.437	13648.58	0.0049078	0.05148	5.156	0.00196	1.35482	1.7617
265	52.32650	94.75	6.189	11670.59	0.0053642	0.04942	4.954	0.00186	1.34493	1.8339
270	50.88360	89.55	5.856	9841.26	0.0058456	0.04735	4.748	0.00178	1.33448	1.8895
275	49.34060	84.46	5.570	8164.05	0.0064980	0.04526	4.536	0.00167	1.32336	1.9801
280	47.67748	79.05	5.235	6638.05	0.0072662	0.04316	4.319	0.00158	1.31144	2.0694
285	45.86066	73.97	4.946	5305.66	0.0082837	0.04118	4.093	0.00147	1.29851	2.1924
290	43.86666	69.15	4.536	4132.16	0.0095647	0.03974	3.859	0.00137	1.28442	2.3122
295	41.66317	63.74	4.212	3148.30	0.0110946	0.03824	3.617	0.00130	1.26896	2.4079
300	39.22217	59.03	3.940	2359.60	0.0130946	0.03682	3.366	0.00121	1.25199	2.5444
310	33.71968	51.38	3.417	1367.25	0.0169746	0.03374	2.868	0.00115	1.21429	2.6694
320	28.26076	48.01	3.107	996.38	0.0175478	0.03015	2.457	0.00127	1.17767	2.4710
330	24.02182	48.23	2.959	936.54	0.0147121	0.02677	2.189	0.00157	1.14975	2.0885
340	21.05303	50.18	2.881	969.00	0.0118053	0.02438	2.028	0.00195	1.13046	1.7741
350	18.92345	52.81	2.831	1020.01	0.0096677	0.02280	1.928	0.00236	1.11677	1.5540
360	17.31981	55.70	2.794	1069.89	0.0081561	0.02174	1.862	0.00276	1.10653	1.4007
370	16.05996	58.67	2.759	1114.69	0.0070466	0.02097	1.818	0.00316	1.09853	1.2904
380	15.03144	61.69	2.721	1153.94	0.0061973	0.02040	1.787	0.00355	1.09203	1.2053
390	14.17377	64.75	2.706	1188.25	0.0055776	0.02002	1.766	0.00391	1.08663	1.1466
400	13.44059	67.79	2.678	1217.87	0.0050584	0.01973	1.751	0.00428	1.08203	1.0955
410	12.80349	70.79	2.661	1243.73	0.0046502	0.01953	1.742	0.00463	1.07804	1.0567
420	12.24346	73.76	2.644	1266.52	0.0043051	0.01939	1.736	0.00499	1.07454	1.0235
430	11.74513	76.70	2.628	1286.66	0.0040133	0.01930	1.734	0.00534	1.07144	0.9956
440	11.29755	79.59	2.613	1304.53	0.0037635	0.01925	1.734	0.00569	1.06865	0.9717
450	10.89232	82.45	2.600	1320.47	0.0035470	0.01922	1.736	0.00603	1.06614	0.9511
460	10.52291	85.27	2.589	1334.75	0.0033577	0.01922	1.740	0.00638	1.06385	0.9331
470	10.18413	88.07	2.578	1347.58	0.0031906	0.01925	1.745	0.00673	1.06175	0.9173
480	9.87179	90.83	2.569	1359.16	0.0030420	0.01929	1.752	0.00707	1.05982	0.9034
490	9.58250	93.56	2.560	1369.66	0.0029089	0.01934	1.759	0.00742	1.05803	0.8910
500	9.31345	96.27	2.552	1379.20	0.0027890	0.01941	1.767	0.00776	1.05637	0.8800
510	9.06228	98.96	2.544	1387.91	0.0026803	0.01943	1.776	0.00808	1.05482	0.8727
520	8.82704	101.63	2.537	1395.89	0.0025814	0.01954	1.785	0.00844	1.05338	0.8630
530	8.60605	104.28	2.531	1403.21	0.0024908	0.01965	1.795	0.00879	1.05202	0.8542
540	8.39788	106.92	2.525	1409.96	0.0024076	0.01977	1.805	0.00914	1.05074	0.8464
550	8.20130	109.55	2.519	1416.20	0.0023308	0.01989	1.816	0.00950	1.04953	0.8393
560	8.01524	112.17	2.513	1421.98	0.0022597	0.02002	1.827	0.00985	1.04839	0.8330
570	7.83876	114.79	2.507	1427.36	0.0021937	0.02015	1.839	0.01021	1.04731	0.8272
580	7.67107	117.40	2.501	1432.36	0.0021321	0.02029	1.851	0.01057	1.04628	0.8220
590	7.51143	120.01	2.496	1437.04	0.0020746	0.02043	1.863	0.01092	1.04530	0.8174
600	7.35921	122.62	2.490	1441.42	0.0020206	0.02057	1.875	0.01128	1.04437	0.8131

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1500 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 99.954	0.01220	2182.78	318.7	-82.979	-79.590	0.50354	0.267	0.395	3870
100	0.01220	2181.91	318.6	-82.961	-79.572	0.50373	0.267	0.395	3869
105	0.01231	2088.79	306.0	-81.018	-77.598	0.52299	0.262	0.395	3814
110	0.01243	1998.35	293.9	-79.076	-75.625	0.54134	0.258	0.394	3759
115	0.01254	1910.52	282.1	-77.137	-73.654	0.55886	0.255	0.394	3702
120	0.01266	1825.25	270.7	-75.200	-71.684	0.57563	0.251	0.394	3643
125	0.01278	1742.48	259.7	-73.265	-69.715	0.59170	0.247	0.394	3584
130	0.01290	1662.15	249.1	-71.330	-67.747	0.60714	0.244	0.394	3524
135	0.01303	1584.21	238.8	-69.398	-65.779	0.62200	0.241	0.394	3463
140	0.01316	1508.60	228.8	-67.465	-63.811	0.63631	0.238	0.394	3401
145	0.01329	1435.26	219.2	-65.534	-61.842	0.65012	0.235	0.394	3338
150	0.01343	1364.14	210.0	-63.602	-59.873	0.66348	0.232	0.394	3275
155	0.01357	1295.18	201.0	-61.670	-57.902	0.67640	0.229	0.394	3211
160	0.01371	1228.32	192.4	-59.737	-55.929	0.68893	0.227	0.395	3146
165	0.01386	1163.51	184.0	-57.803	-53.953	0.70109	0.224	0.395	3081
170	0.01402	1100.70	176.0	-55.867	-51.974	0.71291	0.222	0.396	3016
175	0.01418	1039.83	168.2	-53.928	-49.990	0.72440	0.220	0.397	2950
180	0.01434	980.85	160.8	-51.985	-48.002	0.73561	0.218	0.398	2884
185	0.01451	923.70	153.5	-50.038	-46.007	0.74654	0.215	0.400	2817
190	0.01469	868.35	146.6	-48.086	-44.005	0.75722	0.213	0.401	2751
195	0.01488	814.73	139.8	-46.127	-41.995	0.76767	0.211	0.403	2684
200	0.01507	762.80	133.3	-44.160	-39.974	0.77790	0.209	0.405	2617
205	0.01528	712.53	127.0	-42.185	-37.942	0.78794	0.207	0.408	2550
210	0.01549	663.87	121.0	-40.198	-35.896	0.79780	0.205	0.411	2482
215	0.01571	616.78	115.1	-38.198	-33.834	0.80751	0.203	0.414	2415
220	0.01595	571.24	109.4	-36.184	-31.754	0.81707	0.201	0.418	2347
225	0.01620	527.22	103.8	-34.152	-29.653	0.82651	0.199	0.422	2279
230	0.01647	484.72	98.5	-32.100	-27.526	0.83585	0.196	0.427	2211
235	0.01675	441.03	92.7	-30.000	-25.347	0.84522	0.200	0.438	2116
240	0.01706	401.50	87.8	-27.873	-23.135	0.85454	0.198	0.447	2046
245	0.01739	364.27	82.4	-25.715	-20.884	0.86382	0.197	0.453	1969
250	0.01775	328.58	77.5	-23.523	-18.593	0.87307	0.196	0.462	1896
255	0.01813	294.22	72.7	-21.290	-16.253	0.88234	0.195	0.474	1821
260	0.01856	261.67	67.7	-19.012	-13.857	0.89165	0.194	0.485	1741
265	0.01903	230.65	63.4	-16.680	-11.394	0.90103	0.193	0.503	1667
270	0.01956	201.14	58.4	-14.282	-8.850	0.91054	0.193	0.517	1580
275	0.02015	173.31	53.9	-11.807	-6.211	0.92023	0.193	0.540	1499
280	0.02082	147.14	49.2	-9.243	-3.460	0.93014	0.193	0.562	1409
285	0.02161	123.63	45.0	-6.560	-0.558	0.94041	0.193	0.597	1330
290	0.02253	102.05	40.7	-3.738	2.521	0.95112	0.198	0.640	1236
295	0.02364	83.19	36.2	-0.753	5.815	0.96238	0.198	0.679	1149
300	0.02500	67.33	32.3	2.409	9.352	0.97427	0.199	0.735	1074
310	0.02867	45.94	24.7	9.225	17.189	0.99996	0.200	0.826	937
320	0.03376	38.17	18.8	16.184	25.559	1.02653	0.199	0.825	857
330	0.03954	40.02	14.8	22.347	33.330	1.05046	0.194	0.720	829
340	0.04517	46.12	12.3	27.399	39.945	1.07022	0.189	0.608	829
350	0.05037	53.56	10.5	31.589	45.579	1.08655	0.185	0.525	840
360	0.05515	61.24	9.3	35.188	50.506	1.10044	0.181	0.466	855
370	0.05958	68.79	8.3	38.379	54.928	1.11256	0.178	0.423	870
380	0.06375	76.12	7.6	41.285	58.993	1.12341	0.175	0.390	886
390	0.06769	83.20	7.0	43.977	62.780	1.13325	0.173	0.368	904
400	0.07146	90.01	6.5	46.509	66.357	1.14231	0.172	0.348	920
410	0.07508	96.54	6.1	48.917	69.770	1.15074	0.170	0.334	937
420	0.07857	102.88	5.7	51.224	73.046	1.15864	0.169	0.322	953
430	0.08195	109.03	5.4	53.449	76.211	1.16608	0.168	0.311	969
440	0.08524	115.00	5.1	55.605	79.281	1.17314	0.167	0.303	984
450	0.08845	120.80	4.9	57.702	82.271	1.17986	0.166	0.295	999
460	0.09159	126.46	4.7	59.751	85.192	1.18628	0.165	0.289	1014
470	0.09467	131.98	4.5	61.756	88.053	1.19243	0.164	0.283	1028
480	0.09770	137.38	4.3	63.724	90.861	1.19835	0.163	0.278	1042
490	0.10068	142.68	4.2	65.659	93.624	1.20404	0.163	0.274	1056
500	0.10361	147.87	4.0	67.566	96.345	1.20954	0.162	0.270	1069
510	0.10651	152.98	3.9	69.447	99.031	1.21486	0.161	0.267	1082
520	0.10937	158.00	3.8	71.306	101.684	1.22001	0.161	0.264	1095
530	0.11220	162.95	3.6	73.145	104.309	1.22501	0.161	0.261	1108
540	0.11500	167.83	3.5	74.966	106.908	1.22987	0.160	0.259	1121
550	0.11777	172.65	3.4	76.772	109.485	1.23460	0.160	0.257	1133
560	0.12052	177.42	3.3	78.563	112.040	1.23920	0.160	0.255	1145
570	0.12325	182.13	3.3	80.342	114.577	1.24369	0.159	0.253	1157
580	0.12596	186.80	3.2	82.110	117.098	1.24808	0.159	0.251	1169
590	0.12866	191.42	3.1	83.869	119.604	1.25236	0.159	0.250	1181
600	0.13133	196.01	3.0	85.618	122.096	1.25655	0.159	0.249	1192

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1500 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DV)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 99.954	81.95301	221.71	14.578	178885.44	0.0017816	0.11242	43.749	0.00347	1.57179	5.5337
100	81.94627	221.68	14.576	178799.31	0.0017818	0.11240	43.711	0.00347	1.57173	5.5295
105	81.21501	218.76	14.356	169641.49	0.0018039	0.11102	39.805	0.00346	1.56585	5.0935
110	80.48113	215.81	14.129	160829.66	0.0018272	0.10956	36.284	0.00345	1.55997	4.7011
115	79.74439	212.82	13.896	152353.58	0.0018516	0.10803	33.110	0.00344	1.55407	4.3478
120	79.00449	209.79	13.657	144203.20	0.0018773	0.10643	30.249	0.00342	1.54816	4.0295
125	78.26112	206.72	13.414	136368.63	0.0019044	0.10478	27.670	0.00340	1.54224	3.7426
130	77.51394	203.60	13.165	128840.17	0.0019331	0.10307	25.344	0.00338	1.53631	3.4840
135	76.76257	200.43	12.914	121608.29	0.0019635	0.10132	23.248	0.00335	1.53036	3.2508
140	76.00658	197.22	12.659	114663.63	0.0019957	0.09952	21.357	0.00333	1.52438	3.0406
145	75.24553	193.96	12.402	107997.06	0.0020300	0.09769	19.651	0.00330	1.51838	2.8513
150	74.47891	190.64	12.144	101599.60	0.0020666	0.09583	18.113	0.00327	1.51235	2.6808
155	73.70615	187.26	11.884	95462.49	0.0021057	0.09393	16.725	0.00323	1.50629	2.5275
160	72.92663	183.83	11.624	89577.19	0.0021477	0.09202	15.472	0.00320	1.50020	2.3898
165	72.13968	180.33	11.365	83935.34	0.0021927	0.09008	14.342	0.00316	1.49406	2.2664
170	71.34453	176.76	11.107	78528.85	0.0022413	0.08812	13.321	0.00312	1.48787	2.1560
175	70.54034	173.13	10.850	73349.83	0.0022938	0.08615	12.399	0.00308	1.48163	2.0575
180	69.72617	169.42	10.595	68390.66	0.0023506	0.08417	11.566	0.00303	1.47534	1.9702
185	68.90096	165.64	10.343	63643.97	0.0024125	0.08218	10.814	0.00298	1.46897	1.8930
190	68.06355	161.78	10.095	59102.69	0.0024798	0.08018	10.133	0.00294	1.46253	1.8254
195	67.21263	157.84	9.850	54760.04	0.0025536	0.07817	9.517	0.00289	1.45600	1.7666
200	66.34671	153.81	9.609	50609.59	0.0026345	0.07616	8.959	0.00283	1.44938	1.7162
205	65.46412	149.70	9.372	46645.25	0.0027237	0.07414	8.454	0.00278	1.44265	1.6736
210	64.56300	145.49	9.141	42861.37	0.0028223	0.07212	7.995	0.00272	1.43580	1.6387
215	63.64119	141.19	8.914	39252.74	0.0029318	0.07010	7.578	0.00266	1.42882	1.6110
220	62.69627	136.79	8.692	35814.68	0.0030540	0.06807	7.199	0.00260	1.42168	1.5905
225	61.72547	132.30	8.475	32543.15	0.0031908	0.06605	6.854	0.00253	1.41438	1.5771
230	60.72560	127.74	8.260	29434.80	0.0033448	0.06402	6.538	0.00247	1.40688	1.5709
235	59.68607	124.29	7.777	26323.59	0.0035212	0.06198	6.248	0.00237	1.39911	1.5882
240	58.61421	119.76	7.544	23533.82	0.0037294	0.05994	5.982	0.00229	1.39113	1.6046
245	57.50362	115.12	7.267	20946.68	0.0039324	0.05791	5.768	0.00222	1.38289	1.6233
250	56.34852	110.46	7.024	18514.94	0.0041867	0.05588	5.577	0.00214	1.37436	1.6616
255	55.14225	105.71	6.770	16224.16	0.0044809	0.05384	5.383	0.00206	1.36549	1.7049
260	53.87793	100.87	6.483	14097.99	0.0048034	0.05181	5.187	0.00198	1.35623	1.7464
265	52.54693	96.14	6.239	12119.82	0.0052282	0.04977	4.988	0.00188	1.34653	1.8134
270	51.13708	91.06	5.914	10285.51	0.0056731	0.04773	4.786	0.00181	1.33631	1.8645
275	49.63581	86.09	5.637	8602.40	0.0062712	0.04568	4.579	0.00170	1.32548	1.9481
280	48.02677	80.80	5.305	7066.82	0.0069554	0.04362	4.367	0.00162	1.31394	2.0254
285	46.27863	75.89	5.031	5721.35	0.0078647	0.04154	4.147	0.00150	1.30148	2.1453
290	44.37643	71.24	4.630	4528.81	0.0089784	0.04011	3.921	0.00141	1.28801	2.2515
295	42.29350	66.00	4.319	3518.33	0.0102859	0.03862	3.688	0.00135	1.27337	2.3339
300	40.00739	61.38	4.056	2693.58	0.0119739	0.03721	3.449	0.00127	1.25743	2.4524
310	34.87809	53.61	3.537	1602.43	0.0154033	0.03422	2.971	0.00119	1.22216	2.5814
320	29.62522	49.57	3.199	1130.89	0.0166382	0.03090	2.559	0.00126	1.18675	2.4590
330	25.28899	49.09	3.024	1012.10	0.0146623	0.02763	2.273	0.00152	1.15805	2.1317
340	22.13899	50.62	2.929	1021.03	0.0120098	0.02514	2.094	0.00187	1.13749	1.8229
350	19.85437	53.02	2.870	1063.44	0.0098963	0.02345	1.982	0.00225	1.12274	1.5962
360	18.13298	55.77	2.826	1110.42	0.0083530	0.02230	1.908	0.00264	1.11171	1.4348
370	16.78370	58.66	2.788	1154.55	0.0072094	0.02145	1.857	0.00302	1.10312	1.3184
380	15.68559	61.62	2.748	1194.05	0.0063327	0.02083	1.822	0.00340	1.09616	1.2287
390	14.77250	64.65	2.731	1229.14	0.0056882	0.02040	1.797	0.00376	1.09040	1.1662
400	13.99428	67.66	2.701	1259.63	0.0051497	0.02008	1.780	0.00412	1.08550	1.1120
410	13.31984	70.64	2.682	1285.86	0.0047274	0.01985	1.768	0.00446	1.08127	1.0711
420	12.72815	73.60	2.663	1309.50	0.0043708	0.01969	1.761	0.00481	1.07757	1.0362
430	12.20265	76.53	2.646	1330.45	0.0040698	0.01957	1.757	0.00515	1.07429	1.0068
440	11.73147	79.42	2.631	1349.08	0.0038124	0.01950	1.756	0.00549	1.07135	0.9817
450	11.30551	82.28	2.618	1365.72	0.0035897	0.01946	1.757	0.00583	1.06870	0.9600
460	10.91771	85.10	2.606	1380.64	0.0033952	0.01945	1.760	0.00617	1.06630	0.9412
470	10.56249	87.89	2.595	1394.06	0.0032238	0.01946	1.764	0.00650	1.06409	0.9247
480	10.23535	90.65	2.585	1406.18	0.0030715	0.01949	1.770	0.00684	1.06207	0.9101
490	9.93263	93.39	2.576	1417.17	0.0029353	0.01954	1.776	0.00718	1.06019	0.8972
500	9.65134	96.10	2.568	1427.17	0.0028127	0.01960	1.784	0.00751	1.05846	0.8857
510	9.38895	98.78	2.560	1436.29	0.0027017	0.01961	1.792	0.00783	1.05684	0.8761
520	9.14337	101.45	2.553	1444.65	0.0026008	0.01971	1.801	0.00817	1.05532	0.8679
530	8.91281	104.11	2.546	1452.34	0.0025085	0.01982	1.810	0.00851	1.05390	0.8588
540	8.69575	106.75	2.540	1459.42	0.0024237	0.01993	1.820	0.00886	1.05257	0.8506
550	8.49088	109.37	2.534	1465.97	0.0023456	0.02005	1.831	0.00920	1.05131	0.8432
560	8.29707	111.99	2.528	1472.04	0.0022734	0.02017	1.841	0.00955	1.05012	0.8366
570	8.11333	114.61	2.523	1477.68	0.0022063	0.02030	1.852	0.00990	1.04899	0.8306
580	7.93879	117.22	2.517	1482.95	0.0021438	0.02043	1.854	0.01024	1.04792	0.8252
590	7.77271	119.82	2.512	1487.86	0.0020854	0.02057	1.876	0.01059	1.04690	0.8203
600	7.61440	122.43	2.506	1492.47	0.0020307	0.02071	1.888	0.01094	1.04593	0.8159

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1600 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 100.094	0.01220	2188.86	318.7	-82.963	-79.349	0.50370	0.267	0.395	3874
105	0.01231	2097.64	306.4	-81.059	-77.413	0.52258	0.263	0.394	3820
110	0.01242	2007.32	294.3	-79.120	-75.441	0.54092	0.259	0.394	3765
115	0.01253	1919.62	282.5	-77.184	-73.471	0.55843	0.255	0.394	3708
120	0.01265	1834.48	271.2	-75.250	-71.503	0.57519	0.251	0.394	3650
125	0.01277	1751.84	260.2	-73.318	-69.535	0.59125	0.248	0.393	3591
130	0.01289	1671.65	249.5	-71.387	-67.568	0.60668	0.244	0.393	3531
135	0.01302	1593.85	239.3	-69.458	-65.602	0.62152	0.241	0.393	3470
140	0.01315	1518.39	229.3	-67.530	-63.635	0.63582	0.238	0.393	3409
145	0.01328	1445.20	219.7	-65.602	-61.669	0.64963	0.235	0.393	3346
150	0.01341	1374.23	210.5	-63.675	-59.701	0.66297	0.232	0.394	3283
155	0.01355	1305.42	201.6	-61.748	-57.732	0.67588	0.230	0.394	3220
160	0.01370	1238.73	192.9	-59.820	-55.762	0.68839	0.227	0.394	3156
165	0.01385	1174.09	184.6	-57.891	-53.789	0.70053	0.225	0.395	3091
170	0.01400	1111.45	176.6	-55.960	-51.813	0.71233	0.222	0.396	3026
175	0.01416	1050.76	168.9	-54.027	-49.833	0.72381	0.220	0.396	2961
180	0.01432	991.97	161.4	-52.091	-47.848	0.73499	0.218	0.397	2895
185	0.01449	935.02	154.2	-50.151	-45.858	0.74590	0.216	0.399	2829
190	0.01467	879.86	147.3	-48.206	-43.861	0.75655	0.214	0.400	2763
195	0.01485	826.45	140.6	-46.256	-41.856	0.76697	0.212	0.402	2697
200	0.01504	774.75	134.1	-44.298	-39.841	0.77717	0.209	0.404	2631
205	0.01524	724.70	127.8	-42.332	-37.816	0.78718	0.207	0.406	2565
210	0.01545	676.27	121.8	-40.356	-35.778	0.79700	0.205	0.409	2498
215	0.01567	629.43	115.9	-38.369	-33.725	0.80666	0.203	0.412	2432
220	0.01591	584.14	110.3	-36.368	-31.655	0.81618	0.201	0.416	2366
225	0.01615	540.39	104.8	-34.351	-29.566	0.82556	0.199	0.420	2299
230	0.01641	498.15	99.5	-32.316	-27.454	0.83484	0.196	0.424	2233
235	0.01669	454.63	93.7	-30.236	-25.291	0.84414	0.200	0.434	2139
240	0.01699	415.12	88.9	-28.132	-23.098	0.85338	0.199	0.443	2070
245	0.01731	378.11	83.5	-25.998	-20.869	0.86257	0.197	0.448	1994
250	0.01765	342.68	78.7	-23.834	-18.604	0.87172	0.196	0.457	1924
255	0.01803	308.57	74.0	-21.635	-16.294	0.88087	0.195	0.467	1851
260	0.01843	276.28	69.1	-19.396	-13.934	0.89003	0.194	0.477	1775
265	0.01888	245.60	64.8	-17.109	-11.516	0.89925	0.193	0.492	1703
270	0.01937	216.29	59.9	-14.767	-9.027	0.90855	0.193	0.504	1619
275	0.01992	188.67	55.7	-12.362	-6.458	0.91798	0.192	0.524	1543
280	0.02055	162.64	50.9	-9.884	-3.796	0.92757	0.192	0.541	1455
285	0.02126	139.14	47.0	-7.307	-1.009	0.93744	0.192	0.570	1382
290	0.02208	117.44	42.8	-4.621	1.920	0.94763	0.197	0.605	1293
295	0.02304	98.19	38.5	-1.810	5.016	0.95821	0.197	0.634	1212
300	0.02418	81.62	34.7	1.131	8.295	0.96923	0.197	0.677	1140
310	0.02716	57.48	27.4	7.397	15.443	0.99266	0.198	0.750	1005
320	0.03122	45.59	21.4	13.898	23.149	1.01712	0.197	0.777	912
330	0.03611	43.62	17.0	20.004	30.703	1.04038	0.194	0.722	867
340	0.04118	47.43	14.0	25.258	37.459	1.06056	0.190	0.629	854
350	0.04604	53.69	11.9	29.693	43.332	1.07759	0.186	0.549	857
360	0.05057	60.79	10.4	33.505	48.488	1.09212	0.182	0.487	868
370	0.05481	68.05	9.3	36.871	53.108	1.10478	0.179	0.441	881
380	0.05880	75.24	8.4	39.919	57.339	1.11607	0.176	0.406	895
390	0.06257	82.28	7.8	42.728	61.266	1.12627	0.174	0.381	913
400	0.06618	89.10	7.2	45.356	64.962	1.13564	0.172	0.359	927
410	0.06963	95.69	6.7	47.844	68.474	1.14431	0.171	0.344	944
420	0.07297	102.08	6.3	50.219	71.838	1.15242	0.170	0.330	959
430	0.07620	108.18	5.9	52.504	75.080	1.16005	0.168	0.319	974
440	0.07934	114.22	5.6	54.712	78.218	1.16727	0.167	0.309	989
450	0.08240	120.10	5.4	56.856	81.269	1.17412	0.166	0.301	1004
460	0.08539	125.83	5.1	58.945	84.245	1.18066	0.165	0.294	1019
470	0.08832	131.43	4.9	60.987	87.155	1.18692	0.164	0.288	1033
480	0.09120	136.91	4.7	62.987	90.009	1.19293	0.164	0.283	1047
490	0.09403	142.28	4.5	64.952	92.812	1.19871	0.163	0.278	1061
500	0.09682	147.55	4.4	66.885	95.571	1.20428	0.162	0.274	1074
510	0.09957	152.72	4.2	68.790	98.291	1.20967	0.162	0.270	1087
520	0.10228	157.82	4.1	70.671	100.975	1.21488	0.161	0.267	1101
530	0.10497	162.84	3.9	72.530	103.629	1.21994	0.161	0.264	1113
540	0.10762	167.79	3.8	74.369	106.255	1.22485	0.160	0.261	1126
550	0.11025	172.68	3.7	76.191	108.856	1.22962	0.160	0.259	1139
560	0.11286	177.51	3.6	77.997	111.435	1.23427	0.159	0.257	1151
570	0.11544	182.29	3.5	79.790	113.993	1.23879	0.159	0.255	1163
580	0.11801	187.02	3.4	81.570	116.534	1.24321	0.159	0.253	1175
590	0.12056	191.70	3.3	83.340	119.058	1.24753	0.159	0.252	1187
600	0.12309	196.35	3.3	85.100	121.568	1.25175	0.159	0.250	1198

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1600 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 100.094	81.97830	222.25	14.574	179438.92	0.0017763	0.11247	43.893	0.00348	1.57199	5.5467
105	81.26278	219.41	14.358	170460.21	0.0017977	0.11113	40.048	0.00347	1.56624	5.1175
110	80.53106	216.48	14.131	161651.84	0.0018205	0.10967	36.513	0.00346	1.56037	4.7235
115	79.79660	213.52	13.898	153179.28	0.0018445	0.10815	33.325	0.00344	1.55449	4.3686
120	79.05914	210.51	13.660	145032.46	0.0018697	0.10657	30.451	0.00342	1.54860	4.0489
125	78.31836	207.47	13.416	137201.50	0.0018962	0.10492	27.860	0.00341	1.54270	3.7606
130	77.57393	204.38	13.168	129676.70	0.0019243	0.10322	25.523	0.00338	1.53679	3.5007
135	76.82550	201.24	12.917	122448.53	0.0019540	0.10148	23.416	0.00336	1.53085	3.2664
140	76.07266	198.06	12.663	115507.63	0.0019854	0.09969	21.515	0.00333	1.52490	3.0551
145	75.31497	194.83	12.406	108844.87	0.0020189	0.09787	19.800	0.00330	1.51893	2.8647
150	74.55194	191.54	12.149	102451.28	0.0020546	0.09602	18.253	0.00327	1.51293	2.6932
155	73.78305	188.20	11.890	96318.09	0.0020927	0.09414	16.857	0.00324	1.50690	2.5389
160	73.00770	184.80	11.631	90436.76	0.0021335	0.09223	15.597	0.00320	1.50083	2.4003
165	72.22524	181.34	11.373	84798.94	0.0021772	0.09031	14.460	0.00317	1.49473	2.2759
170	71.43494	177.82	11.115	79396.53	0.0022243	0.08836	13.433	0.00313	1.48858	2.1646
175	70.63601	174.22	10.860	74221.65	0.0022752	0.08640	12.505	0.00309	1.48238	2.0652
180	69.82754	170.56	10.607	69266.66	0.0023302	0.08444	11.667	0.00304	1.47612	1.9769
185	69.00856	166.83	10.357	64524.21	0.0023899	0.08246	10.909	0.00300	1.46980	1.8989
190	68.17796	163.01	10.111	59987.21	0.0024548	0.08047	10.223	0.00295	1.46341	1.8302
195	67.33449	159.12	9.868	55648.87	0.0025257	0.07848	9.603	0.00290	1.45693	1.7704
200	66.47678	155.15	9.630	51502.74	0.0026034	0.07648	9.041	0.00285	1.45037	1.7189
205	65.60328	151.09	9.397	47542.73	0.0026888	0.07448	8.532	0.00279	1.44371	1.6753
210	64.71224	146.94	9.169	43763.14	0.0027829	0.07248	8.070	0.00274	1.43693	1.6391
215	63.80168	142.70	8.947	40158.72	0.0028872	0.07047	7.650	0.00268	1.43003	1.6100
220	62.86938	138.37	8.731	36724.72	0.0030030	0.06847	7.268	0.00262	1.42299	1.5879
225	61.91281	133.95	8.519	33456.99	0.0031323	0.06646	6.920	0.00256	1.41578	1.5727
230	60.92909	129.46	8.311	30352.05	0.0032771	0.06446	6.602	0.00249	1.40840	1.5644
235	59.90938	126.15	7.828	27236.49	0.0034406	0.06244	6.310	0.00240	1.40078	1.5790
240	58.85913	121.71	7.600	24433.83	0.0036366	0.06043	6.043	0.00232	1.39295	1.5933
245	57.77304	117.19	7.326	21644.51	0.0038228	0.05843	5.817	0.00226	1.38489	1.6056
250	56.64649	112.66	7.092	19411.54	0.0040561	0.05643	5.629	0.00218	1.37656	1.6410
255	55.47408	108.05	6.842	17117.54	0.0043207	0.05443	5.439	0.00210	1.36793	1.6795
260	54.24977	103.40	5.574	14987.89	0.0046136	0.05244	5.248	0.00203	1.35895	1.7186
265	52.96697	98.83	5.334	13008.50	0.0049828	0.05045	5.054	0.00193	1.34959	1.7760
270	51.61634	93.96	5.023	11164.09	0.0053677	0.04846	4.858	0.00186	1.33978	1.8200
275	50.18855	89.22	5.761	9469.14	0.0058774	0.04647	4.659	0.00177	1.32946	1.8923
280	48.67277	84.13	5.434	7916.13	0.0064275	0.04449	4.456	0.00169	1.31857	1.9498
285	47.04040	79.50	5.187	6545.43	0.0071736	0.04248	4.247	0.00158	1.30690	2.0528
290	45.28884	75.18	4.801	5318.51	0.0080420	0.04082	4.034	0.00149	1.29446	2.1511
295	43.39836	70.22	4.514	4261.36	0.0090352	0.03938	3.817	0.00143	1.28112	2.2138
300	41.35416	65.78	4.262	3375.23	0.0102857	0.03799	3.595	0.00136	1.26681	2.3053
310	36.82238	57.99	3.760	2116.65	0.0129401	0.03512	3.153	0.00127	1.23545	2.4246
320	32.02799	53.02	3.389	1460.22	0.0146474	0.03215	2.751	0.00129	1.20286	2.3921
330	27.69106	51.29	3.165	1207.92	0.0140725	0.02916	2.441	0.00146	1.17389	2.1752
340	24.28281	51.88	3.032	1151.76	0.0121334	0.02661	2.231	0.00174	1.15145	1.8999
350	21.72227	53.73	2.953	1166.38	0.0102146	0.02474	2.094	0.00208	1.13479	1.6721
360	19.77390	56.15	2.895	1201.98	0.0086750	0.02341	2.002	0.00243	1.12223	1.4994
370	18.24651	58.83	2.848	1241.62	0.0074943	0.02242	1.939	0.00279	1.11244	1.3726
380	17.00775	61.65	2.805	1279.62	0.0065790	0.02169	1.894	0.00314	1.10455	1.2749
390	15.98163	64.59	2.783	1314.98	0.0058937	0.02117	1.862	0.00348	1.09804	1.2052
400	15.11133	67.53	2.749	1346.41	0.0053206	0.02077	1.839	0.00383	1.09254	1.1450
410	14.36094	70.48	2.732	1374.17	0.0048801	0.02049	1.823	0.00415	1.08781	1.1013
420	13.70485	73.42	2.702	1398.97	0.0044889	0.02027	1.812	0.00449	1.08369	1.0602
430	13.12362	76.29	2.684	1419.65	0.0041779	0.02012	1.805	0.00481	1.08004	1.0290
440	12.60416	79.17	2.668	1439.59	0.0039063	0.02002	1.801	0.00514	1.07680	1.0016
450	12.13585	82.01	2.653	1457.46	0.0036718	0.01995	1.799	0.00546	1.07387	0.9779
460	11.71055	84.83	2.640	1473.53	0.0034674	0.01991	1.800	0.00578	1.07122	0.9574
470	11.32184	87.62	2.628	1488.03	0.0032877	0.01990	1.802	0.00610	1.06881	0.9394
480	10.96456	90.37	2.618	1501.15	0.0031284	0.01991	1.806	0.00642	1.06659	0.9236
490	10.63456	93.10	2.608	1513.06	0.0029862	0.01993	1.811	0.00674	1.06454	0.9095
500	10.32839	95.81	2.600	1523.92	0.0028585	0.01998	1.818	0.00706	1.06264	0.8970
510	10.04323	98.49	2.592	1533.84	0.0027431	0.01997	1.825	0.00736	1.06088	0.8886
520	9.77668	101.15	2.585	1542.94	0.0026383	0.02006	1.832	0.00769	1.05923	0.8776
530	9.52674	103.80	2.578	1551.31	0.0025427	0.02016	1.841	0.00802	1.05769	0.8677
540	9.29169	106.43	2.572	1559.03	0.0024550	0.02026	1.850	0.00834	1.05624	0.8589
550	9.07006	109.06	2.566	1566.18	0.0023743	0.02037	1.859	0.00867	1.05487	0.8509
560	8.86059	111.67	2.560	1572.82	0.0022998	0.02048	1.869	0.00900	1.05358	0.8437
570	8.66217	114.28	2.554	1578.99	0.0022307	0.02060	1.880	0.00933	1.05236	0.8373
580	8.47384	116.88	2.549	1584.75	0.0021664	0.02073	1.890	0.00966	1.05120	0.8314
590	8.29475	119.48	2.544	1590.14	0.0021065	0.02085	1.901	0.00999	1.05010	0.8261
600	8.12415	122.08	2.538	1595.19	0.0020504	0.02098	1.913	0.01032	1.04906	0.8214

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1700 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 100.234	0.01219	2194.93	318.8	-82.946	-79.108	0.50385	0.267	0.395	3878
105	0.01230	2106.47	306.9	-81.099	-77.228	0.52217	0.263	0.394	3826
110	0.01241	2016.27	294.7	-79.164	-75.257	0.54050	0.259	0.394	3771
115	0.01252	1926.69	283.0	-77.231	-73.288	0.55801	0.255	0.394	3714
120	0.01264	1843.68	271.6	-75.300	-71.321	0.57475	0.251	0.393	3657
125	0.01276	1761.18	260.6	-73.371	-69.355	0.59081	0.248	0.393	3598
130	0.01288	1681.12	250.0	-71.444	-67.389	0.60622	0.244	0.393	3538
135	0.01301	1603.46	239.7	-69.518	-65.424	0.62105	0.241	0.393	3478
140	0.01313	1528.13	229.8	-67.594	-63.459	0.63534	0.238	0.393	3416
145	0.01327	1455.09	220.3	-65.670	-61.495	0.64913	0.235	0.393	3354
150	0.01340	1384.27	211.0	-63.748	-59.529	0.66246	0.233	0.393	3292
155	0.01354	1315.62	202.1	-61.825	-57.563	0.67535	0.230	0.393	3229
160	0.01368	1249.09	193.5	-59.902	-55.595	0.68785	0.227	0.394	3165
165	0.01383	1184.61	185.2	-57.978	-53.624	0.69997	0.225	0.394	3101
170	0.01398	1122.15	177.2	-56.052	-51.651	0.71175	0.223	0.395	3036
175	0.01414	1061.63	169.5	-54.125	-49.675	0.72321	0.220	0.396	2971
180	0.01430	1003.02	162.0	-52.195	-47.694	0.73437	0.218	0.397	2906
185	0.01447	946.26	154.9	-50.262	-45.708	0.74526	0.216	0.398	2841
190	0.01464	891.29	147.9	-48.325	-43.715	0.75589	0.214	0.399	2776
195	0.01482	838.09	141.3	-46.382	-41.715	0.76628	0.212	0.401	2710
200	0.01501	786.59	134.8	-44.433	-39.707	0.77645	0.210	0.403	2645
205	0.01521	736.76	128.6	-42.477	-37.688	0.78642	0.208	0.405	2580
210	0.01542	688.56	122.6	-40.511	-35.658	0.79621	0.206	0.407	2514
215	0.01564	641.94	116.8	-38.536	-33.614	0.80583	0.203	0.410	2449
220	0.01586	596.90	111.2	-36.548	-31.554	0.81530	0.201	0.413	2384
225	0.01610	553.39	105.7	-34.546	-29.476	0.82464	0.199	0.417	2319
230	0.01636	511.41	100.5	-32.527	-27.377	0.83386	0.197	0.421	2254
235	0.01663	468.07	94.7	-30.465	-25.230	0.84309	0.200	0.431	2161
240	0.01692	428.59	89.9	-28.382	-23.055	0.85225	0.199	0.439	2094
245	0.01723	391.76	84.6	-26.271	-20.847	0.86135	0.197	0.444	2019
250	0.01756	356.56	79.9	-24.133	-18.604	0.87042	0.196	0.452	1951
255	0.01792	322.66	75.2	-21.964	-16.322	0.87945	0.195	0.461	1879
260	0.01831	290.59	70.5	-19.760	-13.995	0.88849	0.194	0.470	1807
265	0.01874	260.21	66.2	-17.515	-11.616	0.89756	0.193	0.483	1737
270	0.01921	231.08	61.4	-15.222	-9.176	0.90668	0.193	0.494	1656
275	0.01972	203.64	57.3	-12.876	-6.666	0.91589	0.192	0.511	1584
280	0.02030	177.75	52.5	-10.470	-4.080	0.92521	0.192	0.523	1498
285	0.02095	154.24	48.8	-7.980	-1.384	0.93475	0.192	0.549	1430
290	0.02170	132.42	44.7	-5.404	1.426	0.94452	0.196	0.577	1345
295	0.02255	112.88	40.6	-2.727	4.372	0.95459	0.195	0.601	1268
300	0.02354	95.77	36.9	0.049	7.459	0.96497	0.196	0.634	1199
310	0.02604	69.59	29.8	5.903	14.101	0.98674	0.196	0.694	1068
320	0.02938	54.51	23.8	11.997	21.246	1.00943	0.196	0.727	969
330	0.03349	49.04	19.1	17.919	28.462	1.03163	0.193	0.705	910
340	0.03797	50.25	15.7	23.241	35.194	1.05174	0.190	0.638	884
350	0.04243	54.96	13.4	27.849	41.207	1.06918	0.186	0.566	879
360	0.04670	61.20	11.6	31.845	46.544	1.08422	0.183	0.505	884
370	0.05072	68.00	10.3	35.372	51.337	1.09735	0.180	0.457	894
380	0.05452	74.92	9.3	38.557	55.721	1.10905	0.177	0.420	907
390	0.05814	81.82	8.5	41.479	59.780	1.11960	0.175	0.393	922
400	0.06159	88.59	7.9	44.203	63.590	1.12925	0.173	0.370	936
410	0.06490	95.16	7.3	46.771	67.200	1.13817	0.172	0.353	952
420	0.06809	101.57	6.9	49.216	70.649	1.14648	0.170	0.338	966
430	0.07118	107.81	6.5	51.560	73.966	1.15429	0.169	0.326	982
440	0.07418	113.83	6.1	53.821	77.172	1.16166	0.168	0.316	995
450	0.07710	119.59	5.8	56.011	80.281	1.16865	0.167	0.307	1010
460	0.07996	125.39	5.5	58.141	83.311	1.17531	0.166	0.299	1024
470	0.08275	131.05	5.3	60.219	86.270	1.18167	0.165	0.293	1038
480	0.08550	136.59	5.1	62.252	89.167	1.18777	0.164	0.287	1052
490	0.08820	142.03	4.9	64.247	92.011	1.19363	0.163	0.282	1066
500	0.09085	147.36	4.7	66.206	94.807	1.19928	0.162	0.277	1080
510	0.09347	152.60	4.5	68.135	97.560	1.20474	0.162	0.273	1093
520	0.09606	157.76	4.4	70.038	100.276	1.21001	0.161	0.270	1106
530	0.09861	162.84	4.3	71.916	102.958	1.21512	0.161	0.267	1119
540	0.10114	167.86	4.1	73.773	105.611	1.22008	0.160	0.264	1132
550	0.10364	172.81	4.0	75.611	108.236	1.22489	0.160	0.261	1144
560	0.10612	177.70	3.9	77.433	110.837	1.22958	0.159	0.259	1157
570	0.10857	182.54	3.8	79.239	113.417	1.23415	0.159	0.257	1169
580	0.11101	187.33	3.7	81.031	115.977	1.23860	0.159	0.255	1181
590	0.11343	192.08	3.6	82.812	118.520	1.24295	0.159	0.253	1193
600	0.11584	196.78	3.5	84.582	121.047	1.24719	0.158	0.252	1204

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1700 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 100.234	82.00352	222.80	14.570	179991.57	0.0017712	0.11253	44.037	0.00348	1.57219	5.5596
105	81.31035	220.06	14.360	171277.54	0.0017916	0.11123	40.293	0.00347	1.56662	5.1416
110	80.58077	217.16	14.133	162472.56	0.0018139	0.10979	36.742	0.00346	1.56076	4.7459
115	79.84858	214.22	13.900	154003.42	0.0018374	0.10827	33.540	0.00344	1.55490	4.3895
120	79.11351	211.24	13.662	145860.06	0.0018621	0.10670	30.654	0.00343	1.54903	4.0683
125	78.37529	208.22	13.419	138032.60	0.0018881	0.10506	28.050	0.00341	1.54315	3.7788
130	77.63358	205.16	13.171	130511.34	0.0019156	0.10337	25.702	0.00339	1.53726	3.5176
135	76.88805	202.05	12.920	123286.75	0.0019446	0.10164	23.584	0.00336	1.53135	3.2821
140	76.13830	198.90	12.666	116349.48	0.0019753	0.09986	21.674	0.00334	1.52542	3.0697
145	75.38392	195.70	12.411	109690.38	0.0020080	0.09805	19.950	0.00331	1.51947	2.8782
150	74.62445	192.44	12.153	103300.49	0.0020427	0.09621	18.394	0.00328	1.51350	2.7057
155	73.85936	189.14	11.895	97171.04	0.0020798	0.09434	16.991	0.00325	1.50749	2.5505
160	73.08809	185.77	11.637	91293.49	0.0021195	0.09245	15.723	0.00321	1.50146	2.4108
165	72.31003	182.35	11.380	85659.50	0.0021620	0.09053	14.579	0.00318	1.49539	2.2855
170	71.52448	178.86	11.124	80260.94	0.0022077	0.08860	13.545	0.00314	1.48927	2.1733
175	70.73069	175.31	10.870	75089.94	0.0022570	0.08665	12.611	0.00310	1.48311	2.0731
180	69.92780	171.69	10.619	70138.88	0.0023102	0.08470	11.767	0.00305	1.47689	1.9838
185	69.11487	168.00	10.371	65400.36	0.0023679	0.08273	11.004	0.00301	1.47062	1.9048
190	68.29088	164.23	10.126	60867.31	0.0024305	0.08076	10.314	0.00296	1.46427	1.8352
195	67.45465	160.39	9.886	56532.93	0.0024988	0.07878	9.689	0.00291	1.45786	1.7745
200	66.60488	156.47	9.651	52390.74	0.0025734	0.07680	9.123	0.00286	1.45135	1.7219
205	65.74013	152.46	9.421	48434.63	0.0026552	0.07481	8.610	0.00281	1.44475	1.6771
210	64.85878	148.37	9.197	44658.86	0.0027452	0.07283	8.144	0.00276	1.43805	1.6397
215	63.95899	144.19	8.979	41058.14	0.0028445	0.07084	7.721	0.00270	1.43122	1.6093
220	63.03872	139.92	8.768	37627.64	0.0029546	0.06886	7.337	0.00264	1.42427	1.5858
225	62.09566	135.58	8.562	34363.11	0.0030769	0.06687	6.986	0.00258	1.41716	1.5689
230	61.12720	131.16	8.361	31260.95	0.0032134	0.06489	6.666	0.00252	1.40989	1.5587
235	60.12615	127.97	7.877	28143.11	0.0033651	0.06290	6.372	0.00243	1.40239	1.5706
240	59.09619	123.61	7.653	25328.05	0.0035496	0.06092	6.104	0.00235	1.39471	1.5828
245	58.03284	119.21	7.383	22735.13	0.0037217	0.05894	5.865	0.00229	1.38681	1.5893
250	56.93254	114.80	7.157	20299.63	0.0039368	0.05697	5.680	0.00221	1.37867	1.6222
255	55.79095	110.32	6.910	18001.78	0.0041759	0.05500	5.494	0.00214	1.37026	1.6564
260	54.60263	105.83	6.659	15866.99	0.0044452	0.05305	5.306	0.00207	1.36154	1.6940
265	53.36245	101.40	6.421	13885.35	0.0047672	0.05110	5.117	0.00198	1.35247	1.7428
270	52.06351	96.72	6.124	12030.82	0.0051051	0.04916	4.927	0.00191	1.34302	1.7814
275	50.69852	92.17	5.875	10324.04	0.0055464	0.04722	4.734	0.00182	1.33314	1.8449
280	49.26060	87.27	5.551	8755.89	0.0059948	0.04530	4.539	0.00176	1.32278	1.8870
285	47.72255	82.88	5.327	7360.68	0.0066252	0.04336	4.339	0.00165	1.31177	1.9779
290	46.09006	78.82	4.952	6103.34	0.0073241	0.04151	4.136	0.00156	1.30014	2.0711
295	44.34720	74.10	4.686	5006.00	0.0081093	0.04010	3.931	0.00151	1.28780	2.1203
300	42.48386	69.84	4.442	4068.71	0.0090755	0.03874	3.723	0.00144	1.27470	2.1928
310	38.40188	62.15	3.959	2672.38	0.0111588	0.03597	3.309	0.00135	1.24632	2.2963
320	34.03523	56.68	3.574	1855.26	0.0128268	0.03320	2.922	0.00134	1.21643	2.3038
330	29.85839	53.97	3.313	1464.20	0.0130698	0.03045	2.603	0.00145	1.18831	2.1707
340	26.33608	53.61	3.144	1323.33	0.0118950	0.02795	2.370	0.00166	1.16493	1.9464
350	23.56628	54.84	3.043	1295.23	0.0103242	0.02599	2.210	0.00195	1.14677	1.7329
360	21.41539	56.85	2.970	1310.70	0.0088826	0.02452	2.100	0.00227	1.13281	1.5568
370	19.71791	59.27	2.913	1340.74	0.0077124	0.02339	2.023	0.00260	1.12187	1.4232
380	18.34057	61.91	2.865	1374.02	0.0067838	0.02256	1.968	0.00293	1.11304	1.3192
390	17.20097	64.72	2.837	1407.44	0.0060728	0.02195	1.928	0.00325	1.10578	1.2431
400	16.23733	67.57	2.799	1438.43	0.0054730	0.02148	1.899	0.00358	1.09966	1.1773
410	15.40920	70.45	2.779	1466.40	0.0050113	0.02114	1.878	0.00389	1.09442	1.1294
420	14.68717	73.34	2.747	1491.85	0.0046032	0.02087	1.863	0.00421	1.08986	1.0851
430	14.04970	76.22	2.731	1514.72	0.0042804	0.02068	1.853	0.00451	1.08585	1.0522
440	13.48136	79.07	2.709	1534.60	0.0039946	0.02054	1.846	0.00482	1.08229	1.0220
450	12.97039	81.85	2.688	1551.17	0.0037489	0.02044	1.842	0.00514	1.07909	0.9956
460	12.50678	84.65	2.674	1568.19	0.0035355	0.02037	1.841	0.00544	1.07619	0.9734
470	12.08388	87.42	2.662	1583.60	0.0033481	0.02034	1.841	0.00575	1.07355	0.9540
480	11.69589	90.17	2.651	1597.58	0.0031822	0.02032	1.843	0.00606	1.07113	0.9369
490	11.33809	92.89	2.641	1610.32	0.0030345	0.02033	1.847	0.00636	1.06891	0.9217
500	11.00663	95.58	2.632	1621.94	0.0029019	0.02036	1.852	0.00667	1.06685	0.9082
510	10.69831	98.26	2.624	1632.58	0.0027824	0.02033	1.857	0.00695	1.06493	0.8991
520	10.41048	100.91	2.616	1642.36	0.0026740	0.02041	1.864	0.00726	1.06315	0.8872
530	10.14087	103.55	2.610	1651.37	0.0025752	0.02049	1.871	0.00758	1.06148	0.8768
540	9.88759	106.18	2.603	1659.69	0.0024848	0.02059	1.879	0.00789	1.05992	0.8671
550	9.64900	108.79	2.598	1667.40	0.0024017	0.02069	1.888	0.00821	1.05844	0.8585
560	9.42367	111.40	2.592	1674.57	0.0023250	0.02079	1.897	0.00852	1.05705	0.8508
570	9.21041	114.00	2.587	1681.25	0.0022541	0.02090	1.907	0.00883	1.05574	0.8438
580	9.00813	116.59	2.581	1687.49	0.0021881	0.02102	1.917	0.00915	1.05449	0.8375
590	8.81590	119.18	2.576	1693.33	0.0021267	0.02114	1.927	0.00946	1.05331	0.8318
600	8.63290	121.77	2.571	1698.82	0.0020692	0.02126	1.938	0.00977	1.05218	0.8267

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1800 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 100.375	0.01219	2200.98	318.8	-82.930	-78.867	0.50400	0.267	0.394	3882
105	0.01229	2115.27	307.3	-81.140	-77.043	0.52176	0.263	0.394	3832
110	0.01240	2025.19	295.1	-79.207	-75.073	0.54009	0.259	0.394	3777
115	0.01252	1937.74	283.4	-77.277	-73.106	0.55758	0.255	0.393	3721
120	0.01263	1852.85	272.1	-75.349	-71.139	0.57432	0.251	0.393	3663
125	0.01275	1770.48	261.1	-73.424	-69.174	0.59036	0.248	0.393	3605
130	0.01287	1690.56	250.5	-71.500	-67.210	0.60577	0.245	0.393	3545
135	0.01300	1613.03	240.2	-69.578	-65.246	0.62059	0.242	0.393	3485
140	0.01312	1537.84	230.3	-67.657	-63.283	0.63486	0.239	0.393	3424
145	0.01325	1464.94	220.8	-65.738	-61.320	0.64864	0.236	0.393	3362
150	0.01339	1394.27	211.5	-63.819	-59.357	0.66195	0.233	0.393	3300
155	0.01353	1325.78	202.6	-61.901	-57.393	0.67483	0.230	0.393	3237
160	0.01367	1259.40	194.0	-59.982	-55.427	0.68731	0.228	0.393	3174
165	0.01381	1195.08	185.8	-58.063	-53.459	0.69942	0.225	0.394	3110
170	0.01396	1132.78	177.8	-56.144	-51.489	0.71118	0.223	0.394	3046
175	0.01412	1072.44	170.1	-54.222	-49.516	0.72262	0.221	0.395	2982
180	0.01428	1014.00	162.7	-52.298	-47.539	0.73376	0.219	0.396	2917
185	0.01445	957.42	155.5	-50.372	-45.557	0.74463	0.216	0.397	2853
190	0.01462	902.65	148.6	-48.442	-43.569	0.75523	0.214	0.398	2788
195	0.01480	849.63	142.0	-46.507	-41.574	0.76560	0.212	0.400	2723
200	0.01499	798.34	135.5	-44.566	-39.571	0.77574	0.210	0.401	2659
205	0.01518	748.71	129.4	-42.619	-37.559	0.78568	0.208	0.403	2594
210	0.01538	700.72	123.4	-40.664	-35.536	0.79543	0.206	0.406	2530
215	0.01560	654.33	117.6	-38.699	-33.500	0.80501	0.204	0.408	2466
220	0.01582	609.51	112.0	-36.723	-31.450	0.81444	0.201	0.411	2402
225	0.01606	566.24	106.6	-34.735	-29.383	0.82373	0.199	0.415	2338
230	0.01631	524.49	101.4	-32.731	-27.296	0.83289	0.197	0.419	2275
235	0.01657	481.36	95.7	-30.688	-25.163	0.84206	0.200	0.427	2182
240	0.01686	441.91	90.9	-28.624	-23.006	0.85115	0.199	0.435	2116
245	0.01716	405.25	85.7	-26.535	-20.816	0.86018	0.198	0.440	2044
250	0.01748	370.23	81.1	-24.421	-18.594	0.86916	0.196	0.447	1977
255	0.01783	336.54	76.3	-22.280	-16.338	0.87809	0.195	0.455	1907
260	0.01820	304.64	71.9	-20.107	-14.040	0.88702	0.194	0.465	1838
265	0.01861	274.52	67.5	-17.899	-11.696	0.89595	0.193	0.475	1769
270	0.01905	245.55	62.8	-15.650	-9.300	0.90491	0.193	0.484	1692
275	0.01954	218.25	58.8	-13.355	-6.842	0.91393	0.192	0.500	1622
280	0.02008	192.52	54.0	-11.012	-4.319	0.92302	0.192	0.508	1538
285	0.02069	168.96	50.5	-8.595	-1.700	0.93229	0.191	0.532	1475
290	0.02136	147.06	46.5	-6.108	1.013	0.94172	0.195	0.555	1392
295	0.02213	127.28	42.5	-3.539	3.839	0.95138	0.194	0.575	1320
300	0.02301	109.74	38.9	-0.891	6.779	0.96127	0.195	0.601	1253
310	0.02517	81.97	32.0	4.644	13.035	0.98178	0.195	0.650	1126
320	0.02799	64.38	26.0	10.398	19.728	1.00303	0.194	0.683	1024
330	0.03148	55.91	21.2	16.091	26.582	1.02412	0.193	0.680	956
340	0.03540	54.48	17.5	21.382	33.181	1.04382	0.190	0.635	918
350	0.03945	57.38	14.9	26.090	39.238	1.06139	0.187	0.576	905
360	0.04341	62.52	12.9	30.228	44.699	1.07677	0.184	0.519	904
370	0.04721	68.67	11.4	33.897	49.632	1.09030	0.181	0.471	910
380	0.05083	75.19	10.3	37.207	54.149	1.10235	0.178	0.433	920
390	0.05428	81.85	9.4	40.239	58.331	1.11321	0.176	0.405	934
400	0.05758	88.49	8.6	43.056	62.248	1.12313	0.174	0.380	946
410	0.06075	95.00	8.0	45.703	65.952	1.13228	0.172	0.362	961
420	0.06380	101.40	7.5	48.216	69.483	1.14079	0.171	0.345	975
430	0.06676	107.64	7.0	50.620	72.873	1.14877	0.170	0.333	990
440	0.06963	113.65	6.6	52.932	76.142	1.15629	0.168	0.322	1003
450	0.07244	119.54	6.3	55.170	79.314	1.16342	0.167	0.313	1018
460	0.07516	125.13	6.0	57.340	82.391	1.17019	0.166	0.304	1030
470	0.07784	130.85	5.7	59.454	85.398	1.17665	0.165	0.297	1044
480	0.08046	136.44	5.5	61.520	88.339	1.18285	0.164	0.291	1058
490	0.08304	141.93	5.3	63.544	91.222	1.18879	0.163	0.286	1072
500	0.08558	147.31	5.1	65.530	94.054	1.19451	0.163	0.281	1085
510	0.08808	152.61	4.9	67.483	96.840	1.20003	0.162	0.277	1099
520	0.09054	157.83	4.7	69.407	99.587	1.20536	0.161	0.273	1112
530	0.09298	162.96	4.6	71.305	102.297	1.21053	0.161	0.269	1125
540	0.09539	168.03	4.4	73.180	104.975	1.21553	0.160	0.266	1138
550	0.09778	173.04	4.3	75.034	107.624	1.22039	0.160	0.264	1150
560	0.10014	177.99	4.2	76.870	110.248	1.22512	0.159	0.261	1163
570	0.10248	182.89	4.1	78.690	112.848	1.22972	0.159	0.259	1175
580	0.10481	187.73	4.0	80.494	115.428	1.23421	0.159	0.257	1187
590	0.10711	192.54	3.9	82.286	117.988	1.23859	0.158	0.255	1199
600	0.10940	197.30	3.8	84.067	120.532	1.24286	0.158	0.254	1211

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1800 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 100.375	82.02866	223.35	14.566	180543.40	0.0017660	0.11258	44.181	0.00348	1.57240	5.5725
105	81.35773	220.71	14.362	172093.52	0.0017855	0.11133	40.537	0.00347	1.56700	5.1658
110	80.63025	217.83	14.135	163291.83	0.0018074	0.10990	36.972	0.00346	1.56116	4.7685
115	79.90030	214.91	13.902	154826.01	0.0018305	0.10839	33.756	0.00345	1.55532	4.4105
120	79.16762	211.96	13.664	146686.02	0.0018547	0.10682	30.857	0.00343	1.54946	4.0879
125	78.43192	208.97	13.421	138861.96	0.0018801	0.10520	28.241	0.00341	1.54360	3.7969
130	77.69290	205.93	13.174	131344.12	0.0019070	0.10352	25.882	0.00339	1.53773	3.5345
135	76.95023	202.85	12.923	124122.99	0.0019353	0.10180	23.754	0.00337	1.53184	3.2978
140	76.20354	199.73	12.670	117189.20	0.0019654	0.10003	21.833	0.00334	1.52594	3.0843
145	75.45242	196.56	12.415	110533.62	0.0019972	0.09823	20.100	0.00332	1.52001	2.8918
150	74.69643	193.34	12.158	104147.27	0.0020311	0.09640	18.536	0.00329	1.51406	2.7183
155	73.93507	190.07	11.901	98021.40	0.0020672	0.09454	17.124	0.00325	1.50809	2.5620
160	73.16782	186.74	11.644	92147.45	0.0021058	0.09266	15.849	0.00322	1.50208	2.4215
165	72.39408	183.35	11.387	86517.07	0.0021472	0.09076	14.698	0.00318	1.49604	2.2952
170	71.61318	179.90	11.133	81122.15	0.0021915	0.08884	13.658	0.00315	1.48996	2.1821
175	70.82440	176.39	10.880	75954.81	0.0022393	0.08690	12.718	0.00311	1.48384	2.0810
180	70.02695	172.81	10.630	71007.40	0.0022908	0.08496	11.868	0.00306	1.47766	1.9909
185	69.21993	169.16	10.384	66272.55	0.0023465	0.08301	11.100	0.00302	1.47143	1.9109
190	68.40236	165.44	10.142	61743.14	0.0024069	0.08105	10.405	0.00298	1.46513	1.8404
195	67.57315	161.65	9.904	57412.38	0.0024727	0.07908	9.775	0.00293	1.45876	1.7787
200	66.73107	157.77	9.671	53273.76	0.0025444	0.07711	9.205	0.00288	1.45232	1.7251
205	65.87477	153.82	9.445	49321.15	0.0026229	0.07514	8.688	0.00283	1.44578	1.6792
210	65.00274	149.78	9.224	45548.77	0.0027090	0.07318	8.219	0.00277	1.43914	1.6406
215	64.11328	145.66	9.010	41951.26	0.0028037	0.07121	7.793	0.00272	1.43239	1.6090
220	63.20451	141.45	8.803	38523.76	0.0029084	0.06924	7.405	0.00266	1.42552	1.5840
225	62.27430	137.17	8.603	35261.89	0.0030244	0.06727	7.052	0.00260	1.41850	1.5655
230	61.32027	132.82	8.408	32161.92	0.0031533	0.06531	6.730	0.00254	1.41133	1.5536
235	60.33681	129.75	7.924	29043.70	0.0032942	0.06334	6.434	0.00246	1.40397	1.5630
240	59.32596	125.48	7.703	26217.02	0.0034678	0.06139	6.164	0.00238	1.39643	1.5730
245	58.28379	121.19	7.438	23619.31	0.0036280	0.05943	5.916	0.00232	1.38868	1.5754
250	57.20774	116.89	7.218	21180.05	0.0038274	0.05749	5.729	0.00225	1.38071	1.6049
255	56.09437	112.51	6.975	18877.88	0.0040441	0.05556	5.546	0.00218	1.37249	1.6353
260	54.93868	108.18	6.741	16736.44	0.0042944	0.05363	5.363	0.00210	1.36400	1.6721
265	53.73652	103.87	6.501	14751.58	0.0045759	0.05172	5.178	0.00203	1.35520	1.7130
270	52.48321	99.36	6.217	12887.03	0.0048762	0.04982	4.992	0.00196	1.34607	1.7476
275	51.17271	94.99	5.980	11168.52	0.0052634	0.04793	4.804	0.00187	1.33657	1.8041
280	49.80099	90.25	5.657	9587.46	0.0056325	0.04606	4.616	0.00182	1.32667	1.8339
285	48.34167	86.07	5.454	8167.99	0.0061774	0.04418	4.423	0.00172	1.31619	1.9161
290	46.80618	82.24	5.088	6883.38	0.0067537	0.04233	4.230	0.00163	1.30523	1.9980
295	45.18080	77.71	4.838	5750.62	0.0073934	0.04080	4.034	0.00157	1.29369	2.0449
300	43.45837	73.60	4.606	4769.32	0.0081645	0.03947	3.837	0.00151	1.28154	2.1031
310	39.72466	66.09	4.137	3256.41	0.0098348	0.03678	3.445	0.00142	1.25547	2.1919
320	35.72313	60.36	3.747	2299.78	0.0113195	0.03413	3.075	0.00140	1.22793	2.2158
330	31.77072	56.93	3.461	1776.18	0.0119372	0.03155	2.755	0.00146	1.20113	2.1362
340	28.25097	55.74	3.263	1539.01	0.0113852	0.02916	2.507	0.00163	1.17760	1.9644
350	25.34991	56.30	3.140	1454.50	0.0102269	0.02716	2.327	0.00186	1.15845	1.7760
360	23.03391	57.86	3.051	1440.12	0.0089640	0.02560	2.200	0.00214	1.14331	1.6049
370	21.18269	59.97	2.983	1454.55	0.0078532	0.02436	2.110	0.00244	1.13130	1.4686
380	19.67386	62.39	2.928	1479.24	0.0069380	0.02343	2.045	0.00275	1.12158	1.3602
390	18.42352	65.05	2.894	1507.98	0.0062193	0.02273	1.997	0.00305	1.11357	1.2792
400	17.36724	67.77	2.850	1536.79	0.0056038	0.02219	1.961	0.00336	1.10683	1.2085
410	16.46125	70.58	2.827	1563.85	0.0051264	0.02179	1.935	0.00366	1.10108	1.1568
420	15.67280	73.41	2.793	1589.16	0.0047059	0.02147	1.916	0.00397	1.09608	1.1095
430	14.97818	76.25	2.775	1612.29	0.0043698	0.02124	1.902	0.00426	1.09170	1.0739
440	14.36072	79.05	2.748	1632.13	0.0040701	0.02106	1.892	0.00456	1.08781	1.0406
450	13.80502	81.83	2.736	1650.32	0.0038279	0.02093	1.885	0.00484	1.08432	1.0155
460	13.30521	84.55	2.709	1664.94	0.0035989	0.02084	1.882	0.00515	1.08118	0.9892
470	12.84763	87.31	2.696	1681.05	0.0034046	0.02078	1.880	0.00544	1.07832	0.9683
480	12.42847	90.04	2.684	1695.73	0.0032328	0.02074	1.881	0.00573	1.07570	0.9500
490	12.04249	92.74	2.674	1709.14	0.0030799	0.02073	1.883	0.00603	1.07329	0.9337
500	11.68540	95.43	2.664	1721.42	0.0029429	0.02074	1.886	0.00632	1.07107	0.9192
510	11.35364	98.09	2.656	1732.69	0.0028195	0.02070	1.890	0.00659	1.06900	0.9093
520	11.04426	100.73	2.649	1743.07	0.0027078	0.02076	1.896	0.00689	1.06708	0.8966
530	10.75477	103.36	2.642	1752.65	0.0026061	0.02083	1.902	0.00719	1.06529	0.8853
540	10.48306	105.97	2.636	1761.51	0.0025131	0.02092	1.909	0.00749	1.06360	0.8751
550	10.22732	108.58	2.630	1769.74	0.0024277	0.02101	1.917	0.00779	1.06202	0.8659
560	9.98599	111.17	2.625	1777.40	0.0023491	0.02110	1.925	0.00809	1.06052	0.8577
570	9.75774	113.76	2.619	1784.55	0.0022763	0.02120	1.934	0.00839	1.05911	0.8502
580	9.54139	116.34	2.615	1791.24	0.0022088	0.02131	1.943	0.00869	1.05778	0.8435
590	9.33592	118.92	2.610	1797.52	0.0021459	0.02142	1.953	0.00899	1.05651	0.8374
600	9.14042	121.50	2.605	1803.43	0.0020873	0.02154	1.963	0.00929	1.05531	0.8319

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1900 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 100.515	0.01219	2207.02	318.9	-82.913	-78.625	0.50415	0.267	0.394	3887
105	0.01228	2124.05	307.7	-81.180	-76.858	0.52136	0.263	0.394	3838
110	0.01239	2034.09	295.6	-79.250	-74.889	0.53967	0.259	0.394	3783
115	0.01251	1946.76	283.8	-77.323	-72.923	0.55716	0.255	0.393	3727
120	0.01262	1862.00	272.5	-75.398	-70.957	0.57389	0.252	0.393	3670
125	0.01274	1779.75	261.5	-73.476	-68.993	0.58992	0.248	0.393	3611
130	0.01286	1699.96	250.9	-71.556	-67.031	0.60531	0.245	0.392	3552
135	0.01298	1622.57	240.7	-69.637	-65.069	0.62012	0.242	0.392	3492
140	0.01311	1547.52	230.8	-67.720	-63.107	0.63439	0.239	0.392	3432
145	0.01324	1474.76	221.3	-65.805	-61.146	0.64815	0.236	0.392	3370
150	0.01337	1404.23	212.0	-63.890	-59.184	0.66145	0.233	0.392	3308
155	0.01351	1335.89	203.2	-61.976	-57.222	0.67432	0.231	0.392	3246
160	0.01365	1269.66	194.6	-60.062	-55.259	0.68678	0.228	0.393	3183
165	0.01380	1205.50	186.3	-58.148	-53.294	0.69887	0.226	0.393	3120
170	0.01395	1143.36	178.4	-56.234	-51.327	0.71062	0.223	0.394	3056
175	0.01410	1083.18	170.7	-54.318	-49.357	0.72204	0.221	0.394	2992
180	0.01426	1024.92	163.3	-52.400	-47.383	0.73316	0.219	0.395	2928
185	0.01443	968.51	156.1	-50.480	-45.405	0.74400	0.217	0.396	2864
190	0.01460	913.92	149.3	-48.557	-43.421	0.75458	0.215	0.397	2800
195	0.01477	861.09	142.7	-46.629	-41.432	0.76492	0.212	0.399	2736
200	0.01496	809.99	136.3	-44.697	-39.434	0.77504	0.210	0.400	2672
205	0.01515	760.56	130.1	-42.759	-37.428	0.78495	0.208	0.402	2609
210	0.01535	712.77	124.2	-40.813	-35.412	0.79467	0.206	0.404	2545
215	0.01556	666.59	118.4	-38.859	-33.385	0.80421	0.204	0.407	2482
220	0.01578	621.99	112.9	-36.895	-31.343	0.81359	0.202	0.409	2419
225	0.01601	578.93	107.5	-34.920	-29.286	0.82284	0.199	0.413	2357
230	0.01626	537.41	102.4	-32.931	-27.211	0.83195	0.197	0.416	2295
235	0.01652	494.51	96.6	-30.904	-25.092	0.84106	0.200	0.424	2203
240	0.01679	455.11	91.9	-28.859	-22.951	0.85008	0.199	0.432	2138
245	0.01709	418.57	86.7	-26.790	-20.779	0.85904	0.198	0.436	2067
250	0.01740	383.72	82.2	-24.698	-18.577	0.86794	0.197	0.443	2002
255	0.01774	350.21	77.5	-22.584	-16.344	0.87678	0.195	0.450	1933
260	0.01810	318.44	73.2	-20.440	-14.073	0.88560	0.194	0.459	1868
265	0.01849	288.55	68.8	-18.265	-11.760	0.89441	0.193	0.468	1799
270	0.01891	259.72	64.2	-16.055	-9.402	0.90323	0.193	0.476	1725
275	0.01937	232.56	60.2	-13.806	-6.990	0.91208	0.192	0.490	1659
280	0.01988	206.98	55.4	-11.516	-4.522	0.92097	0.191	0.496	1576
285	0.02045	183.36	52.1	-9.161	-1.968	0.93001	0.191	0.517	1516
290	0.02107	161.39	48.2	-6.749	0.665	0.93917	0.195	0.537	1436
295	0.02177	141.41	44.3	-4.269	3.392	0.94849	0.194	0.553	1367
300	0.02256	123.53	40.8	-1.725	6.214	0.95798	0.194	0.575	1303
310	0.02447	94.48	34.0	3.557	12.168	0.97750	0.194	0.616	1179
320	0.02691	74.84	28.1	9.029	18.496	0.99759	0.194	0.646	1076
330	0.02990	63.86	23.2	14.495	25.015	1.01765	0.192	0.651	1002
340	0.03333	59.94	19.3	19.696	31.422	1.03678	0.190	0.624	955
350	0.03698	60.90	16.4	24.437	37.446	1.05425	0.187	0.578	934
360	0.04064	64.75	14.2	28.674	42.972	1.06982	0.184	0.528	927
370	0.04420	70.07	12.5	32.459	48.009	1.08362	0.181	0.482	929
380	0.04763	76.07	11.2	35.881	52.637	1.09597	0.179	0.444	935
390	0.05091	82.38	10.2	39.013	56.925	1.10711	0.177	0.415	947
400	0.05407	88.81	9.4	41.919	60.941	1.11728	0.175	0.389	957
410	0.05710	95.21	8.7	44.643	64.733	1.12665	0.173	0.370	972
420	0.06003	101.55	8.1	47.223	68.343	1.13535	0.171	0.353	984
430	0.06287	107.77	7.6	49.685	71.803	1.14349	0.170	0.340	999
440	0.06562	113.75	7.2	52.048	75.133	1.15115	0.169	0.327	1011
450	0.06830	119.61	6.8	54.330	78.360	1.15841	0.168	0.318	1026
460	0.07092	125.42	6.5	56.543	81.493	1.16529	0.167	0.309	1038
470	0.07348	131.12	6.2	58.696	84.548	1.17187	0.166	0.301	1051
480	0.07598	136.45	5.9	60.792	87.524	1.17813	0.165	0.295	1064
490	0.07845	141.98	5.7	62.845	90.445	1.18416	0.164	0.289	1078
500	0.08088	147.41	5.4	64.857	93.313	1.18995	0.163	0.284	1092
510	0.08327	152.75	5.2	66.834	96.132	1.19553	0.162	0.280	1105
520	0.08563	158.01	5.1	68.779	98.908	1.20092	0.161	0.276	1118
530	0.08797	163.20	4.9	70.697	101.646	1.20614	0.161	0.272	1131
540	0.09027	168.32	4.7	72.589	104.349	1.21119	0.160	0.269	1144
550	0.09255	173.38	4.6	74.459	107.022	1.21610	0.160	0.266	1157
560	0.09481	178.38	4.5	76.310	109.667	1.22086	0.159	0.263	1169
570	0.09705	183.33	4.3	78.143	112.288	1.22550	0.159	0.261	1181
580	0.09927	188.23	4.2	79.959	114.886	1.23002	0.158	0.259	1194
590	0.10148	193.09	4.1	81.762	117.464	1.23443	0.158	0.257	1206
600	0.10366	197.90	4.0	83.552	120.025	1.23873	0.158	0.255	1218

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

1900 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 100.515	82.05374	223.90	14.561	181094.41	0.0017609	0.11264	44.325	0.00348	1.57260	5.5855
105	81.40490	221.36	14.364	172908.14	0.0017794	0.11143	40.783	0.00347	1.56738	5.1901
110	80.67952	218.50	14.137	164109.66	0.0018010	0.11000	37.202	0.00346	1.56156	4.7911
115	79.95179	215.61	13.904	155647.08	0.0018236	0.10851	33.973	0.00345	1.55573	4.4315
120	79.22145	212.68	13.666	147510.35	0.0018473	0.10695	31.060	0.00344	1.54989	4.1075
125	78.48825	209.71	13.423	139689.58	0.0018722	0.10534	28.433	0.00342	1.54405	3.8152
130	77.75189	206.70	13.177	132175.06	0.0018985	0.10367	26.062	0.00340	1.53820	3.5515
135	77.01204	203.65	12.926	124957.26	0.0019262	0.10196	23.923	0.00337	1.53233	3.3137
140	76.26836	200.56	12.673	118026.84	0.0019555	0.10020	21.993	0.00335	1.52645	3.0990
145	75.52045	197.42	12.419	111374.63	0.0019866	0.09841	20.251	0.00332	1.52055	2.9054
150	74.76789	194.23	12.162	104991.68	0.0020197	0.09659	18.678	0.00329	1.51463	2.7309
155	74.01022	190.99	11.906	98869.21	0.0020549	0.09474	17.258	0.00326	1.50868	2.5737
160	73.24690	187.70	11.650	92998.68	0.0020924	0.09287	15.976	0.00323	1.50270	2.4322
165	72.47739	184.34	11.394	87371.73	0.0021326	0.09098	14.817	0.00319	1.49669	2.3051
170	71.70105	180.93	11.141	81980.24	0.0021757	0.08907	13.771	0.00316	1.49064	2.1910
175	70.91719	177.46	10.890	76816.32	0.0022219	0.08715	12.825	0.00312	1.48456	2.0890
180	70.12504	173.92	10.641	71872.32	0.0022718	0.08522	11.970	0.00308	1.47842	1.9980
185	69.32378	170.32	10.397	67140.85	0.0023257	0.08328	11.196	0.00303	1.47223	1.9172
190	68.51246	166.64	10.156	62614.81	0.0023840	0.08133	10.496	0.00299	1.46598	1.8457
195	67.69006	162.89	9.921	58287.35	0.0024474	0.07938	9.862	0.00294	1.45966	1.7830
200	66.85542	159.07	9.691	54151.96	0.0025164	0.07743	9.287	0.00289	1.45327	1.7285
205	66.00729	155.16	9.467	50202.47	0.0025917	0.07547	8.766	0.00284	1.44679	1.6815
210	65.14423	151.17	9.250	46433.07	0.0026741	0.07352	8.294	0.00279	1.44022	1.6418
215	64.26469	147.11	9.040	42838.35	0.0027647	0.07156	7.864	0.00274	1.43354	1.6090
220	63.36692	142.96	8.838	39413.36	0.0028644	0.06961	7.474	0.00268	1.42674	1.5826
225	62.44895	138.73	8.643	36153.66	0.0029745	0.06767	7.118	0.00263	1.41982	1.5627
230	61.50862	134.44	8.454	33055.36	0.0030965	0.06572	6.793	0.00257	1.41275	1.5490
235	60.54176	131.50	7.969	29938.48	0.0032274	0.06378	6.496	0.00248	1.40550	1.5562
240	59.54893	127.31	7.750	27101.25	0.0033907	0.06185	6.224	0.00241	1.39809	1.5639
245	58.52658	123.12	7.491	24497.64	0.0035410	0.05992	5.974	0.00235	1.39048	1.5649
250	57.47303	118.93	7.277	22053.53	0.0037264	0.05800	5.777	0.00228	1.38267	1.5890
255	56.38563	114.65	7.037	19746.66	0.0039237	0.05609	5.597	0.00221	1.37464	1.6159
260	55.25969	110.45	6.819	17597.16	0.0041582	0.05420	5.417	0.00214	1.36635	1.6524
265	54.09177	106.25	6.576	15608.21	0.0044048	0.05232	5.236	0.00207	1.35780	1.6860
270	52.87910	101.89	6.305	13733.82	0.0046746	0.05046	5.054	0.00200	1.34895	1.7176
275	51.61646	97.68	6.078	12003.69	0.0050180	0.04861	4.872	0.00192	1.33978	1.7685
280	50.30178	93.11	5.756	10411.53	0.0053249	0.04679	4.689	0.00188	1.33028	1.7887
285	48.90956	89.08	5.570	8968.10	0.0058040	0.04496	4.502	0.00178	1.32026	1.8641
290	47.45494	85.47	5.211	7658.79	0.0062878	0.04316	4.316	0.00169	1.30986	1.9347
295	45.92573	81.11	4.976	6494.29	0.0068213	0.04147	4.128	0.00163	1.29897	1.9826
300	44.31662	77.13	4.753	5474.27	0.0074524	0.04017	3.940	0.00158	1.28759	2.0300
310	40.86007	69.82	4.297	3860.50	0.0088194	0.03754	3.567	0.00149	1.26336	2.1062
320	37.16321	63.96	3.908	2781.46	0.0101042	0.03499	3.212	0.00146	1.23779	2.1356
330	33.44525	60.05	3.606	2135.82	0.0108496	0.03253	2.896	0.00149	1.21243	2.0879
340	30.00315	58.18	3.386	1798.50	0.0107238	0.03024	2.639	0.00162	1.18927	1.9605
350	27.04387	58.09	3.241	1647.08	0.0099568	0.02826	2.445	0.00181	1.16960	1.8016
360	24.60741	59.15	3.136	1593.23	0.0089211	0.02663	2.302	0.00205	1.15358	1.6422
370	22.62556	60.92	3.056	1585.46	0.0079121	0.02531	2.199	0.00232	1.14065	1.5076
380	20.99703	63.08	2.992	1597.21	0.0070360	0.02429	2.123	0.00261	1.13010	1.3970
390	19.64194	65.56	2.952	1618.13	0.0063283	0.02352	2.067	0.00289	1.12138	1.3127
400	18.49573	68.15	2.904	1642.62	0.0057099	0.02290	2.025	0.00318	1.11403	1.2383
410	17.51307	70.86	2.876	1667.38	0.0052234	0.02244	1.993	0.00346	1.10776	1.1831
420	16.65857	73.61	2.841	1691.60	0.0047956	0.02208	1.969	0.00375	1.10233	1.1334
430	15.90684	76.40	2.820	1714.31	0.0044489	0.02180	1.951	0.00403	1.09756	1.0950
440	15.24039	79.15	2.787	1733.59	0.0041359	0.02158	1.938	0.00433	1.09335	1.0584
450	14.64143	81.89	2.773	1751.31	0.0038883	0.02143	1.929	0.00460	1.08957	1.0319
460	14.10112	84.65	2.749	1768.50	0.0036530	0.02130	1.923	0.00489	1.08618	1.0048
470	13.60900	87.39	2.730	1784.38	0.0034489	0.02122	1.919	0.00517	1.08309	0.9816
480	13.16145	89.98	2.717	1795.84	0.0032797	0.02117	1.918	0.00545	1.08028	0.9629
490	12.74702	92.67	2.707	1809.76	0.0031222	0.02113	1.919	0.00573	1.07769	0.9455
500	12.36405	95.34	2.697	1822.56	0.0029812	0.02113	1.920	0.00601	1.07530	0.9301
510	12.00864	97.98	2.689	1834.35	0.0028543	0.02106	1.923	0.00627	1.07308	0.9194
520	11.67753	100.61	2.681	1845.22	0.0027395	0.02111	1.928	0.00656	1.07102	0.9059
530	11.36799	103.22	2.675	1855.29	0.0026351	0.02118	1.933	0.00685	1.06909	0.8938
540	11.07770	105.82	2.669	1864.63	0.0025398	0.02125	1.939	0.00714	1.06729	0.8830
550	10.80468	108.41	2.663	1873.32	0.0024524	0.02133	1.946	0.00742	1.06559	0.8732
560	10.54723	110.98	2.658	1881.43	0.0023719	0.02141	1.953	0.00771	1.06400	0.8644
570	10.30389	113.56	2.653	1889.01	0.0022975	0.02151	1.961	0.00800	1.06249	0.8565
580	10.07338	116.13	2.648	1896.12	0.0022285	0.02161	1.970	0.00829	1.06107	0.8493
590	9.85458	118.69	2.644	1902.80	0.0021643	0.02171	1.979	0.00858	1.05971	0.8429
600	9.64650	121.26	2.639	1909.09	0.0021044	0.02182	1.988	0.00886	1.05843	0.8370

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

2000 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 100.655	0.01218	2213.05	318.9	-82.897	-78.384	0.50431	0.267	0.394	3891
105	0.01228	2132.61	308.1	-81.220	-76.673	0.52095	0.263	0.394	3844
110	0.01239	2042.97	296.0	-79.293	-74.705	0.53926	0.259	0.393	3789
115	0.01250	1955.76	284.3	-77.369	-72.739	0.55674	0.256	0.393	3733
120	0.01261	1871.12	272.9	-75.447	-70.775	0.57345	0.252	0.393	3676
125	0.01273	1789.00	262.0	-73.528	-68.813	0.58948	0.248	0.392	3618
130	0.01285	1709.33	251.4	-71.611	-66.851	0.60486	0.245	0.392	3559
135	0.01297	1632.07	241.2	-69.696	-64.891	0.61966	0.242	0.392	3500
140	0.01310	1557.16	231.3	-67.783	-62.931	0.63391	0.239	0.392	3439
145	0.01323	1484.54	221.8	-65.871	-60.971	0.64767	0.236	0.392	3378
150	0.01336	1414.15	212.6	-63.960	-59.012	0.66095	0.233	0.392	3316
155	0.01350	1345.95	203.7	-62.050	-57.052	0.67380	0.231	0.392	3254
160	0.01364	1279.87	195.1	-60.141	-55.091	0.68625	0.228	0.392	3192
165	0.01378	1215.87	186.9	-58.232	-53.128	0.69833	0.226	0.393	3129
170	0.01393	1153.89	178.9	-56.323	-51.164	0.71006	0.224	0.393	3066
175	0.01408	1093.87	171.3	-54.412	-49.197	0.72146	0.221	0.394	3002
180	0.01424	1035.77	163.9	-52.500	-47.227	0.73256	0.219	0.394	2939
185	0.01440	979.53	156.8	-50.587	-45.252	0.74338	0.217	0.395	2876
190	0.01457	925.11	149.9	-48.670	-43.273	0.75394	0.215	0.396	2812
195	0.01475	872.47	143.3	-46.750	-41.288	0.76426	0.213	0.398	2749
200	0.01493	821.55	137.0	-44.826	-39.296	0.77435	0.211	0.399	2686
205	0.01512	772.31	130.8	-42.896	-37.296	0.78422	0.208	0.401	2623
210	0.01532	724.72	124.9	-40.960	-35.287	0.79391	0.206	0.403	2560
215	0.01552	678.74	119.2	-39.016	-33.267	0.80342	0.204	0.405	2498
220	0.01574	634.33	113.7	-37.064	-31.234	0.81276	0.202	0.408	2436
225	0.01597	591.49	108.4	-35.101	-29.187	0.82196	0.199	0.411	2375
230	0.01621	550.17	103.3	-33.126	-27.123	0.83103	0.197	0.414	2314
235	0.01646	507.52	97.6	-31.114	-25.017	0.84008	0.200	0.422	2224
240	0.01673	468.18	92.8	-29.087	-22.890	0.84904	0.199	0.428	2159
245	0.01702	431.75	87.8	-27.038	-20.735	0.85793	0.198	0.433	2090
250	0.01732	397.04	83.3	-24.967	-18.552	0.86675	0.197	0.439	2027
255	0.01765	363.69	78.6	-22.876	-16.340	0.87551	0.195	0.445	1959
260	0.01800	332.03	74.4	-20.759	-14.094	0.88423	0.194	0.454	1897
265	0.01837	302.33	69.9	-18.614	-11.810	0.89294	0.193	0.461	1828
270	0.01878	273.63	65.5	-16.439	-9.485	0.90163	0.193	0.469	1757
275	0.01922	246.58	61.6	-14.231	-7.113	0.91033	0.192	0.482	1693
280	0.01970	221.18	56.8	-11.988	-4.693	0.91905	0.191	0.485	1612
285	0.02023	197.46	53.6	-9.688	-2.196	0.92789	0.191	0.505	1555
290	0.02081	175.44	49.7	-7.340	0.368	0.93681	0.194	0.522	1478
295	0.02146	155.29	46.0	-4.933	3.014	0.94585	0.193	0.536	1412
300	0.02218	137.12	42.5	-2.476	5.739	0.95501	0.193	0.554	1350
310	0.02389	107.02	35.9	2.600	11.449	0.97373	0.193	0.588	1229
320	0.02603	85.69	30.0	7.838	17.479	0.99288	0.193	0.615	1126
330	0.02864	72.60	25.0	13.097	23.704	1.01203	0.192	0.625	1047
340	0.03166	66.44	21.0	18.176	29.900	1.03053	0.190	0.609	994
350	0.03493	65.46	17.9	22.903	35.839	1.04775	0.187	0.575	966
360	0.03829	67.85	15.5	27.196	41.376	1.06335	0.185	0.532	952
370	0.04161	72.22	13.7	31.070	46.480	1.07734	0.182	0.490	949
380	0.04484	77.57	12.2	34.586	51.194	1.08992	0.179	0.453	952
390	0.04796	83.43	11.1	37.809	55.572	1.10129	0.177	0.424	961
400	0.05098	89.57	10.2	40.797	59.676	1.11169	0.175	0.398	970
410	0.05388	95.79	9.4	43.595	63.548	1.12125	0.173	0.378	983
420	0.05669	102.02	8.8	46.239	67.232	1.13013	0.172	0.360	995
430	0.05941	108.20	8.2	48.758	70.759	1.13843	0.171	0.346	1009
440	0.06204	114.13	7.7	51.170	74.147	1.14622	0.169	0.333	1019
450	0.06461	119.94	7.3	53.497	77.426	1.15359	0.168	0.323	1034
460	0.06712	125.73	6.9	55.749	80.608	1.16059	0.167	0.314	1046
470	0.06959	131.43	6.6	57.937	83.708	1.16726	0.166	0.306	1059
480	0.07200	137.05	6.3	60.070	86.733	1.17363	0.165	0.299	1073
490	0.07436	142.57	6.0	62.153	89.693	1.17973	0.164	0.293	1086
510	0.07897	153.02	5.6	66.188	95.435	1.19122	0.162	0.283	1111
520	0.08124	158.33	5.4	68.155	98.240	1.19667	0.162	0.278	1124
530	0.08347	163.56	5.2	70.092	101.005	1.20194	0.161	0.275	1137
540	0.08568	168.72	5.1	72.001	103.733	1.20704	0.160	0.271	1150
550	0.08787	173.82	4.9	73.888	106.429	1.21198	0.160	0.268	1163
560	0.09003	178.87	4.8	75.752	109.096	1.21679	0.159	0.265	1176
570	0.09218	183.87	4.6	77.598	111.736	1.22146	0.159	0.263	1188
580	0.09431	188.82	4.5	79.427	114.352	1.22601	0.158	0.261	1200
590	0.09642	193.72	4.4	81.240	116.948	1.23045	0.158	0.259	1213
600	0.09851	198.59	4.3	83.040	119.524	1.23478	0.157	0.257	1225

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

2000 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 100.655	82.07874	224.45	14.557	181644.61	0.0017558	0.11269	44.469	0.00348	1.57280	5.5985
105	81.45189	222.01	14.366	173721.42	0.0017735	0.11153	41.029	0.00348	1.56776	5.2145
110	80.72858	219.17	14.139	164926.07	0.0017946	0.11011	37.434	0.00347	1.56195	4.8137
115	80.00304	216.30	13.906	156466.64	0.0018168	0.10863	34.190	0.00346	1.55614	4.4527
120	79.27503	213.40	13.668	148333.08	0.0018400	0.10708	31.265	0.00344	1.55032	4.1272
125	78.54429	210.45	13.426	140515.50	0.0018644	0.10547	28.625	0.00342	1.54450	3.8335
130	77.81055	207.47	13.179	133004.18	0.0018901	0.10382	26.243	0.00340	1.53866	3.5686
135	77.07349	204.45	12.929	125789.60	0.0019172	0.10211	24.093	0.00338	1.53282	3.3295
140	76.33278	201.39	12.677	118862.41	0.0019459	0.10037	22.153	0.00336	1.52696	3.1138
145	75.58803	198.28	12.422	112213.44	0.0019762	0.09859	20.402	0.00333	1.52108	2.9192
150	74.83886	195.12	12.167	105833.73	0.0020084	0.09678	18.821	0.00330	1.51518	2.7436
155	74.08479	191.91	11.911	99714.52	0.0020427	0.09494	17.393	0.00327	1.50926	2.5854
160	73.32535	188.65	11.656	93847.23	0.0020792	0.09308	16.103	0.00324	1.50331	2.4430
165	72.55999	185.34	11.401	88223.52	0.0021183	0.09120	14.937	0.00320	1.49734	2.3149
170	71.78811	181.96	11.149	82835.25	0.0021601	0.08930	13.884	0.00316	1.49132	2.2000
175	71.00905	178.53	10.899	77674.54	0.0022050	0.08739	12.932	0.00313	1.48527	2.0971
180	70.22210	175.03	10.652	72733.72	0.0022533	0.08547	12.071	0.00309	1.47917	2.0052
185	69.42645	171.46	10.409	68005.39	0.0023054	0.08354	11.292	0.00304	1.47302	1.9235
190	68.62122	167.83	10.171	63482.42	0.0023618	0.08161	10.587	0.00300	1.46682	1.8512
195	67.80543	164.13	9.937	59157.96	0.0024229	0.07967	9.948	0.00295	1.46055	1.7875
200	66.97801	160.35	9.710	55025.48	0.0024893	0.07773	9.370	0.00291	1.45420	1.7320
205	66.13776	156.49	9.489	51078.77	0.0025616	0.07579	8.845	0.00286	1.44778	1.6841
210	65.28337	152.55	9.275	47311.97	0.0026406	0.07385	8.369	0.00281	1.44127	1.6433
215	64.41336	148.54	9.069	43719.63	0.0027272	0.07192	7.936	0.00276	1.43467	1.6092
220	63.52611	144.44	8.871	40296.74	0.0028223	0.06998	7.542	0.00270	1.42795	1.5816
225	62.61983	140.27	8.681	37038.73	0.0029270	0.06805	7.184	0.00265	1.42111	1.5602
230	61.69252	136.04	8.498	33941.63	0.0030427	0.06613	6.857	0.00259	1.41413	1.5450
235	60.74136	133.22	8.013	30827.65	0.0031644	0.06421	6.557	0.00251	1.40700	1.5500
240	59.76555	129.10	7.794	27981.15	0.0033179	0.06229	6.284	0.00243	1.39970	1.5555
245	58.76179	125.01	7.542	25370.68	0.0034598	0.06039	6.032	0.00238	1.39223	1.5554
250	57.72921	120.92	7.333	22920.69	0.0036329	0.05850	5.823	0.00231	1.38456	1.5742
255	56.66580	116.74	7.096	20608.81	0.0038130	0.05662	5.646	0.00224	1.37670	1.5981
260	55.56719	112.66	6.893	18449.96	0.0040343	0.05475	5.469	0.00217	1.36861	1.6344
265	54.43028	108.55	6.646	16456.08	0.0042506	0.05290	5.291	0.00211	1.36027	1.6616
270	53.25414	104.34	6.387	14572.09	0.0044952	0.05107	5.114	0.00204	1.35168	1.6908
275	52.03396	100.27	6.170	12830.50	0.0048027	0.04926	4.936	0.00197	1.34281	1.7371
280	50.76901	95.85	5.849	11228.97	0.0050603	0.04747	4.758	0.00193	1.33365	1.7498
285	49.43492	91.96	5.677	9761.58	0.0054869	0.04569	4.577	0.00183	1.32404	1.8196
290	48.04897	88.53	5.324	8429.76	0.0058991	0.04394	4.396	0.00175	1.31410	1.8812
295	46.60022	84.33	5.101	7236.48	0.0063523	0.04221	4.216	0.00169	1.30377	1.9259
300	45.08456	80.47	4.886	6181.79	0.0068796	0.04084	4.035	0.00164	1.29301	1.9692
310	41.85390	73.36	4.441	4479.24	0.0080182	0.03827	3.678	0.00155	1.27030	2.0346
320	38.41132	67.45	4.056	3291.54	0.0091240	0.03579	3.335	0.00151	1.24639	2.0648
330	34.91408	63.22	3.746	2534.75	0.0098806	0.03342	3.026	0.00153	1.22241	2.0361
340	31.58896	60.81	3.509	2098.75	0.0100125	0.03121	2.766	0.00162	1.19991	1.9423
350	28.62936	60.14	3.346	1873.96	0.0095659	0.02926	2.560	0.00178	1.18012	1.8118
360	26.11763	60.71	3.224	1772.17	0.0087689	0.02762	2.404	0.00199	1.16349	1.6685
370	24.03245	62.10	3.133	1735.53	0.0078912	0.02623	2.289	0.00223	1.14982	1.5396
380	22.29974	63.98	3.059	1729.69	0.0070763	0.02513	2.203	0.00249	1.13854	1.4288
390	20.84879	66.25	3.011	1739.38	0.0063969	0.02429	2.138	0.00275	1.12915	1.3430
400	19.61740	68.68	2.959	1757.09	0.0057890	0.02361	2.089	0.00303	1.12122	1.2663
410	18.56055	71.28	2.927	1777.90	0.0053008	0.02310	2.052	0.00329	1.11445	1.2082
420	17.64130	73.95	2.891	1799.83	0.0048713	0.02269	2.023	0.00357	1.10858	1.1566
430	16.83311	76.67	2.866	1821.29	0.0045172	0.02237	2.002	0.00384	1.10344	1.1157
440	16.11824	79.36	2.826	1839.51	0.0041917	0.02211	1.985	0.00412	1.09890	1.0756
450	15.47647	82.05	2.811	1856.28	0.0039400	0.02192	1.973	0.00438	1.09484	1.0477
460	14.89760	84.77	2.787	1873.08	0.0037025	0.02177	1.965	0.00466	1.09119	1.0197
470	14.37087	87.48	2.767	1888.76	0.0034948	0.02166	1.959	0.00493	1.08787	0.9955
480	13.88977	90.15	2.756	1903.58	0.0033187	0.02159	1.956	0.00520	1.08485	0.9758
490	13.44756	92.81	2.741	1917.27	0.0031538	0.02153	1.955	0.00547	1.08207	0.9564
500	13.04196	95.31	2.730	1925.54	0.0030168	0.02151	1.955	0.00574	1.07953	0.9408
510	12.66276	97.93	2.722	1937.70	0.0028867	0.02143	1.957	0.00599	1.07716	0.9293
520	12.30980	100.54	2.715	1948.97	0.0027692	0.02147	1.960	0.00626	1.07496	0.9150
530	11.98009	103.13	2.708	1959.44	0.0026624	0.02152	1.964	0.00654	1.07290	0.9022
540	11.67112	105.71	2.702	1969.17	0.0025649	0.02158	1.969	0.00682	1.07098	0.8907
550	11.38073	108.28	2.697	1978.26	0.0024755	0.02165	1.975	0.00710	1.06917	0.8803
560	11.10708	110.84	2.692	1986.75	0.0023933	0.02172	1.981	0.00737	1.06747	0.8710
570	10.84858	113.40	2.687	1994.71	0.0023174	0.02181	1.988	0.00765	1.06587	0.8626
580	10.60384	115.95	2.683	2002.19	0.0022471	0.02190	1.996	0.00793	1.06435	0.8550
590	10.37164	118.50	2.678	2009.23	0.0021817	0.02200	2.004	0.00820	1.06291	0.8482
600	10.15094	121.05	2.674	2015.89	0.0021208	0.02210	2.013	0.00848	1.06154	0.8420

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

2200 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 100.933	0.01218	2225.14	319.0	-82.864	-77.904	0.50460	0.267	0.394	3899
105	0.01226	2150.27	308.9	-81.299	-76.303	0.52015	0.264	0.393	3856
110	0.01237	2060.66	296.8	-79.377	-74.337	0.53844	0.260	0.393	3801
115	0.01248	1973.68	285.1	-77.459	-72.373	0.55590	0.256	0.393	3745
120	0.01260	1889.28	273.8	-75.543	-70.411	0.57260	0.252	0.392	3689
125	0.01271	1807.40	262.9	-73.630	-68.451	0.58860	0.249	0.392	3631
130	0.01283	1727.99	252.3	-71.720	-66.492	0.60397	0.246	0.392	3573
135	0.01295	1650.99	242.1	-69.811	-64.534	0.61874	0.242	0.391	3514
140	0.01308	1576.34	232.2	-67.905	-62.577	0.63298	0.239	0.391	3454
145	0.01321	1503.99	222.7	-66.001	-60.621	0.64670	0.237	0.391	3394
150	0.01334	1433.88	213.6	-64.099	-58.665	0.65996	0.234	0.391	3333
155	0.01347	1365.95	204.7	-62.197	-56.709	0.67279	0.231	0.391	3271
160	0.01361	1300.16	196.2	-60.297	-54.753	0.68521	0.229	0.391	3209
165	0.01375	1236.45	188.0	-58.397	-52.795	0.69726	0.226	0.392	3147
170	0.01390	1174.77	180.1	-56.498	-50.836	0.70895	0.224	0.392	3085
175	0.01405	1115.06	172.4	-54.598	-48.875	0.72032	0.222	0.392	3023
180	0.01420	1057.28	165.1	-52.697	-46.912	0.73139	0.220	0.393	2960
185	0.01436	1001.37	158.0	-50.796	-44.945	0.74217	0.218	0.394	2898
190	0.01453	947.28	151.2	-48.892	-42.974	0.75268	0.215	0.395	2836
195	0.01470	894.97	144.7	-46.986	-40.998	0.76295	0.213	0.396	2774
200	0.01488	844.40	138.4	-45.077	-39.016	0.77299	0.211	0.397	2712
205	0.01506	795.52	132.3	-43.163	-37.028	0.78281	0.209	0.398	2651
210	0.01525	748.29	126.4	-41.245	-35.031	0.79243	0.207	0.400	2590
215	0.01546	702.68	120.8	-39.321	-33.025	0.80188	0.205	0.402	2529
220	0.01567	658.66	115.4	-37.390	-31.008	0.81115	0.202	0.404	2470
225	0.01589	616.19	110.1	-35.451	-28.979	0.82026	0.200	0.407	2410
230	0.01612	575.26	105.0	-33.502	-26.936	0.82924	0.197	0.410	2352
235	0.01636	533.16	99.3	-31.520	-24.855	0.83819	0.201	0.416	2263
240	0.01662	494.00	94.7	-29.524	-22.755	0.84703	0.200	0.422	2200
245	0.01689	457.73	89.8	-27.510	-20.630	0.85579	0.198	0.426	2134
250	0.01718	423.21	85.4	-25.478	-18.480	0.86448	0.197	0.432	2074
255	0.01748	390.15	80.7	-23.429	-16.306	0.87309	0.196	0.437	2008
260	0.01781	358.60	76.8	-21.360	-14.105	0.88164	0.195	0.446	1951
265	0.01816	329.22	72.2	-19.268	-11.870	0.89016	0.194	0.450	1883
270	0.01854	300.76	68.0	-17.155	-9.604	0.89863	0.193	0.457	1817
275	0.01894	273.89	64.2	-15.016	-7.301	0.90708	0.192	0.467	1757
280	0.01937	248.85	59.4	-12.852	-4.960	0.91551	0.191	0.468	1679
285	0.01985	224.89	56.4	-10.643	-2.557	0.92402	0.191	0.484	1627
290	0.02036	202.80	52.6	-8.398	-0.103	0.93256	0.194	0.498	1553
295	0.02093	182.38	49.0	-6.111	2.414	0.94116	0.193	0.508	1492
300	0.02154	163.74	45.7	-3.788	4.988	0.94981	0.192	0.521	1434
310	0.02297	132.01	39.3	0.968	10.326	0.96732	0.192	0.546	1319
320	0.02470	108.03	33.5	5.844	15.907	0.98503	0.192	0.568	1218
330	0.02676	91.60	28.5	10.756	21.659	1.00273	0.191	0.579	1136
340	0.02915	81.71	24.3	15.578	27.453	1.02003	0.189	0.576	1074
350	0.03180	77.14	20.9	20.190	33.143	1.03653	0.187	0.559	1034
360	0.03460	76.51	18.2	24.499	38.595	1.05189	0.185	0.530	1009
370	0.03746	78.63	16.0	28.471	43.732	1.06597	0.183	0.497	996
380	0.04031	82.39	14.3	32.121	48.543	1.07880	0.180	0.464	991
390	0.04310	87.10	13.0	35.487	53.047	1.09050	0.178	0.437	995
400	0.04583	92.42	11.8	38.616	57.287	1.10124	0.176	0.411	1000
410	0.04848	98.10	10.9	41.545	61.296	1.11114	0.174	0.391	1009
420	0.05106	103.97	10.1	44.309	65.110	1.12033	0.173	0.373	1020
430	0.05357	109.92	9.5	46.936	68.758	1.12892	0.171	0.358	1031
440	0.05599	115.71	8.8	49.442	72.252	1.13695	0.170	0.342	1039
450	0.05836	121.39	8.4	51.852	75.627	1.14454	0.169	0.332	1052
460	0.06068	127.09	7.9	54.181	78.900	1.15174	0.168	0.323	1064
470	0.06295	132.73	7.5	56.439	82.083	1.15858	0.167	0.314	1075
480	0.06518	138.31	7.2	58.635	85.187	1.16512	0.166	0.307	1089
490	0.06736	143.82	6.9	60.776	88.219	1.17137	0.165	0.300	1101
500	0.06951	149.26	6.6	62.868	91.187	1.17737	0.164	0.294	1115
510	0.07163	154.60	6.3	64.915	94.096	1.18313	0.163	0.288	1126
520	0.07371	159.86	6.1	66.922	96.952	1.18868	0.162	0.283	1139
530	0.07576	164.61	5.9	68.893	99.757	1.19403	0.161	0.280	1151
540	0.07780	169.84	5.7	70.837	102.533	1.19921	0.160	0.276	1164
550	0.07982	175.02	5.5	72.754	105.272	1.20424	0.159	0.272	1177
560	0.08182	180.15	5.4	74.646	107.980	1.20912	0.159	0.269	1190
570	0.08380	185.22	5.2	76.517	110.658	1.21386	0.158	0.266	1202
580	0.08577	190.26	5.1	78.369	113.310	1.21847	0.158	0.264	1215
590	0.08772	195.25	4.9	80.203	115.938	1.22296	0.157	0.262	1227
600	0.08965	200.21	4.8	82.021	118.545	1.22735	0.157	0.260	1240

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

2200 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 100.933	82.12901	225.55	14.548	182748.77	0.0017458	0.11280	44.761	0.00349	1.57321	5.6248
105	81.54528	223.30	14.369	175344.03	0.0017617	0.11172	41.524	0.00348	1.56851	5.2634
110	80.82605	220.50	14.143	166554.69	0.0017821	0.11033	37.898	0.00347	1.56273	4.8593
115	80.10483	217.68	13.910	158101.31	0.0018034	0.10886	34.627	0.00346	1.55695	4.4951
120	79.38140	214.82	13.672	149973.81	0.0018257	0.10733	31.675	0.00345	1.55117	4.1667
125	78.65552	211.93	13.430	142162.30	0.0018491	0.10574	29.011	0.00343	1.54538	3.8704
130	77.92692	209.01	13.184	134657.07	0.0018737	0.10411	26.606	0.00341	1.53959	3.6030
135	77.19533	206.04	12.935	127448.58	0.0018996	0.10242	24.435	0.00339	1.53378	3.3615
140	76.46043	203.03	12.683	120527.48	0.0019269	0.10070	22.475	0.00337	1.52797	3.1436
145	75.72188	199.98	12.430	113884.60	0.0019558	0.09894	20.705	0.00334	1.52214	2.9468
150	74.97930	196.89	12.175	107510.96	0.0019865	0.09715	19.107	0.00331	1.51629	2.7692
155	74.23229	193.74	11.921	101397.78	0.0020190	0.09533	17.663	0.00328	1.51042	2.6091
160	73.48039	190.55	11.667	95536.49	0.0020536	0.09349	16.358	0.00325	1.50453	2.4648
165	72.72310	187.30	11.414	89918.73	0.0020906	0.09163	15.178	0.00322	1.49861	2.3350
170	71.95988	184.00	11.164	84536.35	0.0021300	0.08976	14.112	0.00318	1.49266	2.2183
175	71.19014	180.64	10.916	79381.43	0.0021723	0.08787	13.147	0.00315	1.48667	2.1136
180	70.41321	177.22	10.672	74446.30	0.0022176	0.08597	12.275	0.00311	1.48065	2.0200
185	69.62838	173.73	10.433	69723.52	0.0022664	0.08407	11.485	0.00307	1.47458	1.9365
190	68.83485	170.18	10.198	65205.94	0.0023191	0.08216	10.770	0.00302	1.46846	1.8624
195	68.03175	166.56	9.969	60886.65	0.0023759	0.08025	10.122	0.00298	1.46228	1.7970
200	67.21812	162.87	9.746	56759.08	0.0024376	0.07834	9.535	0.00294	1.45604	1.7396
205	66.39290	159.10	9.531	52816.95	0.0025045	0.07643	9.002	0.00289	1.44973	1.6897
210	65.55493	155.26	9.323	49054.32	0.0025773	0.07452	8.519	0.00284	1.44334	1.6468
215	64.70293	151.34	9.124	45465.65	0.0026567	0.07261	8.079	0.00279	1.43686	1.6105
220	63.83549	147.34	8.934	42045.77	0.0027435	0.07071	7.679	0.00274	1.43029	1.5805
225	62.95107	143.27	8.753	38789.95	0.0028386	0.06881	7.315	0.00269	1.42360	1.5565
230	62.04796	139.14	8.581	35693.99	0.0029430	0.06692	6.983	0.00263	1.41680	1.5383
235	61.12577	136.58	8.096	32589.99	0.0030484	0.06504	6.680	0.00256	1.40988	1.5394
240	60.18134	132.61	7.878	29729.39	0.0031839	0.06317	6.402	0.00249	1.40281	1.5406
245	59.21158	128.70	7.640	27102.69	0.0033123	0.06130	6.148	0.00243	1.39557	1.5389
250	58.21697	124.78	7.438	24638.08	0.0034648	0.05945	5.914	0.00236	1.38818	1.5482
255	57.19656	120.76	7.206	22315.49	0.0036164	0.05762	5.741	0.00231	1.38062	1.5664
260	56.14655	116.89	7.032	20134.34	0.0038164	0.05580	5.569	0.00223	1.37288	1.6027
265	55.06388	112.95	6.775	18128.38	0.0039835	0.05400	5.397	0.00218	1.36492	1.6189
270	53.95088	108.99	5.538	16226.02	0.0041891	0.05223	5.226	0.00212	1.35677	1.6447
275	52.80298	105.16	5.337	14461.96	0.0044412	0.05048	5.056	0.00205	1.34840	1.6839
280	51.62077	101.04	5.021	12845.72	0.0046276	0.04876	4.886	0.00202	1.33981	1.6865
285	50.38296	97.36	5.871	11330.51	0.0049755	0.04705	4.714	0.00193	1.33086	1.7472
290	49.10792	94.26	5.525	9959.00	0.0052848	0.04538	4.544	0.00186	1.32169	1.7956
295	47.78687	90.31	5.322	8715.15	0.0056259	0.04374	4.374	0.00180	1.31223	1.8293
300	46.41707	86.66	5.119	7600.14	0.0060114	0.04213	4.205	0.00174	1.30246	1.8720
310	43.53321	79.91	4.698	5746.93	0.0068366	0.03964	3.872	0.00167	1.28207	1.9212
320	40.48650	74.07	4.321	4373.67	0.0076657	0.03726	3.552	0.00162	1.26076	1.9487
330	37.36512	69.50	4.005	3422.62	0.0083314	0.03501	3.257	0.00162	1.23918	1.9392
340	34.30640	66.40	3.751	2803.24	0.0086725	0.03293	2.997	0.00167	1.21828	1.8866
350	31.45104	64.79	3.559	2426.05	0.0086253	0.03106	2.779	0.00177	1.19898	1.8004
360	28.90170	64.43	3.410	2211.14	0.0082336	0.02941	2.605	0.00192	1.18193	1.6914
370	26.69392	65.06	3.294	2098.86	0.0076462	0.02796	2.469	0.00211	1.16729	1.5819
380	24.80748	66.33	3.198	2043.91	0.0069983	0.02675	2.364	0.00232	1.15489	1.4771
390	23.19960	68.12	3.135	2020.79	0.0064126	0.02579	2.284	0.00255	1.14438	1.3922
400	21.81913	70.19	3.074	2016.62	0.0058615	0.02501	2.221	0.00279	1.13542	1.3151
410	20.62641	72.52	3.032	2023.49	0.0053924	0.02440	2.172	0.00302	1.12771	1.2534
420	19.58522	74.98	2.993	2036.35	0.0049763	0.02390	2.134	0.00327	1.12101	1.1996
430	18.66863	77.54	2.961	2052.12	0.0046185	0.02350	2.104	0.00351	1.11514	1.1546
440	17.86006	80.10	2.907	2066.52	0.0042744	0.02316	2.081	0.00379	1.10997	1.1078
450	17.13517	82.68	2.888	2080.00	0.0040180	0.02291	2.064	0.00402	1.10536	1.0772
460	16.48079	85.30	2.864	2094.50	0.0037811	0.02271	2.050	0.00427	1.10120	1.0481
470	15.88600	87.93	2.842	2108.49	0.0035696	0.02255	2.040	0.00452	1.09743	1.0221
480	15.34315	90.55	2.828	2122.15	0.0033876	0.02244	2.033	0.00477	1.09400	1.0005
490	14.84486	93.16	2.810	2135.03	0.0032170	0.02234	2.028	0.00502	1.09086	0.9792
500	14.38558	95.73	2.801	2147.13	0.0030710	0.02228	2.025	0.00527	1.08796	0.9618
510	13.96073	98.30	2.784	2158.37	0.0029291	0.02217	2.024	0.00552	1.08529	0.9464
520	13.56592	100.79	2.779	2168.65	0.0028104	0.02218	2.025	0.00577	1.08282	0.9308
530	13.19926	103.11	2.775	2172.74	0.0027110	0.02221	2.026	0.00602	1.08052	0.9183
540	12.85283	105.64	2.770	2182.98	0.0026099	0.02224	2.029	0.00628	1.07835	0.9055
550	12.52759	108.17	2.765	2192.60	0.0025174	0.02229	2.033	0.00653	1.07632	0.8941
560	12.22143	110.68	2.761	2201.65	0.0024323	0.02235	2.038	0.00679	1.07441	0.8837
570	11.93250	113.20	2.757	2210.19	0.0023538	0.02241	2.043	0.00705	1.07261	0.8744
580	11.65920	115.71	2.753	2218.26	0.0022812	0.02249	2.049	0.00731	1.07090	0.8660
590	11.40014	118.22	2.750	2225.90	0.0022137	0.02257	2.056	0.00756	1.06929	0.8584
600	11.15409	120.73	2.747	2233.16	0.0021509	0.02265	2.063	0.00782	1.06776	0.8515

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

2400 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU / LB -R	C_P BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 101.211	0.01217	2237.17	319.1	-82.831	-77.423	0.50490	0.267	0.393	3907
105	0.01225	2167.64	309.7	-81.376	-75.933	0.51935	0.264	0.393	3867
110	0.01236	2078.25	297.6	-79.460	-73.969	0.53763	0.260	0.393	3813
115	0.01247	1991.51	286.0	-77.547	-72.007	0.55507	0.256	0.392	3758
120	0.01258	1907.34	274.7	-75.638	-70.047	0.57175	0.253	0.392	3702
125	0.01270	1825.70	263.7	-73.731	-68.089	0.58774	0.249	0.391	3645
130	0.01281	1746.53	253.2	-71.827	-66.132	0.60308	0.246	0.391	3587
135	0.01293	1669.78	243.0	-69.925	-64.177	0.61784	0.243	0.391	3528
140	0.01306	1595.38	233.2	-68.026	-62.223	0.63205	0.240	0.391	3469
145	0.01318	1523.29	223.7	-66.129	-60.270	0.64575	0.237	0.390	3409
150	0.01331	1453.44	214.6	-64.234	-58.318	0.65899	0.234	0.390	3348
155	0.01344	1385.79	205.7	-62.341	-56.366	0.67179	0.232	0.390	3288
160	0.01358	1320.27	197.2	-60.449	-54.414	0.68418	0.229	0.390	3227
165	0.01372	1256.84	189.1	-58.559	-52.461	0.69620	0.227	0.391	3165
170	0.01386	1195.45	181.2	-56.669	-50.507	0.70787	0.225	0.391	3104
175	0.01401	1136.03	173.6	-54.779	-48.552	0.71920	0.222	0.391	3042
180	0.01416	1078.54	166.3	-52.889	-46.595	0.73023	0.220	0.392	2981
185	0.01432	1022.94	159.2	-50.999	-44.635	0.74097	0.218	0.392	2919
190	0.01448	969.16	152.5	-49.108	-42.671	0.75145	0.216	0.393	2858
195	0.01465	917.17	146.0	-47.215	-40.704	0.76167	0.214	0.394	2798
200	0.01483	866.92	139.7	-45.320	-38.732	0.77166	0.212	0.395	2737
205	0.01501	818.37	133.7	-43.422	-36.754	0.78143	0.210	0.396	2677
210	0.01519	771.48	127.9	-41.521	-34.769	0.79100	0.207	0.398	2618
215	0.01539	726.21	122.3	-39.615	-32.776	0.80038	0.205	0.399	2559
220	0.01559	682.52	116.9	-37.704	-30.774	0.80958	0.203	0.401	2501
225	0.01581	640.40	111.7	-35.786	-28.762	0.81862	0.200	0.403	2444
230	0.01603	599.81	106.8	-33.861	-26.737	0.82751	0.198	0.406	2388
235	0.01626	558.32	101.1	-31.905	-24.678	0.83637	0.201	0.412	2301
240	0.01651	519.42	96.4	-29.939	-22.603	0.84511	0.200	0.417	2239
245	0.01677	483.23	91.7	-27.956	-20.504	0.85376	0.199	0.421	2176
250	0.01704	448.83	87.4	-25.958	-18.384	0.86233	0.198	0.426	2118
255	0.01733	416.03	82.7	-23.947	-16.243	0.87081	0.196	0.430	2054
260	0.01764	384.47	79.1	-21.920	-14.080	0.87921	0.195	0.439	2002
265	0.01797	355.32	74.3	-19.873	-11.886	0.88757	0.194	0.440	1934
270	0.01832	327.06	70.3	-17.811	-9.670	0.89586	0.193	0.446	1872
275	0.01869	300.33	66.7	-15.730	-7.423	0.90410	0.192	0.455	1816
280	0.01909	275.66	61.9	-13.630	-5.146	0.91231	0.191	0.454	1742
285	0.01952	251.41	59.0	-11.494	-2.818	0.92055	0.191	0.469	1693
290	0.01999	229.28	55.3	-9.331	-0.449	0.92879	0.194	0.480	1621
295	0.02049	208.66	51.8	-7.135	1.970	0.93706	0.192	0.487	1565
300	0.02103	189.66	48.5	-4.914	4.432	0.94533	0.192	0.497	1509
310	0.02226	156.73	42.3	-0.394	9.499	0.96195	0.191	0.516	1399
320	0.02372	130.76	36.6	4.217	14.757	0.97864	0.191	0.533	1300
330	0.02542	111.77	31.7	8.858	20.155	0.99525	0.190	0.544	1218
340	0.02737	98.98	27.4	13.451	25.617	1.01156	0.188	0.546	1152
350	0.02955	91.38	23.8	17.906	31.041	1.02728	0.187	0.537	1104
360	0.03190	87.89	20.8	22.150	36.328	1.04218	0.185	0.519	1070
370	0.03435	87.61	18.4	26.137	41.405	1.05609	0.183	0.496	1049
380	0.03685	89.53	16.4	29.855	46.229	1.06896	0.181	0.468	1037
390	0.03933	92.87	14.8	33.313	50.791	1.08081	0.179	0.444	1033
400	0.04178	97.11	13.5	36.545	55.114	1.09176	0.177	0.421	1034
410	0.04419	101.99	12.5	39.580	59.219	1.10190	0.175	0.401	1040
420	0.04655	107.27	11.6	42.446	63.135	1.11133	0.174	0.383	1048
430	0.04886	112.81	10.8	45.169	66.883	1.12016	0.172	0.368	1057
440	0.05110	118.37	10.0	47.761	70.470	1.12840	0.171	0.351	1061
450	0.05328	123.87	9.4	50.249	73.929	1.13618	0.170	0.340	1073
460	0.05543	129.41	8.9	52.649	77.283	1.14355	0.168	0.330	1084
470	0.05753	134.92	8.5	54.973	80.542	1.15056	0.167	0.321	1095
480	0.05960	140.40	8.1	57.229	83.716	1.15725	0.166	0.314	1108
490	0.06163	145.84	7.7	59.426	86.814	1.16364	0.165	0.306	1119
500	0.06362	151.22	7.4	61.568	89.844	1.16976	0.164	0.300	1131
510	0.06559	156.55	7.1	63.663	92.811	1.17564	0.163	0.294	1142
520	0.06752	161.81	6.8	65.714	95.722	1.18129	0.162	0.289	1155
530	0.06944	167.00	6.6	67.726	98.584	1.18674	0.161	0.284	1168
540	0.07133	172.16	6.4	69.701	101.401	1.19201	0.160	0.280	1181
550	0.07319	177.05	6.1	71.643	104.171	1.19709	0.159	0.275	1191
560	0.07504	181.80	6.0	73.554	106.902	1.20202	0.158	0.273	1205
570	0.07688	186.94	5.8	75.449	109.615	1.20682	0.158	0.270	1218
580	0.07871	192.05	5.6	77.323	112.300	1.21149	0.157	0.267	1230
590	0.08052	197.11	5.5	79.176	114.959	1.21603	0.156	0.265	1243
600	0.08232	202.15	5.3	81.013	117.595	1.22046	0.156	0.262	1255

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

2400 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 101.211	82.17885	226.65	14.540	183847.77	0.0017358	0.11291	45.052	0.00349	1.57361	5.6512
105	81.63791	224.58	14.372	176961.43	0.0017502	0.11192	42.021	0.00349	1.56925	5.3127
110	80.92270	221.83	14.146	168177.80	0.0017698	0.11054	38.365	0.00348	1.56351	4.9052
115	80.20571	219.05	13.914	159730.12	0.0017902	0.10909	35.066	0.00347	1.55776	4.5379
120	79.48676	216.25	13.676	151608.33	0.0018117	0.10758	32.088	0.00345	1.55201	4.2066
125	78.76562	213.41	13.434	143802.52	0.0018341	0.10601	29.399	0.00344	1.54626	3.9076
130	78.04205	210.53	13.189	136302.97	0.0018576	0.10439	26.972	0.00342	1.54050	3.6376
135	77.31578	207.62	12.940	129100.14	0.0018824	0.10273	24.779	0.00340	1.53474	3.3938
140	76.58655	204.67	12.689	122184.66	0.0019085	0.10102	22.799	0.00338	1.52896	3.1736
145	75.85401	201.67	12.436	115547.36	0.0019361	0.09928	21.011	0.00335	1.52318	2.9747
150	75.11784	198.64	12.183	109179.24	0.0019652	0.09751	19.395	0.00333	1.51738	2.7952
155	74.37765	195.56	11.930	103071.53	0.0019961	0.09571	17.934	0.00330	1.51156	2.6331
160	73.63303	192.43	11.678	97215.62	0.0020289	0.09390	16.614	0.00327	1.50572	2.4870
165	72.88353	189.25	11.427	91603.14	0.0020639	0.09206	15.421	0.00323	1.49986	2.3553
170	72.12864	186.01	11.178	86225.92	0.0021011	0.09021	14.341	0.00320	1.49397	2.2369
175	71.36783	182.72	10.933	81076.03	0.0021409	0.08834	13.364	0.00316	1.48805	2.1305
180	70.60050	179.38	10.692	76145.76	0.0021836	0.08647	12.480	0.00313	1.48210	2.0352
185	69.82598	175.97	10.455	71427.65	0.0022294	0.08459	11.680	0.00309	1.47611	1.9500
190	69.04357	172.49	10.223	66914.50	0.0022786	0.08270	10.955	0.00305	1.47007	1.8742
195	68.25249	168.95	9.998	62599.37	0.0023317	0.08082	10.297	0.00301	1.46398	1.8070
200	67.45186	165.34	9.780	58475.62	0.0023890	0.07893	9.701	0.00296	1.45783	1.7478
205	66.64075	161.66	9.570	54536.91	0.0024510	0.07704	9.161	0.00292	1.45163	1.6960
210	65.81814	157.90	9.368	50777.23	0.0025183	0.07516	8.669	0.00287	1.44535	1.6512
215	64.98288	154.07	9.175	47190.91	0.0025914	0.07328	8.223	0.00282	1.43899	1.6128
220	64.13375	150.16	8.993	43772.67	0.0026710	0.07141	7.817	0.00278	1.43255	1.5805
225	63.26941	146.18	8.821	40517.63	0.0027578	0.06954	7.447	0.00273	1.42601	1.5541
230	62.38839	142.15	8.659	37421.36	0.0028527	0.06768	7.109	0.00268	1.41936	1.5333
235	61.49228	139.83	8.174	34332.21	0.0029438	0.06584	6.802	0.00260	1.41263	1.5309
240	60.57611	136.01	7.955	31464.18	0.0030635	0.06401	6.520	0.00254	1.40576	1.5281
245	59.63675	132.25	7.731	28818.40	0.0031815	0.06218	6.262	0.00248	1.39874	1.5254
250	58.67575	128.49	7.536	26335.73	0.0033174	0.06037	6.025	0.00241	1.39159	1.5314
255	57.69284	124.64	7.308	24001.75	0.0034467	0.05857	5.830	0.00236	1.38430	1.5393
260	56.68499	120.91	7.158	21793.96	0.0036298	0.05680	5.663	0.00228	1.37684	1.5753
265	55.64838	117.12	6.890	19773.19	0.0037596	0.05504	5.497	0.00225	1.36921	1.5829
270	54.58825	113.37	6.674	17853.65	0.0039364	0.05332	5.331	0.00219	1.36143	1.6064
275	53.49991	109.74	6.487	16067.77	0.0041483	0.05162	5.167	0.00212	1.35347	1.6403
280	52.38385	105.91	6.181	14439.92	0.0042898	0.04996	5.003	0.00210	1.34535	1.6381
285	51.22340	102.36	6.042	12877.94	0.0045791	0.04830	4.839	0.00201	1.33694	1.6905
290	50.03454	99.55	5.700	11472.06	0.0048185	0.04669	4.676	0.00195	1.32835	1.7296
295	48.81101	95.82	5.514	10184.97	0.0050863	0.04511	4.515	0.00190	1.31956	1.7560
300	47.55062	92.35	5.320	9018.55	0.0053814	0.04357	4.355	0.00184	1.31054	1.7883
310	44.92166	85.91	4.918	7040.56	0.0060066	0.04089	4.041	0.00176	1.29186	1.8357
320	42.16698	80.23	4.550	5513.62	0.0066456	0.03860	3.739	0.00172	1.27249	1.8591
330	39.33981	75.56	4.239	4396.90	0.0072025	0.03644	3.456	0.00170	1.25280	1.8583
340	36.53002	72.05	3.978	3615.57	0.0075709	0.03443	3.201	0.00173	1.23345	1.8260
350	33.83530	69.82	3.769	3091.74	0.0076959	0.03262	2.980	0.00179	1.21508	1.7675
360	31.34467	68.72	3.596	2754.94	0.0075570	0.03100	2.795	0.00190	1.19826	1.6858
370	29.10819	68.65	3.462	2550.25	0.0072196	0.02952	2.645	0.00205	1.18330	1.5986
380	27.14042	69.32	3.346	2429.99	0.0067569	0.02826	2.525	0.00222	1.17024	1.5068
390	25.42709	70.61	3.265	2361.46	0.0062865	0.02722	2.430	0.00241	1.15895	1.4264
400	23.93342	72.27	3.195	2324.13	0.0058218	0.02636	2.355	0.00262	1.14917	1.3529
410	22.62841	74.26	3.142	2307.82	0.0053988	0.02566	2.295	0.00283	1.14067	1.2907
420	21.48096	76.47	3.098	2304.21	0.0050151	0.02508	2.247	0.00305	1.13323	1.2366
430	20.46616	78.82	3.060	2308.77	0.0046706	0.02461	2.209	0.00327	1.12668	1.1895
440	19.57026	81.22	2.994	2316.57	0.0043212	0.02420	2.179	0.00352	1.12092	1.1377
450	18.76727	83.69	2.968	2324.79	0.0040638	0.02389	2.155	0.00374	1.11577	1.1043
460	18.04128	86.20	2.944	2334.69	0.0038321	0.02365	2.136	0.00397	1.11113	1.0745
470	17.38138	88.73	2.919	2345.06	0.0036206	0.02344	2.122	0.00420	1.10692	1.0468
480	16.77903	91.27	2.902	2355.84	0.0034366	0.02328	2.110	0.00442	1.10309	1.0235
490	16.22640	93.82	2.880	2366.46	0.0032628	0.02315	2.102	0.00466	1.09959	1.0005
500	15.71735	96.34	2.868	2376.74	0.0031145	0.02306	2.096	0.00489	1.09637	0.9818
510	15.24677	98.87	2.848	2386.81	0.0029694	0.02291	2.092	0.00512	1.09339	0.9651
520	14.80986	101.33	2.840	2396.34	0.0028473	0.02289	2.090	0.00536	1.09064	0.9482
530	14.40178	103.74	2.838	2405.05	0.0027402	0.02289	2.089	0.00559	1.08807	0.9339
540	14.01978	106.15	2.834	2413.66	0.0026376	0.02291	2.090	0.00584	1.08566	0.9195
550	13.66250	108.50	2.822	2418.94	0.0025381	0.02293	2.092	0.00610	1.08342	0.9041
560	13.32676	110.68	2.832	2422.83	0.0024658	0.02297	2.095	0.00632	1.08132	0.8958
570	13.00746	113.14	2.829	2431.66	0.0023854	0.02302	2.098	0.00656	1.07932	0.8856
580	12.70565	115.60	2.827	2440.07	0.0023109	0.02308	2.103	0.00680	1.07743	0.8764
590	12.41974	118.07	2.824	2448.10	0.0022418	0.02314	2.108	0.00704	1.07564	0.8680
600	12.14836	120.53	2.822	2455.77	0.0021775	0.02321	2.114	0.00728	1.07395	0.8605

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

2600 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 101.489	0.01216	2249.16	319.2	-82.797	-76.942	0.50520	0.267	0.393	3916
105	0.01224	2184.93	310.5	-81.453	-75.562	0.51856	0.264	0.393	3878
110	0.01234	2095.76	298.4	-79.542	-73.600	0.53682	0.260	0.392	3825
115	0.01245	2009.24	286.8	-77.635	-71.640	0.55425	0.257	0.392	3770
120	0.01256	1925.30	275.5	-75.731	-69.682	0.57091	0.253	0.391	3714
125	0.01268	1843.89	264.6	-73.830	-67.726	0.58688	0.250	0.391	3658
130	0.01279	1764.96	254.1	-71.932	-65.772	0.60221	0.246	0.391	3600
135	0.01291	1688.44	243.9	-70.037	-63.820	0.61694	0.243	0.390	3542
140	0.01304	1614.29	234.1	-68.145	-61.869	0.63113	0.240	0.390	3483
145	0.01316	1542.45	224.7	-66.255	-59.919	0.64481	0.238	0.390	3424
150	0.01329	1472.85	215.5	-64.368	-57.970	0.65803	0.235	0.390	3364
155	0.01342	1405.46	206.7	-62.482	-56.022	0.67080	0.232	0.390	3304
160	0.01355	1340.21	198.3	-60.599	-54.073	0.68317	0.230	0.390	3243
165	0.01369	1277.04	190.1	-58.717	-52.125	0.69516	0.228	0.390	3183
170	0.01383	1215.92	182.3	-56.836	-50.176	0.70680	0.225	0.390	3122
175	0.01398	1156.78	174.7	-54.956	-48.226	0.71810	0.223	0.390	3062
180	0.01413	1099.58	167.4	-53.077	-46.275	0.72910	0.221	0.390	3001
185	0.01428	1044.26	160.4	-51.198	-44.322	0.73980	0.219	0.391	2941
190	0.01444	990.77	153.7	-49.318	-42.366	0.75024	0.217	0.392	2881
195	0.01461	939.08	147.2	-47.438	-40.406	0.76042	0.214	0.392	2821
200	0.01478	889.13	141.0	-45.556	-38.443	0.77036	0.212	0.393	2762
205	0.01495	840.88	135.0	-43.673	-36.475	0.78008	0.210	0.394	2703
210	0.01513	794.29	129.3	-41.787	-34.501	0.78960	0.208	0.395	2645
215	0.01532	749.33	123.7	-39.898	-32.520	0.79892	0.206	0.397	2588
220	0.01552	705.96	118.4	-38.006	-30.532	0.80806	0.203	0.398	2532
225	0.01573	664.14	113.3	-36.108	-28.535	0.81703	0.201	0.400	2477
230	0.01595	623.86	108.4	-34.205	-26.528	0.82585	0.198	0.402	2422
235	0.01617	583.02	102.7	-32.273	-24.488	0.83462	0.201	0.407	2337
240	0.01641	544.48	98.1	-30.334	-22.435	0.84327	0.200	0.412	2277
245	0.01666	508.33	93.5	-28.379	-20.360	0.85182	0.199	0.416	2217
250	0.01692	473.97	89.3	-26.412	-18.267	0.86028	0.198	0.421	2160
255	0.01719	441.38	84.7	-24.433	-16.155	0.86865	0.197	0.423	2098
260	0.01749	409.73	81.2	-22.443	-14.024	0.87692	0.195	0.432	2050
265	0.01780	380.73	76.4	-20.435	-11.867	0.88514	0.194	0.432	1981
270	0.01812	352.66	72.5	-18.418	-9.692	0.89327	0.193	0.438	1924
275	0.01847	326.04	68.9	-16.386	-7.493	0.90135	0.192	0.445	1871
280	0.01884	301.70	64.3	-14.338	-5.267	0.90937	0.191	0.444	1801
285	0.01924	277.15	61.4	-12.264	-3.002	0.91739	0.191	0.456	1753
290	0.01966	255.00	57.7	-10.166	-0.700	0.92539	0.194	0.465	1684
295	0.02011	234.24	54.4	-8.043	1.641	0.93339	0.192	0.471	1630
300	0.02060	214.95	51.1	-5.903	4.015	0.94137	0.192	0.478	1577
310	0.02169	181.09	45.0	-1.566	8.876	0.95731	0.191	0.493	1471
320	0.02295	153.58	39.5	2.838	13.887	0.97322	0.191	0.507	1376
330	0.02440	132.52	34.6	7.270	19.018	0.98901	0.189	0.517	1295
340	0.02605	117.39	30.2	11.669	24.211	1.00451	0.188	0.520	1227
350	0.02789	107.29	26.5	15.971	29.398	1.01955	0.186	0.516	1174
360	0.02988	101.33	23.3	20.116	34.503	1.03393	0.185	0.504	1133
370	0.03199	98.75	20.7	24.068	39.469	1.04754	0.183	0.488	1105
380	0.03416	98.74	18.6	27.800	44.248	1.06029	0.181	0.467	1087
390	0.03636	100.58	16.8	31.308	48.816	1.07215	0.179	0.446	1077
400	0.03857	103.58	15.3	34.607	53.174	1.08319	0.177	0.426	1073
410	0.04075	107.46	14.0	37.718	57.337	1.09347	0.176	0.407	1074
420	0.04290	111.93	13.0	40.666	61.322	1.10308	0.174	0.391	1078
430	0.04503	116.86	12.1	43.468	65.146	1.11208	0.173	0.376	1085
440	0.04709	122.09	11.2	46.137	68.810	1.12050	0.172	0.358	1087
450	0.04911	127.37	10.6	48.696	72.342	1.12844	0.170	0.347	1097
460	0.05110	132.66	10.0	51.162	75.765	1.13597	0.169	0.337	1107
470	0.05306	137.98	9.5	53.546	79.090	1.14312	0.168	0.328	1117
480	0.05498	143.30	9.0	55.858	82.326	1.14993	0.167	0.320	1128
490	0.05687	148.61	8.6	58.106	85.484	1.15645	0.166	0.312	1138
500	0.05872	153.89	8.2	60.297	88.570	1.16268	0.165	0.306	1150
510	0.06055	159.15	7.9	62.437	91.590	1.16866	0.164	0.299	1160
520	0.06236	164.38	7.6	64.529	94.551	1.17441	0.163	0.294	1172
530	0.06414	169.49	7.3	66.580	97.460	1.17996	0.162	0.289	1184
540	0.06590	174.58	7.1	68.593	100.322	1.18531	0.161	0.284	1196
550	0.06764	179.48	6.8	70.567	103.131	1.19046	0.160	0.279	1205
560	0.06936	184.32	6.6	72.509	105.901	1.19546	0.159	0.275	1217
570	0.07106	189.10	6.4	74.420	108.634	1.20029	0.158	0.272	1229
580	0.07276	193.82	6.2	76.303	111.333	1.20499	0.157	0.269	1241
590	0.07444	198.50	6.0	78.160	114.000	1.20955	0.156	0.266	1253
600	0.07615	204.39	5.9	80.015	116.676	1.21405	0.155	0.265	1272

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

2600 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 101.489	82.22849	227.74	14.531	184944.68	0.0017260	0.11302	45.344	0.00350	1.57401	5.6776
105	81.72981	225.86	14.375	178573.74	0.0017388	0.11211	42.521	0.00349	1.56999	5.3623
110	81.01853	223.15	14.149	169795.51	0.0017577	0.11075	38.835	0.00349	1.56428	4.9514
115	80.30569	220.42	13.917	161353.22	0.0017774	0.10932	35.507	0.00347	1.55856	4.5810
120	79.59112	217.66	13.680	153236.78	0.0017979	0.10783	32.503	0.00346	1.55285	4.2468
125	78.87462	214.87	13.438	145436.30	0.0018195	0.10627	29.790	0.00345	1.54713	3.9451
130	78.15596	212.04	13.193	137942.04	0.0018420	0.10467	27.339	0.00343	1.54141	3.6725
135	77.43490	209.18	12.945	130744.45	0.0018657	0.10303	25.126	0.00341	1.53568	3.4264
140	76.71117	206.29	12.694	123834.15	0.0018906	0.10134	23.126	0.00339	1.52995	3.2039
145	75.98449	203.35	12.443	117201.95	0.0019169	0.09962	21.318	0.00336	1.52421	3.0029
150	75.25453	200.37	12.190	110838.86	0.0019446	0.09787	19.685	0.00334	1.51845	2.8214
155	74.52096	197.35	11.938	104736.06	0.0019740	0.09609	18.208	0.00331	1.51268	2.6574
160	73.78338	194.29	11.687	98884.95	0.0020051	0.09429	16.872	0.00328	1.50690	2.5094
165	73.04139	191.17	11.438	93277.13	0.0020382	0.09248	15.664	0.00325	1.50109	2.3760
170	72.29453	188.01	11.192	87904.42	0.0020734	0.09065	14.571	0.00322	1.49527	2.2558
175	71.54229	184.78	10.949	82758.85	0.0021109	0.08880	13.582	0.00318	1.48941	2.1477
180	70.78414	181.51	10.710	77832.68	0.0021511	0.08695	12.686	0.00315	1.48352	2.0507
185	70.01948	178.17	10.476	73118.43	0.0021940	0.08510	11.875	0.00311	1.47760	1.9639
190	69.24767	174.77	10.248	68608.85	0.0022402	0.08323	11.140	0.00307	1.47164	1.8864
195	68.46798	171.31	10.026	64296.95	0.0022898	0.08137	10.473	0.00303	1.46564	1.8175
200	67.67965	167.77	9.812	60176.06	0.0023432	0.07951	9.868	0.00299	1.45958	1.7566
205	66.88183	164.17	9.606	56239.74	0.0024008	0.07765	9.319	0.00295	1.45347	1.7030
210	66.07361	160.49	9.410	52481.92	0.0024632	0.07579	8.821	0.00290	1.44729	1.6563
215	65.25398	156.74	9.223	48896.82	0.0025307	0.07394	8.367	0.00286	1.44105	1.6160
220	64.42185	152.91	9.048	45479.05	0.0026040	0.07209	7.954	0.00281	1.43473	1.5816
225	63.57604	149.02	8.884	42223.58	0.0026836	0.07025	7.578	0.00276	1.42833	1.5529
230	62.71529	145.06	8.731	39125.78	0.0027702	0.06842	7.235	0.00272	1.42183	1.5297
235	61.84278	142.98	8.247	36055.62	0.0028490	0.06661	6.923	0.00264	1.41526	1.5241
240	60.95213	139.32	8.029	33187.43	0.0029551	0.06481	6.638	0.00258	1.40857	1.5179
245	60.04021	135.69	7.817	30520.17	0.0030643	0.06302	6.375	0.00252	1.40175	1.5143
250	59.10928	132.06	7.628	28016.31	0.0031867	0.06124	6.135	0.00246	1.39481	1.5176
255	58.15945	128.37	7.402	25670.48	0.0032984	0.05949	5.916	0.00242	1.38775	1.5158
260	57.18874	124.74	7.272	23432.14	0.0034670	0.05775	5.753	0.00234	1.38057	1.5509
265	56.19195	121.10	6.996	21394.12	0.0035689	0.05603	5.591	0.00231	1.37321	1.5523
270	55.17691	117.53	6.798	19458.63	0.0037235	0.05435	5.430	0.00225	1.36575	1.5740
275	54.13874	114.07	6.622	17651.56	0.0039048	0.05270	5.271	0.00219	1.35814	1.6038
280	53.07702	110.50	6.333	16013.50	0.0040181	0.05107	5.113	0.00217	1.35039	1.6000
285	51.98061	107.06	6.195	14406.30	0.0042607	0.04947	4.954	0.00209	1.34242	1.6447
290	50.86107	104.49	5.856	12969.52	0.0044505	0.04790	4.798	0.00203	1.33432	1.6768
295	49.71493	100.94	5.683	11644.98	0.0046676	0.04638	4.643	0.00198	1.32605	1.6983
300	48.54026	97.63	5.496	10433.83	0.0049006	0.04489	4.491	0.00193	1.31762	1.7231
310	46.10756	91.49	5.108	8349.50	0.0053907	0.04206	4.191	0.00185	1.30026	1.7690
320	43.57679	85.97	4.753	6692.53	0.0058969	0.03984	3.903	0.00180	1.28238	1.7882
330	40.98162	81.30	4.450	5430.94	0.0063622	0.03774	3.632	0.00178	1.26421	1.7920
340	38.38447	77.59	4.186	4505.93	0.0067032	0.03579	3.384	0.00179	1.24620	1.7701
350	35.85533	74.94	3.968	3846.77	0.0068887	0.03402	3.163	0.00194	1.22883	1.7280
360	33.46539	73.30	3.778	3391.07	0.0068810	0.03242	2.973	0.00192	1.21257	1.6651
370	31.26082	72.66	3.629	3086.89	0.0067171	0.03094	2.813	0.00203	1.19770	1.5974
380	29.27031	72.79	3.502	2890.01	0.0064191	0.02965	2.682	0.00217	1.18438	1.5211
390	27.49912	73.59	3.402	2765.91	0.0060610	0.02856	2.575	0.00233	1.17262	1.4476
400	25.93011	74.84	3.319	2685.88	0.0056873	0.02764	2.488	0.00250	1.16226	1.3793
410	24.54105	76.47	3.255	2637.11	0.0053268	0.02687	2.418	0.00269	1.15314	1.3193
420	23.30799	78.36	3.203	2608.86	0.0049877	0.02624	2.361	0.00288	1.14509	1.2663
430	22.20945	80.47	3.159	2595.43	0.0046721	0.02570	2.315	0.00308	1.13795	1.2191
440	21.23503	82.69	3.086	2592.67	0.0043354	0.02523	2.278	0.00331	1.13164	1.1653
450	20.36050	85.03	3.053	2593.23	0.0040811	0.02487	2.248	0.00352	1.12600	1.1294
460	19.56855	87.42	3.026	2596.00	0.0038563	0.02457	2.224	0.00372	1.12091	1.0984
470	18.84795	89.84	2.997	2600.63	0.0036481	0.02432	2.204	0.00394	1.11629	1.0694
480	18.18963	92.29	2.976	2606.66	0.0034655	0.02412	2.189	0.00415	1.11208	1.0448
490	17.58547	94.76	2.950	2613.43	0.0032914	0.02395	2.177	0.00437	1.10822	1.0203
500	17.02891	97.20	2.935	2620.53	0.0031430	0.02382	2.167	0.00458	1.10468	1.0005
510	16.51428	99.68	2.914	2628.24	0.0029983	0.02365	2.160	0.00479	1.10141	0.9828
520	16.03657	102.11	2.903	2636.03	0.0028743	0.02360	2.155	0.00502	1.09839	0.9648
530	15.59090	104.49	2.897	2642.47	0.0027641	0.02358	2.152	0.00524	1.09557	0.9490
540	15.17371	106.85	2.891	2648.95	0.0026617	0.02357	2.151	0.00546	1.09293	0.9341
550	14.78472	109.23	2.868	2653.60	0.0025526	0.02358	2.150	0.00572	1.09048	0.9195
560	14.41816	111.47	2.868	2657.57	0.0024696	0.02360	2.151	0.00594	1.08817	0.9036
570	14.07192	113.66	2.869	2660.99	0.0023929	0.02363	2.153	0.00617	1.08599	0.8925
580	13.74415	115.82	2.872	2663.94	0.0023216	0.02366	2.156	0.00640	1.08393	0.8821
590	13.43325	117.94	2.875	2666.51	0.0022552	0.02371	2.160	0.00664	1.08198	0.8723
600	13.13240	120.44	2.901	2684.18	0.0022007	0.02377	2.164	0.00683	1.08010	0.8689

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

2800 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 101.766	0.01215	2261.11	319.3	-82.763	-76.462	0.50549	0.267	0.393	3924
105	0.01222	2202.14	311.3	-81.529	-75.192	0.51778	0.265	0.392	3890
110	0.01233	2113.18	299.3	-79.623	-73.231	0.53602	0.261	0.392	3836
115	0.01244	2026.88	287.6	-77.721	-71.273	0.55343	0.257	0.391	3782
120	0.01255	1943.16	276.4	-75.823	-69.317	0.57008	0.253	0.391	3727
125	0.01266	1861.98	265.5	-73.928	-67.363	0.58603	0.250	0.390	3670
130	0.01278	1783.27	255.0	-72.036	-65.411	0.60134	0.247	0.390	3613
135	0.01289	1706.99	244.8	-70.147	-63.462	0.61605	0.244	0.390	3556
140	0.01302	1633.07	235.0	-68.262	-61.513	0.63022	0.241	0.389	3497
145	0.01314	1561.47	225.6	-66.379	-59.567	0.64388	0.238	0.389	3439
150	0.01326	1492.12	216.5	-64.498	-57.621	0.65707	0.235	0.389	3379
155	0.01339	1424.97	207.7	-62.621	-55.676	0.66983	0.233	0.389	3320
160	0.01353	1359.97	199.3	-60.745	-53.732	0.68217	0.230	0.389	3260
165	0.01366	1297.07	191.2	-58.871	-51.788	0.69414	0.228	0.389	3200
170	0.01380	1236.20	183.3	-56.999	-49.844	0.70574	0.226	0.389	3140
175	0.01394	1177.33	175.8	-55.129	-47.899	0.71702	0.224	0.389	3080
180	0.01409	1120.39	168.5	-53.260	-45.953	0.72798	0.221	0.389	3021
185	0.01424	1065.34	161.6	-51.391	-44.006	0.73865	0.219	0.390	2961
190	0.01440	1012.13	154.9	-49.523	-42.057	0.74905	0.217	0.390	2902
195	0.01456	960.71	148.5	-47.655	-40.105	0.75919	0.215	0.391	2844
200	0.01473	911.04	142.3	-45.786	-38.150	0.76909	0.213	0.391	2786
205	0.01490	863.07	136.3	-43.916	-36.191	0.77877	0.211	0.392	2728
210	0.01508	816.77	130.6	-42.045	-34.228	0.78824	0.208	0.393	2672
215	0.01526	772.09	125.2	-40.172	-32.259	0.79750	0.206	0.394	2616
220	0.01546	728.99	119.9	-38.297	-30.283	0.80659	0.204	0.395	2561
225	0.01566	687.46	114.8	-36.418	-28.300	0.81549	0.201	0.397	2508
230	0.01587	647.45	110.0	-34.535	-26.309	0.82424	0.198	0.398	2455
235	0.01608	607.30	104.3	-32.626	-24.287	0.83294	0.202	0.403	2372
240	0.01631	569.24	99.7	-30.711	-22.254	0.84150	0.201	0.407	2313
245	0.01655	533.06	95.3	-28.781	-20.200	0.84997	0.200	0.411	2256
250	0.01680	498.68	91.1	-26.842	-18.131	0.85833	0.198	0.416	2201
255	0.01706	466.28	86.6	-24.893	-16.045	0.86659	0.197	0.418	2140
260	0.01734	434.45	83.2	-22.935	-13.944	0.87475	0.196	0.427	2094
265	0.01764	405.53	78.3	-20.962	-11.818	0.88285	0.195	0.425	2026
270	0.01795	377.64	74.5	-18.983	-9.679	0.89085	0.193	0.430	1972
275	0.01827	351.11	71.1	-16.993	-7.520	0.89877	0.193	0.437	1922
280	0.01862	327.03	66.7	-14.990	-5.337	0.90664	0.192	0.436	1857
285	0.01899	302.21	63.6	-12.968	-3.124	0.91447	0.191	0.446	1809
290	0.01938	280.02	60.0	-10.925	-0.879	0.92228	0.194	0.453	1741
295	0.01979	259.16	56.7	-8.862	1.399	0.93007	0.192	0.458	1691
300	0.02023	239.66	53.5	-6.787	3.704	0.93782	0.192	0.464	1639
310	0.02121	205.05	47.5	-2.596	8.402	0.95322	0.191	0.475	1538
320	0.02233	176.34	42.1	1.644	13.219	0.96851	0.190	0.487	1445
330	0.02359	153.55	37.2	5.908	18.141	0.98366	0.189	0.496	1365
340	0.02502	136.46	32.8	10.143	23.117	0.99852	0.188	0.499	1296
350	0.02660	124.25	29.0	14.307	28.101	1.01296	0.186	0.497	1240
360	0.02832	116.22	25.7	18.348	33.033	1.02686	0.184	0.489	1195
370	0.03015	111.56	23.0	22.238	37.871	1.04011	0.183	0.478	1162
380	0.03206	109.66	20.7	25.951	42.572	1.05266	0.181	0.463	1139
390	0.03401	109.96	18.7	29.474	47.108	1.06444	0.179	0.445	1124
400	0.03598	111.68	17.0	32.811	51.467	1.07548	0.178	0.427	1115
410	0.03796	114.45	15.7	35.974	55.653	1.08581	0.176	0.411	1111
420	0.03992	117.96	14.5	38.979	59.677	1.09551	0.175	0.395	1112
430	0.04187	122.11	13.5	41.845	63.552	1.10463	0.173	0.381	1116
440	0.04378	126.85	12.5	44.579	67.276	1.11319	0.172	0.365	1116
450	0.04565	131.81	11.8	47.200	70.869	1.12127	0.171	0.353	1123
460	0.04750	136.80	11.1	49.724	74.350	1.12892	0.170	0.343	1132
470	0.04931	141.87	10.5	52.163	77.732	1.13620	0.168	0.333	1140
480	0.05110	146.98	10.0	54.526	81.022	1.14313	0.167	0.325	1150
490	0.05286	152.11	9.5	56.823	84.232	1.14975	0.166	0.317	1159
500	0.05460	157.24	9.1	59.058	87.368	1.15608	0.165	0.310	1170
510	0.05631	162.39	8.7	61.240	90.436	1.16216	0.164	0.304	1179
520	0.05800	167.54	8.4	63.372	93.443	1.16800	0.163	0.298	1191
530	0.05966	172.55	8.0	65.460	96.394	1.17362	0.162	0.293	1201
540	0.06131	177.53	7.7	67.507	99.296	1.17905	0.161	0.288	1213
550	0.06293	182.44	7.4	69.514	102.143	1.18427	0.160	0.282	1220
560	0.06454	187.29	7.2	71.486	104.948	1.18933	0.159	0.278	1232
570	0.06613	192.07	7.0	73.426	107.714	1.19422	0.158	0.275	1244
580	0.06771	196.79	6.8	75.336	110.443	1.19897	0.157	0.272	1255
590	0.06928	201.46	6.6	77.217	113.139	1.20358	0.156	0.269	1267
600	0.07084	206.08	6.4	79.072	115.804	1.20806	0.155	0.266	1279

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

2800 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DV)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 101.766	82.27794	228.84	14.521	186039.52	0.0017163	0.11312	45.637	0.00350	1.57441	5.7042
105	81.82099	227.13	14.378	180181.04	0.0017277	0.11230	43.023	0.00350	1.57072	5.4123
110	81.11356	224.47	14.152	171407.92	0.0017459	0.11095	39.307	0.00349	1.56504	4.9980
115	80.40480	221.78	13.920	162970.70	0.0017648	0.10954	35.951	0.00348	1.55935	4.6244
120	79.69452	219.07	13.683	154859.30	0.0017845	0.10807	32.920	0.00347	1.55367	4.2872
125	78.98256	216.32	13.442	147063.80	0.0018052	0.10653	30.183	0.00345	1.54799	3.9828
130	78.26869	213.55	13.197	139574.46	0.0018268	0.10495	27.709	0.00344	1.54230	3.7078
135	77.55270	210.74	12.949	132381.71	0.0018494	0.10332	25.474	0.00342	1.53662	3.4592
140	76.83435	207.90	12.699	125476.17	0.0018732	0.10166	23.454	0.00340	1.53092	3.2345
145	76.11336	205.02	12.449	118848.62	0.0018982	0.09996	21.628	0.00337	1.52522	3.0314
150	75.38944	202.10	12.197	112490.07	0.0019246	0.09822	19.976	0.00335	1.51952	2.8478
155	74.66228	199.14	11.946	106391.67	0.0019525	0.09647	18.483	0.00332	1.51380	2.6819
160	73.93152	196.13	11.697	100544.82	0.0019821	0.09469	17.132	0.00329	1.50806	2.5321
165	73.19679	193.08	11.449	94941.08	0.0020134	0.09289	15.910	0.00326	1.50231	2.3969
170	72.45765	189.98	11.204	89572.26	0.0020467	0.09108	14.803	0.00323	1.49654	2.2750
175	71.71367	186.82	10.963	84430.35	0.0020821	0.08926	13.802	0.00320	1.49074	2.1653
180	70.96433	183.61	10.727	79507.59	0.0021199	0.08743	12.894	0.00317	1.48492	2.0666
185	70.20910	180.35	10.495	74796.46	0.0021603	0.08559	12.072	0.00313	1.47907	1.9782
190	69.44738	177.02	10.270	70289.66	0.0022036	0.08375	11.326	0.00309	1.47318	1.8990
195	68.67853	173.62	10.052	65980.18	0.0022500	0.08191	10.650	0.00305	1.46726	1.8285
200	67.90186	170.16	9.842	61861.26	0.0022999	0.08007	10.036	0.00301	1.46129	1.7659
205	67.11659	166.63	9.641	57926.43	0.0023536	0.07824	9.479	0.00297	1.45527	1.7106
210	66.32190	163.03	9.449	54169.50	0.0024115	0.07640	8.972	0.00293	1.44919	1.6621
215	65.51690	159.35	9.268	50584.63	0.0024741	0.07458	8.512	0.00289	1.44305	1.6199
220	64.70061	155.60	9.099	47166.31	0.0025418	0.07276	8.092	0.00284	1.43685	1.5836
225	63.87200	151.77	8.943	43909.36	0.0026150	0.07095	7.710	0.00280	1.43056	1.5528
230	63.02994	147.89	8.798	40809.00	0.0026945	0.06914	7.361	0.00275	1.42420	1.5273
235	62.17885	146.04	8.315	37761.41	0.0027627	0.06737	7.045	0.00269	1.41779	1.5190
240	61.31133	142.55	8.101	34900.64	0.0028573	0.06560	6.755	0.00263	1.41127	1.5100
245	60.42437	139.04	7.898	32209.85	0.0029584	0.06383	6.488	0.00257	1.40462	1.5051
250	59.52058	135.52	7.713	29681.96	0.0030697	0.06209	6.244	0.00251	1.39788	1.5061
255	58.60022	131.99	7.491	27323.92	0.0031678	0.06037	6.020	0.00246	1.39103	1.5011
260	57.66266	128.43	7.373	25051.50	0.0033228	0.05867	5.838	0.00238	1.38407	1.5289
265	56.70079	124.91	7.095	22994.05	0.0034045	0.05698	5.680	0.00236	1.37696	1.5260
270	55.72477	121.50	6.911	21043.78	0.0035409	0.05533	5.523	0.00231	1.36977	1.5461
275	54.72963	118.18	6.746	19216.12	0.0036984	0.05371	5.368	0.00225	1.36247	1.5726
280	53.71338	114.84	6.478	17565.97	0.0037957	0.05212	5.215	0.00223	1.35503	1.5700
285	52.67134	111.48	6.332	15917.57	0.0039977	0.05056	5.062	0.00215	1.34744	1.6062
290	51.60910	109.14	5.995	14451.56	0.0041515	0.04904	4.911	0.00210	1.33973	1.6335
295	50.52616	105.75	5.833	13094.39	0.0043317	0.04755	4.762	0.00205	1.33190	1.6514
300	49.42082	102.58	5.651	11843.98	0.0045198	0.04610	4.615	0.00201	1.32394	1.6706
310	47.14461	96.71	5.276	9667.21	0.0049147	0.04333	4.327	0.00193	1.30764	1.7087
320	44.79107	91.38	4.934	7898.26	0.0053253	0.04099	4.051	0.00188	1.29094	1.7312
330	42.38253	86.73	4.640	6507.97	0.0057167	0.03894	3.789	0.00185	1.27399	1.7368
340	39.96366	82.91	4.374	5453.58	0.0060190	0.03703	3.547	0.00186	1.25713	1.7209
350	37.58704	80.00	4.152	4670.34	0.0062173	0.03529	3.329	0.00189	1.24071	1.6890
360	35.30862	77.98	3.954	4103.51	0.0062715	0.03371	3.137	0.00195	1.22510	1.6383
370	33.16740	76.90	3.793	3700.00	0.0062129	0.03224	2.972	0.00203	1.21055	1.5856
380	31.19390	76.58	3.657	3420.65	0.0060397	0.03094	2.832	0.00214	1.19725	1.5242
390	29.40249	76.94	3.543	3233.24	0.0057807	0.02981	2.716	0.00228	1.18526	1.4587
400	27.79133	77.80	3.447	3103.86	0.0054872	0.02885	2.620	0.00243	1.17455	1.3956
410	26.34620	79.06	3.372	3015.25	0.0051924	0.02803	2.540	0.00259	1.16500	1.3394
420	25.05003	80.63	3.308	2955.00	0.0049013	0.02734	2.475	0.00276	1.15648	1.2880
430	23.88499	82.45	3.258	2916.51	0.0046254	0.02675	2.421	0.00294	1.14885	1.2425
440	22.84311	84.48	3.184	2897.71	0.0043188	0.02623	2.377	0.00315	1.14206	1.1902
450	21.90493	86.67	3.143	2887.27	0.0040733	0.02582	2.341	0.00334	1.13598	1.1525
460	21.05389	88.92	3.110	2880.19	0.0038557	0.02548	2.312	0.00353	1.13047	1.1200
470	20.27807	91.22	3.077	2876.84	0.0036535	0.02519	2.288	0.00373	1.12547	1.0898
480	19.56826	93.56	3.052	2876.15	0.0034755	0.02495	2.268	0.00392	1.12090	1.0642
490	18.91616	95.94	3.022	2877.42	0.0033037	0.02474	2.252	0.00413	1.11672	1.0384
500	18.31505	98.31	3.004	2879.94	0.0031571	0.02458	2.239	0.00432	1.11288	1.0177
510	17.75872	100.72	2.981	2883.91	0.0030153	0.02438	2.229	0.00452	1.10933	0.9994
520	17.24207	103.10	2.968	2888.79	0.0028914	0.02431	2.221	0.00473	1.10604	0.9804
530	16.76071	105.44	2.954	2892.09	0.0027767	0.02426	2.216	0.00494	1.10298	0.9625
540	16.31004	107.75	2.947	2895.57	0.0026757	0.02423	2.212	0.00515	1.10012	0.9473
550	15.89020	110.13	2.918	2899.07	0.0025625	0.02422	2.209	0.00540	1.09746	0.9269
560	15.49483	112.37	2.915	2901.97	0.0024779	0.02422	2.209	0.00561	1.09496	0.9141
570	15.12158	114.56	2.914	2904.33	0.0023998	0.02423	2.209	0.00583	1.09260	0.9023
580	14.76842	116.72	2.914	2906.24	0.0023275	0.02425	2.210	0.00605	1.09037	0.8912
590	14.43357	118.84	2.916	2907.77	0.0022601	0.02428	2.212	0.00626	1.08827	0.8808
600	14.11550	120.92	2.919	2908.98	0.0021973	0.02433	2.215	0.00649	1.08627	0.8711

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

3000 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 102.042	0.01215	2273.03	319.4	-82.729	-75.982	0.50579	0.267	0.392	3932
105	0.01221	2219.27	312.1	-81.603	-74.821	0.51700	0.265	0.392	3901
110	0.01231	2130.52	300.1	-79.703	-72.862	0.53523	0.261	0.392	3848
115	0.01242	2044.43	288.4	-77.806	-70.906	0.55262	0.257	0.391	3794
120	0.01253	1960.93	277.2	-75.913	-68.951	0.56925	0.254	0.391	3739
125	0.01264	1879.96	266.3	-74.024	-67.000	0.58519	0.250	0.390	3683
130	0.01276	1801.48	255.8	-72.138	-65.050	0.60048	0.247	0.390	3627
135	0.01288	1725.42	245.7	-70.255	-63.103	0.61517	0.244	0.389	3569
140	0.01299	1651.73	235.9	-68.376	-61.158	0.62932	0.241	0.389	3512
145	0.01312	1580.36	226.5	-66.500	-59.214	0.64297	0.239	0.389	3453
150	0.01324	1511.24	217.5	-64.627	-57.271	0.65613	0.236	0.388	3395
155	0.01337	1444.33	208.7	-62.756	-55.330	0.66886	0.233	0.388	3336
160	0.01350	1379.58	200.3	-60.889	-53.389	0.68119	0.231	0.388	3277
165	0.01363	1316.91	192.2	-59.023	-51.449	0.69312	0.229	0.388	3217
170	0.01377	1256.30	184.4	-57.160	-49.510	0.70470	0.226	0.388	3158
175	0.01391	1197.67	176.9	-55.298	-47.570	0.71595	0.224	0.388	3099
180	0.01406	1140.98	169.7	-53.438	-45.630	0.72688	0.222	0.388	3040
185	0.01421	1086.19	162.7	-51.580	-43.688	0.73752	0.220	0.388	2982
190	0.01436	1033.24	156.1	-49.722	-41.746	0.74789	0.218	0.389	2923
195	0.01452	982.08	149.7	-47.865	-39.801	0.75799	0.216	0.389	2866
200	0.01468	932.66	143.5	-46.009	-37.854	0.76785	0.213	0.390	2809
205	0.01485	884.96	137.6	-44.152	-35.904	0.77749	0.211	0.390	2753
210	0.01502	838.91	132.0	-42.295	-33.950	0.78691	0.209	0.391	2697
215	0.01520	794.49	126.5	-40.437	-31.991	0.79612	0.207	0.392	2643
220	0.01539	751.66	121.3	-38.578	-30.028	0.80515	0.204	0.393	2590
225	0.01559	710.38	116.3	-36.717	-28.058	0.81400	0.201	0.394	2538
230	0.01579	670.62	111.5	-34.853	-26.082	0.82268	0.199	0.395	2487
235	0.01600	631.19	105.9	-32.964	-24.076	0.83131	0.202	0.400	2405
240	0.01622	593.70	101.4	-31.071	-22.061	0.83979	0.201	0.403	2349
245	0.01645	557.46	97.0	-29.165	-20.026	0.84818	0.200	0.407	2293
250	0.01669	523.01	92.9	-27.250	-17.978	0.85646	0.199	0.412	2239
255	0.01694	490.76	88.4	-25.328	-15.915	0.86463	0.198	0.413	2181
260	0.01721	458.68	85.1	-23.400	-13.841	0.87269	0.196	0.421	2136
265	0.01749	429.79	80.1	-21.458	-11.743	0.88068	0.195	0.419	2069
270	0.01778	402.07	76.5	-19.513	-9.635	0.88856	0.194	0.424	2018
275	0.01809	375.61	73.1	-17.559	-7.510	0.89636	0.193	0.430	1970
280	0.01842	351.70	68.9	-15.594	-5.364	0.90409	0.192	0.429	1910
285	0.01876	326.66	65.7	-13.618	-3.197	0.91177	0.191	0.437	1860
290	0.01912	304.40	62.1	-11.622	-0.999	0.91941	0.194	0.443	1794
295	0.01951	283.48	58.9	-9.609	1.228	0.92702	0.193	0.447	1747
300	0.01991	263.81	55.8	-7.588	3.474	0.93457	0.192	0.451	1696
310	0.02080	228.62	49.8	-3.517	8.040	0.94954	0.191	0.461	1599
320	0.02181	198.93	44.5	0.589	12.703	0.96435	0.190	0.470	1509
330	0.02293	174.69	39.7	4.711	17.452	0.97896	0.189	0.478	1431
340	0.02419	155.91	35.3	8.813	22.253	0.99330	0.188	0.481	1362
350	0.02558	141.89	31.4	12.855	27.065	1.00725	0.186	0.481	1304
360	0.02708	132.10	28.0	16.798	31.843	1.02071	0.184	0.475	1256
370	0.02869	125.61	25.2	20.616	36.553	1.03361	0.183	0.467	1220
380	0.03037	121.96	22.7	24.291	41.164	1.04591	0.181	0.456	1192
390	0.03211	120.71	20.6	27.806	45.646	1.05755	0.180	0.441	1172
400	0.03388	121.17	18.8	31.156	49.980	1.06853	0.178	0.426	1158
410	0.03567	122.81	17.3	34.349	54.164	1.07886	0.177	0.411	1151
420	0.03746	125.32	16.0	37.394	58.203	1.08859	0.175	0.397	1147
430	0.03924	128.56	14.9	40.305	62.105	1.09778	0.174	0.384	1148
440	0.04101	132.64	13.8	43.091	65.872	1.10644	0.173	0.370	1148
450	0.04275	137.15	13.0	45.765	69.512	1.11462	0.171	0.358	1153
460	0.04446	141.77	12.2	48.340	73.040	1.12237	0.170	0.348	1158
470	0.04616	146.54	11.6	50.828	76.468	1.12975	0.169	0.338	1165
480	0.04783	151.39	11.0	53.237	79.805	1.13677	0.168	0.330	1174
490	0.04947	156.31	10.4	55.577	83.060	1.14349	0.167	0.321	1181
500	0.05109	161.26	10.0	57.854	86.239	1.14991	0.166	0.315	1191
510	0.05270	166.25	9.5	60.075	89.350	1.15607	0.165	0.308	1200
520	0.05428	171.28	9.1	62.245	92.399	1.16199	0.164	0.302	1210
530	0.05584	176.17	8.8	64.367	95.387	1.16769	0.163	0.296	1219
540	0.05739	181.04	8.5	66.446	98.325	1.17318	0.162	0.292	1230
550	0.05891	185.93	8.1	68.484	101.207	1.17847	0.161	0.286	1237
560	0.06041	190.76	7.8	70.485	104.045	1.18358	0.160	0.282	1248
570	0.06190	195.53	7.6	72.453	106.842	1.18854	0.159	0.278	1260
580	0.06339	200.24	7.4	74.389	109.601	1.19334	0.158	0.274	1271
590	0.06486	204.90	7.1	76.295	112.325	1.19799	0.157	0.271	1282
600	0.06632	209.51	6.9	78.173	115.016	1.20252	0.156	0.268	1293

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

3000 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_p$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 102.042	82.32720	229.93	14.512	187132.31	0.0017067	0.11323	45.931	0.00350	1.57480	5.7308
105	81.91146	228.40	14.381	181783.42	0.0017168	0.11248	43.529	0.00350	1.57145	5.4625
110	81.20782	225.78	14.155	173015.14	0.0017343	0.11116	39.782	0.00350	1.56580	5.0448
115	80.50305	223.13	13.923	164582.70	0.0017525	0.10976	36.398	0.00349	1.56014	4.6681
120	79.79698	220.47	13.686	156476.02	0.0017714	0.10831	33.341	0.00348	1.55449	4.3280
125	79.08945	217.77	13.445	148685.16	0.0017912	0.10679	30.578	0.00346	1.54884	4.0208
130	78.38027	215.04	13.200	141200.38	0.0018119	0.10523	28.081	0.00345	1.54319	3.7432
135	77.66924	212.29	12.953	134012.10	0.0018335	0.10362	25.824	0.00343	1.53754	3.4923
140	76.95612	209.50	12.704	127110.91	0.0018562	0.10197	23.784	0.00341	1.53189	3.2654
145	76.24067	206.67	12.454	120487.59	0.0018801	0.10028	21.939	0.00339	1.52623	3.0602
150	75.52263	203.81	12.204	114133.12	0.0019052	0.09857	20.270	0.00336	1.52056	2.8746
155	74.80169	200.91	11.954	108038.65	0.0019318	0.09683	18.760	0.00334	1.51489	2.7068
160	74.07753	197.96	11.706	102195.54	0.0019598	0.09508	17.394	0.00331	1.50921	2.5551
165	73.34981	194.97	11.459	96595.35	0.0019895	0.09330	16.157	0.00328	1.50351	2.4182
170	72.61814	191.93	11.216	91229.83	0.0020210	0.09151	15.037	0.00325	1.49779	2.2946
175	71.88209	188.84	10.977	86090.98	0.0020544	0.08971	14.023	0.00322	1.49205	2.1832
180	71.14121	185.70	10.743	81170.99	0.0020901	0.08790	13.103	0.00318	1.48629	2.0829
185	70.39501	182.49	10.514	76462.30	0.0021281	0.08608	12.270	0.00315	1.48051	1.9928
190	69.64295	179.23	10.292	71957.58	0.0021688	0.08426	11.514	0.00311	1.47469	1.9121
195	68.88443	175.91	10.077	67649.76	0.0022123	0.08245	10.828	0.00308	1.46884	1.8399
200	68.11882	172.52	9.870	63532.03	0.0022589	0.08063	10.205	0.00304	1.46295	1.7757
205	67.34542	169.06	9.673	59597.85	0.0023091	0.07882	9.639	0.00300	1.45702	1.7188
210	66.56350	165.52	9.486	55840.97	0.0023630	0.07701	9.125	0.00296	1.45104	1.6685
215	65.77224	161.91	9.311	52255.46	0.0024211	0.07520	8.657	0.00292	1.44500	1.6246
220	64.97077	158.23	9.148	48835.68	0.0024838	0.07341	8.231	0.00287	1.43890	1.5864
225	64.15817	154.47	8.998	45576.36	0.0025515	0.07162	7.842	0.00283	1.43273	1.5536
230	63.33343	150.65	8.861	42472.57	0.0026247	0.06984	7.488	0.00279	1.42649	1.5260
235	62.50185	149.03	8.380	39450.64	0.0026835	0.06809	7.166	0.00272	1.42022	1.5153
240	61.65533	145.70	8.173	36605.04	0.0027690	0.06635	6.872	0.00267	1.41385	1.5042
245	60.79121	142.29	7.974	33888.94	0.0028620	0.06462	6.601	0.00261	1.40737	1.4976
250	59.91214	138.87	7.793	31334.39	0.0029640	0.06290	6.353	0.00255	1.40080	1.4965
255	59.01824	135.48	7.577	28963.87	0.0030515	0.06121	6.125	0.00251	1.39413	1.4894
260	58.11059	131.99	7.461	26654.13	0.0031933	0.05954	5.920	0.00243	1.38739	1.5087
265	57.17973	128.57	7.188	24575.25	0.0032613	0.05789	5.765	0.00241	1.38050	1.5033
270	56.23790	125.31	7.014	22611.34	0.0033822	0.05627	5.612	0.00236	1.37355	1.5219
275	55.28020	122.10	6.859	20763.64	0.0035208	0.05468	5.461	0.00230	1.36650	1.5456
280	54.30291	118.97	6.615	19098.22	0.0036087	0.05312	5.311	0.00228	1.35934	1.5453
285	53.30763	115.67	6.457	17413.51	0.0037751	0.05160	5.163	0.00222	1.35207	1.5729
290	52.29382	113.54	6.120	15918.05	0.0039031	0.05010	5.016	0.00216	1.34470	1.5971
295	51.26365	110.29	5.970	14532.40	0.0040556	0.04865	4.872	0.00212	1.33723	1.6124
300	50.21578	107.25	5.791	13247.61	0.0042096	0.04724	4.729	0.00208	1.32966	1.6272
310	48.06772	101.64	5.427	10989.39	0.0045352	0.04454	4.452	0.00201	1.31423	1.6587
320	45.85819	96.51	5.095	9122.44	0.0048749	0.04208	4.185	0.00195	1.29849	1.6845
330	43.60285	91.90	4.808	7617.00	0.0052057	0.04007	3.932	0.00192	1.28256	1.6902
340	41.33400	87.99	4.548	6444.55	0.0054712	0.03819	3.696	0.00192	1.26666	1.6774
350	39.09267	84.92	4.320	5547.01	0.0056632	0.03647	3.481	0.00194	1.25109	1.6525
360	36.92255	82.66	4.120	4877.31	0.0057455	0.03491	3.289	0.00199	1.23614	1.6109
370	34.85721	81.23	3.952	4378.50	0.0057454	0.03343	3.120	0.00206	1.22202	1.5682
380	32.92405	80.55	3.808	4015.28	0.0056550	0.03213	2.975	0.00214	1.20891	1.5187
390	31.13933	80.54	3.684	3758.69	0.0054800	0.03098	2.852	0.00225	1.19689	1.4625
400	29.51164	81.03	3.575	3575.85	0.0052523	0.02998	2.748	0.00239	1.18599	1.4044
410	28.03436	81.96	3.490	3442.85	0.0050165	0.02913	2.661	0.00253	1.17616	1.3523
420	26.69615	83.20	3.413	3345.50	0.0047699	0.02839	2.588	0.00268	1.16731	1.3025
430	25.48238	84.75	3.356	3275.95	0.0045367	0.02777	2.527	0.00283	1.15932	1.2598
440	24.38586	86.55	3.285	3234.45	0.0042725	0.02721	2.477	0.00302	1.15213	1.2117
450	23.39313	88.57	3.237	3208.43	0.0040427	0.02675	2.435	0.00319	1.14565	1.1732
460	22.49063	90.67	3.195	3188.55	0.0038334	0.02636	2.400	0.00337	1.13977	1.1391
470	21.66572	92.84	3.156	3174.85	0.0036393	0.02603	2.371	0.00356	1.13443	1.1079
480	20.90952	95.07	3.128	3165.41	0.0034684	0.02576	2.347	0.00374	1.12954	1.0816
490	20.21364	97.34	3.094	3159.51	0.0033012	0.02552	2.327	0.00393	1.12505	1.0549
500	19.57142	99.63	3.073	3156.04	0.0031582	0.02533	2.311	0.00411	1.12092	1.0335
510	18.97627	101.96	3.049	3154.81	0.0030207	0.02511	2.298	0.00430	1.11711	1.0145
520	18.42301	104.28	3.033	3155.41	0.0028987	0.02502	2.287	0.00449	1.11357	0.9949
530	17.90808	106.59	3.010	3154.92	0.0027797	0.02494	2.279	0.00470	1.11028	0.9746
540	17.42591	108.84	3.001	3154.71	0.0026803	0.02489	2.273	0.00490	1.10721	0.9591
550	16.97635	111.19	2.972	3156.39	0.0025677	0.02486	2.269	0.00513	1.10435	0.9381
560	16.55317	113.42	2.966	3157.66	0.0024820	0.02484	2.266	0.00533	1.10166	0.9246
570	16.15383	115.61	2.962	3158.52	0.0024030	0.02483	2.264	0.00553	1.09913	0.9120
580	15.77613	117.76	2.960	3159.01	0.0023298	0.02484	2.264	0.00574	1.09674	0.9003
590	15.41814	119.88	2.959	3159.16	0.0022617	0.02485	2.265	0.00595	1.09447	0.8893
600	15.07818	121.96	2.960	3159.04	0.0021983	0.02488	2.266	0.00615	1.09233	0.8790

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

3200 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 102.318	0.01214	2284.92	319.5	-82.695	-75.502	0.50608	0.267	0.392	3940
105	0.01219	2236.32	312.9	-81.677	-74.451	0.51622	0.265	0.392	3912
110	0.01230	2147.78	300.8	-79.781	-72.493	0.53444	0.261	0.391	3859
115	0.01241	2061.89	289.2	-77.890	-70.538	0.55182	0.258	0.391	3806
120	0.01252	1978.60	278.0	-76.002	-68.586	0.56843	0.254	0.390	3751
125	0.01263	1897.85	267.2	-74.118	-66.636	0.58435	0.251	0.390	3696
130	0.01274	1819.58	256.7	-72.238	-64.689	0.59962	0.248	0.389	3640
135	0.01286	1743.74	246.6	-70.362	-62.744	0.61430	0.245	0.389	3583
140	0.01297	1670.27	236.8	-68.489	-60.801	0.62844	0.242	0.388	3525
145	0.01309	1599.12	227.4	-66.619	-58.860	0.64206	0.239	0.388	3468
150	0.01322	1530.23	218.4	-64.753	-56.921	0.65521	0.236	0.388	3410
155	0.01334	1463.55	209.7	-62.890	-54.983	0.66791	0.234	0.387	3351
160	0.01347	1399.02	201.3	-61.029	-53.046	0.68021	0.231	0.387	3293
165	0.01361	1336.59	193.2	-59.172	-51.110	0.69213	0.229	0.387	3234
170	0.01374	1276.21	185.4	-57.316	-49.174	0.70368	0.227	0.387	3176
175	0.01388	1217.82	177.9	-55.464	-47.239	0.71490	0.225	0.387	3117
180	0.01402	1161.37	170.7	-53.613	-45.304	0.72580	0.223	0.387	3059
185	0.01417	1106.82	163.8	-51.764	-43.368	0.73641	0.220	0.387	3001
190	0.01432	1054.11	157.2	-49.917	-41.432	0.74674	0.218	0.387	2944
195	0.01447	1003.19	150.8	-48.071	-39.494	0.75681	0.216	0.388	2887
200	0.01463	954.02	144.7	-46.226	-37.554	0.76664	0.214	0.388	2831
205	0.01480	906.56	138.9	-44.382	-35.612	0.77623	0.212	0.389	2776
210	0.01497	860.75	133.2	-42.538	-33.667	0.78561	0.209	0.389	2722
215	0.01515	816.57	127.8	-40.694	-31.719	0.79478	0.207	0.390	2669
220	0.01533	773.97	122.7	-38.850	-29.766	0.80375	0.205	0.391	2617
225	0.01552	732.92	117.7	-37.005	-27.809	0.81255	0.202	0.392	2566
230	0.01572	693.39	112.9	-35.159	-25.846	0.82117	0.199	0.393	2517
235	0.01592	654.71	107.4	-33.288	-23.855	0.82973	0.202	0.397	2438
240	0.01613	617.91	103.0	-31.415	-21.856	0.83815	0.202	0.400	2384
245	0.01636	581.57	98.6	-29.531	-19.840	0.84647	0.200	0.403	2329
250	0.01659	546.98	94.6	-27.639	-17.810	0.85467	0.199	0.408	2276
255	0.01683	514.87	90.2	-25.741	-15.768	0.86275	0.198	0.409	2220
260	0.01708	482.47	86.9	-23.841	-13.718	0.87072	0.197	0.417	2175
265	0.01735	453.56	82.0	-21.926	-11.645	0.87862	0.195	0.414	2110
270	0.01763	426.00	78.4	-20.011	-9.564	0.88639	0.194	0.418	2061
275	0.01792	399.60	75.0	-18.090	-7.470	0.89408	0.193	0.424	2015
280	0.01823	375.71	71.1	-16.158	-5.356	0.90170	0.192	0.424	1960
285	0.01855	350.58	67.7	-14.222	-3.228	0.90923	0.191	0.429	1908
290	0.01889	328.17	64.1	-12.266	-1.070	0.91674	0.194	0.435	1844
295	0.01925	307.24	61.0	-10.296	1.112	0.92420	0.193	0.438	1799
300	0.01963	287.46	57.9	-8.322	3.310	0.93159	0.192	0.441	1750
310	0.02045	251.80	52.0	-4.352	7.766	0.94620	0.191	0.449	1656
320	0.02136	221.29	46.7	-0.357	12.302	0.96060	0.190	0.457	1569
330	0.02238	195.83	41.9	3.648	16.909	0.97477	0.189	0.464	1491
340	0.02351	175.58	37.5	7.635	21.563	0.98867	0.188	0.467	1423
350	0.02474	159.97	33.6	11.569	26.229	1.00220	0.186	0.467	1364
360	0.02608	148.64	30.2	15.423	30.875	1.01528	0.184	0.462	1315
370	0.02750	140.57	27.2	19.170	35.466	1.02786	0.182	0.456	1276
380	0.02900	135.32	24.7	22.795	39.980	1.03990	0.181	0.447	1244
390	0.03056	132.52	22.5	26.289	44.398	1.05138	0.180	0.436	1221
400	0.03216	131.76	20.5	29.638	48.694	1.06226	0.178	0.423	1203
410	0.03378	132.33	18.9	32.842	52.858	1.07254	0.177	0.410	1193
420	0.03541	133.87	17.4	35.909	56.891	1.08226	0.175	0.397	1184
430	0.03704	136.19	16.2	38.853	60.804	1.09147	0.174	0.386	1182
440	0.03867	139.43	15.1	41.678	64.595	1.10018	0.173	0.373	1181
450	0.04029	143.36	14.2	44.395	68.269	1.10844	0.172	0.362	1183
460	0.04189	147.53	13.4	47.013	71.833	1.11627	0.171	0.351	1187
470	0.04347	151.94	12.6	49.543	75.298	1.12373	0.169	0.342	1191
480	0.04503	156.48	12.0	51.993	78.674	1.13084	0.168	0.334	1199
490	0.04657	161.15	11.4	54.373	81.967	1.13763	0.167	0.325	1205
500	0.04809	165.89	10.9	56.688	85.183	1.14413	0.166	0.318	1213
510	0.04959	170.69	10.4	58.944	88.331	1.15036	0.165	0.312	1222
520	0.05108	175.55	10.0	61.148	91.417	1.15635	0.164	0.306	1231
530	0.05255	180.33	9.5	63.302	94.440	1.16211	0.163	0.299	1238
540	0.05400	185.08	9.2	65.412	97.410	1.16767	0.162	0.295	1249
550	0.05543	189.92	8.8	67.479	100.324	1.17302	0.161	0.289	1256
560	0.05685	194.72	8.5	69.508	103.193	1.17819	0.160	0.285	1266
570	0.05825	199.47	8.2	71.502	106.020	1.18319	0.159	0.281	1277
580	0.05965	204.16	8.0	73.463	108.807	1.18804	0.158	0.277	1287
590	0.06103	208.80	7.7	75.393	111.557	1.19274	0.157	0.274	1298
600	0.06241	213.39	7.5	77.294	114.273	1.19731	0.156	0.270	1309

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

3200 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_p$ BTU/LB	$V(DP/DU)_v$ PSIA-CU FT/BTU	$-V(DP/DV)_t$ PSIA	$-(DV/DT)_p/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 102.318	82.37628	231.03	14.503	188223.09	0.0016973	0.11334	46.226	0.00351	1.57520	5.7577
105	82.00124	229.66	14.384	183380.98	0.0017061	0.11267	44.037	0.00351	1.57218	5.5131
110	81.30132	227.08	14.158	174617.26	0.0017229	0.11136	40.260	0.00350	1.56655	5.0920
115	80.60046	224.48	13.926	166189.31	0.0017404	0.10998	36.847	0.00349	1.56092	4.7121
120	79.89852	221.86	13.689	158087.05	0.0017586	0.10854	33.763	0.00348	1.55530	4.3690
125	79.19533	219.21	13.448	150300.52	0.0017775	0.10704	30.975	0.00347	1.54969	4.0591
130	78.49074	216.53	13.204	142819.96	0.0017973	0.10550	28.455	0.00345	1.54407	3.7790
135	77.78454	213.83	12.957	135635.77	0.0018180	0.10391	26.177	0.00344	1.53846	3.5257
140	77.07653	211.09	12.709	128738.55	0.0018397	0.10227	24.116	0.00342	1.53284	3.2965
145	76.36648	208.32	12.459	122119.06	0.0018625	0.10061	22.252	0.00340	1.52722	3.0892
150	75.65414	205.51	12.210	115768.25	0.0018864	0.09892	20.565	0.00337	1.52160	2.9016
155	74.93925	202.66	11.961	109677.25	0.0019116	0.09720	19.039	0.00335	1.51597	2.7319
160	74.22149	199.77	11.714	103837.41	0.0019382	0.09546	17.657	0.00332	1.51033	2.5784
165	73.50056	196.84	11.469	98240.25	0.0019664	0.09370	16.406	0.00329	1.50469	2.4397
170	72.77608	193.86	11.227	92877.51	0.0019962	0.09193	15.272	0.00326	1.49902	2.3144
175	72.04769	190.84	10.990	87741.15	0.0020278	0.09015	14.245	0.00323	1.49334	2.2014
180	71.31495	187.75	10.758	82823.34	0.0020614	0.08836	13.314	0.00320	1.48764	2.0995
185	70.57741	184.62	10.531	78116.46	0.0020973	0.08656	12.469	0.00317	1.48192	2.0078
190	69.83458	181.42	10.312	73613.17	0.0021355	0.08477	11.703	0.00313	1.47617	1.9255
195	69.08591	178.16	10.100	69306.33	0.0021763	0.08297	11.007	0.00310	1.47039	1.8518
200	68.33083	174.84	9.897	65189.08	0.0022201	0.08117	10.375	0.00306	1.46458	1.7860
205	67.56870	171.44	9.703	61254.82	0.0022670	0.07938	9.801	0.00302	1.45873	1.7274
210	66.79885	167.97	9.521	57497.24	0.0023173	0.07759	9.278	0.00298	1.45283	1.6755
215	66.02053	164.42	9.350	53910.30	0.0023714	0.07581	8.803	0.00295	1.44689	1.6299
220	65.23297	160.80	9.193	50488.30	0.0024296	0.07404	8.370	0.00291	1.44089	1.5899
225	64.43533	157.10	9.050	47225.82	0.0024924	0.07228	7.975	0.00286	1.43483	1.5553
230	63.62670	153.33	8.920	44117.82	0.0025600	0.07053	7.615	0.00282	1.42871	1.5258
235	62.81293	151.94	8.441	41124.30	0.0026108	0.06880	7.288	0.00276	1.42256	1.5128
240	61.98550	148.79	8.246	38301.61	0.0026894	0.06708	6.988	0.00270	1.41633	1.5007
245	61.14242	145.46	8.046	35558.65	0.0027737	0.06538	6.713	0.00265	1.41000	1.4914
250	60.28602	142.13	7.869	32975.00	0.0028678	0.06369	6.461	0.00259	1.40359	1.4885
255	59.41605	138.88	7.660	30591.76	0.0029474	0.06202	6.230	0.00255	1.39710	1.4801
260	58.53566	135.44	7.540	28241.76	0.0030757	0.06039	6.018	0.00248	1.39055	1.4945
265	57.63263	132.12	7.276	26139.62	0.0031353	0.05876	5.847	0.00246	1.38385	1.4839
270	56.72104	128.97	7.111	24163.14	0.0032427	0.05717	5.697	0.00241	1.37711	1.5004
275	55.79630	125.88	6.962	22295.93	0.0033657	0.05561	5.549	0.00235	1.37030	1.5221
280	54.85289	122.90	6.745	20608.69	0.0034494	0.05407	5.403	0.00233	1.36337	1.5247
285	53.89843	119.66	6.568	18895.73	0.0035823	0.05258	5.258	0.00228	1.35638	1.5432
290	52.92636	117.71	6.235	17368.64	0.0036928	0.05112	5.115	0.00222	1.34929	1.5659
295	51.94105	114.60	6.093	15958.18	0.0038240	0.04970	4.975	0.00218	1.34213	1.5794
300	50.94171	111.68	5.917	14643.59	0.0039514	0.04831	4.837	0.00215	1.33490	1.5905
310	48.90086	106.32	5.565	12313.06	0.0042250	0.04566	4.567	0.00208	1.32020	1.6173
320	46.81087	101.37	5.240	10358.88	0.0045105	0.04319	4.309	0.00202	1.30527	1.6422
330	44.68357	96.84	4.957	8750.42	0.0047910	0.04113	4.063	0.00198	1.29018	1.6500
340	42.54218	92.86	4.705	7469.42	0.0050248	0.03927	3.833	0.00198	1.27511	1.6395
350	40.41961	89.68	4.477	6465.97	0.0052032	0.03757	3.621	0.00199	1.26030	1.6188
360	38.34950	87.27	4.275	5700.15	0.0052984	0.03602	3.430	0.00203	1.24596	1.5848
370	36.36224	85.57	4.104	5111.34	0.0053286	0.03454	3.260	0.00208	1.23230	1.5489
380	34.48114	84.58	3.951	4666.01	0.0052862	0.03323	3.111	0.00216	1.21946	1.5068
390	32.72109	84.25	3.821	4336.13	0.0051795	0.03207	2.982	0.00225	1.20754	1.4606
400	31.09510	84.46	3.701	4096.93	0.0050067	0.03105	2.872	0.00236	1.19659	1.4081
410	29.60393	85.10	3.607	3917.53	0.0048191	0.03016	2.778	0.00248	1.18661	1.3599
420	28.24109	86.05	3.519	3780.74	0.0046104	0.02939	2.699	0.00262	1.17754	1.3116
430	26.99478	87.31	3.455	3676.34	0.0044161	0.02873	2.632	0.00276	1.16928	1.2715
440	25.85729	88.87	3.386	3605.36	0.0041982	0.02815	2.576	0.00292	1.16178	1.2288
450	24.82006	90.69	3.333	3558.12	0.0039911	0.02765	2.528	0.00308	1.15497	1.1911
460	23.87405	92.62	3.281	3522.21	0.0037923	0.02723	2.488	0.00325	1.14878	1.1556
470	23.00654	94.66	3.236	3495.58	0.0036083	0.02686	2.455	0.00342	1.14313	1.1237
480	22.20937	96.77	3.204	3475.31	0.0034465	0.02656	2.426	0.00359	1.13795	1.0971
490	21.47418	98.94	3.166	3460.51	0.0032861	0.02629	2.403	0.00376	1.13319	1.0700
500	20.79456	101.15	3.142	3449.65	0.0031478	0.02607	2.383	0.00394	1.12880	1.0479
510	20.16383	103.38	3.116	3441.74	0.0030151	0.02584	2.367	0.00411	1.12473	1.0281
520	19.57669	105.63	3.098	3436.61	0.0028965	0.02571	2.354	0.00429	1.12096	1.0082
530	19.03041	107.90	3.067	3431.80	0.0027748	0.02562	2.343	0.00450	1.11745	0.9857
540	18.51878	110.10	3.056	3427.41	0.0026770	0.02554	2.334	0.00468	1.11418	0.9697
550	18.04087	112.41	3.028	3426.40	0.0025684	0.02549	2.328	0.00489	1.11113	0.9493
560	17.59109	114.62	3.019	3425.37	0.0024822	0.02545	2.323	0.00508	1.10826	0.9349
570	17.16674	116.80	3.012	3424.19	0.0024025	0.02543	2.320	0.00528	1.10556	0.9216
580	16.76547	118.94	3.008	3422.81	0.0023288	0.02542	2.318	0.00547	1.10301	0.9093
590	16.38523	121.05	3.005	3421.22	0.0022603	0.02542	2.317	0.00567	1.10059	0.8977
600	16.02421	123.12	3.004	3419.44	0.0021964	0.02543	2.317	0.00587	1.09831	0.8869

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

3400 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 102.594	0.01213	2296.77	319.5	-82.661	-75.022	0.50638	0.267	0.392	3948
105	0.01218	2253.30	313.6	-81.749	-74.080	0.51546	0.266	0.392	3923
110	0.01229	2164.95	301.6	-79.859	-72.124	0.53366	0.262	0.391	3871
115	0.01239	2079.27	290.0	-77.972	-70.170	0.55102	0.258	0.390	3817
120	0.01250	1996.18	278.8	-76.090	-68.220	0.56762	0.255	0.390	3763
125	0.01261	1915.63	268.0	-74.212	-66.272	0.58352	0.251	0.389	3708
130	0.01272	1837.57	257.5	-72.337	-64.327	0.59878	0.248	0.389	3652
135	0.01284	1761.94	247.5	-70.467	-62.385	0.61344	0.245	0.388	3596
140	0.01295	1688.69	237.7	-68.600	-60.444	0.62756	0.242	0.388	3539
145	0.01307	1617.75	228.3	-66.737	-58.506	0.64116	0.240	0.387	3482
150	0.01320	1549.08	219.3	-64.877	-56.569	0.65429	0.237	0.387	3424
155	0.01332	1482.62	210.6	-63.020	-54.634	0.66698	0.234	0.387	3365
160	0.01345	1418.31	202.2	-61.167	-52.701	0.67925	0.232	0.386	3309
165	0.01358	1356.11	194.2	-59.317	-50.769	0.69114	0.230	0.386	3251
170	0.01371	1295.95	186.4	-57.470	-48.837	0.70267	0.227	0.386	3193
175	0.01385	1237.79	179.0	-55.626	-46.907	0.71387	0.225	0.386	3135
180	0.01399	1181.57	171.8	-53.784	-44.976	0.72474	0.223	0.386	3078
185	0.01413	1127.24	164.9	-51.944	-43.046	0.73532	0.221	0.386	3021
190	0.01428	1074.75	158.3	-50.107	-41.115	0.74562	0.219	0.386	2964
195	0.01443	1024.06	152.0	-48.271	-39.184	0.75566	0.217	0.386	2908
200	0.01459	975.12	145.9	-46.437	-37.251	0.76545	0.215	0.387	2853
205	0.01475	927.88	140.1	-44.605	-35.317	0.77500	0.212	0.387	2799
210	0.01492	882.30	134.5	-42.773	-33.381	0.78434	0.210	0.387	2746
215	0.01509	838.34	129.1	-40.943	-31.442	0.79346	0.208	0.388	2694
220	0.01527	795.95	124.0	-39.113	-29.499	0.80239	0.205	0.389	2644
225	0.01545	755.11	119.1	-37.284	-27.553	0.81113	0.202	0.389	2594
230	0.01565	715.78	114.4	-35.454	-25.603	0.81970	0.199	0.390	2547
235	0.01584	677.88	108.8	-33.601	-23.626	0.82821	0.203	0.394	2469
240	0.01605	641.88	104.7	-31.746	-21.641	0.83656	0.202	0.397	2419
245	0.01627	605.40	100.2	-29.882	-19.642	0.84481	0.201	0.400	2363
250	0.01649	570.62	96.2	-28.012	-17.630	0.85294	0.200	0.404	2312
255	0.01672	538.65	91.9	-26.135	-15.606	0.86095	0.199	0.406	2258
260	0.01697	505.86	88.5	-24.260	-13.578	0.86883	0.197	0.412	2212
265	0.01722	476.88	83.7	-22.370	-11.527	0.87665	0.196	0.410	2150
270	0.01749	449.49	80.2	-20.482	-9.471	0.88433	0.195	0.413	2103
275	0.01777	423.12	76.9	-18.590	-7.404	0.89192	0.194	0.418	2058
280	0.01806	399.08	73.1	-16.688	-5.317	0.89944	0.192	0.419	2007
285	0.01837	374.02	69.5	-14.787	-3.224	0.90685	0.191	0.421	1952
290	0.01869	351.35	66.0	-12.867	-1.102	0.91423	0.195	0.427	1891
295	0.01902	330.44	63.0	-10.933	1.043	0.92156	0.193	0.431	1847
300	0.01938	310.61	59.8	-8.999	3.200	0.92881	0.192	0.433	1800
310	0.02014	274.58	54.1	-5.115	7.563	0.94312	0.191	0.439	1709
320	0.02098	243.39	48.8	-1.214	11.993	0.95718	0.191	0.446	1624
330	0.02190	216.91	44.0	2.691	16.481	0.97099	0.190	0.452	1548
340	0.02292	195.36	39.7	6.577	21.010	0.98452	0.188	0.454	1480
350	0.02404	178.35	35.7	10.418	25.551	0.99768	0.186	0.454	1421
360	0.02524	165.62	32.3	14.192	30.081	1.01044	0.184	0.451	1371
370	0.02652	156.15	29.2	17.871	34.566	1.02273	0.183	0.446	1330
380	0.02787	149.50	26.5	21.443	38.987	1.03452	0.181	0.438	1295
390	0.02927	145.19	24.3	24.904	43.333	1.04581	0.180	0.430	1270
400	0.03072	143.21	22.2	28.242	47.583	1.05657	0.178	0.419	1249
410	0.03220	142.79	20.5	31.448	51.719	1.06678	0.177	0.408	1235
420	0.03369	143.46	18.9	34.526	55.736	1.07646	0.176	0.396	1223
430	0.03519	144.91	17.6	37.488	59.641	1.08565	0.174	0.385	1218
440	0.03669	147.22	16.4	40.341	63.442	1.09439	0.173	0.375	1215
450	0.03819	150.40	15.4	43.091	67.137	1.10270	0.172	0.365	1215
460	0.03968	154.05	14.5	45.743	70.726	1.11059	0.171	0.354	1216
470	0.04116	158.04	13.7	48.309	74.221	1.11810	0.170	0.344	1219
480	0.04262	162.22	13.0	50.795	77.626	1.12527	0.169	0.337	1224
490	0.04406	166.60	12.3	53.210	80.951	1.13213	0.168	0.328	1229
500	0.04549	171.11	11.8	55.559	84.200	1.13870	0.167	0.322	1237
510	0.04691	175.68	11.2	57.849	87.380	1.14499	0.166	0.315	1244
520	0.04831	180.33	10.8	60.084	90.497	1.15105	0.165	0.309	1253
530	0.04969	185.01	10.3	62.268	93.551	1.15687	0.164	0.302	1259
540	0.05106	189.65	9.9	64.406	96.550	1.16247	0.163	0.297	1268
550	0.05241	194.42	9.5	66.500	99.494	1.16788	0.162	0.292	1275
560	0.05374	199.16	9.2	68.556	102.392	1.17310	0.161	0.287	1285
570	0.05507	203.86	8.9	70.575	105.246	1.17815	0.160	0.283	1295
580	0.05639	208.52	8.6	72.560	108.060	1.18305	0.159	0.280	1305
590	0.05769	213.13	8.3	74.513	110.835	1.18779	0.157	0.276	1315
600	0.05899	217.70	8.1	76.435	113.574	1.19239	0.156	0.273	1326

* TWO-PHASE BOUNDARY

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THERMODYNAMIC PROPERTIES OF OXYGEN

3400 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 102.594	82.42517	232.12	14.493	189311.86	0.0016879	0.11344	46.523	0.00351	1.57559	5.7846
105	82.09033	230.91	14.386	184973.79	0.0016955	0.11285	44.548	0.00351	1.57289	5.5641
110	81.39407	228.38	14.160	176214.37	0.0017117	0.11156	40.740	0.00351	1.56729	5.1395
115	80.69705	225.82	13.928	167790.65	0.0017285	0.11020	37.299	0.00350	1.56170	4.7563
120	79.99915	223.24	13.692	159692.51	0.0017460	0.10877	34.188	0.00349	1.55611	4.4104
125	79.30023	220.64	13.451	151909.99	0.0017642	0.10729	31.375	0.00348	1.55052	4.0977
130	78.60011	218.01	13.207	144433.33	0.0017831	0.10576	28.832	0.00346	1.54494	3.8150
135	77.89864	215.35	12.961	137252.91	0.0018029	0.10419	26.532	0.00344	1.53936	3.5593
140	77.19561	212.67	12.713	130359.29	0.0018236	0.10258	24.450	0.00343	1.53379	3.3279
145	76.49083	209.95	12.464	123743.24	0.0018453	0.10093	22.567	0.00341	1.52821	3.1185
150	75.78404	207.19	12.215	117395.68	0.0018681	0.09925	20.863	0.00338	1.52263	2.9289
155	75.07502	204.40	11.967	111307.73	0.0018921	0.09755	19.320	0.00336	1.51704	2.7573
160	74.36347	201.57	11.721	105470.70	0.0019173	0.09583	17.922	0.00333	1.51145	2.6020
165	73.64911	198.70	11.478	99876.10	0.0019440	0.09409	16.656	0.00331	1.50585	2.4615
170	72.93160	195.78	11.238	94515.64	0.0019723	0.09234	15.509	0.00328	1.50024	2.3346
175	72.21058	192.81	11.002	89381.25	0.0020022	0.09058	14.469	0.00325	1.49461	2.2199
180	71.48568	189.79	10.772	84465.06	0.0020339	0.08881	13.525	0.00322	1.48897	2.1164
185	70.75646	186.72	10.548	79759.43	0.0020677	0.08704	12.670	0.00319	1.48331	2.0232
190	70.02248	183.58	10.331	75256.96	0.0021037	0.08526	11.893	0.00315	1.47763	1.9393
195	69.28323	180.38	10.122	70950.48	0.0021421	0.08348	11.187	0.00312	1.47192	1.8641
200	68.53818	177.12	9.922	66833.07	0.0021831	0.08171	10.546	0.00308	1.46618	1.7967
205	67.78676	173.78	9.732	62898.07	0.0022270	0.07994	9.963	0.00305	1.46040	1.7366
210	67.02833	170.37	9.554	59139.10	0.0022741	0.07817	9.433	0.00301	1.45459	1.6831
215	66.26224	166.89	9.388	55550.06	0.0023246	0.07641	8.950	0.00297	1.44873	1.6358
220	65.48777	163.32	9.236	52125.14	0.0023788	0.07466	8.510	0.00293	1.44283	1.5941
225	64.70415	159.67	9.098	48858.83	0.0024371	0.07292	8.108	0.00290	1.43687	1.5577
230	63.91057	155.96	8.975	45745.97	0.0024999	0.07119	7.742	0.00286	1.43086	1.5263
235	63.11312	154.79	8.499	42783.24	0.0025436	0.06949	7.410	0.00280	1.42483	1.5114
240	62.30304	151.81	8.321	39991.17	0.0026176	0.06780	7.105	0.00274	1.41872	1.4993
245	61.47944	148.56	8.113	37219.95	0.0026922	0.06612	6.825	0.00269	1.41253	1.4865
250	60.64397	145.30	7.939	34604.93	0.0027797	0.06445	6.569	0.00263	1.40627	1.4820
255	59.79577	142.18	7.740	32208.80	0.0028536	0.06281	6.334	0.00259	1.39993	1.4728
260	58.94043	138.77	7.609	29815.81	0.0029680	0.06120	6.119	0.00252	1.39356	1.4825
265	58.06259	135.57	7.358	27688.73	0.0030237	0.05960	5.925	0.00250	1.38704	1.4672
270	57.17800	132.51	7.201	25700.69	0.0031187	0.05803	5.778	0.00246	1.38049	1.4814
275	56.28258	129.52	7.058	23814.45	0.0032290	0.05650	5.634	0.00240	1.37388	1.5013
280	55.36926	126.64	6.863	22096.75	0.0033102	0.05499	5.490	0.00237	1.36716	1.5067
285	54.45058	123.47	6.664	20365.80	0.0034120	0.05352	5.349	0.00233	1.36042	1.5157
290	53.51516	121.67	6.341	18802.80	0.0035122	0.05208	5.209	0.00228	1.35359	1.5387
295	52.56851	118.71	6.206	17370.77	0.0036267	0.05069	5.072	0.00224	1.34669	1.5510
300	51.61077	115.91	6.032	16030.96	0.0037328	0.04933	4.937	0.00221	1.33974	1.5590
310	49.66115	110.77	5.690	13636.09	0.0039664	0.04673	4.675	0.00214	1.32566	1.5824
320	47.67224	106.01	5.373	11602.84	0.0042093	0.04430	4.424	0.00208	1.31141	1.6041
330	45.65351	101.56	5.091	9902.76	0.0044475	0.04213	4.184	0.00204	1.29704	1.6151
340	43.62161	97.59	4.843	8521.72	0.0046545	0.04030	3.959	0.00203	1.28269	1.6065
350	41.60324	94.26	4.623	7419.76	0.0048174	0.03861	3.751	0.00204	1.26854	1.5880
360	39.62382	91.76	4.422	6562.56	0.0049187	0.03707	3.561	0.00207	1.25477	1.5607
370	37.71195	89.88	4.246	5888.78	0.0049634	0.03559	3.391	0.00212	1.24157	1.5298
380	35.88727	88.61	4.086	5365.16	0.0049447	0.03427	3.239	0.00218	1.22905	1.4911
390	34.16314	88.01	3.953	4960.05	0.0048903	0.03310	3.107	0.00225	1.21730	1.4540
400	32.55135	87.97	3.827	4661.61	0.0047652	0.03206	2.992	0.00235	1.20639	1.4081
410	31.05925	88.39	3.724	4434.99	0.0046160	0.03115	2.892	0.00246	1.19635	1.3639
420	29.68479	89.10	3.625	4258.53	0.0044388	0.03034	2.808	0.00258	1.18715	1.3175
430	28.41911	90.12	3.553	4118.12	0.0042755	0.02966	2.735	0.00271	1.17872	1.2792
440	27.25383	91.40	3.486	4012.34	0.0040990	0.02905	2.673	0.00285	1.17099	1.2411
450	26.18264	93.00	3.428	3937.84	0.0039200	0.02853	2.621	0.00299	1.16392	1.2056
460	25.20113	94.76	3.368	3882.29	0.0037354	0.02806	2.576	0.00315	1.15747	1.1696
470	24.29761	96.66	3.317	3839.90	0.0035632	0.02767	2.538	0.00331	1.15155	1.1373
480	23.46501	98.64	3.281	3806.55	0.0034118	0.02733	2.506	0.00346	1.14611	1.1107
490	22.69510	100.71	3.239	3781.06	0.0032600	0.02704	2.478	0.00363	1.14110	1.0835
500	21.98192	102.82	3.212	3761.36	0.0031274	0.02679	2.455	0.00379	1.13647	1.0611
510	21.31904	104.97	3.182	3745.41	0.0029994	0.02655	2.436	0.00396	1.13218	1.0401
520	20.70100	107.14	3.162	3733.07	0.0028855	0.02640	2.420	0.00413	1.12819	1.0201
530	20.12558	109.36	3.127	3723.48	0.0027639	0.02628	2.407	0.00432	1.12449	0.9964
540	19.58652	111.52	3.112	3714.60	0.0026674	0.02619	2.396	0.00449	1.12102	0.9797
550	19.08188	113.76	3.086	3709.82	0.0025643	0.02611	2.387	0.00469	1.11778	0.9600
560	18.60687	115.95	3.075	3705.65	0.0024784	0.02606	2.380	0.00487	1.11474	0.9450
570	18.15872	118.11	3.066	3701.79	0.0023987	0.02602	2.375	0.00506	1.11188	0.9311
580	17.73496	120.24	3.058	3698.03	0.0023248	0.02599	2.371	0.00524	1.10918	0.9182
590	17.33344	122.34	3.053	3694.29	0.0022560	0.02598	2.369	0.00543	1.10662	0.9061
600	16.95226	124.41	3.050	3690.50	0.0021920	0.02598	2.367	0.00562	1.10419	0.8947

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

3600 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 102.869	0.01213	2308.59	319.6	-82.626	-74.543	0.50667	0.268	0.392	3956
105	0.01217	2270.20	314.4	-81.821	-73.709	0.51469	0.266	0.391	3934
110	0.01227	2182.05	302.4	-79.935	-71.754	0.53288	0.262	0.391	3882
115	0.01238	2096.56	290.8	-78.054	-69.803	0.55023	0.258	0.390	3829
120	0.01248	2013.67	279.6	-76.177	-67.854	0.56682	0.255	0.389	3775
125	0.01259	1933.32	268.8	-74.304	-65.908	0.58270	0.252	0.389	3720
130	0.01271	1855.46	258.4	-72.435	-63.965	0.59794	0.249	0.388	3665
135	0.01282	1780.04	248.3	-70.570	-62.025	0.61259	0.246	0.388	3609
140	0.01293	1706.99	238.6	-68.709	-60.087	0.62669	0.243	0.387	3553
145	0.01305	1636.26	229.2	-66.852	-58.151	0.64027	0.240	0.387	3496
150	0.01317	1567.80	220.2	-64.999	-56.217	0.65338	0.237	0.386	3439
155	0.01330	1501.55	211.5	-63.149	-54.285	0.66605	0.235	0.386	3382
160	0.01342	1437.46	203.2	-61.303	-52.355	0.67830	0.233	0.386	3324
165	0.01355	1375.47	195.1	-59.460	-50.427	0.69017	0.230	0.386	3267
170	0.01368	1315.52	187.4	-57.620	-48.499	0.70168	0.228	0.385	3210
175	0.01382	1257.57	180.0	-55.784	-46.573	0.71285	0.226	0.385	3153
180	0.01396	1201.57	172.8	-53.951	-44.647	0.72370	0.224	0.385	3096
185	0.01410	1147.46	166.0	-52.120	-42.722	0.73425	0.222	0.385	3040
190	0.01424	1095.19	159.4	-50.292	-40.797	0.74452	0.219	0.385	2984
195	0.01439	1044.71	153.1	-48.466	-38.871	0.75452	0.217	0.385	2929
200	0.01455	995.98	147.1	-46.643	-36.945	0.76428	0.215	0.385	2875
205	0.01471	948.95	141.3	-44.822	-35.018	0.77380	0.213	0.385	2822
210	0.01487	903.57	135.7	-43.002	-33.090	0.78309	0.211	0.386	2770
215	0.01504	859.81	130.4	-41.185	-31.160	0.79218	0.208	0.386	2719
220	0.01521	817.62	125.3	-39.368	-29.227	0.80106	0.205	0.386	2669
225	0.01539	776.98	120.4	-37.553	-27.292	0.80976	0.203	0.387	2621
230	0.01558	737.83	115.7	-35.739	-25.353	0.81827	0.200	0.387	2575
235	0.01577	700.73	110.2	-33.903	-23.389	0.82672	0.203	0.391	2499
240	0.01597	665.63	106.4	-32.064	-21.417	0.83503	0.202	0.395	2454
245	0.01618	628.99	101.7	-30.219	-19.433	0.84321	0.201	0.397	2396
250	0.01640	593.98	97.8	-28.368	-17.438	0.85127	0.200	0.400	2346
255	0.01662	562.11	93.6	-26.512	-15.431	0.85922	0.199	0.403	2295
260	0.01686	528.89	90.0	-24.659	-13.423	0.86702	0.198	0.407	2246
265	0.01710	499.79	85.5	-22.792	-11.391	0.87476	0.197	0.406	2188
270	0.01736	472.56	81.9	-20.928	-9.357	0.88236	0.195	0.409	2142
275	0.01762	446.23	78.7	-19.063	-7.315	0.88986	0.194	0.413	2099
280	0.01790	421.81	75.1	-17.187	-5.253	0.89729	0.193	0.415	2050
285	0.01819	397.04	71.1	-15.318	-3.191	0.90459	0.192	0.414	1993
290	0.01850	373.98	67.8	-13.430	-1.100	0.91186	0.195	0.421	1935
295	0.01881	353.11	64.9	-11.529	1.012	0.91908	0.193	0.424	1894
300	0.01915	333.30	61.7	-9.628	3.135	0.92622	0.193	0.425	1847
310	0.01986	296.99	56.0	-5.819	7.418	0.94026	0.192	0.431	1759
320	0.02064	265.18	50.8	-1.999	11.757	0.95404	0.191	0.437	1676
330	0.02149	237.89	46.0	1.820	16.146	0.96754	0.190	0.441	1601
340	0.02242	215.19	41.7	5.620	20.568	0.98074	0.188	0.444	1533
350	0.02344	196.93	37.7	9.377	25.000	0.99359	0.186	0.443	1475
360	0.02453	182.90	34.3	13.077	29.426	1.00606	0.184	0.442	1425
370	0.02569	172.17	31.1	16.695	33.818	1.01810	0.183	0.437	1382
380	0.02691	164.30	28.3	20.217	38.155	1.02966	0.181	0.430	1344
390	0.02818	158.58	26.0	23.636	42.424	1.04075	0.180	0.424	1317
400	0.02951	155.36	23.9	26.954	46.623	1.05138	0.178	0.415	1294
410	0.03086	153.99	22.0	30.156	50.726	1.06151	0.177	0.405	1277
420	0.03223	153.87	20.4	33.239	54.722	1.07114	0.176	0.394	1263
430	0.03361	154.57	19.0	36.210	58.613	1.08030	0.175	0.384	1255
440	0.03500	155.96	17.7	39.078	62.408	1.08903	0.173	0.375	1250
450	0.03639	158.27	16.7	41.852	66.111	1.09735	0.172	0.366	1248
460	0.03778	161.32	15.7	44.532	69.716	1.10527	0.171	0.356	1245
470	0.03916	164.81	14.8	47.128	73.232	1.11284	0.170	0.346	1247
480	0.04053	168.59	14.0	49.644	76.661	1.12006	0.169	0.339	1251
490	0.04189	172.64	13.3	52.090	80.011	1.12697	0.168	0.331	1255
500	0.04323	176.89	12.7	54.469	83.288	1.13359	0.167	0.324	1261
510	0.04456	181.22	12.1	56.788	86.495	1.13994	0.166	0.317	1267
520	0.04588	185.63	11.6	59.052	89.639	1.14605	0.165	0.312	1275
530	0.04719	190.20	11.1	61.264	92.720	1.15191	0.164	0.305	1280
540	0.04848	194.74	10.7	63.428	95.746	1.15757	0.163	0.300	1289
550	0.04976	199.38	10.2	65.549	98.717	1.16302	0.162	0.295	1296
560	0.05102	204.03	9.9	67.628	101.641	1.16829	0.161	0.290	1305
570	0.05228	208.67	9.5	69.671	104.521	1.17339	0.160	0.286	1315
580	0.05352	213.28	9.2	71.679	107.359	1.17833	0.159	0.282	1324
590	0.05476	217.86	8.9	73.654	110.157	1.18311	0.158	0.278	1334
600	0.05599	222.40	8.7	75.597	112.919	1.18775	0.157	0.275	1344

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

3600 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_p$ BTU/LB	$V(DP/DU)_v$ PSIA-CU FT/BTU	$-V(DP/DV)_t$ PSIA	$-(DV/DT)_p/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 102.869	82.47388	233.22	14.483	190398.65	0.0016787	0.11354	46.820	0.00352	1.57598	5.8117
105	82.17875	232.16	14.389	186561.95	0.0016852	0.11302	45.062	0.00352	1.57361	5.6153
110	81.48608	229.67	14.162	177806.58	0.0017008	0.11175	41.223	0.00351	1.56803	5.1873
115	80.79284	227.15	13.930	169386.82	0.0017169	0.11041	37.753	0.00350	1.56246	4.8009
120	80.09891	224.62	13.694	161292.52	0.0017337	0.10900	34.615	0.00349	1.55691	4.4520
125	79.40415	222.06	13.453	153513.72	0.0017511	0.10754	31.778	0.00348	1.55135	4.1366
130	78.70843	219.48	13.210	146040.64	0.0017692	0.10603	29.211	0.00347	1.54580	3.8514
135	78.01157	216.87	12.964	138863.65	0.0017881	0.10447	26.889	0.00345	1.54026	3.5932
140	77.31341	214.24	12.717	131973.30	0.0018079	0.10288	24.787	0.00344	1.53472	3.3596
145	76.61375	211.57	12.468	125360.32	0.0018286	0.10125	22.885	0.00342	1.52918	3.1480
150	75.91238	208.87	12.220	119015.62	0.0018503	0.09959	21.162	0.00339	1.52364	2.9564
155	75.20906	206.13	11.973	112930.31	0.0018731	0.09791	19.602	0.00337	1.51810	2.7829
160	74.50354	203.36	11.728	107095.67	0.0018971	0.09620	18.189	0.00335	1.51255	2.6258
165	73.79554	200.54	11.486	101503.19	0.0019224	0.09448	16.908	0.00332	1.50699	2.4836
170	73.08477	197.68	11.248	96144.55	0.0019492	0.09275	15.747	0.00329	1.50143	2.3550
175	72.37088	194.77	11.014	91011.64	0.0019775	0.09101	14.694	0.00326	1.49586	2.2387
180	71.65352	191.81	10.785	86096.56	0.0020075	0.08926	13.739	0.00324	1.49028	2.1336
185	70.93231	188.79	10.563	81391.65	0.0020394	0.08750	12.871	0.00320	1.48467	2.0389
190	70.20682	185.72	10.348	76889.46	0.0020733	0.08574	12.084	0.00317	1.47905	1.9535
195	69.47658	182.58	10.142	72582.77	0.0021094	0.08399	11.368	0.00314	1.47341	1.8767
200	68.74112	179.37	9.945	68464.61	0.0021479	0.08223	10.718	0.00310	1.46774	1.8078
205	67.99989	176.10	9.759	64528.28	0.0021891	0.08048	10.126	0.00307	1.46204	1.7462
210	67.25232	172.74	9.584	60767.32	0.0022332	0.07874	9.588	0.00303	1.45630	1.6912
215	66.49780	169.31	9.423	57175.56	0.0022804	0.07700	9.097	0.00300	1.45053	1.6422
220	65.73567	165.79	9.276	53747.10	0.0023310	0.07527	8.650	0.00296	1.44472	1.5989
225	64.96524	162.19	9.144	50476.37	0.0023854	0.07355	8.242	0.00293	1.43886	1.5609
230	64.18575	158.52	9.027	47358.07	0.0024437	0.07184	7.870	0.00289	1.43294	1.5277
235	63.40328	157.57	8.555	44428.26	0.0024814	0.07015	7.532	0.00283	1.42702	1.5111
240	62.60899	154.77	8.399	41674.38	0.0025530	0.06849	7.222	0.00277	1.42102	1.4999
245	61.80351	151.60	8.176	38873.69	0.0026166	0.06683	6.938	0.00273	1.41496	1.4825
250	60.98746	148.40	8.005	36225.17	0.0026985	0.06519	6.677	0.00267	1.40884	1.4766
255	60.15920	145.39	7.818	33815.97	0.0027686	0.06357	6.438	0.00263	1.40264	1.4674
260	59.32704	142.01	7.668	31377.47	0.0028684	0.06199	6.220	0.00257	1.39643	1.4713
265	58.47219	138.92	7.438	29223.91	0.0029243	0.06041	6.016	0.00254	1.39008	1.4565
270	57.61188	135.94	7.283	27225.26	0.0030076	0.05886	5.857	0.00250	1.38370	1.4645
275	56.74277	133.03	7.148	25320.43	0.0031072	0.05735	5.714	0.00245	1.37727	1.4826
280	55.85663	130.22	6.969	23560.91	0.0031864	0.05586	5.573	0.00241	1.37074	1.4902
285	54.96946	127.14	6.745	21825.29	0.0032583	0.05442	5.435	0.00239	1.36422	1.4895
290	54.06674	125.46	6.438	20219.80	0.0033550	0.05301	5.299	0.00233	1.35761	1.5148
295	53.15383	122.61	6.312	18769.16	0.0034562	0.05163	5.165	0.00229	1.35095	1.5260
300	52.23216	119.95	6.137	17408.84	0.0035451	0.05030	5.033	0.00226	1.34425	1.5319
310	50.36125	115.03	5.807	14956.89	0.0037472	0.04774	4.777	0.00220	1.33071	1.5527
320	48.45916	110.43	5.494	12850.51	0.0039556	0.04534	4.531	0.00214	1.31704	1.5714
330	46.53360	106.09	5.212	11069.93	0.0041582	0.04312	4.298	0.00210	1.30329	1.5828
340	44.59669	102.14	4.969	9596.89	0.0043425	0.04128	4.078	0.00209	1.28957	1.5774
350	42.67007	98.72	4.756	8403.23	0.0044900	0.03960	3.873	0.00209	1.27601	1.5604
360	40.77259	96.11	4.562	7457.37	0.0045943	0.03807	3.684	0.00211	1.26275	1.5383
370	38.93146	94.10	4.380	6702.74	0.0046450	0.03659	3.514	0.00215	1.24998	1.5112
380	37.16327	92.64	4.209	6106.02	0.0046366	0.03525	3.361	0.00221	1.23779	1.4745
390	35.48128	91.76	4.079	5626.66	0.0046175	0.03408	3.226	0.00227	1.22628	1.4440
400	33.89232	91.51	3.950	5265.34	0.0045346	0.03302	3.107	0.00235	1.21546	1.4055
410	32.40819	91.75	3.839	4990.40	0.0044168	0.03209	3.003	0.00244	1.20542	1.3652
420	31.03120	92.29	3.732	4774.72	0.0042670	0.03125	2.914	0.00256	1.19616	1.3213
430	29.75589	93.12	3.651	4599.26	0.0041263	0.03055	2.836	0.00267	1.18762	1.2844
440	28.57421	94.15	3.580	4456.38	0.0039808	0.02992	2.770	0.00279	1.17975	1.2491
450	27.47937	95.49	3.521	4349.28	0.0038314	0.02937	2.712	0.00292	1.17249	1.2163
460	26.47020	97.06	3.455	4270.09	0.0036654	0.02888	2.663	0.00307	1.16582	1.1811
470	25.53719	98.81	3.397	4208.80	0.0035063	0.02845	2.621	0.00322	1.15968	1.1489
480	24.67468	100.67	3.357	4159.92	0.0033664	0.02809	2.585	0.00336	1.15402	1.1226
490	23.87465	102.62	3.313	4121.75	0.0032249	0.02777	2.554	0.00351	1.14879	1.0957
500	23.13175	104.64	3.282	4091.66	0.0030987	0.02750	2.528	0.00367	1.14394	1.0731
510	22.44016	106.71	3.248	4066.53	0.0029752	0.02725	2.505	0.00383	1.13945	1.0507
520	21.79434	108.79	3.225	4045.68	0.0028664	0.02708	2.486	0.00398	1.13526	1.0306
530	21.19195	110.96	3.189	4030.68	0.0027486	0.02694	2.470	0.00417	1.13136	1.0068
540	20.62741	113.08	3.171	4017.01	0.0026529	0.02682	2.457	0.00433	1.12772	0.9893
550	20.09788	115.26	3.147	4007.18	0.0025556	0.02673	2.446	0.00452	1.12431	0.9704
560	19.59919	117.41	3.133	3998.90	0.0024706	0.02666	2.437	0.00469	1.12110	0.9548
570	19.12855	119.54	3.121	3991.58	0.0023915	0.02660	2.430	0.00486	1.11808	0.9403
580	18.68346	121.65	3.111	3984.86	0.0023179	0.02656	2.425	0.00504	1.11523	0.9269
590	18.26171	123.74	3.103	3978.49	0.0022493	0.02653	2.421	0.00522	1.11254	0.9143
600	17.86131	125.79	3.098	3972.33	0.0021853	0.02651	2.418	0.00540	1.10998	0.9025

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

3800 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p	VELOCITY OF SOUND FT/SEC
* 103.143	0.01212	2320.38	319.7	-82.591	-74.064	0.50696	0.268	0.391	3964
105	0.01216	2287.02	315.1	-81.891	-73.338	0.51394	0.266	0.391	3945
110	0.01226	2199.07	303.2	-80.010	-71.385	0.53211	0.262	0.390	3893
115	0.01236	2113.77	291.6	-78.134	-69.435	0.54945	0.259	0.390	3840
120	0.01247	2031.07	280.4	-76.262	-67.488	0.56602	0.255	0.389	3787
125	0.01258	1950.92	269.6	-74.394	-65.544	0.58189	0.252	0.388	3733
130	0.01269	1873.26	259.2	-72.531	-63.603	0.59712	0.249	0.388	3678
135	0.01280	1798.03	249.2	-70.671	-61.664	0.61175	0.246	0.387	3622
140	0.01291	1725.18	239.5	-68.816	-59.729	0.62582	0.243	0.387	3566
145	0.01303	1654.66	230.1	-66.965	-57.795	0.63939	0.240	0.386	3510
150	0.01315	1586.40	221.1	-65.118	-55.864	0.65248	0.238	0.386	3453
155	0.01327	1520.35	212.4	-63.275	-53.935	0.66513	0.235	0.385	3396
160	0.01340	1456.46	204.1	-61.436	-52.009	0.67736	0.233	0.385	3340
165	0.01352	1394.67	196.1	-59.600	-50.083	0.68921	0.231	0.385	3283
170	0.01365	1334.93	188.4	-57.768	-48.160	0.70070	0.229	0.385	3226
175	0.01379	1277.19	181.0	-55.939	-46.237	0.71184	0.226	0.384	3170
180	0.01392	1221.39	173.9	-54.114	-44.316	0.72267	0.224	0.384	3114
185	0.01406	1167.48	167.0	-52.292	-42.396	0.73319	0.222	0.384	3058
190	0.01421	1115.41	160.5	-50.473	-40.476	0.74343	0.220	0.384	3003
195	0.01435	1065.13	154.2	-48.657	-38.556	0.75341	0.218	0.384	2949
200	0.01451	1016.60	148.2	-46.843	-36.637	0.76313	0.216	0.384	2896
205	0.01466	969.76	142.4	-45.033	-34.717	0.77262	0.213	0.384	2844
210	0.01482	924.58	136.9	-43.225	-32.796	0.78188	0.211	0.384	2792
215	0.01499	881.01	131.6	-41.419	-30.874	0.79092	0.209	0.384	2743
220	0.01516	839.00	126.5	-39.616	-28.951	0.79976	0.206	0.385	2694
225	0.01533	798.53	121.7	-37.814	-27.025	0.80841	0.203	0.385	2647
230	0.01552	759.55	117.1	-36.015	-25.098	0.81688	0.200	0.385	2602
235	0.01570	723.26	111.6	-34.195	-23.146	0.82528	0.204	0.388	2528
240	0.01590	689.17	108.2	-32.370	-21.184	0.83354	0.203	0.393	2489
245	0.01610	652.34	103.2	-30.543	-19.215	0.84166	0.202	0.394	2428
250	0.01631	617.06	99.3	-28.711	-17.235	0.84966	0.201	0.397	2379
255	0.01653	585.28	95.3	-26.872	-15.243	0.85755	0.200	0.400	2331
260	0.01675	551.58	91.4	-25.041	-13.254	0.86527	0.198	0.403	2279
265	0.01699	522.33	87.2	-23.195	-11.241	0.87294	0.197	0.403	2225
270	0.01723	495.27	83.6	-21.352	-9.226	0.88048	0.196	0.405	2179
275	0.01749	468.96	80.4	-19.511	-7.205	0.88789	0.194	0.409	2138
280	0.01776	443.88	76.9	-17.660	-5.166	0.89524	0.193	0.411	2091
285	0.01803	419.69	72.6	-15.818	-3.130	0.90245	0.192	0.407	2030
290	0.01832	396.05	69.5	-13.960	-1.069	0.90962	0.195	0.415	1976
295	0.01862	375.25	66.6	-12.088	1.015	0.91674	0.194	0.418	1937
300	0.01893	355.53	63.5	-10.217	3.106	0.92377	0.193	0.419	1891
310	0.01960	319.04	57.9	-6.473	7.322	0.93759	0.192	0.424	1807
320	0.02033	286.65	52.7	-2.724	11.583	0.95112	0.191	0.429	1725
330	0.02112	258.74	47.9	1.021	15.886	0.96436	0.190	0.432	1650
340	0.02198	235.06	43.6	4.746	20.216	0.97729	0.188	0.434	1584
350	0.02291	215.69	39.6	8.430	24.554	0.98987	0.186	0.434	1526
360	0.02391	200.38	36.2	12.059	28.886	1.00207	0.184	0.433	1477
370	0.02497	188.47	33.0	15.621	33.195	1.01388	0.183	0.429	1432
380	0.02609	179.58	30.0	19.096	37.455	1.02524	0.181	0.422	1392
390	0.02726	172.64	27.6	22.474	41.653	1.03614	0.180	0.417	1363
400	0.02847	168.10	25.5	25.763	45.793	1.04663	0.178	0.410	1339
410	0.02971	165.76	23.6	28.956	49.860	1.05667	0.177	0.402	1320
420	0.03097	164.90	21.8	32.039	53.833	1.06624	0.176	0.392	1304
430	0.03225	164.97	20.3	35.015	57.708	1.07536	0.175	0.383	1293
440	0.03354	165.58	19.0	37.892	61.489	1.08406	0.174	0.374	1285
450	0.03483	166.99	17.9	40.679	65.188	1.09237	0.173	0.366	1281
460	0.03613	169.33	16.8	43.378	68.799	1.10031	0.171	0.357	1278
470	0.03742	172.26	15.8	45.997	72.327	1.10790	0.170	0.348	1276
480	0.03870	175.57	15.0	48.539	75.773	1.11515	0.169	0.341	1279
490	0.03998	179.24	14.3	51.011	79.144	1.12210	0.168	0.333	1282
500	0.04125	183.19	13.6	53.418	82.443	1.12877	0.167	0.326	1287
510	0.04251	187.28	13.0	55.763	85.673	1.13517	0.166	0.320	1291
520	0.04375	191.45	12.4	58.054	88.841	1.14132	0.165	0.314	1298
530	0.04499	195.88	11.9	60.291	91.947	1.14724	0.164	0.308	1303
540	0.04621	200.33	11.4	62.480	94.997	1.15294	0.163	0.302	1311
550	0.04742	204.80	11.0	64.624	97.992	1.15843	0.162	0.297	1318
560	0.04862	209.33	10.6	66.727	100.940	1.16375	0.161	0.293	1326
570	0.04981	213.88	10.2	68.792	103.843	1.16888	0.160	0.288	1335
580	0.05099	218.42	9.9	70.820	106.703	1.17386	0.159	0.284	1344
590	0.05217	222.95	9.6	72.816	109.523	1.17868	0.158	0.281	1353
600	0.05333	227.45	9.3	74.779	112.306	1.18336	0.157	0.277	1362

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

3800 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_p$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_p/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC X 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 103.143	82.52241	234.31	14.473	191483.49	0.0016696	0.11365	47.118	0.00352	1.57638	5.8389
105	82.26653	233.41	14.391	188145.53	0.0016750	0.11320	45.578	0.00352	1.57431	5.6669
110	81.57738	230.95	14.164	179393.97	0.0016900	0.11194	41.709	0.00352	1.56877	5.2354
115	80.88784	228.48	13.933	170977.90	0.0017055	0.11062	38.210	0.00351	1.56323	4.8458
120	80.19780	225.99	13.696	162887.18	0.0017216	0.10923	35.045	0.00350	1.55770	4.4939
125	79.50713	223.48	13.456	155111.82	0.0017383	0.10778	32.182	0.00349	1.55217	4.1758
130	78.81570	220.95	13.213	147642.02	0.0017556	0.10629	29.592	0.00348	1.54666	3.8880
135	78.12336	218.39	12.967	140468.15	0.0017737	0.10475	27.248	0.00346	1.54115	3.6274
140	77.42996	215.80	12.720	133580.73	0.0017926	0.10317	25.125	0.00344	1.53564	3.3915
145	76.73530	213.18	12.472	126970.48	0.0018123	0.10156	23.204	0.00343	1.53014	3.1778
150	76.03919	210.53	12.225	120628.29	0.0018330	0.09992	21.463	0.00341	1.52464	2.9842
155	75.34143	207.85	11.979	114545.23	0.0018547	0.09825	19.886	0.00338	1.51914	2.8089
160	74.64176	205.13	11.735	108712.58	0.0018775	0.09657	18.457	0.00336	1.51363	2.6499
165	73.93994	202.37	11.494	103121.80	0.0019015	0.09487	17.162	0.00333	1.50813	2.5060
170	73.23569	199.56	11.257	97764.53	0.0019269	0.09315	15.987	0.00331	1.50261	2.3757
175	72.52869	196.71	11.024	92632.65	0.0019537	0.09143	14.921	0.00328	1.49709	2.2578
180	71.81861	193.80	10.798	87718.22	0.0019820	0.08969	13.953	0.00325	1.49156	2.1512
185	71.10510	190.85	10.578	83013.54	0.0020121	0.08796	13.075	0.00322	1.48601	2.0549
190	70.38776	187.83	10.365	78511.12	0.0020441	0.08622	12.276	0.00319	1.48045	1.9680
195	69.66617	184.75	10.161	74203.70	0.0020781	0.08448	11.551	0.00316	1.47487	1.8897
200	68.93987	181.60	9.967	70084.27	0.0021144	0.08275	10.891	0.00313	1.46927	1.8194
205	68.20836	178.37	9.784	66146.05	0.0021531	0.08101	10.291	0.00309	1.46364	1.7562
210	67.47112	175.07	9.613	62382.56	0.0021944	0.07929	9.744	0.00306	1.45798	1.6997
215	66.72758	171.69	9.456	58787.53	0.0022386	0.07757	9.246	0.00302	1.45229	1.6492
220	65.97713	168.22	9.313	55355.01	0.0022860	0.07586	8.791	0.00299	1.44656	1.6043
225	65.21913	164.67	9.186	52079.32	0.0023367	0.07416	8.377	0.00296	1.44079	1.5646
230	64.45290	161.04	9.076	48955.08	0.0023912	0.07247	7.998	0.00292	1.43497	1.5298
235	63.68419	160.30	8.608	46060.09	0.0024235	0.07081	7.654	0.00286	1.42914	1.5117
240	62.90425	157.66	8.482	43351.83	0.0024950	0.06916	7.339	0.00280	1.42325	1.5026
245	62.11572	154.58	8.234	40520.54	0.0025463	0.06753	7.050	0.00276	1.41731	1.4793
250	61.31779	151.43	8.067	37836.54	0.0026233	0.06591	6.785	0.00271	1.41132	1.4721
255	60.50785	148.52	7.894	35414.11	0.0026911	0.06431	6.541	0.00266	1.40525	1.4635
260	59.69729	145.16	7.719	32927.78	0.0027757	0.06275	6.320	0.00261	1.39919	1.4609
265	58.86358	142.17	7.516	30746.31	0.0028353	0.06119	6.113	0.00258	1.39298	1.4496
270	58.02522	139.30	7.358	28737.94	0.0029074	0.05967	5.932	0.00254	1.38676	1.4494
275	57.17989	136.43	7.232	26814.93	0.0029978	0.05818	5.792	0.00249	1.38050	1.4658
280	56.31874	133.62	7.060	24998.49	0.0030744	0.05671	5.653	0.00245	1.37414	1.4743
285	55.45930	130.69	6.807	23275.67	0.0031171	0.05529	5.518	0.00245	1.36782	1.4637
290	54.58628	129.09	6.527	21618.80	0.0032168	0.05390	5.385	0.00238	1.36142	1.4935
295	53.70311	126.35	6.409	20152.22	0.0033073	0.05254	5.253	0.00234	1.35496	1.5040
300	52.81299	123.81	6.236	18776.35	0.0033822	0.05122	5.124	0.00232	1.34847	1.5080
310	51.01078	119.12	5.915	16274.28	0.0035588	0.04870	4.873	0.00225	1.33540	1.5270
320	49.18431	114.66	5.603	14098.76	0.0037384	0.04634	4.633	0.00220	1.32224	1.5427
330	47.33945	110.46	5.323	12248.75	0.0039116	0.04415	4.404	0.00216	1.30903	1.5518
340	45.48567	106.56	5.084	10691.67	0.0040763	0.04221	4.188	0.00214	1.29585	1.5516
350	43.64020	103.11	4.872	9412.82	0.0042092	0.04055	3.987	0.00214	1.28282	1.5362
360	41.81701	100.32	4.693	8379.27	0.0043144	0.03902	3.800	0.00216	1.27004	1.5173
370	40.04148	98.22	4.506	7546.70	0.0043671	0.03753	3.630	0.00219	1.25767	1.4934
380	38.32744	96.64	4.329	6883.03	0.0043644	0.03618	3.476	0.00224	1.24581	1.4589
390	36.69006	95.55	4.195	6334.14	0.0043634	0.03500	3.339	0.00229	1.23455	1.4321
400	35.12996	95.05	4.070	5905.43	0.0043166	0.03394	3.217	0.00235	1.22388	1.4003
410	33.66009	95.12	3.953	5579.47	0.0042265	0.03299	3.110	0.00244	1.21389	1.3644
420	32.28688	95.54	3.841	5323.98	0.0041018	0.03214	3.016	0.00254	1.20461	1.3240
430	31.00856	96.23	3.751	5115.47	0.0039778	0.03140	2.935	0.00265	1.19601	1.2880
440	29.81915	97.07	3.670	4937.43	0.0038511	0.03075	2.864	0.00276	1.18804	1.2536
450	28.70997	98.17	3.608	4794.30	0.0037286	0.03018	2.802	0.00287	1.18065	1.2237
460	27.68065	99.53	3.540	4687.16	0.0035845	0.02966	2.749	0.00300	1.17382	1.1902
470	26.72449	101.10	3.478	4603.45	0.0034397	0.02921	2.703	0.00314	1.16750	1.1584
480	25.83742	102.82	3.433	4536.32	0.0033122	0.02883	2.663	0.00328	1.16165	1.1327
490	25.01182	104.66	3.388	4483.24	0.0031820	0.02848	2.629	0.00342	1.15623	1.1066
500	24.24302	106.59	3.353	4441.02	0.0030630	0.02819	2.599	0.00356	1.15119	1.0838
510	23.52601	108.57	3.314	4405.94	0.0029442	0.02794	2.574	0.00372	1.14651	1.0602
520	22.85546	110.58	3.289	4375.60	0.0028403	0.02775	2.552	0.00387	1.14215	1.0399
530	22.22830	112.68	3.254	4354.16	0.0027297	0.02759	2.534	0.00403	1.13807	1.0171
540	21.64015	114.77	3.231	4335.21	0.0026348	0.02745	2.518	0.00420	1.13426	0.9987
550	21.08776	116.88	3.207	4318.85	0.0025421	0.02734	2.505	0.00436	1.13069	0.9801
560	20.56707	118.98	3.191	4305.31	0.0024591	0.02725	2.494	0.00453	1.12733	0.9642
570	20.07537	121.08	3.177	4293.67	0.0023812	0.02717	2.485	0.00470	1.12416	0.9493
580	19.61019	123.16	3.165	4283.31	0.0023084	0.02712	2.478	0.00486	1.12117	0.9353
590	19.16929	125.23	3.155	4273.79	0.0022403	0.02708	2.473	0.00503	1.11834	0.9223
600	18.75065	127.27	3.147	4264.84	0.0021766	0.02705	2.468	0.00521	1.11566	0.9101

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

4000 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 103.417	0.01211	2332.14	319.8	-82.556	-73.586	0.50725	0.268	0.391	3972
105	0.01214	2303.78	315.9	-81.961	-72.967	0.51319	0.267	0.391	3956
110	0.01224	2216.00	303.9	-80.085	-71.015	0.53135	0.263	0.390	3904
115	0.01235	2130.89	292.4	-78.213	-69.067	0.54867	0.258	0.389	3852
120	0.01245	2048.38	281.2	-76.346	-67.121	0.56523	0.256	0.389	3799
125	0.01256	1968.42	270.4	-74.483	-65.179	0.58108	0.252	0.388	3745
130	0.01267	1890.95	260.0	-72.625	-63.240	0.59629	0.249	0.388	3690
135	0.01278	1815.92	250.0	-70.771	-61.304	0.61091	0.246	0.387	3635
140	0.01290	1743.26	240.3	-68.922	-59.370	0.62497	0.244	0.386	3579
145	0.01301	1672.93	231.0	-67.077	-57.439	0.63852	0.241	0.386	3523
150	0.01313	1604.87	222.0	-65.236	-55.511	0.65159	0.238	0.385	3467
155	0.01325	1539.01	213.3	-63.399	-53.585	0.66422	0.236	0.385	3411
160	0.01337	1475.32	205.0	-61.566	-51.661	0.67644	0.234	0.384	3355
165	0.01350	1413.73	197.0	-59.737	-49.739	0.68827	0.231	0.384	3298
170	0.01363	1354.18	189.3	-57.912	-47.819	0.69973	0.229	0.384	3242
175	0.01376	1296.63	182.0	-56.091	-45.901	0.71085	0.227	0.383	3187
180	0.01389	1241.03	174.9	-54.274	-43.984	0.72165	0.225	0.383	3131
185	0.01403	1187.31	168.1	-52.460	-42.068	0.73215	0.223	0.383	3076
190	0.01417	1135.43	161.5	-50.650	-40.153	0.74237	0.221	0.383	3022
195	0.01432	1085.35	155.3	-48.843	-38.239	0.75231	0.218	0.383	2969
200	0.01446	1037.00	149.3	-47.039	-36.325	0.76201	0.216	0.383	2916
205	0.01462	990.35	143.5	-45.239	-34.412	0.77146	0.214	0.383	2865
210	0.01477	945.34	138.1	-43.441	-32.498	0.78068	0.212	0.383	2815
215	0.01494	901.94	132.8	-41.647	-30.584	0.78969	0.209	0.383	2766
220	0.01510	860.10	127.8	-39.856	-28.669	0.79849	0.206	0.383	2718
225	0.01528	819.79	123.0	-38.068	-26.754	0.80710	0.204	0.383	2673
230	0.01545	780.96	118.3	-36.282	-24.836	0.81552	0.200	0.383	2629
235	0.01564	745.50	113.0	-34.477	-22.896	0.82387	0.204	0.386	2557
240	0.01583	712.52	110.0	-32.666	-20.944	0.83209	0.203	0.392	2524
245	0.01602	675.47	104.6	-30.854	-18.988	0.84016	0.202	0.391	2459
250	0.01622	639.88	100.7	-29.040	-17.023	0.84810	0.201	0.394	2411
255	0.01644	608.19	97.0	-27.218	-15.045	0.85593	0.200	0.397	2366
260	0.01665	573.96	92.7	-25.407	-13.073	0.86359	0.199	0.399	2309
265	0.01688	544.53	88.9	-23.580	-11.076	0.87120	0.198	0.400	2261
270	0.01712	517.62	85.2	-21.757	-9.078	0.87867	0.196	0.401	2215
275	0.01736	491.33	82.0	-19.938	-7.078	0.88601	0.195	0.405	2175
280	0.01762	465.26	78.4	-18.110	-5.060	0.89328	0.194	0.407	2127
285	0.01788	442.00	73.8	-16.292	-3.047	0.90041	0.193	0.400	2063
290	0.01816	417.57	71.2	-14.461	-1.013	0.90748	0.196	0.410	2015
295	0.01844	396.87	68.3	-12.615	1.045	0.91452	0.194	0.413	1978
300	0.01874	377.31	65.2	-10.771	3.110	0.92146	0.193	0.413	1934
310	0.01937	340.73	59.7	-7.083	7.266	0.93509	0.192	0.418	1852
320	0.02006	307.78	54.5	-3.397	11.459	0.94840	0.192	0.421	1771
330	0.02080	279.45	49.7	0.283	15.687	0.96141	0.190	0.424	1698
340	0.02160	254.92	45.4	3.942	19.939	0.97410	0.189	0.426	1633
350	0.02246	234.59	41.4	7.560	24.194	0.98644	0.187	0.426	1574
360	0.02338	217.99	38.0	11.128	28.444	0.99841	0.184	0.425	1526
370	0.02436	204.96	34.7	14.632	32.672	1.01000	0.183	0.421	1480
380	0.02538	195.25	31.8	18.066	36.868	1.02119	0.181	0.415	1440
390	0.02645	187.35	29.2	21.406	41.000	1.03192	0.180	0.410	1408
400	0.02757	181.43	27.0	24.662	45.080	1.04225	0.178	0.405	1382
410	0.02872	178.01	25.1	27.835	49.104	1.05219	0.177	0.399	1362
420	0.02989	176.35	23.3	30.915	53.052	1.06170	0.176	0.390	1344
430	0.03107	175.89	21.7	33.894	56.910	1.07078	0.175	0.381	1332
440	0.03227	176.00	20.3	36.777	60.677	1.07944	0.174	0.372	1321
450	0.03347	176.56	19.1	39.572	64.365	1.08773	0.173	0.365	1315
460	0.03468	178.10	17.9	42.284	67.974	1.09566	0.172	0.357	1310
470	0.03589	180.38	16.9	44.919	71.506	1.10326	0.171	0.348	1306
480	0.03710	183.17	16.0	47.480	74.961	1.11054	0.170	0.342	1307
490	0.03831	186.40	15.2	49.975	78.347	1.11752	0.169	0.335	1309
500	0.03950	190.00	14.5	52.404	81.663	1.12422	0.168	0.328	1313
510	0.04069	193.87	13.9	54.774	84.913	1.13065	0.167	0.322	1316
520	0.04187	197.81	13.3	57.087	88.100	1.13684	0.166	0.316	1322
530	0.04304	202.07	12.7	59.349	91.229	1.14281	0.165	0.310	1328
540	0.04420	206.40	12.2	61.561	94.301	1.14855	0.164	0.305	1334
550	0.04535	210.65	11.7	63.728	97.318	1.15408	0.163	0.299	1340
560	0.04649	215.02	11.3	65.852	100.287	1.15944	0.162	0.295	1348
570	0.04762	219.44	10.9	67.937	103.211	1.16461	0.161	0.291	1356
580	0.04875	223.90	10.5	69.986	106.091	1.16962	0.160	0.286	1364
590	0.04986	228.36	10.2	72.000	108.932	1.17448	0.159	0.283	1373
600	0.05097	232.82	9.9	73.981	111.733	1.17919	0.158	0.279	1382

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

4000 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_P$ BTU/LB	$V(DP/DU)_V$ PSIA-CU FT/BTU	$-V(DP/DV)_T$ PSIA	$-(DV/DT)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 103.417	82.57076	235.41	14.463	192566.39	0.0016605	0.11375	47.417	0.00352	1.57677	5.8662
105	82.35366	234.65	14.393	189724.61	0.0016650	0.11337	46.098	0.00352	1.57562	5.7189
110	81.66798	232.23	14.166	180976.63	0.0016794	0.11213	42.197	0.00352	1.56949	5.2838
115	80.98208	229.81	13.934	172564.01	0.0016943	0.11082	38.669	0.00351	1.56398	4.8910
120	80.29585	227.36	13.698	164476.60	0.0017097	0.10945	35.478	0.00351	1.55848	4.5362
125	79.60919	224.89	13.458	156704.41	0.0017257	0.10802	32.589	0.00350	1.55299	4.2152
130	78.92197	222.40	13.215	149237.61	0.0017423	0.10654	29.975	0.00348	1.54751	3.9248
135	78.23405	219.89	12.970	142066.55	0.0017596	0.10502	27.609	0.00347	1.54203	3.6619
140	77.54528	217.35	12.723	135181.75	0.0017777	0.10346	25.466	0.00345	1.53656	3.4237
145	76.85551	214.78	12.476	128573.89	0.0017965	0.10187	23.525	0.00344	1.53109	3.2079
150	76.16454	212.19	12.230	122233.86	0.0018162	0.10024	21.766	0.00342	1.52563	3.0123
155	75.47217	209.55	11.984	116152.70	0.0018368	0.09860	20.173	0.00339	1.52017	2.8350
160	74.77820	206.89	11.741	110321.67	0.0018585	0.09693	18.728	0.00337	1.51471	2.6743
165	74.08237	204.18	11.501	104732.19	0.0018812	0.09524	17.417	0.00335	1.50924	2.5287
170	73.38443	201.43	11.265	99375.89	0.0019053	0.09355	16.228	0.00332	1.50378	2.3967
175	72.68410	198.63	11.034	94244.62	0.0019306	0.09184	15.149	0.00329	1.49830	2.2772
180	71.98106	195.78	10.809	89330.40	0.0019575	0.09013	14.169	0.00327	1.49282	2.1690
185	71.27497	192.88	10.591	84625.49	0.0019859	0.08841	13.279	0.00324	1.48733	2.0712
190	70.56548	189.92	10.381	80122.37	0.0020161	0.08669	12.470	0.00321	1.48183	1.9828
195	69.85218	186.89	10.179	75813.74	0.0020482	0.08497	11.735	0.00318	1.47631	1.9031
200	69.13465	183.79	9.988	71692.55	0.0020823	0.08325	11.065	0.00315	1.47077	1.8313
205	68.41244	180.62	9.808	67751.97	0.0021187	0.08154	10.456	0.00311	1.46521	1.7666
210	67.68504	177.37	9.641	63985.44	0.0021575	0.07983	9.901	0.00308	1.45962	1.7086
215	66.95193	174.04	9.487	60386.65	0.0021990	0.07813	9.395	0.00305	1.45401	1.6567
220	66.21256	170.61	9.348	56949.58	0.0022434	0.07644	8.934	0.00302	1.44835	1.6103
225	65.46631	167.10	9.227	53668.47	0.0022909	0.07476	8.512	0.00298	1.44267	1.5690
230	64.71256	163.51	9.122	50537.86	0.0023418	0.07309	8.127	0.00295	1.43694	1.5326
235	63.95654	162.97	8.659	47679.40	0.0023696	0.07145	7.777	0.00289	1.43120	1.5132
240	63.18964	160.50	8.570	45024.00	0.0024429	0.06982	7.455	0.00282	1.42541	1.5073
245	62.41698	157.51	8.288	42161.09	0.0024804	0.06820	7.162	0.00280	1.41958	1.4769
250	61.63605	154.40	8.124	39439.74	0.0025533	0.06661	6.893	0.00274	1.41370	1.4686
255	60.84304	151.57	7.968	37003.93	0.0026202	0.06503	6.645	0.00269	1.40776	1.4610
260	60.05270	148.25	7.762	34467.60	0.0026890	0.06350	6.421	0.00265	1.40185	1.4511
265	59.23854	145.32	7.594	32256.90	0.0027551	0.06196	6.210	0.00261	1.39577	1.4447
270	58.42017	142.56	7.429	30239.64	0.0028163	0.06045	6.017	0.00258	1.38969	1.4387
275	57.59649	139.75	7.309	28298.84	0.0028989	0.05898	5.867	0.00253	1.38358	1.4508
280	56.75872	136.87	7.135	26407.82	0.0029707	0.05753	5.731	0.00249	1.37739	1.4580
285	55.92358	134.15	6.850	24718.49	0.0029846	0.05613	5.598	0.00251	1.37123	1.4375
290	55.07797	132.58	6.608	22998.85	0.0030941	0.05476	5.467	0.00242	1.36502	1.4743
295	54.22124	129.93	6.498	21518.77	0.0031760	0.05342	5.338	0.00239	1.35874	1.4844
300	53.35893	127.52	6.329	20132.65	0.0032398	0.05211	5.211	0.00236	1.35245	1.4871
310	51.61723	123.05	6.015	17587.31	0.0033950	0.04962	4.965	0.00230	1.33979	1.5046
320	49.85744	118.71	5.702	15344.94	0.0035497	0.04729	4.729	0.00225	1.32708	1.5170
330	48.08301	114.66	5.427	13436.71	0.0036994	0.04512	4.505	0.00221	1.31434	1.5247
340	46.30247	110.84	5.191	11803.66	0.0038464	0.04311	4.293	0.00218	1.30165	1.5284
350	44.52910	107.40	4.981	10446.04	0.0039660	0.04145	4.094	0.00219	1.28909	1.5145
360	42.77371	104.46	4.811	9324.28	0.0040701	0.03994	3.909	0.00220	1.27674	1.4984
370	41.05882	102.20	4.627	8415.50	0.0041232	0.03844	3.740	0.00222	1.26475	1.4761
380	39.39537	100.61	4.449	7691.76	0.0041291	0.03708	3.586	0.00227	1.25319	1.4463
390	37.80215	99.39	4.305	7082.40	0.0041292	0.03588	3.448	0.00231	1.24219	1.4195
400	36.27524	98.62	4.182	6581.25	0.0041101	0.03481	3.324	0.00237	1.23170	1.3930
410	34.82440	98.48	4.065	6199.13	0.0040467	0.03385	3.213	0.00244	1.22180	1.3618
420	33.45969	98.78	3.949	5900.70	0.0039459	0.03298	3.116	0.00253	1.21253	1.3254
430	32.18269	99.38	3.852	5660.71	0.0038358	0.03222	3.030	0.00263	1.20390	1.2908
440	30.99098	100.13	3.760	5454.35	0.0037181	0.03154	2.956	0.00273	1.19589	1.2560
450	29.87506	101.02	3.692	5274.82	0.0036158	0.03095	2.891	0.00284	1.18842	1.2281
460	28.83262	102.18	3.623	5135.20	0.0034947	0.03042	2.834	0.00296	1.18147	1.1973
470	27.85937	103.55	3.556	5025.27	0.0033651	0.02995	2.784	0.00309	1.17500	1.1661
480	26.95293	105.11	3.510	4936.84	0.0032505	0.02954	2.741	0.00321	1.16900	1.1411
490	26.10618	106.82	3.462	4866.31	0.0031325	0.02918	2.703	0.00334	1.16342	1.1160
500	25.31522	108.65	3.424	4809.91	0.0030214	0.02886	2.671	0.00347	1.15822	1.0935
510	24.57581	110.56	3.383	4764.61	0.0029086	0.02862	2.642	0.00362	1.15337	1.0690
520	23.88340	112.49	3.353	4724.34	0.0028085	0.02841	2.618	0.00376	1.14884	1.0483
530	23.23373	114.53	3.322	4694.79	0.0027076	0.02822	2.597	0.00392	1.14461	1.0273
540	22.62386	116.58	3.295	4669.61	0.0026138	0.02807	2.579	0.00407	1.14064	1.0080
550	22.05078	118.62	3.268	4645.04	0.0025239	0.02794	2.564	0.00423	1.13692	0.9891
560	21.50989	120.66	3.249	4624.96	0.0024438	0.02783	2.551	0.00439	1.13342	0.9730
570	20.99865	122.71	3.234	4608.01	0.0023679	0.02774	2.540	0.00455	1.13011	0.9579
580	20.51466	124.76	3.220	4593.25	0.0022964	0.02767	2.531	0.00471	1.12699	0.9436
590	20.05573	126.80	3.208	4580.00	0.0022292	0.02761	2.524	0.00487	1.12404	0.9301
600	19.61984	128.82	3.198	4567.81	0.0021661	0.02757	2.518	0.00504	1.12124	0.9175

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

4500 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 104.099	0.01209	2361.39	319.9	-82.468	-72.391	0.50797	0.268	0.390	3991
105	0.01211	2345.36	317.7	-82.131	-72.039	0.51133	0.267	0.390	3982
110	0.01221	2258.03	305.8	-80.266	-70.091	0.52946	0.264	0.389	3931
115	0.01231	2173.36	294.3	-78.406	-68.146	0.54675	0.260	0.389	3880
120	0.01242	2091.30	283.2	-76.551	-66.204	0.56327	0.257	0.388	3827
125	0.01252	2011.79	272.4	-74.700	-64.266	0.57910	0.253	0.387	3774
130	0.01263	1934.78	262.0	-72.855	-62.331	0.59427	0.250	0.387	3721
135	0.01274	1860.20	252.0	-71.014	-60.400	0.60885	0.247	0.386	3666
140	0.01285	1788.00	242.4	-69.178	-58.472	0.62287	0.245	0.385	3612
145	0.01296	1718.12	233.1	-67.347	-56.547	0.63638	0.242	0.385	3557
150	0.01308	1650.52	224.2	-65.521	-54.624	0.64942	0.239	0.384	3502
155	0.01319	1585.12	215.5	-63.699	-52.705	0.66200	0.237	0.384	3447
160	0.01331	1521.88	207.3	-61.882	-50.788	0.67417	0.235	0.383	3392
165	0.01344	1460.75	199.3	-60.070	-48.874	0.68595	0.233	0.382	3337
170	0.01356	1401.66	191.7	-58.262	-46.963	0.69736	0.230	0.382	3282
175	0.01369	1344.55	184.3	-56.458	-45.053	0.70843	0.228	0.382	3228
180	0.01382	1289.39	177.3	-54.659	-43.146	0.71918	0.226	0.381	3174
185	0.01395	1236.12	170.5	-52.865	-41.241	0.72962	0.224	0.381	3120
190	0.01409	1184.67	164.1	-51.075	-39.338	0.73977	0.222	0.380	3068
195	0.01422	1135.01	157.9	-49.289	-37.436	0.74965	0.220	0.380	3015
200	0.01437	1087.08	151.9	-47.508	-35.536	0.75928	0.218	0.380	2966
205	0.01451	1040.83	146.3	-45.731	-33.638	0.76866	0.215	0.380	2916
210	0.01466	996.22	140.8	-43.959	-31.741	0.77780	0.213	0.379	2868
215	0.01482	953.20	135.6	-42.191	-29.844	0.78673	0.210	0.379	2821
220	0.01498	911.72	130.7	-40.428	-27.949	0.79544	0.208	0.379	2776
225	0.01514	871.75	125.9	-38.669	-26.055	0.80395	0.205	0.378	2733
230	0.01531	833.24	121.4	-36.915	-24.161	0.81227	0.201	0.378	2691
235	0.01548	799.90	116.3	-35.145	-22.247	0.82050	0.205	0.381	2625
240	0.01566	770.13	114.9	-33.362	-20.314	0.82864	0.204	0.391	2614
245	0.01584	732.45	107.8	-31.586	-18.386	0.83659	0.203	0.384	2532
250	0.01603	695.93	104.1	-29.811	-16.454	0.84440	0.202	0.387	2485
255	0.01623	664.39	101.0	-28.027	-14.506	0.85212	0.201	0.392	2449
260	0.01642	628.67	95.4	-26.261	-12.575	0.85962	0.200	0.388	2377
265	0.01664	596.65	93.1	-24.476	-10.614	0.86709	0.199	0.395	2348
270	0.01685	572.16	89.0	-22.694	-8.651	0.87443	0.198	0.394	2299
275	0.01708	545.88	85.9	-20.919	-6.690	0.88162	0.196	0.397	2262
280	0.01731	515.58	81.3	-19.148	-4.726	0.88870	0.195	0.394	2198
285	0.01755	496.63	75.7	-17.377	-2.756	0.89568	0.194	0.381	2128
290	0.01779	468.97	74.8	-15.607	-0.782	0.90254	0.197	0.400	2102
295	0.01805	448.59	72.2	-13.817	1.223	0.90939	0.195	0.402	2070
300	0.01832	429.84	69.3	-12.029	3.233	0.91615	0.194	0.402	2032
310	0.01887	393.47	63.9	-8.458	7.270	0.92939	0.193	0.405	1956
320	0.01947	358.98	58.4	-4.900	11.324	0.94226	0.193	0.406	1873
330	0.02011	330.49	54.0	-1.350	15.407	0.95483	0.191	0.409	1809
340	0.02079	304.57	49.7	2.174	19.500	0.96704	0.190	0.410	1746
350	0.02152	282.38	45.7	5.663	23.594	0.97891	0.188	0.410	1689
360	0.02229	262.37	42.1	9.099	27.673	0.99040	0.186	0.409	1636
370	0.02311	246.57	38.7	12.476	31.729	1.00152	0.183	0.406	1590
380	0.02397	235.63	36.4	15.804	35.775	1.01231	0.181	0.408	1568
390	0.02486	227.26	33.2	19.068	39.783	1.02272	0.180	0.397	1524
400	0.02578	217.54	30.6	22.244	43.724	1.03270	0.179	0.391	1485
410	0.02673	210.53	28.6	25.355	47.631	1.04235	0.177	0.389	1462
420	0.02771	205.89	26.6	28.392	51.486	1.05164	0.176	0.382	1438
430	0.02872	203.97	25.0	31.364	55.295	1.06060	0.175	0.377	1425
440	0.02974	204.85	23.6	34.262	59.043	1.06922	0.175	0.370	1419
450	0.03076	204.32	22.1	37.067	62.698	1.07743	0.174	0.362	1404
460	0.03178	203.49	20.8	39.795	66.279	1.08530	0.173	0.355	1393
470	0.03282	203.78	19.6	42.453	69.800	1.09288	0.172	0.348	1384
480	0.03386	204.91	18.6	45.043	73.254	1.10015	0.171	0.342	1381
490	0.03490	206.76	17.7	47.569	76.648	1.10715	0.169	0.337	1379
500	0.03594	209.23	16.9	50.037	79.984	1.11389	0.168	0.331	1380
510	0.03698	212.79	16.2	52.453	83.270	1.12040	0.167	0.327	1387
520	0.03802	216.40	15.4	54.816	86.495	1.12666	0.166	0.320	1388
530	0.03905	219.77	14.8	57.126	89.665	1.13270	0.166	0.315	1393
540	0.04007	223.52	14.2	59.388	92.782	1.13852	0.165	0.310	1396
550	0.04109	226.97	13.6	61.601	95.837	1.14413	0.164	0.303	1396
560	0.04209	230.73	13.1	63.772	98.849	1.14956	0.163	0.299	1403
570	0.04310	234.72	12.6	65.904	101.817	1.15481	0.162	0.295	1409
580	0.04410	238.84	12.2	67.998	104.742	1.15990	0.161	0.291	1416
590	0.04509	243.07	11.8	70.056	107.627	1.16483	0.160	0.287	1424
600	0.04607	247.34	11.5	72.080	110.472	1.16961	0.159	0.284	1432

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

4500 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(DH/DV)_p$ BTU/LB	$V(DP/DU)_v$ PSIA-CU FT/BTU	$-V(DP/DV)_t$ PSIA	$-(DV/DT)_p/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC $\times 10^5$	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 104.099	82.69088	238.14	14.437	195265.30	0.0016384	0.11400	48.169	0.00353	1.57774	5.9351
105	82.56876	237.73	14.397	193653.13	0.0016407	0.11379	47.409	0.00353	1.57675	5.8501
110	81.89150	235.41	14.170	184913.12	0.0016538	0.11259	43.430	0.00353	1.57129	5.4063
115	81.21441	233.09	13.939	176508.11	0.0016673	0.11132	39.830	0.00353	1.56585	5.0054
120	80.53742	230.75	13.702	168427.91	0.0016811	0.10999	36.570	0.00352	1.56042	4.6430
125	79.86044	228.39	13.463	160662.51	0.0016955	0.10861	33.618	0.00351	1.55500	4.3151
130	79.18336	226.01	13.220	153202.03	0.0017104	0.10717	30.944	0.00350	1.54959	4.0182
135	78.50608	223.61	12.975	146036.78	0.0017258	0.10569	28.522	0.00349	1.54419	3.7492
140	77.82847	221.19	12.730	139157.23	0.0017418	0.10417	26.327	0.00347	1.53881	3.5054
145	77.15041	218.75	12.484	132554.02	0.0017585	0.10262	24.337	0.00346	1.53343	3.2843
150	76.47173	216.27	12.239	126217.98	0.0017759	0.10104	22.533	0.00344	1.52806	3.0837
155	75.79227	213.77	11.995	120140.11	0.0017941	0.09943	20.896	0.00342	1.52269	2.9016
160	75.11185	211.23	11.755	114311.60	0.0018132	0.09781	19.411	0.00340	1.51733	2.7364
165	74.43028	208.65	11.517	108723.81	0.0018332	0.09617	18.063	0.00338	1.51197	2.5864
170	73.74732	206.03	11.284	103368.31	0.0018542	0.09451	16.839	0.00335	1.50662	2.4503
175	73.06274	203.36	11.056	98236.86	0.0018764	0.09285	15.727	0.00333	1.50126	2.3269
180	72.37627	200.65	10.835	93321.43	0.0018998	0.09118	14.716	0.00330	1.49590	2.2148
185	71.68764	197.87	10.621	88614.19	0.0019245	0.08950	13.797	0.00328	1.49054	2.1133
190	70.99652	195.04	10.416	84107.53	0.0019507	0.08783	12.961	0.00325	1.48517	2.0213
195	70.30259	192.14	10.220	79794.05	0.0019785	0.08615	12.200	0.00322	1.47979	1.9379
200	69.60548	189.17	10.035	75666.58	0.0020080	0.08448	11.506	0.00320	1.47440	1.8625
205	68.90481	186.12	9.862	71718.21	0.0020393	0.08281	10.875	0.00317	1.46900	1.7944
210	68.20014	182.98	9.702	67942.24	0.0020727	0.08115	10.299	0.00314	1.46358	1.7328
215	67.49104	179.75	9.557	64332.23	0.0021084	0.07949	9.773	0.00311	1.45813	1.6773
220	66.77702	176.42	9.428	60882.00	0.0021464	0.07785	9.293	0.00308	1.45267	1.6272
225	66.05758	173.00	9.317	57585.63	0.0021870	0.07621	8.854	0.00305	1.44717	1.5823
230	65.33217	169.48	9.225	54437.49	0.0022304	0.07459	8.452	0.00302	1.44165	1.5420
235	64.60378	169.43	8.778	51676.70	0.0022498	0.07299	8.086	0.00296	1.43611	1.5204
240	63.86437	167.33	8.815	49183.81	0.0023363	0.07139	7.749	0.00286	1.43051	1.5277
245	63.12754	164.62	8.408	46238.00	0.0023323	0.06982	7.444	0.00288	1.42494	1.4735
250	62.38496	161.58	8.251	43415.80	0.0023973	0.06828	7.164	0.00283	1.41934	1.4630
255	61.62920	158.92	8.149	40945.97	0.0024669	0.06675	6.904	0.00276	1.41365	1.4600
260	60.88460	155.69	7.834	38276.11	0.0024926	0.06527	6.672	0.00276	1.40807	1.4281
265	60.11372	152.85	7.787	35987.08	0.0025862	0.06378	6.452	0.00268	1.40230	1.4398
270	59.33830	150.36	7.590	33950.92	0.0026207	0.06231	6.250	0.00266	1.39652	1.4229
275	58.56121	147.73	7.476	31967.17	0.0026880	0.06088	6.065	0.00262	1.39074	1.4241
280	57.77839	144.36	7.228	29789.25	0.0027293	0.05948	5.914	0.00261	1.38493	1.4103
285	56.98988	142.50	6.861	28303.08	0.0026753	0.05811	5.785	0.00257	1.37910	1.3663
290	56.20649	140.74	6.774	26358.90	0.0028395	0.05680	5.661	0.00253	1.37332	1.4338
295	55.40472	138.27	6.691	24854.12	0.0029064	0.05549	5.536	0.00249	1.36742	1.4433
300	54.59892	136.20	6.544	23468.53	0.0029528	0.05421	5.413	0.00247	1.36151	1.4457
310	52.98097	132.27	6.241	20846.38	0.0030645	0.05178	5.177	0.00241	1.34969	1.4588
320	51.35931	128.16	5.905	18436.92	0.0031671	0.04951	4.951	0.00238	1.33792	1.4613
330	49.72588	124.62	5.666	16433.87	0.0032830	0.04738	4.736	0.00233	1.32613	1.4721
340	48.09448	121.04	5.435	14648.17	0.0033899	0.04541	4.532	0.00230	1.31443	1.4741
350	46.46946	117.72	5.229	13122.06	0.0034818	0.04359	4.340	0.00229	1.30284	1.4690
360	44.86172	114.48	5.048	11770.29	0.0035740	0.04207	4.160	0.00229	1.29144	1.4566
370	43.28007	111.82	4.878	10671.57	0.0036275	0.04056	3.993	0.00231	1.28029	1.4376
380	41.72445	110.35	4.808	9831.62	0.0036997	0.03924	3.838	0.00230	1.26939	1.4376
390	40.22611	109.17	4.590	9141.71	0.0036352	0.03795	3.698	0.00238	1.25895	1.3922
400	38.79317	107.71	4.418	8439.15	0.0036288	0.03684	3.571	0.00243	1.24902	1.3641
410	37.40718	106.91	4.315	7875.45	0.0036364	0.03587	3.456	0.00247	1.23947	1.3487
420	36.08189	106.58	4.190	7428.78	0.0035873	0.03496	3.352	0.00253	1.23038	1.3197
430	34.82010	107.00	4.099	7102.17	0.0035240	0.03416	3.259	0.00260	1.22177	1.2949
440	33.62578	108.11	4.018	6888.24	0.0034232	0.03343	3.176	0.00269	1.21366	1.2657
450	32.51155	108.81	3.912	6642.83	0.0033235	0.03278	3.103	0.00279	1.20612	1.2325
460	31.46283	109.44	3.825	6402.48	0.0032445	0.03221	3.039	0.00288	1.19906	1.2060
470	30.47081	110.34	3.745	6209.26	0.0031531	0.03170	2.982	0.00299	1.19240	1.1782
480	29.53691	111.46	3.691	6052.48	0.0030717	0.03126	2.931	0.00309	1.18616	1.1556
490	28.65575	112.78	3.641	5924.92	0.0029848	0.03088	2.886	0.00320	1.18029	1.1324
500	27.82528	114.25	3.599	5821.76	0.0028968	0.03055	2.847	0.00332	1.17478	1.1102
510	27.04021	116.04	3.579	5753.99	0.0028154	0.03025	2.811	0.00342	1.16958	1.0930
520	26.30325	117.89	3.528	5692.11	0.0027141	0.02999	2.781	0.00356	1.16472	1.0679
530	25.60877	119.65	3.498	5628.03	0.0026345	0.02977	2.754	0.00369	1.16015	1.0499
540	24.95349	121.52	3.464	5577.60	0.0025500	0.02957	2.730	0.00382	1.15584	1.0301
550	24.33892	123.36	3.412	5524.21	0.0024591	0.02940	2.710	0.00398	1.15182	1.0067
560	23.75592	125.22	3.391	5481.29	0.0023900	0.02925	2.692	0.00411	1.14801	0.9916
570	23.20280	127.12	3.373	5446.05	0.0023221	0.02913	2.677	0.00425	1.14441	0.9767
580	22.67770	129.06	3.356	5416.42	0.0022565	0.02902	2.664	0.00439	1.14099	0.9623
590	22.17875	131.01	3.340	5390.90	0.0021935	0.02893	2.652	0.00454	1.13775	0.9485
600	21.70414	132.97	3.327	5368.38	0.0021334	0.02886	2.643	0.00469	1.13467	0.9353

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

5000 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME CU FT/LB	ISOTHERM DERIVATIVE CU FT-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU / LB -R	C_p BTU / LB -R	VELOCITY OF SOUND FT/SEC
* 104.777	0.01208	2390.44	320.1	-82.378	-71.198	0.50868	0.268	0.389	4010
105	0.01208	2386.51	319.5	-82.295	-71.111	0.50951	0.268	0.389	4008
110	0.01218	2299.59	307.6	-80.441	-69.165	0.52761	0.264	0.389	3958
115	0.01228	2215.35	296.1	-78.592	-67.224	0.54487	0.261	0.388	3907
120	0.01238	2133.71	285.0	-76.748	-65.286	0.56136	0.257	0.387	3855
125	0.01248	2054.63	274.3	-74.910	-63.352	0.57715	0.254	0.386	3803
130	0.01259	1978.03	264.0	-73.076	-61.421	0.59229	0.251	0.386	3750
135	0.01269	1903.88	254.0	-71.248	-59.494	0.60684	0.248	0.385	3697
140	0.01280	1832.10	244.4	-69.425	-57.571	0.62083	0.246	0.384	3643
145	0.01291	1762.65	235.1	-67.607	-55.651	0.63430	0.243	0.384	3589
150	0.01303	1695.46	226.2	-65.795	-53.735	0.64729	0.241	0.383	3535
155	0.01314	1630.48	217.7	-63.987	-51.821	0.65984	0.238	0.382	3481
160	0.01326	1567.66	209.4	-62.185	-49.911	0.67197	0.236	0.382	3427
165	0.01337	1506.93	201.5	-60.387	-48.004	0.68370	0.234	0.381	3374
170	0.01350	1448.24	193.9	-58.595	-46.100	0.69507	0.232	0.380	3320
175	0.01362	1391.54	186.6	-56.808	-44.199	0.70609	0.229	0.380	3267
180	0.01374	1336.78	179.6	-55.026	-42.301	0.71679	0.227	0.379	3214
185	0.01387	1283.88	172.9	-53.249	-40.405	0.72718	0.225	0.379	3163
190	0.01400	1232.82	166.5	-51.478	-38.512	0.73728	0.223	0.378	3111
195	0.01414	1183.52	160.3	-49.711	-36.622	0.74710	0.221	0.378	3061
200	0.01427	1135.95	154.5	-47.950	-34.734	0.75666	0.219	0.377	3012
205	0.01441	1090.04	148.8	-46.195	-32.849	0.76597	0.217	0.377	2964
210	0.01456	1045.76	143.4	-44.445	-30.966	0.77505	0.214	0.376	2918
215	0.01471	1003.05	138.3	-42.700	-29.085	0.78390	0.212	0.376	2873
220	0.01486	961.87	133.4	-40.962	-27.207	0.79254	0.209	0.375	2830
225	0.01501	922.17	128.7	-39.230	-25.331	0.80096	0.206	0.374	2789
230	0.01517	883.92	124.3	-37.504	-23.458	0.80919	0.202	0.374	2750
235	0.01534	852.76	119.4	-35.764	-21.566	0.81733	0.206	0.377	2689
240	0.01551	826.75	120.4	-34.004	-19.647	0.82541	0.205	0.393	2708
245	0.01568	788.34	110.8	-32.260	-17.745	0.83326	0.204	0.378	2599
250	0.01585	750.71	107.1	-30.518	-15.839	0.84096	0.203	0.381	2554
255	0.01604	719.26	105.0	-28.766	-13.917	0.84857	0.202	0.388	2529
260	0.01622	681.83	97.5	-27.041	-12.022	0.85593	0.201	0.378	2435
265	0.01642	651.07	97.3	-25.291	-10.092	0.86329	0.200	0.392	2432
270	0.01662	625.00	92.5	-23.543	-8.156	0.87052	0.199	0.388	2377
275	0.01683	598.70	89.5	-21.805	-6.227	0.87760	0.198	0.391	2342
280	0.01703	560.81	81.9	-20.086	-4.315	0.88449	0.196	0.376	2232
285	0.01726	550.11	75.6	-18.343	-2.365	0.89140	0.195	0.358	2165
290	0.01748	516.84	78.0	-16.634	-0.453	0.89804	0.198	0.391	2176
295	0.01771	496.88	75.7	-14.885	1.512	0.90476	0.196	0.393	2150
300	0.01795	479.62	73.2	-13.140	3.483	0.91139	0.195	0.395	2122
310	0.01846	444.22	67.7	-9.662	7.428	0.92432	0.194	0.396	2049
320	0.01899	407.72	61.6	-6.206	11.375	0.93686	0.194	0.392	1957
330	0.01956	380.41	58.1	-2.751	15.356	0.94911	0.193	0.400	1913
340	0.02016	354.16	53.6	0.672	19.333	0.96098	0.191	0.399	1850
350	0.02079	330.93	49.7	4.061	23.308	0.97250	0.189	0.399	1797
360	0.02145	307.04	45.6	7.390	27.249	0.98360	0.187	0.395	1733
370	0.02215	286.27	42.2	10.670	31.174	0.99436	0.185	0.393	1685
380	0.02289	277.37	42.2	13.921	35.118	1.00488	0.182	0.419	1718
390	0.02368	272.27	37.7	17.113	39.034	1.01504	0.180	0.391	1655
400	0.02445	258.76	33.6	20.205	42.841	1.02468	0.179	0.372	1579
410	0.02525	246.19	31.8	23.247	46.625	1.03403	0.178	0.377	1554
420	0.02608	235.52	29.1	26.221	50.364	1.04304	0.177	0.367	1506
430	0.02694	230.45	27.9	29.158	54.099	1.05183	0.176	0.371	1501
440	0.02786	236.33	27.6	32.078	57.869	1.06050	0.175	0.378	1540
450	0.02875	237.55	25.4	34.891	61.509	1.06868	0.174	0.361	1512
460	0.02962	233.99	23.5	37.613	65.040	1.07644	0.173	0.350	1480
470	0.03051	231.83	22.2	40.276	68.526	1.08394	0.172	0.344	1465
480	0.03141	230.84	21.1	42.879	71.959	1.09117	0.171	0.340	1458
490	0.03231	230.80	20.1	45.425	75.343	1.09814	0.170	0.336	1451
500	0.03322	231.62	19.2	47.917	78.678	1.10488	0.169	0.331	1449
510	0.03416	235.52	18.9	50.370	81.995	1.11145	0.168	0.336	1476
520	0.03509	239.60	17.9	52.764	85.248	1.11777	0.167	0.326	1470
530	0.03599	240.90	16.9	55.096	88.420	1.12381	0.166	0.317	1458
540	0.03690	243.09	16.2	57.388	91.553	1.12966	0.165	0.313	1460
550	0.03780	245.38	15.4	59.633	94.626	1.13530	0.164	0.305	1452
560	0.03869	248.24	14.9	61.839	97.662	1.14077	0.163	0.301	1457
570	0.03959	251.54	14.4	64.008	100.660	1.14608	0.162	0.298	1462
580	0.04048	255.15	13.9	66.140	103.619	1.15122	0.161	0.295	1469
590	0.04137	258.99	13.4	68.236	106.539	1.15622	0.160	0.291	1475
600	0.04226	262.99	13.0	70.297	109.422	1.16106	0.159	0.287	1482

* TWO-PHASE BOUNDARY

THERMODYNAMIC PROPERTIES OF OXYGEN

5000 PSIA ISOBAR

TEMPERATURE DEG. R	DENSITY LB/CU FT	$V(\partial H/\partial V)_P$ BTU/LB	$V(\partial P/\partial U)_V$ PSIA-CU FT/BTU	$-V(\partial P/\partial V)_T$ PSIA	$-(\partial V/\partial T)_P/V$ DEG. R	THERMAL CONDUCTIVITY BTU/FT-HR-R	VISCOSITY LB/FT-SEC x 10^5	THERMAL DIFFUSIVITY SQ FT/HR	DIELECTRIC CONSTANT	PRANDTL NUMBER
* 104.777	82.80994	240.88	14.410	197952.53	0.0016169	0.11425	48.928	0.00354	1.57870	6.0048
105	82.78009	240.78	14.400	197555.14	0.0016175	0.11420	48.738	0.00354	1.57846	5.9836
110	82.11091	238.56	14.174	188821.79	0.0016293	0.11304	44.681	0.00354	1.57306	5.5308
115	81.44227	236.33	13.942	180423.02	0.0016414	0.11181	41.006	0.00354	1.56768	5.1217
120	80.77411	234.10	13.705	172348.63	0.0016539	0.11052	37.678	0.00353	1.56231	4.7517
125	80.10636	231.85	13.466	164588.53	0.0016667	0.10917	34.662	0.00353	1.55696	4.4168
130	79.43893	229.58	13.224	157132.81	0.0016800	0.10777	31.928	0.00352	1.55163	4.1134
135	78.77175	227.29	12.980	149971.76	0.0016937	0.10633	29.449	0.00351	1.54631	3.8383
140	78.10471	224.99	12.735	143095.78	0.0017080	0.10486	27.202	0.00349	1.54100	3.5887
145	77.43770	222.66	12.490	136495.47	0.0017228	0.10335	25.162	0.00348	1.53570	3.3623
150	76.77060	220.30	12.246	130161.62	0.0017382	0.10181	23.312	0.00346	1.53042	3.1566
155	76.10326	217.92	12.004	124085.16	0.0017542	0.10024	21.632	0.00345	1.52514	2.9698
160	75.43554	215.50	11.765	118257.23	0.0017710	0.09866	20.106	0.00343	1.51988	2.8001
165	74.76725	213.04	11.530	112669.13	0.0017886	0.09706	18.720	0.00341	1.51462	2.6458
170	74.09822	210.55	11.300	107312.37	0.0018070	0.09544	17.460	0.00339	1.50937	2.5056
175	73.42823	208.01	11.075	102178.65	0.0018264	0.09382	16.315	0.00336	1.50412	2.3782
180	72.75707	205.41	10.857	97259.86	0.0018468	0.09219	15.272	0.00334	1.49887	2.2624
185	72.08448	202.76	10.647	92548.09	0.0018683	0.09056	14.324	0.00332	1.49363	2.1571
190	71.41020	200.05	10.446	88035.65	0.0018911	0.08892	13.460	0.00329	1.48838	2.0615
195	70.73393	197.26	10.254	83715.07	0.0019153	0.08729	12.673	0.00327	1.48313	1.9747
200	70.05536	194.40	10.075	79579.10	0.0019409	0.08566	11.955	0.00324	1.47788	1.8958
205	69.37414	191.46	9.907	75620.70	0.0019681	0.08403	11.301	0.00321	1.47262	1.8242
210	68.68991	188.42	9.754	71833.08	0.0019970	0.08241	10.703	0.00319	1.46734	1.7593
215	68.00228	185.28	9.616	68209.69	0.0020278	0.08080	10.157	0.00316	1.46206	1.7003
220	67.31082	182.04	9.496	64744.24	0.0020606	0.07919	9.658	0.00314	1.45675	1.6469
225	66.61509	178.68	9.395	61430.68	0.0020957	0.07760	9.201	0.00311	1.45143	1.5984
230	65.91461	175.22	9.313	58263.22	0.0021331	0.07601	8.783	0.00309	1.44608	1.5546
235	65.20898	175.62	8.889	55607.62	0.0021475	0.07444	8.399	0.00303	1.44071	1.5319
240	64.49079	173.81	9.104	53317.99	0.0022587	0.07287	8.044	0.00288	1.43525	1.5602
245	63.78531	171.49	8.505	50284.57	0.0022031	0.07135	7.727	0.00296	1.42991	1.4730
250	63.07645	168.47	8.357	47352.01	0.0022628	0.06986	7.436	0.00291	1.42455	1.4609
255	62.35220	165.90	8.323	44847.35	0.0023404	0.06836	7.165	0.00282	1.41909	1.4651
260	61.64795	162.89	7.858	42033.29	0.0023189	0.06694	6.925	0.00287	1.41379	1.4067
265	60.91420	159.93	7.981	39659.40	0.0024525	0.06548	6.695	0.00274	1.40829	1.4436
270	60.17397	157.70	7.732	37608.52	0.0024602	0.06405	6.483	0.00274	1.40275	1.4137
275	59.43532	155.24	7.624	35583.75	0.0025162	0.06266	6.290	0.00270	1.39724	1.4116
280	58.70712	151.24	7.109	32923.64	0.0024882	0.06132	6.115	0.00278	1.39182	1.3509
285	57.94593	151.03	6.696	31876.57	0.0023724	0.05996	5.958	0.00289	1.38617	1.2818
290	57.22107	148.15	6.899	29574.41	0.0026385	0.05870	5.840	0.00252	1.38080	1.4001
295	56.46265	145.87	6.838	28055.17	0.0026971	0.05741	5.719	0.00258	1.37520	1.4107
300	55.69902	144.15	6.742	26714.40	0.0027404	0.05616	5.599	0.00255	1.36958	1.4180
310	54.17574	140.73	6.437	24065.91	0.0028124	0.05377	5.369	0.00251	1.35841	1.4228
320	52.66463	136.78	6.042	21472.53	0.0028684	0.05155	5.153	0.00250	1.34739	1.4117
330	51.13449	133.89	5.901	19451.93	0.0029864	0.04945	4.943	0.00242	1.33629	1.4389
340	49.61541	130.66	5.656	17571.70	0.0030516	0.04750	4.745	0.00240	1.32534	1.4338
350	48.10370	127.58	5.463	15919.15	0.0031238	0.04570	4.558	0.00238	1.31449	1.4311
360	46.62166	123.95	5.230	14314.75	0.0031876	0.04406	4.384	0.00239	1.30392	1.4155
370	45.15354	121.04	5.062	13016.44	0.0032454	0.04254	4.221	0.00240	1.29350	1.4032
380	43.67885	120.34	5.294	12115.04	0.0034819	0.04136	4.065	0.00226	1.28310	1.4827
390	42.23714	119.42	4.948	11499.81	0.0032749	0.03987	3.920	0.00241	1.27298	1.3845
400	40.90227	117.21	4.593	10583.71	0.0031761	0.03872	3.795	0.00254	1.26366	1.3135
410	39.60409	115.49	4.513	9749.97	0.0032604	0.03771	3.679	0.00253	1.25463	1.3223
420	38.35047	113.86	4.301	9032.27	0.0032269	0.03680	3.573	0.00261	1.24597	1.2842
430	37.12212	113.71	4.280	8554.64	0.0032622	0.03597	3.475	0.00261	1.23751	1.2899
440	35.89784	116.33	4.399	8483.62	0.0032517	0.03527	3.381	0.00260	1.22912	1.3054
450	34.78353	117.42	4.202	8262.91	0.0030759	0.03450	3.301	0.00275	1.22152	1.2440
460	33.75686	117.49	4.027	7898.62	0.0029792	0.03393	3.232	0.00287	1.21455	1.2004
470	32.77384	117.91	3.930	7598.00	0.0029203	0.03341	3.170	0.00296	1.20789	1.1761
480	31.83830	118.59	3.867	7349.69	0.0028703	0.03294	3.114	0.00304	1.20158	1.1582
490	30.94678	119.48	3.805	7142.37	0.0028091	0.03252	3.063	0.00313	1.19559	1.1380
500	30.09838	120.57	3.759	6971.32	0.0027489	0.03215	3.018	0.00322	1.18991	1.1200
510	29.27605	122.39	3.840	6895.15	0.0027450	0.03180	2.976	0.00323	1.18442	1.1318
520	28.50220	124.31	3.751	6829.22	0.0026193	0.03149	2.939	0.00339	1.17927	1.0938
530	27.78387	125.56	3.653	6693.27	0.0025211	0.03123	2.907	0.00355	1.17450	1.0606
540	27.09959	126.97	3.624	6587.67	0.0024641	0.03100	2.878	0.00366	1.16997	1.0459
550	26.45847	128.57	3.538	6492.35	0.0023693	0.03079	2.854	0.00382	1.16574	1.0162
560	25.84578	130.17	3.519	6416.02	0.0023160	0.03062	2.831	0.00393	1.16170	1.0037
570	25.26109	131.87	3.500	6354.12	0.0022602	0.03046	2.812	0.00405	1.15786	0.9906
580	24.70351	133.65	3.483	6303.12	0.0022038	0.03032	2.795	0.00417	1.15421	0.9773
590	24.17185	135.48	3.466	6260.33	0.0021477	0.03020	2.779	0.00429	1.15073	0.9640
600	23.66478	137.35	3.451	6223.71	0.0020928	0.03010	2.766	0.00442	1.14742	0.9510

* TWO-PHASE BOUNDARY

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16. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.)

Tables of thermophysical properties of oxygen are presented for temperatures from the melting line to 600 R for pressures to 5000 psia. The tables include, entropy, enthalpy, internal energy, density, volume, speed of sound, specific heat, thermal conductivity, viscosity, thermal diffusivity, Prandtl number and the dielectric constant for 79 isobars. Also included in the isobaric tables are quantities of special utility in heat transfer calculations: $(\partial P/\partial V)_T$, $(\partial P/\partial T)_\rho$, $V(\partial H/\partial V)_P$, $V(\partial P/\partial U)_V$, $-V(\partial P/\partial V)_T$, $1/V(\partial V/\partial T)_P$.

In addition to the isobaric tables, tables for the saturated vapor and liquid are given which include all of the above properties, plus the surface tension. Tables for the P-T of the freezing liquid, index of refraction and the derived Joule-Thomson inversion curve are also presented. The specific heat of the saturated liquid is given in graphical form. A temperature-entropy chart and a Mollier diagram are also included.

17. KEY WORDS (Alphabetical order, separated by semicolons) Density; dielectric constant; enthalpy; entropy; equation of state; fixed points; heat transfer coefficients; index of refraction; Joule-Thomson; latent heat; melting point; Prandtl number; oxygen; specific heat

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