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APPROXIMATE THERMOCHEMICAL TABLES FOR SOME C-H AND C-H-O SPECIES

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16. Abstract

Approximate thermochemical tables are presented for some C-H and C-H-O species and for some ionized species, supplementing the JANAF Thermochemical Tables for application to finite-chemical-kinetics calculations. The approximate tables have been prepared by interpolation and extrapolation of limited available data, especially by interpolations over chemical families of species. Original estimations have been smoothed by use of a modification for the CDC-6600 computer of the Lewis Research Center PAC1 Program which was originally prepared for the IBM-7094 computer Summary graphs for various families show reasonably consistent curvefit values, anchored by properties of existing species in the JANAF tables.

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APPROXIMATE THERMOCHEMICAL TABLES

FOR SOME C-H and C-H-O

SPECIES

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SUMMARY

The Fortran IV Program for Calculation of Thermodynamic Data (named PAC1) prepared by B. J. McBride and S. Gordon for the IBM 7094 computer has been adapted in its curvefitting option to run on the CDC-6600 computer. The "grey" and "very grey" thermochemical tables for some C-H and C-H-O species previously issued by the author as a technical paper, along with additional tables for some related chemical species, have been subjected to the refinement afforded by the curvefitting treatment. Comparisons within chemical families have been made, and substitute values have been assigned and then curvefitted as evidently required. Tables for available JANAF species have anchored such comparisons. This report includes tables and comparison graphs for 180 species, primarily selected for finite-chemical-kinetics calculations involving pyrolysis and/or combustion of aliphatic hydrocarbons, but also incorporating ionic species of possible interest in the hydrogen/air system at very high temperatures.

INTRODUCTION

Finite-chemical-kinetics calculations of pyrolysis and/or combustion of fuels or for ionization of air or combustion products require chemical thermodynamic data for the participating chemical species. In the past two decades, improvements made in both validity and scope of the chemical thermodynamic data in the scientific literature have been chiefly associated with chemical equilibrium considerations; the transient species of pyrolysis and combustion have generally been ignored during this time. The foremost English-language effort in the field is reported in the JANAF Thermochemical Tables (ref. 1), and even today the new tables issued for the JANAF compilation are justified by the needs of equilibrium calculations, not by finite-kinetics requirements. This report presents a set of tables designed to satisfy the latter need.

In finite-kinetics calculations, the most critical application of the pertinent thermochemical data is in the determination of the equilibrium constant for each reaction of interest. The net rate of progress of any reaction depends upon its degree of displacement from its own equilibrium, even if all of the participants are nonequilibrium species. Secondly, adjustment of temperature in the reacting system is dependent upon the heat capacities of the participating species and upon the exothermicity or endothermicity of the various reactions consuming and producing quantities of these species. Finally, the balance of chemical thermodynamic data for a reaction may enter into the definition of the reaction rate constant when this is unknown experimentally and must be estimated analytically. These considerations

explain the need for detailed chemical thermodynamic data such as are presented here.

In order to pursue kinetic calculations of pyrolysis and/or combustion in the recent past, the author has previously prepared provisional tables of chemical thermodynamic data for participating species. These tables were not well refined. Their preparation began with the tables from API Petroleum Project 44 (ref. 2), which were extrapolated as regards temperature for the particular species of interest that were present in the tables, and were interpolated as regards molecular composition for other species, especially free radicals. Another significant source of backgound numbers for the provisional tables was a report of Bauer and Duff (ref. 3), which made available results of their calculations for various species in the form of curvefit coefficients for the thermodynamic parameters as functions of temperature. Specific numbers were obtained by evaluating the coefficient expressions. Between averaging, extrapolating, interpolating, and estimating of similarities between different molecules, the present provisional tables owe debts to API Petroleum Project 44 and to Bauer and Duff. However, until now it has not been considered worthwhile to document these tables so that the basis of each table could be firmly established. Previously the preliminary or provisional versions of these tables were informally offered to the scientific community as "grey" (originally printed on grey paper) and "very grey" tables (in the terminology of Y. S. Touloukian) via reference 4.

Availability of a computer program of McBride and Gordon, reported in reference 5, afforded an opportunity to refine the provisional tables. This computer program provides a least-squares curvefitting to temperature (T)

of a set of chemical thermodynamic data, taking heat capacity (c_p), enthalpy (H), and entropy (S) jointly into account. The output data thus are internally consistent. In addition to ensuring this internal consistency, it was desired to improve the relationships between members of families of species, as is discussed in the body of the report. A few revisions of heats of formation that were effected were based simply on graphical comparisons.

The McBride-Gordon computer program was prepared for the IBM 7094 computer, and changes were required to adapt it to the CDC-6600 computers installed at Langley Research Center. The adaptation is discussed, and then a delineation is made of the operations performed on the initial provisional data so as to obtain the output values which comprise the principle substance of this report.

The work presented herein was done in support of the NASA Hypersonic Research Engine Project. The information presented was required, in part, for the HRE chemical kinetics studies where the engine internal flow temperatures were high enough to generate many free radicals and ionized species. Also, hydrocarbon information was required for combustion studies conducted with carboniferous vitiation in the tunnel air flow.

It is unlikely that this work will be repeated in any general sense. For example, the API tables are sufficient for their intended ends, and the work of Bauer and Duff served its own purpose. Primarily, this report documents working tools utilized by the author in finite-chemical-kinetics calculations. Continued improvements will be desirable.

SYMBOLS

c_p	heat capacity, cal/g-mole-°K
DCUBE	a parameter used in estimation of reaction rate constants, not specifically dimensioned as assembled but roughly Angstroms cubed
H	enthalpy, kcal/g-mole
S	entropy, cal/g-mole-°K
T	temperature, °K

COMPUTER PROGRAM CHANGES

The "Fortran IV Program for Calculation of Thermodynamic Data "(ref. 5) bears the short title "PAC1" and will hereafter be referred to by this designation. The program has a multiplicity of options, and thus is of wide utility when an IBM 7094 computer is available for its application. However, it is specific to the computer type for which it was prepared because five subroutines written in MAP language are included, and these are peculiar to the IBM 7094 compiler.

Three of the MAP subroutines are required only for options which were not involved in the effort being discussed here. No work was devoted to adapting these options to the CDC-6600 computer; instead, the portions of the program involving these options were identified and eliminated. The other two subroutines required replacement with standard CDC-6600 subroutines, and this involved certain changes in PAC1 as well, because the appropriate subroutines are not identical in function (let alone composition) as between the two types of computers. These subroutines are concerned with positioning

the bits of symbolic words within the computer word field, so that logical matching and sorting operations can be performed to identify input data. The CDC-6600 subroutines RSHFT and RSHFTA were thus substituted for the inapplicable IBM 7094 MAP subroutines IALS and IARS, and so PAC1 was made operable for curvefitting on the CDC-6600 computer.

This limited version of PAC1 (itself named LEWIS) could be provided to other CDC-6600 users, but it is important to note plainly that the other PAC1 options have not been made operable and the subroutines involving them but extraneous to curvefitting are stripped from the deck. It also may be noted that the operable deck for curvefitting is a version prepared according to Program TIDY (ref. 6), so that assigned statement numbers appear in developing numerical order. Use of TIDY made it necessary to abandon variable formats for output, but within the limited objective of the curvefitting operation this was not a problem.

Finally, it is worthwhile to make plain what "curvefitting" encompasses. To the intended ends of PAC1 as prepared by Gordon and McBride, curvefitting presumes the validity of the input data and merely seeks to represent them as power series in temperature; the CDC-6600 version of the program will do this, punching out cards for the coefficients obtained. Alternatively, curvefitting as being reported here was sought only to smooth out data of uncertain validity, replacing an input set of tables by a more refined output set. The CDC-6600 version of the program will also do this, punching out an output set of cards equivalent to the input set. The former operation may be the only one of interest to some readers of this report.

If all data are taken as basically valid, then the values at any one temperature may be accepted as fixed, and curvefits may be tied to these fixed values. In the normal utilization of PAC1 for curvefitting envisioned by McBride and Gordon, the input values at 1000° K are fixed or "pinned," and curvefitting is performed over temperature ranges extending downward and upward from 1000° K. However, when all data are uncertain, so that H and S at 1000° K may be internally inconsistent with the general trend, these values are not appropriate for pinning. The program thus was modified in the following manner: in the first computer run for any set of data, the program curvefits over a range of values extending from well below to well above 1000° K, and evaluates pinned values of c_p, H, and S at 1000° K according to this curvefitting as its output. (In application, the data from 300 to 1800° K have been used for this calculation.) Then in the second run these pinned values are substituted for the original, uncertain, ones at 1000° K and the calculation is now performed as envisioned by McBride and Gordon, curvefitting all of the other input data downward and upward from the fixed condition at 1000° K. The first data card read into the program directs which type of run is sought.

CONSIDERATION OF PARTICULAR APPLICATION OF THERMODYNAMIC DATA

Many, and perhaps most, computer programs now in operation for either equilibrium or nonequilibrium chemical calculations employ curvefits of the requisite thermodynamic properties as functions of temperature, such as PAC1 will provide. However, if the choices of assigned thermodynamic properties are significant to the calculational results, the properties themselves must be available for inspection, not a set of coefficients which

are numerically fine but physically of no demonstrable significance. In addition, there are computer programs which require the thermodynamic properties to be in tabular form; therefore, tables rather than coefficients are presented here. With these tables and with PAC1, coefficients might readily be generated in card output form to serve as input for computer programs requiring them.

The tables extend to 6000° K, the upper limit of the JANAF thermochemical tables. The array sizes for thermodynamic properties extend to 6000° K in the computer programs frequently employed by the author. Since no programming logic is incorporated in such programs to have them skip over a species beyond the range of its defined properties, reasonable approximations of properties must be provided up to the upper limit of temperature that is to be encountered in the calculations.

DEVELOPMENT OF REFINED TABLES

The chemical species dealt with here are primarily those of the aliphatic hydrocarbon families, supplemented by appropriate combustion products and intermediates, and then 20 ionic species are also included. Most of the species appeared in reference 4, but some were added to the set shortly after preparation of reference 4. The properties in the latter case had been composed to approximately the same standards of estimation which had already been employed. The set of data at this point included JANAF values to the extent these were available, with the rest having various degrees of validation as discussed in the introduction. It was convenient to treat all 180 species as one set in the application of PAC1. Thus, all output in both printed and card form would be available for desired comparisons,

such as when JANAF species afforded one or two members of a family of molecules.

Some oxygenated species in the set represent first efforts toward chemical kinetics treatment of the pyrolysis of cellulose. No effort is made here to reflect the chemical kinetics considerations underlying the choice or significance, validity or accuracy of representation, of such species; they may be simply disregarded by those uninterested in them. As stated, it has been convenient to treat all of the species previously assembled as one set, rather than sorting and renumbering to eliminate a few.

In the previous effort, some degree of smoothing had been achieved. For a single species, considering the effect of temperature upon H and S, such smoothing was most important for the data obtained form the report of Bauer and Duff, because their low-temperature and high-temperature curve-fits yielded values which did not join smoothly. For families of species smoothing was important particularly in those cases where all assigned values for certain species had been obtained by interpolation from the given values for other species in the family. Smoothing of both types had been performed by the simple least-squares technique. Thus, there had been no coordination between adjustments made to H and those made to S, coordination such as is inherent in PAC1. Accordingly, values of c_p had not been required in the earlier work and no values were available consistent with the assigned values of either H or S.

In order to satisfy the input requirements of PAC1, a value of c_p was needed corresponding to each pair of values of H and S. Therefore, as the first step in the new calculations, a value of $c_{p,i}$ at T_i based on H

was computed as $c_{p_i} = (H_{i+1} - H_{i-1})/(T_{i+1} - T_{i-1})$ and a value of c_{p_i} at T_i based on S was computed as $c_{p_i} = (S_{i+1} - S_{i-1})/\ln (T_{i+1}/T_{i-1})$. The two indicated values of c_{p_i} were averaged to provide the value assigned to correspond to H_i, S_i, and T_i. While c_p values were, of course, available for the JANAF species, these were not used, and the above technique was used instead. This reduced the requisite keypunching for one thing; it served as a check on the technique's suitability for another. It was found that the PAC1 solutions for JANAF species, even with this source of c_p values, were practically identical to the input values.

As noted earlier, the first run of PAC1 for each species provided a set of pinned values of c_p, H, and S at 1000° K. The second run provided the nominal output data. These output data were assembled for machine plotting in two ways: for each species the input and output data were plotted for internal comparison; for families of species the smoothed output data were plotted for comparisons between species. As already stated, the graphs for single species showed complete consistency between input and output in the case of all JANAF species. Indeed, a single keypunch error at one temperature was disclosed by the one graphical discrepancy encountered, and this case was recalculated.

The family-type graphs were inspected visually. In approximately 20 cases a member of the family did not lie as expected nor was a chemical explanation of discrepancy available. In these cases, replacement input data for PAC1 were derived by averaging the thermodynamic values for other family members. For example, if C_5H_5 lay at odds with other members of the C_5H_n family, then trial input data could be estimated from $C_5H_3 + C_5H_7$ and from $C_4H_5 + C_6H_5$. Recalculations were made with PAC1 and new graphs prepared,

until all family graphs appeared acceptably consistent. The output data cards from PAC1 were then used to prepare other cards in the format consistent with listing in this report or consistent with the input format of selected computer programs of interest.

Note that the tabulated values for JANAF species are the PAC1 output values, not the JANAF data, but discrepancies are insignificant. However, this does not imply that the JANAF data are incorrectly unsmooth; all of the JANAF species included herein are highly refined in their own right, and the trivial discrepancies between them and PAC1 output data seemingly must be laid at the foot of the PAC1 curvefitting. This point is brought out because some years ago some JANAF tables themselves were notably improvable by curvefitting, and this would still doubtless be true of the remaining "grey" tables (those printed on grey paper) in the JANAF collection.

PRESENTATION AND IDENTIFICATION OF RESULTS

The order of presentation of results herein is as follows:

1. A listing of species identification cards.
2. Tables for 180 species.

Only a few isomers are included in the set of species, and in general where isomers indeed exist among hydrocarbons the representative species included is an "average" one. The following isomers are included: "average" aliphatic C_6H_6 (species 115) and benzene (species 116); cis-HNO_2 (species (149) and trans-HNO_2 (species 150); acetaldehyde (species 55) and ethylene oxide (species 148). Also, there are a number of isomers among the oxygenated species envisioned for the degradation of cellulose, including species 49, 51, 52, 54, 57, 123, 124, and 125.

The format used by the author for species representation in various computer programs is limited to six characters of any composition. Accordingly, $C_{12}H_{20}O_{10}$ is represented by C+H+O+, and the isomers of $C_6H_{12}O_5$ by permutations of C_6H+O+. An asterisk denotes a condensed species, and the various asterisked carbon species (C* to C_6*) have values that are appropriate multiples of the real JANAF values for solid carbon. H_2O* and NH_3* allow for progression of the liquids into the gaseous phase over a range of temperature. For argon, the archaic symbol A has been retained. (DCUBE is a parameter used in estimation of reaction rate constants.)

CONCLUDING REMARKS

Useful chemical kinetics calculations on the pyrolysis and/or combustion of aliphatic hydrocarbon molecules have been performed in the past using the provisional thermochemical tables of reference 4. However, as efforts increase in this area, such as in air pollution studies or the potential application of hydrocarbon fuels to supersonic combustion engines, it will be worthwhile to work with as good a foundation of chemical thermodynamic properties as is possible. Among other factors, it is important that a calculation should not numerically "blow-up" because thermodynamic definitions or approximations designed for reasonable equilibrium temperatures are unwittingly dragged up to unreasonable for them (but nevertheless physically realistic) nonequilibrium temperatures within the calculations. Comparison graphs which were prepared showed that some species were appreciably out of line as compared to their closer relations, but that with the refinements permitted by PAC1, a consistent set of approximate tables has been achieved, anchored to the extent possible to existing JANAF species.

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TABLE 1. - SPECIES LIST

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION								DCUBE		CARD NUMBER	
A	1	39.944	0.000	A	1							29.220		1	00
H	2	1.008	52.100	H	1							.216	J	2	00
HNO	3	31.016	23.800	H	1	N	1	O	1			5.260	J	3	00
OH	4	17.008	9.432	H	1	O	1					2.516	J	4	00
HO2	5	33.008	5.000	H	1	O	2					4.816	J	5	00
H2	6	2.016	0.000	H	2							.432	J	6	00
H2O	7	18.016	-57.798	H	2	O	1					2.732	J	7	00
H2O2	8	34.016	-32.530	H	2	O	2					5.032		8	00
N	9	14.008	112.965	N	1							2.744	J	9	00
NO	10	30.008	21.580	N	1	O	1					5.044	J	10	00
NO2	11	46.008	7.910	N	1	O	2					7.344	J	11	00
N2	12	28.016	0.000	N	2							5.488	J	12	00
N2O	13	44.016	19.610	N	2	O	1					7.788	J	13	00
O	14	16.000	59.559	O	1							2.300	J	14	00
O2	15	32.000	0.000	O	2							4.600	J	15	00
O3	16	48.000	34.100	O	3							6.900	J	16	00
NH	17	15.016	79.200	N	1	H	1					2.960	J	17	00
NH2	18	16.024	40.300	N	1	H	2					3.176	J	18	00
NH3	19	17.032	-11.040	N	1	H	3					3.392	J	19	00
N2H2	20	30.032	50.900	N	2	H	2					5.920	J	20	00
N2H3	21	31.040	36.800	N	2	H	3					6.136		21	00
N2H4	22	32.048	22.750	N	2	H	4					6.352	J	22	00
H2O*	23	18.016	-68.320	H	2	O	1					2.732		23	00
NH3*	24	17.032	-18.060	N	1	H	3					3.392		24	00
C*	25	12.011	0.000	C	1							3.652	J	25	00
C	26	12.011	170.890	C	1							3.652	J	26	00
CH	27	13.019	142.000	C	1	H	1					3.868	J	27	00
HCN	28	27.027	31.200	C	1	H	1	N	1			6.612	J	28	00
HCNO	29	43.027	-27.900	C	1	H	1	O	1	N	1	8.912	J	29	00
HCO	30	29.019	-2.900	C	1	H	1	O	1			6.168	J	30	00
CH2	31	14.027	92.070	C	1	H	2					4.084	J	31	00
HCHO	32	30.027	-27.700	C	1	H	2	O	1			6.384	J	32	00
CH3	33	15.035	34.820	C	1	H	3					4.300	J	33	00
CH2OH	34	31.035	-14.000	C	1	H	3	O	1			6.600		34	00
CH4	35	16.043	-17.895	C	1	H	4					4.516	J	35	00
CH3OH	36	32.043	-47.940	C	1	H	4	O	1			6.816		36	00
CO	37	28.011	-26.417	C	1	O	1					5.952	J	37	00
CO2	38	44.011	-94.054	C	1	O	2					8.252	J	38	00
CN	39	26.019	109.000	C	1	N	1					6.396	J	39	00
C2*	40	24.022	0.000	C	2							7.304		40	00

TABLE 1 - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION						DCUBE	CARD NUMBER		
C2	41	24.022	199.000	C	2					7.304	J	41	00
C2H	42	25.030	114.000	C	2	H	1			7.520	J	42	00
C2HO	43	41.030	54.000	C	2	H	1	O	1	9.820		43	00
C2HO2	44	57.030	32.000	C	2	H	1	O	2	12.120		44	00
C2H2	45	26.038	54.190	C	2	H	2			7.736	J	45	00
C2H2O	46	42.038	4.000	C	2	H	2	O	1	10.036		46	00
C2H2O2	47	58.038	-8.000	C	2	H	2	O	2	12.336		47	00
C2H3	48	27.046	66.900	C	2	H	3			7.952		48	00
C2H3O	49	43.046	-10.000	C	2	H	3	O	1	10.252		49	00
CH3CO	50	43.046	-6.000	C	2	H	3	O	1	10.252		50	00
C2H3O2	51	59.046	-26.000	C	2	H	3	O	2	12.552		51	00
C2O2H3	52	59.046	0.000	C	2	H	3	O	2	12.552		52	00
C2H4	53	28.054	12.496	C	2	H	4			8.168	J	53	00
C2H4O	54	44.054	-52.000	C	2	H	4	O	1	10.468		54	00
CH3CHO	55	44.054	-39.670	C	2	H	4	O	1	10.468		55	00
C2H4O2	56	60.054	-78.000	C	2	H	4	O	2	12.768		56	00
C2O2H4	57	60.054	-4.000	C	2	H	4	O	2	12.768		57	00
C2H5	58	29.062	26.362	C	2	H	5			8.384		58	00
C2H4OH	59	45.062	-24.000	C	2	H	5	O	1	10.684		59	00
C2H6	60	30.070	-20.236	C	2	H	6			8.600		60	00
C2H5OH	61	46.070	-56.170	C	2	H	6	O	1	10.900		61	00
C2N2	62	52.038	73.870	C	2	N	2			12.792	J	62	00
C2O	63	40.022	68.500	C	2	O	1			9.604	J	63	00
C2O2	64	56.022	62.000	C	2	O	2			11.904		64	00
C3*	65	36.033	0.000	C	3					10.956		65	00
C3	66	36.033	196.000	C	3					10.956	J	66	00
C3H	67	37.041	127.100	C	3	H	1			11.172		67	00
C3H2	68	38.049	106.700	C	3	H	2			11.388		68	00
C3H3	69	39.057	77.300	C	3	H	3			11.604		69	00
C3H4	70	40.065	46.017	C	3	H	4			11.820		70	00
C3H5	71	41.073	34.900	C	3	H	5			12.036		71	00
C2H5CO	72	57.073	-9.000	C	3	H	5	O	1	14.336		72	00
C3H6	73	42.081	4.880	C	3	H	6			12.252		73	00
C2H6CO	74	58.081	-48.000	C	3	H	6	O	1	14.552		74	00
C3H7	75	43.089	21.778	C	3	H	7			12.468		75	00
C3H6OH	76	59.089	-32.000	C	3	H	7	O	1	14.768		76	00
C3H8	77	44.097	-24.820	C	3	H	8			12.684		77	00
C3H7OH	78	60.097	-61.820	C	3	H	8	O	1	14.984		78	00
C3O2	79	68.033	-8.300	C	3	O	2			15.556	J	79	00
C4*	80	48.044	0.000	C	4					14.608		80	00

TABLE 1 - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION						DCUBE	CARD NUMBER		
C4	81	48.044	232.000	C	4					14.608	J	81	00
C4H	82	49.052	154.000	C	4	H	1			14.824		82	00
C4H2	83	50.060	111.300	C	4	H	2			15.040		83	00
C4H3	84	51.068	108.950	C	4	H	3			15.256		84	00
C4H4	85	52.076	62.850	C	4	H	4			15.472		85	00
C4H5	86	53.084	81.250	C	4	H	5			15.688		86	00
C4H6	87	54.092	35.150	C	4	H	6			15.904		87	00
C4H7	88	55.100	39.060	C	4	H	7			16.120		88	00
C4H7O4	89	119.100	-102.000	C	4	H	7	O	4	25.320		89	00
C4H8	90	56.108	-4.040	C	4	H	8			16.336		90	00
C4H9	91	57.116	14.448	C	4	H	9			16.552		91	00
C4H10	92	58.124	-32.150	C	4	H	10			16.768		92	00
C5	93	60.055	234.000	C	5					18.260	J	93	00
C5H	94	61.063	185.400	C	5	H	1			18.476		94	00
C5H2	95	62.071	165.000	C	5	H	2			18.692		95	00
C5H3	96	63.079	143.600	C	5	H	3			18.908		96	00
C5H4	97	64.087	97.500	C	5	H	4			19.124		97	00
C5H5	98	65.095	104.400	C	5	H	5			19.340		98	00
C5H6	99	66.103	58.300	C	5	H	6			19.556		99	00
C5H7	100	67.111	76.710	C	5	H	7			19.772		100	00
C5H8	101	68.119	30.610	C	5	H	8			19.988		101	00
C5H9	102	69.127	37.510	C	5	H	9			20.204		102	00
C5H10	103	70.135	-8.590	C	5	H	10			20.420		103	00
C5H11	104	71.143	8.298	C	5	H	11			20.636		104	00
C5H12	105	72.151	-38.300	C	5	H	12			20.852		105	00
C6	106	72.066	200.000	C	6					21.912		106	00
C6H	107	73.074	211.300	C	6	H	1			22.128		107	00
C6H2	108	74.082	168.600	C	6	H	2			22.344		108	00
C6OH2	109	90.082	58.000	C	6	H	2	O	1	24.644		109	00
C6H3	110	75.090	165.640	C	6	H	3			22.560		110	00
C6H4	111	76.098	119.540	C	6	H	4			22.776		111	00
C6O2H4	112	108.098	-68.000	C	6	H	4	O	2	27.376		112	00
C6H5	113	77.106	137.940	C	6	H	5			22.992		113	00
C6H5	114	77.106	70.000	C	6	H	5			22.992		114	00
C6H6	115	78.114	91.840	C	6	H	6			23.208		115	00
C6H6	116	78.114	19.820	C	6	H	6			23.208		116	00
C6O3H6	117	126.114	-122.000	C	6	H	6	O	3	30.108		117	00
C6H7	118	79.122	98.740	C	6	H	7			23.424		118	00
C6H8	119	80.130	52.650	C	6	H	8			23.640		119	00
C6O4H8	120	144.130	-177.000	C	6	H	8	O	4	32.840		120	00

TABLE 1 - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION						DCUBE		CARD NUMBER	
C6H9	121	81.138	71.050	C	6	H	9			23.856		121	00
C6H10	122	82.146	24.950	C	6	H	10			24.072		122	00
C6H+O5	123	162.146	-137.000	C	6	H	10	O	5	35.572		123	00
C6O5H+	124	162.146	-230.000	C	6	H	10	O	5	35.572		124	00
H+O5C6	125	162.146	-218.000	C	6	H	10	O	5	35.572		125	00
C6H11	126	83.154	31.850	C	6	H	11			24.288		126	00
C6H12	127	84.162	-14.250	C	6	H	12			24.504		127	00
C6H13	128	85.170	2.248	C	6	H	13			24.720		128	00
C6H14	129	86.178	-44.350	C	6	H	14			24.936		129	00
C7H	130	85.085	240.000	C	7	H	1			25.780		130	00
C7H2	131	86.093	220.000	C	7	H	2			25.996		131	00
C7H14	132	98.189	-17.240	C	7	H	14			28.588		132	00
C7H15	133	99.197	-1.140	C	7	H	15			28.804		133	00
C7H16	134	100.205	-47.240	C	7	H	16			29.020		134	00
C8H	135	97.096	267.000	C	8	H	1			29.432		135	00
C8H2	136	98.104	225.000	C	8	H	2			29.648		136	00
C8H16	137	112.216	-23.462	C	8	H	16			32.672		137	00
C8H17	138	113.224	-6.862	C	8	H	17			32.888		138	00
C8H18	139	114.232	-53.460	C	8	H	18			33.104		139	00
C9H	140	109.107	291.000	C	9	H	1			33.084		140	00
C9H2	141	110.115	271.000	C	9	H	2			33.300		141	00
C9H18	142	126.243	-28.380	C	9	H	18			36.756		142	00
C9H19	143	127.251	-11.782	C	9	H	19			36.972		143	00
C9H20	144	128.259	-58.380	C	9	H	20			37.188		144	00
C10H	145	121.118	324.000	C	10	H	1			36.736		145	00
C10H2	146	122.126	282.000	C	10	H	2			36.952		146	00
C+H+O+	147	324.292	-460.000	C	12	H	20	O	10	71.144		147	00
C2H4O	148	44.054	-12.190	C	2	H	4	O	1	10.468	J	148	00
HNO2-C	149	47.016	-18.340	H	1	N	1	O	2	7.560	J	149	00
HNO2-T	150	47.016	-18.840	H	1	N	1	O	2	7.560	J	150	00
HNO3	151	63.016	-32.100	H	1	N	1	O	3	9.860	J	151	00
NO3	152	62.008	17.000	N	1	O	3			9.644	J	152	00
N2O3	153	76.016	19.800	N	2	O	3			12.388	J	153	00
N2O4	154	92.016	2.170	N	2	O	4			14.688	J	154	00
N2O5	155	108.016	2.700	N	2	O	5			16.988	J	155	00
C5*	156	60.055	0.000	C	5					18.260		156	00
C6*	157	72.066	0.000	C	6					21.912		157	00
HCOOH	158	46.037	-94.000	C	1	H	2	O	2	8.684		158	00
CH4COO	159	60.054	-110.900	C	2	H	4	O	2	12.768		159	00
HF	160	4.003	0.000	HE	1					6.435		160	00

TABLE 1 - CONCLUDED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION				DCUBE	CARD NUMBER		
F-	161	.001	0.000	E-	1			.216	J	161	00
H+	162	1.007	367.186	H	1	E--1		.216	J	162	00
H-	163	1.009	33.200	H	1	E-	1	.216	J	163	00
O-	164	16.001	24.300	O	1	E-	1	2.300	J	164	00
OH+	165	17.007	314.800	H	1	O	1	E--1	2.516	J	165	00
OH-	166	17.009	-34.400	H	1	O	1	E-	1	2.516	J	166	00
H3O+	167	19.023	138.900	H	3	O	1	E--1	2.948	J	167	00
NO+	168	30.007	236.660	N	1	O	1	E--1	5.044	J	168	00
NO2-	169	46.009	-85.850	N	1	O	2	E-	1	7.344	J	169	00
O2-	170	32.001	-11.390	O	2	E-	1	4.600	J	170	00
H2+	171	2.015	359.627	H	2	E--1		.432		171	00
H2O+	172	18.015	231.748	H	2	O	1	E--1	2.732		172	00
N+	173	14.007	446.772	N	1	E--1		2.744		173	00
NO2+	174	46.007	261.493	N	1	O	2	E--1	7.344		174	00
N2+	175	28.015	357.552	N	2	E--1		5.488		175	00
N2O+	176	44.015	316.994	N	2	O	1	E--1	6.788		176	00
O+	177	15.999	371.927	O	1	E--1		2.300		177	00
O2+	178	31.999	288.162	O	2	E--1		4.600		178	00
O3-	179	48.001	-35.059	O	3	E-	1	6.900		179	00
A+	180	39.943	361.471	A	1	E--1		29.220		180	00

TABLE 2 - THERMODYNAMIC PROPERTIES.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
A	1	39.944	0.000	A 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.460	31.689	-.966	-.966
200.000	4.930	34.949	-.493	-.493
298.150	5.070	36.950	0.000	0.000
300.000	5.071	36.983	.009	.009
400.000	5.045	38.440	.516	.516
500.000	4.969	39.558	1.017	1.017
600.000	4.919	40.459	1.511	1.511
700.000	4.926	41.217	2.003	2.003
800.000	4.980	41.873	2.498	2.498
900.000	5.026	42.467	2.998	2.998
1000.000	4.968	42.995	3.499	3.499
1100.000	4.968	43.469	3.996	3.996
1200.000	4.968	43.901	4.493	4.493
1300.000	4.968	44.299	4.990	4.990
1400.000	4.968	44.667	5.487	5.487
1500.000	4.968	45.010	5.983	5.983
1600.000	4.968	45.330	6.480	6.480
1700.000	4.968	45.632	6.977	6.977
1800.000	4.968	45.916	7.474	7.474
1900.000	4.968	46.184	7.970	7.970
2000.000	4.968	46.439	8.467	8.467
2100.000	4.968	46.681	8.964	8.964
2200.000	4.968	46.912	9.461	9.461
2300.000	4.968	47.133	9.958	9.958
2400.000	4.968	47.345	10.455	10.455
2500.000	4.968	47.548	10.951	10.951
2600.000	4.968	47.742	11.448	11.448
2700.000	4.968	47.930	11.945	11.945
2800.000	4.968	48.111	12.442	12.442
2900.000	4.968	48.285	12.939	12.939
3000.000	4.968	48.453	13.435	13.435
3100.000	4.968	48.616	13.932	13.932
3200.000	4.968	48.774	14.429	14.429
3300.000	4.968	48.927	14.926	14.926
3400.000	4.968	49.075	15.423	15.423
3500.000	4.968	49.219	15.920	15.920
3600.000	4.968	49.359	16.416	16.416
3700.000	4.968	49.495	16.913	16.913
3800.000	4.968	49.623	17.410	17.410
3900.000	4.968	49.757	17.907	17.907
4000.000	4.968	49.883	18.404	18.404
4100.000	4.968	50.005	18.901	18.901
4200.000	4.968	50.125	19.397	19.397
4300.000	4.968	50.242	19.894	19.894
4400.000	4.968	50.355	20.391	20.391
4500.000	4.968	50.463	20.888	20.888
4600.000	4.968	50.577	21.385	21.385
4700.000	4.968	50.684	21.881	21.881
4800.000	4.968	50.789	22.378	22.378
4900.000	4.968	50.891	22.875	22.875
5000.000	4.968	50.991	23.372	23.372
5100.000	4.968	51.090	23.869	23.869
5200.000	4.969	51.185	24.365	24.365
5300.000	4.969	51.281	24.862	24.862
5400.000	4.969	51.374	25.359	25.359
5500.000	4.969	51.465	25.856	25.856
5600.000	4.970	51.554	26.353	26.353
5700.000	4.970	51.642	26.850	26.850
5800.000	4.970	51.729	27.347	27.347
5900.000	4.971	51.814	27.844	27.844
6000.000	4.971	51.897	28.341	28.341

TABLE 2 - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
H	2	1.008	52.100	H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.460	22.098	-.566	51.134
200.000	4.930	25.357	-.493	51.607
298.150	5.071	27.359	0.000	52.100
300.000	5.072	27.391	.009	52.109
400.000	5.045	28.849	.516	52.616
500.000	4.970	29.967	1.017	53.117
600.000	4.919	30.863	1.511	53.611
700.000	4.926	31.626	2.003	54.103
800.000	4.980	32.287	2.498	54.598
900.000	5.026	32.877	2.998	55.098
1000.000	4.968	33.405	3.499	55.599
1100.000	4.968	33.878	3.996	56.096
1200.000	4.968	34.310	4.493	56.593
1300.000	4.968	34.703	4.990	57.090
1400.000	4.968	35.075	5.486	57.586
1500.000	4.968	35.419	5.983	58.083
1600.000	4.968	35.739	6.480	58.580
1700.000	4.968	36.041	6.977	59.077
1800.000	4.968	36.324	7.474	59.574
1900.000	4.968	36.593	7.970	60.070
2000.000	4.968	36.848	8.467	60.567
2100.000	4.968	37.090	8.964	61.064
2200.000	4.968	37.322	9.461	61.561
2300.000	4.968	37.542	9.958	62.058
2400.000	4.968	37.754	10.455	62.555
2500.000	4.968	37.957	10.951	63.051
2600.000	4.968	38.151	11.448	63.548
2700.000	4.968	38.339	11.945	64.045
2800.000	4.968	38.520	12.442	64.542
2900.000	4.968	38.694	12.939	65.039
3000.000	4.968	38.862	13.436	65.536
3100.000	4.968	39.025	13.932	66.032
3200.000	4.968	39.183	14.429	66.529
3300.000	4.968	39.335	14.926	67.026
3400.000	4.968	39.484	15.423	67.523
3500.000	4.968	39.623	15.920	68.020
3600.000	4.968	39.768	16.417	68.517
3700.000	4.968	39.904	16.913	69.013
3800.000	4.968	40.037	17.410	69.510
3900.000	4.968	40.165	17.907	70.007
4000.000	4.968	40.292	18.404	70.504
4100.000	4.968	40.414	18.901	71.001
4200.000	4.968	40.534	19.397	71.497
4300.000	4.968	40.651	19.894	71.994
4400.000	4.968	40.765	20.391	72.491
4500.000	4.968	40.877	20.888	72.988
4600.000	4.968	40.986	21.385	73.485
4700.000	4.968	41.093	21.881	73.981
4800.000	4.968	41.197	22.378	74.478
4900.000	4.968	41.300	22.875	74.975
5000.000	4.968	41.400	23.372	75.472
5100.000	4.968	41.499	23.869	75.969
5200.000	4.968	41.595	24.365	76.465
5300.000	4.969	41.690	24.862	76.962
5400.000	4.969	41.783	25.359	77.459
5500.000	4.969	41.874	25.856	77.956
5600.000	4.969	41.963	26.353	78.453
5700.000	4.970	42.051	26.850	78.950
5800.000	4.970	42.133	27.347	79.447
5900.000	4.971	42.223	27.844	79.944
6000.000	4.971	42.305	28.341	80.441

TABLE 2 - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
HNO	3	31.016	23.800	H 1 N 1 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.159	44.191	-1.565	22.235
200.000	7.943	49.413	-.807	22.993
298.150	8.469	52.686	0.000	23.800
300.000	8.478	52.740	.016	23.816
400.000	8.904	55.239	.885	24.685
500.000	9.317	57.270	1.796	25.596
600.000	9.768	59.007	2.750	26.550
700.000	10.266	60.550	3.751	27.551
800.000	10.773	61.954	4.803	28.603
900.000	11.209	63.249	5.904	29.704
1000.000	11.450	64.445	7.039	30.839
1100.000	11.698	65.548	8.196	31.996
1200.000	11.923	66.576	9.378	33.178
1300.000	12.126	67.539	10.580	34.380
1400.000	12.310	68.444	11.802	35.602
1500.000	12.474	69.299	13.042	36.842
1600.000	12.622	70.109	14.296	38.096
1700.000	12.754	70.878	15.565	39.365
1800.000	12.871	71.610	16.847	40.647
1900.000	12.974	72.309	18.139	41.939
2000.000	13.065	72.977	19.441	43.241
2100.000	13.145	73.617	20.752	44.552
2200.000	13.215	74.230	22.070	45.870
2300.000	13.275	74.818	23.394	47.194
2400.000	13.327	75.385	24.725	48.525
2500.000	13.372	75.930	26.060	49.860
2600.000	13.411	76.455	27.399	51.199
2700.000	13.444	76.962	28.742	52.542
2800.000	13.472	77.451	30.087	53.887
2900.000	13.495	77.924	31.436	55.236
3000.000	13.516	78.382	32.786	56.586
3100.000	13.533	78.825	34.139	57.939
3200.000	13.548	79.255	35.493	59.293
3300.000	13.562	79.673	36.848	60.648
3400.000	13.574	80.078	38.205	62.005
3500.000	13.585	80.471	39.563	63.363
3600.000	13.595	80.854	40.922	64.722
3700.000	13.605	81.227	42.282	66.082
3800.000	13.615	81.590	43.643	67.443
3900.000	13.626	81.943	45.005	68.805
4000.000	13.637	82.289	46.368	70.168
4100.000	13.648	82.625	47.733	71.533
4200.000	13.660	82.954	49.098	72.898
4300.000	13.673	83.276	50.465	74.265
4400.000	13.686	83.590	51.832	75.632
4500.000	13.700	83.898	53.202	77.002
4600.000	13.714	84.199	54.572	78.372
4700.000	13.728	84.494	55.945	79.745
4800.000	13.743	84.784	57.318	81.118
4900.000	13.757	85.067	58.693	82.493
5000.000	13.770	85.345	60.069	83.869
5100.000	13.783	85.618	61.447	85.247
5200.000	13.794	85.886	62.826	86.626
5300.000	13.803	86.149	64.206	88.006
5400.000	13.810	86.407	65.587	89.387
5500.000	13.814	86.660	66.968	90.768
5600.000	13.815	86.909	68.349	92.149
5700.000	13.811	87.154	69.731	93.531
5800.000	13.803	87.394	71.111	94.911
5900.000	13.788	87.630	72.491	96.291
6000.000	13.767	87.861	73.869	97.669

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
OH	4	17.008	9.432	H 1 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.838	35.958	-1.437	7.995
200.000	7.329	40.882	-.724	8.708
298.150	7.375	43.826	0.000	9.432
300.000	7.374	43.873	.014	9.446
400.000	7.221	45.976	.744	10.176
500.000	7.048	47.567	1.457	10.889
600.000	6.966	48.843	2.157	11.589
700.000	7.016	49.919	2.855	12.287
800.000	7.169	50.865	3.564	12.996
900.000	7.329	51.720	4.289	13.721
1000.000	7.331	52.494	5.024	14.456
1100.000	7.451	53.199	5.763	15.195
1200.000	7.565	53.852	6.514	15.946
1300.000	7.672	54.462	7.276	16.708
1400.000	7.774	55.034	8.048	17.480
1500.000	7.869	55.573	8.831	18.263
1600.000	7.960	56.084	9.622	19.054
1700.000	8.045	56.570	10.422	19.854
1800.000	8.125	57.032	11.231	20.663
1900.000	8.201	57.473	12.047	21.479
2000.000	8.272	57.895	12.871	22.303
2100.000	8.339	58.301	13.702	23.134
2200.000	8.401	58.690	14.539	23.971
2300.000	8.460	59.065	15.382	24.814
2400.000	8.515	59.426	16.230	25.662
2500.000	8.567	59.775	17.085	26.517
2600.000	8.616	60.112	17.944	27.376
2700.000	8.661	60.438	18.808	28.240
2800.000	8.704	60.753	19.676	29.108
2900.000	8.744	61.060	20.548	29.980
3000.000	8.781	61.357	21.425	30.857
3100.000	8.817	61.645	22.304	31.736
3200.000	8.850	61.926	23.188	32.620
3300.000	8.881	62.198	24.074	33.506
3400.000	8.910	62.464	24.964	34.396
3500.000	8.937	62.723	25.856	35.288
3600.000	8.964	62.975	26.751	36.183
3700.000	8.988	63.221	27.649	37.081
3800.000	9.011	63.461	28.549	37.981
3900.000	9.034	63.695	29.451	38.883
4000.000	9.055	63.924	30.356	39.788
4100.000	9.075	64.148	31.262	40.694
4200.000	9.095	64.367	32.171	41.603
4300.000	9.113	64.581	33.081	42.513
4400.000	9.132	64.791	33.993	43.425
4500.000	9.149	64.996	34.907	44.339
4600.000	9.167	65.197	35.823	45.255
4700.000	9.184	65.395	36.741	46.173
4800.000	9.201	65.588	37.660	47.092
4900.000	9.217	65.778	38.581	48.013
5000.000	9.234	65.965	39.503	48.935
5100.000	9.250	66.148	40.428	49.860
5200.000	9.267	66.327	41.353	50.785
5300.000	9.284	66.504	42.281	51.713
5400.000	9.300	66.678	43.210	52.642
5500.000	9.317	66.849	44.141	53.573
5600.000	9.335	67.017	45.074	54.506
5700.000	9.352	67.182	46.008	55.440
5800.000	9.370	67.345	46.944	56.376
5900.000	9.388	67.505	47.882	57.314
6000.000	9.406	67.663	48.822	58.254

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
HO2	5	33.008	5.000	H 1 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.161	45.825	-1.569	3.431
200.000	7.962	51.051	-.811	4.189
298.150	8.533	54.340	0.000	5.000
300.000	8.543	54.395	.016	5.016
400.000	9.011	56.913	.894	5.894
500.000	9.445	58.976	1.817	6.817
600.000	9.885	60.736	2.783	7.783
700.000	10.340	62.294	3.794	8.794
800.000	10.784	63.704	4.851	9.851
900.000	11.158	64.997	5.949	10.949
1000.000	11.367	66.186	7.077	12.077
1100.000	11.596	67.280	8.225	13.225
1200.000	11.805	68.298	9.396	14.396
1300.000	11.995	69.250	10.586	15.586
1400.000	12.169	70.146	11.794	16.794
1500.000	12.326	70.991	13.019	18.019
1600.000	12.469	71.791	14.259	19.259
1700.000	12.598	72.551	15.512	20.512
1800.000	12.713	73.274	16.778	21.778
1900.000	12.817	73.964	18.055	23.055
2000.000	12.911	74.624	19.341	24.341
2100.000	12.994	75.256	20.636	25.636
2200.000	13.067	75.862	21.939	26.939
2300.000	13.133	76.445	23.250	28.250
2400.000	13.191	77.005	24.566	29.566
2500.000	13.243	77.544	25.888	30.888
2600.000	13.288	78.065	27.214	32.214
2700.000	13.328	78.567	28.545	33.545
2800.000	13.363	79.052	29.880	34.880
2900.000	13.394	79.522	31.217	36.217
3000.000	13.421	79.976	32.558	37.558
3100.000	13.446	80.417	33.902	38.902
3200.000	13.467	80.844	35.247	40.247
3300.000	13.487	81.259	36.595	41.595
3400.000	13.505	81.662	37.945	42.945
3500.000	13.521	82.053	39.296	44.296
3600.000	13.536	82.435	40.649	45.649
3700.000	13.551	82.806	42.003	47.003
3800.000	13.565	83.167	43.359	48.359
3900.000	13.579	83.520	44.716	49.716
4000.000	13.592	83.864	46.075	51.075
4100.000	13.605	84.200	47.434	52.434
4200.000	13.619	84.528	48.796	53.796
4300.000	13.632	84.848	50.158	55.158
4400.000	13.646	85.162	51.522	56.522
4500.000	13.660	85.468	52.888	57.888
4600.000	13.674	85.769	54.254	59.254
4700.000	13.688	86.063	55.622	60.622
4800.000	13.702	86.352	56.992	61.992
4900.000	13.715	86.634	58.363	63.363
5000.000	13.728	86.911	59.735	64.735
5100.000	13.740	87.183	61.108	66.108
5200.000	13.750	87.450	62.483	67.483
5300.000	13.760	87.712	63.858	68.858
5400.000	13.767	87.970	65.235	70.235
5500.000	13.772	88.222	66.612	71.612
5600.000	13.775	88.470	67.989	72.989
5700.000	13.774	88.714	69.366	74.366
5800.000	13.770	88.954	70.744	75.744
5900.000	13.761	89.189	72.120	77.120
6000.000	13.747	89.420	73.496	78.496

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
H2	6	2.016	0.000	H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	5.314	24.462	-1.246	-1.246
200.000	6.390	28.516	-.655	-.655
298.150	6.875	31.172	0.000	0.000
300.000	6.881	31.215	.013	.013
400.000	7.033	33.221	.710	.710
500.000	7.031	34.792	1.414	1.414
600.000	7.005	36.071	2.116	2.116
700.000	7.025	37.152	2.817	2.817
800.000	7.106	38.095	3.523	3.523
900.000	7.202	38.937	4.239	4.239
1000.000	7.213	39.698	4.961	4.961
1100.000	7.324	40.391	5.688	5.688
1200.000	7.432	41.033	6.425	6.425
1300.000	7.536	41.632	7.174	7.174
1400.000	7.637	42.194	7.933	7.933
1500.000	7.734	42.724	8.701	8.701
1600.000	7.829	43.227	9.479	9.479
1700.000	7.920	43.704	10.267	10.267
1800.000	8.008	44.159	11.063	11.063
1900.000	8.093	44.594	11.868	11.868
2000.000	8.175	45.012	12.682	12.682
2100.000	8.255	45.412	13.503	13.503
2200.000	8.332	45.798	14.333	14.333
2300.000	8.406	46.170	15.169	15.169
2400.000	8.478	46.530	16.014	16.014
2500.000	8.547	46.877	16.865	16.865
2600.000	8.614	47.214	17.723	17.723
2700.000	8.678	47.540	18.588	18.588
2800.000	8.741	47.857	19.459	19.459
2900.000	8.801	48.164	20.336	20.336
3000.000	8.859	48.464	21.219	21.219
3100.000	8.916	48.755	22.107	22.107
3200.000	8.970	49.039	23.002	23.002
3300.000	9.023	49.316	23.901	23.901
3400.000	9.074	49.586	24.806	24.806
3500.000	9.124	49.850	25.716	25.716
3600.000	9.172	50.108	26.631	26.631
3700.000	9.219	50.359	27.551	27.551
3800.000	9.264	50.606	28.475	28.475
3900.000	9.308	50.847	29.403	29.403
4000.000	9.351	51.083	30.336	30.336
4100.000	9.393	51.315	31.273	31.273
4200.000	9.434	51.542	32.215	32.215
4300.000	9.474	51.764	33.160	33.160
4400.000	9.514	51.982	34.110	34.110
4500.000	9.552	52.197	35.063	35.063
4600.000	9.590	52.407	36.020	36.020
4700.000	9.628	52.613	36.981	36.981
4800.000	9.665	52.817	37.946	37.946
4900.000	9.702	53.016	38.914	38.914
5000.000	9.739	53.213	39.886	39.886
5100.000	9.776	53.406	40.862	40.862
5200.000	9.813	53.596	41.841	41.841
5300.000	9.849	53.783	42.824	42.824
5400.000	9.886	53.968	43.811	43.811
5500.000	9.923	54.149	44.802	44.802
5600.000	9.961	54.329	45.796	45.796
5700.000	9.999	54.505	46.794	46.794
5800.000	10.038	54.680	47.796	47.796
5900.000	10.077	54.851	48.801	48.801
6000.000	10.117	55.021	49.811	49.811

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
H2O	7	18.016	-57.798	H 2 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.168	36.607	-1.551	-59.349
200.000	7.901	41.832	-.793	-58.591
298.150	8.203	45.051	0.000	-57.798
300.000	8.207	45.104	.015	-57.783
400.000	8.320	47.483	.842	-56.956
500.000	8.413	49.348	1.679	-56.119
600.000	8.587	50.896	2.528	-55.270
700.000	8.880	52.240	3.400	-54.398
800.000	9.264	53.450	4.307	-53.491
900.000	9.641	54.564	5.253	-52.545
1000.000	9.849	55.593	6.229	-51.569
1100.000	10.164	56.546	7.230	-50.568
1200.000	10.458	57.444	8.261	-49.537
1300.000	10.733	58.292	9.321	-48.477
1400.000	10.990	59.097	10.407	-47.391
1500.000	11.229	59.863	11.519	-46.279
1600.000	11.452	60.595	12.653	-45.145
1700.000	11.660	61.295	13.808	-43.990
1800.000	11.853	61.967	14.984	-42.814
1900.000	12.032	62.613	16.179	-41.619
2000.000	12.198	63.235	17.390	-40.408
2100.000	12.353	63.834	18.618	-39.180
2200.000	12.495	64.412	19.860	-37.938
2300.000	12.628	64.970	21.117	-36.681
2400.000	12.750	65.510	22.386	-35.412
2500.000	12.863	66.033	23.666	-34.132
2600.000	12.968	66.539	24.958	-32.840
2700.000	13.065	67.031	26.260	-31.538
2800.000	13.154	67.507	27.571	-30.227
2900.000	13.237	67.970	28.890	-28.908
3000.000	13.313	68.421	30.218	-27.580
3100.000	13.384	68.858	31.553	-26.245
3200.000	13.450	69.284	32.894	-24.904
3300.000	13.511	69.699	34.243	-23.555
3400.000	13.568	70.103	35.597	-22.201
3500.000	13.621	70.497	36.956	-20.842
3600.000	13.671	70.882	38.321	-19.477
3700.000	13.718	71.257	39.690	-18.108
3800.000	13.762	71.623	41.064	-16.734
3900.000	13.804	71.981	42.443	-15.355
4000.000	13.844	72.331	43.825	-13.973
4100.000	13.882	72.674	45.211	-12.587
4200.000	13.919	73.009	46.601	-11.197
4300.000	13.954	73.337	47.995	-9.803
4400.000	13.988	73.658	49.392	-8.406
4500.000	14.021	73.973	50.793	-7.005
4600.000	14.053	74.281	52.196	-5.602
4700.000	14.084	74.584	53.603	-4.195
4800.000	14.115	74.881	55.013	-2.785
4900.000	14.145	75.172	56.426	-1.372
5000.000	14.175	75.458	57.842	.044
5100.000	14.204	75.739	59.261	1.463
5200.000	14.232	76.015	60.683	2.885
5300.000	14.260	76.286	62.108	4.310
5400.000	14.287	76.553	63.535	5.737
5500.000	14.313	76.816	64.965	7.167
5600.000	14.338	77.074	66.397	8.599
5700.000	14.362	77.328	67.832	10.034
5800.000	14.384	77.578	69.270	11.472
5900.000	14.405	77.824	70.709	12.911
6000.000	14.424	78.066	72.151	14.353

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
H2O2	8	34.016	-32.530	H 2 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.876	45.558	-1.900	-34.430
200.000	9.702	51.618	-1.016	-33.546
298.150	10.913	55.731	0.000	-32.530
300.000	10.933	55.801	.020	-32.510
400.000	11.781	59.069	1.158	-31.372
500.000	12.416	61.769	2.369	-30.161
600.000	12.959	64.081	3.638	-28.892
700.000	13.486	66.118	4.961	-27.569
800.000	14.028	67.954	6.336	-26.194
900.000	14.570	69.638	7.766	-24.764
1000.000	15.052	71.199	9.248	-23.282
1100.000	15.479	72.654	10.775	-21.755
1200.000	15.857	74.017	12.342	-20.188
1300.000	16.190	75.300	13.945	-18.585
1400.000	16.483	76.510	15.579	-16.951
1500.000	16.741	77.657	17.240	-15.290
1600.000	16.969	78.744	18.926	-13.604
1700.000	17.170	79.779	20.633	-11.897
1800.000	17.348	80.765	22.359	-10.171
1900.000	17.508	81.708	24.102	-8.428
2000.000	17.652	82.610	25.860	-6.670
2100.000	17.785	83.474	27.632	-4.898
2200.000	17.909	84.305	29.417	-3.113
2300.000	18.027	85.104	31.214	-1.316
2400.000	18.143	85.873	33.022	.492
2500.000	18.258	86.616	34.842	2.312
2600.000	18.374	87.334	36.674	4.144
2700.000	18.495	88.030	38.517	5.987
2800.000	18.622	88.705	40.373	7.843
2900.000	18.756	89.361	42.242	9.712
3000.000	18.900	89.999	44.125	11.595
3100.000	19.054	90.621	46.022	13.492
3200.000	19.220	91.229	47.936	15.406
3300.000	19.398	91.823	49.867	17.337
3400.000	19.589	92.405	51.816	19.286
3500.000	19.794	92.976	53.785	21.255
3600.000	20.013	93.535	55.775	23.245
3700.000	20.245	94.088	57.788	25.258
3800.000	20.491	94.631	59.825	27.295
3900.000	20.751	95.166	61.887	29.357
4000.000	21.024	95.695	63.975	31.445
4100.000	21.308	96.218	66.092	33.562
4200.000	21.604	96.735	68.237	35.707
4300.000	21.909	97.247	70.413	37.883
4400.000	22.223	97.754	72.620	40.090
4500.000	22.544	98.257	74.858	42.328
4600.000	22.869	98.756	77.128	44.598
4700.000	23.198	99.251	79.432	46.902
4800.000	23.528	99.743	81.768	49.238
4900.000	23.856	100.232	84.137	51.607
5000.000	24.179	100.717	86.539	54.009
5100.000	24.496	101.199	88.973	56.443
5200.000	24.803	101.678	91.438	58.908
5300.000	25.095	102.153	93.933	61.403
5400.000	25.371	102.624	96.457	63.927
5500.000	25.627	103.093	99.007	66.477
5600.000	25.858	103.556	101.581	69.051
5700.000	26.060	104.016	104.177	71.647
5800.000	26.230	104.471	106.792	74.262
5900.000	26.362	104.920	109.422	76.892
6000.000	26.452	105.364	112.063	79.533

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N	9	14.008	112.965	N 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.461	31.320	-.966	111.999
200.000	4.930	34.580	-.493	112.472
298.150	5.070	36.581	0.000	112.965
300.000	5.071	36.613	.009	112.974
400.000	5.045	38.071	.516	113.481
500.000	4.970	39.189	1.017	113.982
600.000	4.919	40.090	1.511	114.476
700.000	4.926	40.848	2.003	114.968
800.000	4.980	41.509	2.498	115.463
900.000	5.026	42.099	2.998	115.963
1000.000	4.967	42.627	3.499	116.464
1100.000	4.971	43.100	3.996	116.961
1200.000	4.972	43.533	4.493	117.458
1300.000	4.973	43.931	4.991	117.956
1400.000	4.973	44.300	5.488	118.453
1500.000	4.972	44.643	5.985	118.950
1600.000	4.971	44.963	6.483	119.448
1700.000	4.970	45.265	6.980	119.945
1800.000	4.968	45.549	7.476	120.441
1900.000	4.967	45.817	7.973	120.938
2000.000	4.966	46.072	8.470	121.435
2100.000	4.966	46.314	8.966	121.931
2200.000	4.966	46.545	9.463	122.428
2300.000	4.967	46.765	9.960	122.925
2400.000	4.969	46.978	10.457	123.422
2500.000	4.973	47.180	10.954	123.919
2600.000	4.977	47.376	11.451	124.416
2700.000	4.983	47.564	11.949	124.914
2800.000	4.990	47.745	12.448	125.413
2900.000	4.999	47.920	12.947	125.912
3000.000	5.010	48.090	13.448	126.413
3100.000	5.022	48.254	13.949	126.914
3200.000	5.036	48.414	14.452	127.417
3300.000	5.051	48.569	14.956	127.921
3400.000	5.069	48.720	15.462	128.427
3500.000	5.089	48.867	15.970	128.935
3600.000	5.110	49.011	16.480	129.445
3700.000	5.133	49.151	16.992	129.957
3800.000	5.159	49.289	17.507	130.472
3900.000	5.186	49.423	18.024	130.989
4000.000	5.215	49.555	18.544	131.509
4100.000	5.247	49.684	19.067	132.032
4200.000	5.280	49.811	19.594	132.559
4300.000	5.315	49.935	20.123	133.088
4400.000	5.351	50.058	20.656	133.621
4500.000	5.390	50.178	21.194	134.159
4600.000	5.430	50.297	21.734	134.699
4700.000	5.471	50.415	22.280	135.245
4800.000	5.515	50.530	22.829	135.794
4900.000	5.559	50.645	23.383	136.348
5000.000	5.605	50.757	23.941	136.906
5100.000	5.652	50.869	24.504	137.469
5200.000	5.700	50.979	25.071	138.036
5300.000	5.749	51.083	25.644	138.609
5400.000	5.799	51.196	26.221	139.186
5500.000	5.849	51.303	26.803	139.768
5600.000	5.900	51.409	27.391	140.356
5700.000	5.951	51.514	27.983	140.948
5800.000	6.002	51.617	28.581	141.546
5900.000	6.053	51.720	29.184	142.149
6000.000	6.103	51.823	29.792	142.757

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
NO	10	30.008	21.580	N 1 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.755	42.524	-1.421	20.159
200.000	7.233	47.382	-.717	20.863
298.150	7.341	50.297	0.000	21.580
300.000	7.342	50.344	.014	21.594
400.000	7.304	52.452	.746	22.326
500.000	7.279	54.078	1.475	23.055
600.000	7.355	55.410	2.206	23.786
700.000	7.556	56.557	2.950	24.530
800.000	7.836	57.584	3.719	25.299
900.000	8.083	58.522	4.516	26.096
1000.000	8.118	59.379	5.329	26.909
1100.000	8.219	60.157	6.146	27.726
1200.000	8.310	60.876	6.973	28.553
1300.000	8.392	61.545	7.808	29.388
1400.000	8.466	62.169	8.651	30.231
1500.000	8.533	62.756	9.501	31.081
1600.000	8.593	63.308	10.357	31.937
1700.000	8.646	63.831	11.219	32.799
1800.000	8.693	64.327	12.086	33.666
1900.000	8.735	64.798	12.958	34.538
2000.000	8.772	65.247	13.833	35.413
2100.000	8.805	65.676	14.712	36.292
2200.000	8.834	66.086	15.594	37.174
2300.000	8.859	66.479	16.478	38.058
2400.000	8.881	66.857	17.365	38.945
2500.000	8.900	67.220	18.254	39.834
2600.000	8.916	67.569	19.145	40.725
2700.000	8.931	67.906	20.038	41.618
2800.000	8.944	68.231	20.931	42.511
2900.000	8.955	68.545	21.826	43.406
3000.000	8.965	68.849	22.722	44.302
3100.000	8.974	69.143	23.619	45.199
3200.000	8.983	69.428	24.517	46.097
3300.000	8.991	69.704	25.416	46.996
3400.000	8.998	69.973	26.315	47.895
3500.000	9.006	70.234	27.216	48.796
3600.000	9.013	70.488	28.117	49.697
3700.000	9.021	70.735	29.018	50.598
3800.000	9.028	70.975	29.921	51.501
3900.000	9.036	71.210	30.824	52.404
4000.000	9.044	71.439	31.728	53.308
4100.000	9.053	71.662	32.633	54.213
4200.000	9.062	71.880	33.538	55.118
4300.000	9.071	72.094	34.445	56.025
4400.000	9.081	72.302	35.353	56.933
4500.000	9.091	72.507	36.261	57.841
4600.000	9.101	72.706	37.171	58.751
4700.000	9.111	72.902	38.081	59.661
4800.000	9.121	73.094	38.993	60.573
4900.000	9.132	73.282	39.906	61.486
5000.000	9.141	73.467	40.819	62.399
5100.000	9.151	73.648	41.734	63.314
5200.000	9.159	73.826	42.649	64.229
5300.000	9.167	74.000	43.566	65.146
5400.000	9.174	74.172	44.483	66.063
5500.000	9.179	74.340	45.401	66.981
5600.000	9.183	74.506	46.319	67.899
5700.000	9.185	74.668	47.237	68.817
5800.000	9.184	74.828	48.156	69.736
5900.000	9.180	74.985	49.074	70.654
6000.000	9.174	75.139	49.992	71.572

TABLE 2. -CONTINUED. -

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
NO2	11	46.008	7.910	N 1 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.203	48.574	-1.617	6.293
200.000	8.199	53.886	-.645	7.065
298.150	8.986	57.310	0.000	7.910
300.000	9.000	57.367	.017	7.927
400.000	9.681	60.051	.951	8.861
500.000	10.296	62.278	1.951	9.861
600.000	10.870	64.207	3.009	10.919
700.000	11.408	65.923	4.123	12.033
800.000	11.889	67.479	5.289	13.199
900.000	12.266	68.902	6.498	14.408
1000.000	12.469	70.207	7.736	15.646
1100.000	12.640	71.404	8.992	16.902
1200.000	12.794	72.510	10.264	18.174
1300.000	12.931	73.540	11.550	19.460
1400.000	13.053	74.503	12.850	20.760
1500.000	13.161	75.407	14.160	22.070
1600.000	13.256	76.260	15.481	23.391
1700.000	13.339	77.066	16.811	24.721
1800.000	13.411	77.830	18.149	26.059
1900.000	13.473	78.557	19.493	27.403
2000.000	13.527	79.249	20.843	28.753
2100.000	13.572	79.911	22.198	30.108
2200.000	13.610	80.543	23.557	31.467
2300.000	13.642	81.149	24.920	32.830
2400.000	13.668	81.730	26.285	34.195
2500.000	13.689	82.288	27.653	35.563
2600.000	13.706	82.825	29.023	36.933
2700.000	13.719	83.343	30.394	38.304
2800.000	13.729	83.842	31.767	39.677
2900.000	13.736	84.324	33.140	41.050
3000.000	13.742	84.790	34.514	42.424
3100.000	13.746	85.240	35.888	43.798
3200.000	13.749	85.677	37.263	45.173
3300.000	13.752	86.100	38.638	46.548
3400.000	13.754	86.510	40.013	47.923
3500.000	13.756	86.909	41.389	49.299
3600.000	13.758	87.297	42.764	50.674
3700.000	13.760	87.674	44.140	52.050
3800.000	13.764	88.041	45.517	53.427
3900.000	13.768	88.398	46.893	54.803
4000.000	13.772	88.747	48.270	56.180
4100.000	13.778	89.087	49.648	57.558
4200.000	13.785	89.419	51.026	58.936
4300.000	13.793	89.744	52.405	60.315
4400.000	13.801	90.061	53.784	61.694
4500.000	13.810	90.371	55.165	63.075
4600.000	13.820	90.675	56.546	64.456
4700.000	13.830	90.972	57.929	65.839
4800.000	13.840	91.263	59.312	67.222
4900.000	13.850	91.549	60.697	68.607
5000.000	13.860	91.829	62.082	69.992
5100.000	13.869	92.103	63.469	71.379
5200.000	13.876	92.373	64.856	72.766
5300.000	13.882	92.637	66.244	74.154
5400.000	13.886	92.896	67.632	75.542
5500.000	13.887	93.151	69.021	76.931
5600.000	13.885	93.401	70.410	78.320
5700.000	13.879	93.647	71.798	79.708
5800.000	13.868	93.889	73.185	81.095
5900.000	13.852	94.126	74.571	82.481
6000.000	13.831	94.353	75.956	83.866

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N2	12	28.016	0.000	N 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.257	38.353	-1.352	-1.352
200.000	6.900	42.920	-.690	-.690
298.150	7.102	45.722	0.000	0.000
300.000	7.104	45.767	.013	.013
400.000	7.107	47.814	.725	.725
500.000	7.079	49.396	1.434	1.434
600.000	7.125	50.689	2.143	2.143
700.000	7.282	51.798	2.862	2.862
800.000	7.523	52.786	3.602	3.602
900.000	7.751	53.686	4.366	4.366
1000.000	7.807	54.507	5.147	5.147
1100.000	7.928	55.257	5.933	5.933
1200.000	8.038	55.952	6.732	6.732
1300.000	8.139	56.599	7.541	7.541
1400.000	8.229	57.206	8.359	8.359
1500.000	8.312	57.776	9.186	9.186
1600.000	8.386	58.315	10.021	10.021
1700.000	8.452	58.826	10.863	10.863
1800.000	8.512	59.311	11.712	11.712
1900.000	8.565	59.772	12.565	12.565
2000.000	8.612	60.213	13.424	13.424
2100.000	8.654	60.634	14.288	14.288
2200.000	8.691	61.037	15.155	15.155
2300.000	8.724	61.425	16.026	16.026
2400.000	8.753	61.796	16.900	16.900
2500.000	8.778	62.154	17.776	17.776
2600.000	8.801	62.499	18.655	18.655
2700.000	8.820	62.832	19.536	19.536
2800.000	8.838	63.153	20.419	20.419
2900.000	8.853	63.463	21.304	21.304
3000.000	8.867	63.763	22.190	22.190
3100.000	8.880	64.054	23.077	23.077
3200.000	8.891	64.336	23.966	23.966
3300.000	8.902	64.610	24.855	24.855
3400.000	8.912	64.876	25.746	25.746
3500.000	8.921	65.135	26.638	26.638
3600.000	8.931	65.386	27.530	27.530
3700.000	8.940	65.631	28.424	28.424
3800.000	8.949	65.869	29.318	29.318
3900.000	8.959	66.102	30.214	30.214
4000.000	8.968	66.329	31.110	31.110
4100.000	8.978	66.550	32.007	32.007
4200.000	8.989	66.767	32.906	32.906
4300.000	9.000	66.979	33.805	33.805
4400.000	9.011	67.186	34.706	34.706
4500.000	9.022	67.388	35.607	35.607
4600.000	9.034	67.587	36.510	36.510
4700.000	9.046	67.781	37.414	37.414
4800.000	9.058	67.972	38.319	38.319
4900.000	9.071	68.159	39.226	39.226
5000.000	9.083	68.342	40.133	40.133
5100.000	9.094	68.522	41.042	41.042
5200.000	9.106	68.699	41.952	41.952
5300.000	9.116	68.872	42.863	42.863
5400.000	9.126	69.043	43.776	43.776
5500.000	9.135	69.210	44.689	44.689
5600.000	9.142	69.375	45.602	45.602
5700.000	9.147	69.537	46.517	46.517
5800.000	9.151	69.696	47.432	47.432
5900.000	9.152	69.852	48.347	48.347
6000.000	9.150	70.006	49.262	49.262

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N2O	13	44.016	19.610	N 2 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.552	44.067	-1.583	18.027
200.000	8.050	49.088	-.850	18.760
298.150	9.219	52.528	0.000	19.610
300.000	9.239	52.586	.017	19.627
400.000	10.187	55.379	.990	20.600
500.000	10.949	57.737	2.048	21.658
600.000	11.571	59.790	3.175	22.785
700.000	12.084	61.613	4.359	23.969
800.000	12.508	63.255	5.589	25.199
900.000	12.852	64.749	6.858	26.468
1000.000	13.111	66.113	8.157	27.767
1100.000	13.312	67.377	9.478	29.088
1200.000	13.494	68.543	10.818	30.428
1300.000	13.656	69.630	12.176	31.786
1400.000	13.802	70.647	13.549	33.159
1500.000	13.931	71.604	14.936	34.546
1600.000	14.045	72.507	16.335	35.945
1700.000	14.146	73.361	17.744	37.354
1800.000	14.234	74.172	19.164	38.774
1900.000	14.311	74.944	20.591	40.201
2000.000	14.377	75.680	22.025	41.635
2100.000	14.434	76.383	23.466	43.076
2200.000	14.483	77.055	24.912	44.522
2300.000	14.524	77.700	26.362	45.972
2400.000	14.558	78.319	27.817	47.427
2500.000	14.587	78.914	29.274	48.884
2600.000	14.610	79.486	30.734	50.344
2700.000	14.629	80.038	32.196	51.806
2800.000	14.644	80.570	33.659	53.269
2900.000	14.656	81.085	35.124	54.734
3000.000	14.666	81.582	36.591	56.201
3100.000	14.674	82.063	38.058	57.668
3200.000	14.680	82.529	39.525	59.135
3300.000	14.686	82.981	40.994	60.604
3400.000	14.690	83.419	42.463	62.073
3500.000	14.695	83.845	43.932	63.542
3600.000	14.699	84.259	45.402	65.012
3700.000	14.704	84.662	46.872	66.482
3800.000	14.710	85.054	48.342	67.952
3900.000	14.716	85.436	49.814	69.424
4000.000	14.722	85.809	51.286	70.896
4100.000	14.730	86.172	52.758	72.368
4200.000	14.738	86.528	54.232	73.842
4300.000	14.748	86.874	55.706	75.316
4400.000	14.758	87.213	57.181	76.791
4500.000	14.769	87.545	58.657	78.267
4600.000	14.781	87.870	60.135	79.745
4700.000	14.792	88.188	61.614	81.224
4800.000	14.804	88.500	63.093	82.703
4900.000	14.816	88.805	64.574	84.184
5000.000	14.827	89.104	66.057	85.667
5100.000	14.837	89.398	67.540	87.150
5200.000	14.846	89.686	69.024	88.634
5300.000	14.852	89.969	70.509	90.119
5400.000	14.857	90.247	71.994	91.604
5500.000	14.858	90.519	73.480	93.090
5600.000	14.856	90.787	74.966	94.576
5700.000	14.849	91.050	76.451	96.061
5800.000	14.838	91.308	77.935	97.545
5900.000	14.821	91.562	79.418	99.028
6000.000	14.797	91.811	80.899	100.509

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
O	14	16.000	59.559	O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	5.049	32.645	-1.053	58.506
200.000	5.366	36.264	-.529	59.030
298.150	5.381	38.415	0.000	59.559
300.000	5.380	38.450	.010	59.569
400.000	5.254	39.982	.542	60.101
500.000	5.106	41.138	1.060	60.619
600.000	5.009	42.059	1.565	61.124
700.000	4.990	42.829	2.064	61.623
800.000	5.031	43.498	2.565	62.124
900.000	5.067	44.093	3.071	62.630
1000.000	4.992	44.624	3.575	63.134
1100.000	4.988	45.100	4.074	63.633
1200.000	4.985	45.534	4.573	64.132
1300.000	4.982	45.933	5.071	64.630
1400.000	4.979	46.302	5.569	65.128
1500.000	4.977	46.645	6.067	65.626
1600.000	4.976	46.965	6.564	66.123
1700.000	4.974	47.268	7.062	66.621
1800.000	4.974	47.552	7.559	67.118
1900.000	4.974	47.821	8.057	67.616
2000.000	4.974	48.076	8.554	68.113
2100.000	4.975	48.319	9.051	68.610
2200.000	4.976	48.550	9.549	69.108
2300.000	4.978	48.772	10.047	69.606
2400.000	4.980	48.984	10.545	70.104
2500.000	4.983	49.187	11.043	70.602
2600.000	4.987	49.382	11.541	71.100
2700.000	4.990	49.571	12.040	71.599
2800.000	4.995	49.752	12.539	72.098
2900.000	5.000	49.928	13.039	72.598
3000.000	5.006	50.097	13.539	73.098
3100.000	5.012	50.262	14.040	73.599
3200.000	5.019	50.421	14.542	74.101
3300.000	5.026	50.575	15.044	74.603
3400.000	5.034	50.725	15.547	75.106
3500.000	5.042	50.871	16.051	75.610
3600.000	5.050	51.014	16.555	76.114
3700.000	5.059	51.152	17.061	76.620
3800.000	5.069	51.287	17.567	77.126
3900.000	5.079	51.419	18.075	77.634
4000.000	5.089	51.548	18.583	78.142
4100.000	5.100	51.673	19.092	78.651
4200.000	5.111	51.796	19.603	79.162
4300.000	5.123	51.917	20.115	79.674
4400.000	5.134	52.035	20.628	80.187
4500.000	5.146	52.150	21.142	80.701
4600.000	5.159	52.264	21.657	81.216
4700.000	5.171	52.375	22.173	81.732
4800.000	5.184	52.484	22.691	82.250
4900.000	5.196	52.591	23.210	82.769
5000.000	5.209	52.696	23.730	83.289
5100.000	5.222	52.799	24.252	83.811
5200.000	5.235	52.900	24.775	84.334
5300.000	5.248	53.000	25.299	84.858
5400.000	5.261	53.099	25.824	85.383
5500.000	5.273	53.195	26.351	85.910
5600.000	5.286	53.290	26.879	86.438
5700.000	5.298	53.384	27.408	86.967
5800.000	5.310	53.476	27.938	87.497
5900.000	5.322	53.567	28.470	88.029
6000.000	5.333	53.657	29.003	88.562

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
O2	15	32.000	0.000	O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.265	41.586	-1.354	-1.354
200.000	6.895	46.147	-.693	-.693
298.150	7.182	48.960	0.000	0.000
300.000	7.186	49.006	.013	.013
400.000	7.320	51.093	.739	.739
500.000	7.426	52.738	1.476	1.476
600.000	7.580	54.104	2.226	2.226
700.000	7.805	55.289	2.995	2.995
800.000	8.070	56.348	3.788	3.788
900.000	8.292	57.312	4.607	4.607
1000.000	8.334	58.191	5.441	5.441
1100.000	8.417	58.989	6.278	6.278
1200.000	8.497	59.725	7.124	7.124
1300.000	8.575	60.403	7.978	7.978
1400.000	8.649	61.045	8.839	8.839
1500.000	8.722	61.645	9.707	9.707
1600.000	8.791	62.210	10.583	10.583
1700.000	8.859	62.745	11.466	11.466
1800.000	8.924	63.254	12.355	12.355
1900.000	8.987	63.738	13.250	13.250
2000.000	9.048	64.200	14.152	14.152
2100.000	9.107	64.643	15.060	15.060
2200.000	9.164	65.068	15.974	15.974
2300.000	9.219	65.477	16.893	16.893
2400.000	9.273	65.870	17.817	17.817
2500.000	9.324	66.250	18.747	18.747
2600.000	9.374	66.617	19.682	19.682
2700.000	9.422	66.971	20.622	20.622
2800.000	9.469	67.315	21.567	21.567
2900.000	9.514	67.648	22.516	22.516
3000.000	9.558	67.971	23.469	23.469
3100.000	9.600	68.285	24.427	24.427
3200.000	9.641	68.591	25.389	25.389
3300.000	9.680	68.888	26.355	26.355
3400.000	9.719	69.177	27.325	27.325
3500.000	9.755	69.460	28.299	28.299
3600.000	9.791	69.735	29.276	29.276
3700.000	9.825	70.004	30.257	30.257
3800.000	9.858	70.266	31.241	31.241
3900.000	9.890	70.523	32.229	32.229
4000.000	9.921	70.774	33.219	33.219
4100.000	9.951	71.019	34.213	34.213
4200.000	9.979	71.259	35.209	35.209
4300.000	10.006	71.494	36.209	36.209
4400.000	10.032	71.724	37.211	37.211
4500.000	10.057	71.950	38.215	38.215
4600.000	10.081	72.171	39.222	39.222
4700.000	10.103	72.389	40.231	40.231
4800.000	10.124	72.602	41.243	41.243
4900.000	10.144	72.811	42.256	42.256
5000.000	10.163	73.016	43.271	43.271
5100.000	10.181	73.217	44.289	44.289
5200.000	10.197	73.415	45.308	45.308
5300.000	10.212	73.609	46.328	46.328
5400.000	10.225	73.800	47.350	47.350
5500.000	10.238	73.988	48.373	48.373
5600.000	10.248	74.173	49.397	49.397
5700.000	10.258	74.354	50.423	50.423
5800.000	10.265	74.532	51.449	51.449
5900.000	10.272	74.708	52.476	52.476
6000.000	10.276	74.881	53.503	53.503

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
O3	16	48.000	34.100	O 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.855	46.977	-1.822	32.278
200.000	9.149	53.183	-.525	33.175
298.150	9.729	56.935	0.000	34.100
300.000	9.741	56.997	.018	34.118
400.000	10.486	59.899	1.029	35.129
500.000	11.260	62.323	2.116	36.216
600.000	11.969	64.440	3.278	37.378
700.000	12.542	66.330	4.505	38.605
800.000	12.938	68.033	5.781	39.881
900.000	13.141	69.570	7.087	41.187
1000.000	13.160	70.957	8.403	42.503
1100.000	13.282	72.217	9.725	43.825
1200.000	13.392	73.378	11.059	45.159
1300.000	13.492	74.454	12.403	46.503
1400.000	13.582	75.457	13.757	47.857
1500.000	13.663	76.397	15.119	49.219
1600.000	13.735	77.281	16.489	50.589
1700.000	13.799	78.116	17.866	51.966
1800.000	13.857	78.905	19.249	53.349
1900.000	13.908	79.657	20.637	54.737
2000.000	13.953	80.371	22.030	56.130
2100.000	13.993	81.053	23.428	57.528
2200.000	14.028	81.705	24.829	58.929
2300.000	14.059	82.329	26.233	60.333
2400.000	14.086	82.928	27.640	61.740
2500.000	14.111	83.503	29.050	63.150
2600.000	14.132	84.057	30.462	64.562
2700.000	14.151	84.591	31.877	65.977
2800.000	14.168	85.106	33.293	67.393
2900.000	14.184	85.603	34.710	68.810
3000.000	14.199	86.084	36.129	70.229
3100.000	14.212	86.550	37.550	71.650
3200.000	14.226	87.002	38.972	73.072
3300.000	14.238	87.440	40.395	74.495
3400.000	14.251	87.865	41.820	75.920
3500.000	14.264	88.278	43.245	77.345
3600.000	14.276	88.680	44.672	78.772
3700.000	14.290	89.072	46.101	80.201
3800.000	14.303	89.453	47.530	81.630
3900.000	14.318	89.825	48.961	83.061
4000.000	14.333	90.187	50.394	84.494
4100.000	14.349	90.541	51.828	85.928
4200.000	14.365	90.887	53.264	87.364
4300.000	14.382	91.226	54.701	88.801
4400.000	14.400	91.556	56.140	90.240
4500.000	14.418	91.880	57.581	91.681
4600.000	14.437	92.197	59.024	93.124
4700.000	14.456	92.508	60.469	94.569
4800.000	14.476	92.813	61.915	96.015
4900.000	14.495	93.111	63.364	97.464
5000.000	14.514	93.404	64.814	98.914
5100.000	14.532	93.692	66.266	100.366
5200.000	14.550	93.974	67.721	101.821
5300.000	14.567	94.251	69.176	103.276
5400.000	14.582	94.524	70.634	104.734
5500.000	14.596	94.792	72.093	106.193
5600.000	14.607	95.055	73.553	107.653
5700.000	14.616	95.313	75.014	109.114
5800.000	14.622	95.568	76.476	110.576
5900.000	14.625	95.818	77.938	112.038
6000.000	14.624	96.063	79.401	113.501

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
NH	17	15.016	79.200	N 1 H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.254	35.869	-1.355	77.845
200.000	6.916	40.442	-.691	78.509
298.150	7.109	43.248	0.000	79.200
300.000	7.111	43.294	.013	79.213
400.000	7.080	45.338	.724	79.924
500.000	6.999	46.909	1.427	80.627
600.000	6.979	48.182	2.126	81.326
700.000	7.066	49.263	2.827	82.027
800.000	7.243	50.217	3.542	82.742
900.000	7.426	51.082	4.276	83.476
1000.000	7.469	51.868	5.023	84.223
1100.000	7.604	52.587	5.776	84.976
1200.000	7.731	53.254	6.543	85.743
1300.000	7.848	53.877	7.322	86.522
1400.000	7.958	54.463	8.112	87.312
1500.000	8.059	55.015	8.913	88.113
1600.000	8.154	55.539	9.724	88.924
1700.000	8.241	56.036	10.544	89.744
1800.000	8.323	56.509	11.372	90.572
1900.000	8.398	56.961	12.208	91.408
2000.000	8.468	57.394	13.052	92.252
2100.000	8.533	57.808	13.902	93.102
2200.000	8.593	58.207	14.758	93.958
2300.000	8.648	58.590	15.620	94.820
2400.000	8.700	58.959	16.487	95.687
2500.000	8.747	59.315	17.360	96.560
2600.000	8.792	59.659	18.237	97.437
2700.000	8.833	59.992	19.118	98.318
2800.000	8.871	60.314	20.003	99.203
2900.000	8.907	60.626	20.892	100.092
3000.000	8.940	60.928	21.785	100.985
3100.000	8.972	61.222	22.680	101.880
3200.000	9.001	61.507	23.579	102.779
3300.000	9.029	61.784	24.480	103.680
3400.000	9.056	62.054	25.385	104.585
3500.000	9.081	62.317	26.292	105.492
3600.000	9.105	62.573	27.201	106.401
3700.000	9.128	62.823	28.113	107.313
3800.000	9.151	63.067	29.027	108.227
3900.000	9.173	63.305	29.943	109.143
4000.000	9.194	63.537	30.861	110.061
4100.000	9.215	63.765	31.782	110.982
4200.000	9.235	63.987	32.704	111.904
4300.000	9.256	64.205	33.629	112.829
4400.000	9.276	64.418	34.555	113.755
4500.000	9.295	64.626	35.484	114.684
4600.000	9.315	64.831	36.414	115.614
4700.000	9.334	65.031	37.347	116.547
4800.000	9.353	65.228	38.281	117.481
4900.000	9.372	65.421	39.217	118.417
5000.000	9.391	65.611	40.155	119.355
5100.000	9.410	65.797	41.096	120.296
5200.000	9.428	65.980	42.037	121.237
5300.000	9.445	66.160	42.981	122.181
5400.000	9.463	66.336	43.926	123.126
5500.000	9.479	66.510	44.874	124.074
5600.000	9.495	66.681	45.822	125.022
5700.000	9.510	66.849	46.772	125.972
5800.000	9.524	67.015	47.724	126.924
5900.000	9.536	67.177	48.677	127.877
6000.000	9.548	67.338	49.631	128.831

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
NH2	18	16.024	40.300	N 1 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.153	36.630	-1.548	38.752
200.000	7.885	41.844	-.791	39.509
298.150	8.192	45.058	0.000	40.300
300.000	8.197	45.110	.015	40.315
400.000	8.323	47.488	.842	41.142
500.000	8.435	49.356	1.679	41.979
600.000	8.634	50.910	2.532	42.832
700.000	8.955	52.263	3.410	43.710
800.000	9.365	53.485	4.326	44.626
900.000	9.765	54.612	5.283	45.583
1000.000	9.988	55.655	6.273	46.573
1100.000	10.300	56.622	7.288	47.588
1200.000	10.588	57.531	8.332	48.632
1300.000	10.853	58.389	9.404	49.704
1400.000	11.098	59.202	10.502	50.802
1500.000	11.323	59.976	11.623	51.923
1600.000	11.529	60.713	12.766	53.066
1700.000	11.718	61.418	13.929	54.229
1800.000	11.890	62.092	15.109	55.409
1900.000	12.048	62.740	16.306	56.606
2000.000	12.191	63.361	17.518	57.818
2100.000	12.322	63.959	18.744	59.044
2200.000	12.440	64.535	19.982	60.282
2300.000	12.547	65.091	21.232	61.532
2400.000	12.643	65.627	22.491	62.791
2500.000	12.731	66.145	23.760	64.060
2600.000	12.810	66.646	25.037	65.337
2700.000	12.880	67.130	26.322	66.622
2800.000	12.944	67.600	27.613	67.913
2900.000	13.002	68.055	28.910	69.210
3000.000	13.054	68.497	30.213	70.513
3100.000	13.101	68.926	31.521	71.821
3200.000	13.143	69.342	32.833	73.133
3300.000	13.181	69.747	34.149	74.449
3400.000	13.216	70.141	35.469	75.769
3500.000	13.248	70.525	36.792	77.092
3600.000	13.278	70.898	38.119	78.419
3700.000	13.305	71.263	39.448	79.748
3800.000	13.331	71.618	40.780	81.080
3900.000	13.355	71.965	42.114	82.414
4000.000	13.378	72.303	43.451	83.751
4100.000	13.400	72.633	44.790	85.090
4200.000	13.421	72.957	46.131	86.431
4300.000	13.442	73.273	47.474	87.774
4400.000	13.462	73.582	48.819	89.119
4500.000	13.482	73.885	50.166	90.466
4600.000	13.502	74.181	51.516	91.816
4700.000	13.521	74.472	52.867	93.167
4800.000	13.540	74.757	54.220	94.520
4900.000	13.558	75.036	55.575	95.875
5000.000	13.576	75.310	56.932	97.232
5100.000	13.593	75.579	58.290	98.590
5200.000	13.610	75.843	59.650	99.950
5300.000	13.625	76.103	61.012	101.312
5400.000	13.638	76.358	62.375	102.675
5500.000	13.650	76.608	63.739	104.039
5600.000	13.660	76.854	65.105	105.405
5700.000	13.667	77.095	66.471	106.771
5800.000	13.672	77.334	67.838	108.138
5900.000	13.673	77.567	69.206	109.506
6000.000	13.670	77.797	70.573	110.873

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
NH3	19	17.032	-11.040	N 1 H 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.166	37.395	-1.572	-12.612
200.000	7.971	42.626	-.813	-11.853
298.150	8.567	45.922	0.000	-11.040
300.000	8.578	45.976	.016	-11.024
400.000	9.121	48.519	.901	-10.139
500.000	9.692	50.614	1.841	-9.199
600.000	10.337	52.437	2.842	-8.198
700.000	11.058	54.084	3.911	-7.129
800.000	11.814	55.610	5.055	-5.985
900.000	12.518	57.043	6.272	-4.768
1000.000	13.038	58.391	7.552	-3.488
1100.000	13.594	59.660	8.884	-2.156
1200.000	14.106	60.865	10.269	-.771
1300.000	14.578	62.013	11.704	.664
1400.000	15.010	63.110	13.184	2.144
1500.000	15.407	64.159	14.705	3.665
1600.000	15.770	65.165	16.264	5.224
1700.000	16.101	66.131	17.858	6.818
1800.000	16.403	67.060	19.483	8.443
1900.000	16.677	67.954	21.137	10.097
2000.000	16.926	68.816	22.818	11.778
2100.000	17.151	69.648	24.522	13.482
2200.000	17.355	70.450	26.247	15.207
2300.000	17.539	71.226	27.992	16.952
2400.000	17.704	71.976	29.754	18.714
2500.000	17.853	72.702	31.532	20.492
2600.000	17.987	73.405	33.325	22.285
2700.000	18.107	74.086	35.129	24.089
2800.000	18.215	74.746	36.946	25.906
2900.000	18.312	75.387	38.772	27.732
3000.000	18.399	76.009	40.608	29.568
3100.000	18.477	76.614	42.451	31.411
3200.000	18.548	77.202	44.303	33.263
3300.000	18.613	77.774	46.161	35.121
3400.000	18.672	78.330	48.025	36.985
3500.000	18.726	78.872	49.895	38.855
3600.000	18.776	79.400	51.770	40.730
3700.000	18.823	79.915	53.650	42.610
3800.000	18.867	80.418	55.535	44.495
3900.000	18.909	80.909	57.423	46.383
4000.000	18.949	81.388	59.316	48.276
4100.000	18.987	81.856	61.213	50.173
4200.000	19.025	82.314	63.114	52.074
4300.000	19.062	82.762	65.018	53.978
4400.000	19.099	83.201	66.926	55.886
4500.000	19.135	83.631	68.838	57.798
4600.000	19.170	84.052	70.753	59.713
4700.000	19.205	84.464	72.672	61.632
4800.000	19.239	84.869	74.594	63.554
4900.000	19.271	85.266	76.520	65.480
5000.000	19.303	85.655	78.448	67.408
5100.000	19.333	86.038	80.380	69.340
5200.000	19.361	86.414	82.315	71.275
5300.000	19.386	86.783	84.252	73.212
5400.000	19.408	87.145	86.192	75.152
5500.000	19.425	87.502	88.133	77.093
5600.000	19.438	87.852	90.077	79.037
5700.000	19.446	88.196	92.021	80.981
5800.000	19.447	88.534	93.966	82.926
5900.000	19.441	88.867	95.910	84.870
6000.000	19.426	89.193	97.853	86.813

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N2H2	20	30.032	50.900	N 2 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.182	43.558	-1.597	49.303
200.000	8.066	48.808	-.835	50.065
298.150	8.945	52.190	0.000	50.900
300.000	8.961	52.247	.017	50.917
400.000	9.880	54.950	.958	51.858
500.000	10.821	57.256	1.993	52.893
600.000	11.769	59.313	3.123	54.023
700.000	12.693	61.197	4.346	55.246
800.000	13.552	62.949	5.659	56.559
900.000	14.287	64.589	7.053	57.953
1000.000	14.828	66.124	8.510	59.410
1100.000	15.308	67.560	10.017	60.917
1200.000	15.746	68.911	11.571	62.471
1300.000	16.144	70.188	13.165	64.065
1400.000	16.504	71.398	14.798	65.698
1500.000	16.828	72.547	16.465	67.365
1600.000	17.121	73.643	18.163	69.063
1700.000	17.383	74.689	19.888	70.788
1800.000	17.618	75.689	21.638	72.538
1900.000	17.827	76.648	23.411	74.311
2000.000	18.013	77.567	25.203	76.103
2100.000	18.177	78.450	27.013	77.913
2200.000	18.321	79.299	28.838	79.738
2300.000	18.448	80.115	30.676	81.576
2400.000	18.560	80.903	32.527	83.427
2500.000	18.657	81.663	34.388	85.288
2600.000	18.741	82.397	36.258	87.158
2700.000	18.814	83.105	38.136	89.036
2800.000	18.878	83.791	40.020	90.920
2900.000	18.933	84.454	41.911	92.811
3000.000	18.982	85.097	43.807	94.707
3100.000	19.024	85.720	45.707	96.607
3200.000	19.061	86.325	47.611	98.511
3300.000	19.094	86.912	49.519	100.419
3400.000	19.125	87.482	51.430	102.330
3500.000	19.152	88.037	53.344	104.244
3600.000	19.179	88.577	55.261	106.161
3700.000	19.204	89.103	57.180	108.080
3800.000	19.229	89.615	59.101	110.001
3900.000	19.253	90.115	61.025	111.925
4000.000	19.278	90.603	62.952	113.852
4100.000	19.303	91.079	64.881	115.781
4200.000	19.329	91.544	66.813	117.713
4300.000	19.356	91.999	68.747	119.647
4400.000	19.383	92.445	70.684	121.584
4500.000	19.411	92.881	72.624	123.524
4600.000	19.440	93.308	74.566	125.466
4700.000	19.468	93.726	76.511	127.411
4800.000	19.496	94.136	78.460	129.360
4900.000	19.523	94.539	80.411	131.311
5000.000	19.549	94.933	82.364	133.264
5100.000	19.573	95.321	84.320	135.220
5200.000	19.595	95.701	86.279	137.179
5300.000	19.612	96.074	88.239	139.139
5400.000	19.626	96.441	90.201	141.101
5500.000	19.633	96.801	92.164	143.064
5600.000	19.635	97.155	94.128	145.028
5700.000	19.628	97.503	96.091	146.991
5800.000	19.612	97.844	98.053	148.953
5900.000	19.586	98.179	100.013	150.913
6000.000	19.548	98.508	101.970	152.870

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N2H3	21	31.040	36.800	N 2 H 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.471	45.120	-1.777	35.023
200.000	8.961	50.742	-.558	35.842
298.150	10.566	54.616	0.000	36.800
300.000	10.596	54.682	.020	36.820
400.000	12.239	57.957	1.162	37.962
500.000	13.785	60.857	2.464	39.264
600.000	15.167	63.495	3.913	40.713
700.000	16.352	65.924	5.491	42.291
800.000	17.343	68.175	7.177	43.977
900.000	18.179	70.267	8.954	45.754
1000.000	18.935	72.222	10.810	47.610
1100.000	19.564	74.056	12.736	49.536
1200.000	20.138	75.784	14.721	51.521
1300.000	20.662	77.416	16.762	53.562
1400.000	21.137	78.965	18.852	55.652
1500.000	21.569	80.439	20.988	57.788
1600.000	21.958	81.843	23.164	59.964
1700.000	22.310	83.185	25.378	62.178
1800.000	22.625	84.470	27.625	64.425
1900.000	22.908	85.700	29.902	66.702
2000.000	23.161	86.882	32.206	69.006
2100.000	23.386	88.018	34.533	71.333
2200.000	23.586	89.110	36.882	73.682
2300.000	23.763	90.163	39.250	76.050
2400.000	23.920	91.177	41.634	78.434
2500.000	24.057	92.157	44.033	80.833
2600.000	24.178	93.103	46.445	83.245
2700.000	24.285	94.017	48.868	85.668
2800.000	24.379	94.902	51.302	88.102
2900.000	24.461	95.759	53.744	90.544
3000.000	24.533	96.590	56.193	92.993
3100.000	24.597	97.395	58.650	95.450
3200.000	24.655	98.177	61.113	97.913
3300.000	24.706	98.936	63.581	100.381
3400.000	24.753	99.675	66.054	102.854
3500.000	24.796	100.393	68.531	105.331
3600.000	24.837	101.092	71.013	107.813
3700.000	24.875	101.773	73.498	110.298
3800.000	24.912	102.437	75.988	112.788
3900.000	24.949	103.084	78.481	115.281
4000.000	24.985	103.717	80.978	117.778
4100.000	25.021	104.334	83.478	120.278
4200.000	25.058	104.937	85.982	122.782
4300.000	25.095	105.527	88.489	125.289
4400.000	25.133	106.105	91.001	127.801
4500.000	25.170	106.670	93.516	130.316
4600.000	25.208	107.224	96.035	132.835
4700.000	25.246	107.766	98.558	135.358
4800.000	25.283	108.298	101.084	137.884
4900.000	25.319	108.820	103.614	140.414
5000.000	25.354	109.332	106.148	142.948
5100.000	25.385	109.834	108.685	145.485
5200.000	25.414	110.327	111.225	148.025
5300.000	25.438	110.812	113.768	150.568
5400.000	25.456	111.287	116.312	153.112
5500.000	25.468	111.755	118.859	155.659
5600.000	25.472	112.213	121.406	158.206
5700.000	25.467	112.664	123.953	160.753
5800.000	25.450	113.107	126.499	163.299
5900.000	25.422	113.542	129.042	165.842
6000.000	25.378	113.969	131.583	168.383

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N2H4	22	32.048	22.750	N 2 H 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.929	45.117	-2.145	20.605
200.000	10.814	51.868	-1.161	21.589
298.150	12.854	56.561	0.000	22.750
300.000	12.893	56.642	.024	22.774
400.000	14.986	60.639	1.418	24.168
500.000	16.950	64.198	3.017	25.767
600.000	18.679	67.445	4.800	27.550
700.000	20.101	70.436	6.742	29.492
800.000	21.182	73.194	8.809	31.559
900.000	21.923	75.735	10.967	33.717
1000.000	22.362	78.070	13.184	35.934
1100.000	23.047	80.234	15.455	38.205
1200.000	23.690	82.267	17.792	40.542
1300.000	24.295	84.188	20.191	42.941
1400.000	24.863	86.009	22.650	45.400
1500.000	25.397	87.743	25.163	47.913
1600.000	25.899	89.398	27.728	50.478
1700.000	26.371	90.983	30.342	53.092
1800.000	26.814	92.503	33.001	55.751
1900.000	27.232	93.964	35.704	58.454
2000.000	27.626	95.371	38.447	61.197
2100.000	27.996	96.727	41.228	63.978
2200.000	28.346	98.038	44.045	66.795
2300.000	28.677	99.305	46.897	69.647
2400.000	28.989	100.533	49.780	72.530
2500.000	29.285	101.722	52.694	75.444
2600.000	29.566	102.876	55.637	78.387
2700.000	29.833	103.997	58.607	81.357
2800.000	30.087	105.087	61.603	84.353
2900.000	30.328	106.147	64.624	87.374
3000.000	30.559	107.179	67.668	90.418
3100.000	30.780	108.184	70.735	93.485
3200.000	30.991	109.165	73.824	96.574
3300.000	31.194	110.122	76.933	99.683
3400.000	31.388	111.056	80.062	102.812
3500.000	31.575	111.963	83.211	105.961
3600.000	31.755	112.860	86.377	109.127
3700.000	31.928	113.733	89.561	112.311
3800.000	32.095	114.587	92.763	115.513
3900.000	32.255	115.422	95.980	118.730
4000.000	32.408	116.241	99.213	121.963
4100.000	32.555	117.043	102.461	125.211
4200.000	32.696	117.829	105.724	128.474
4300.000	32.830	118.600	109.000	131.750
4400.000	32.957	119.356	112.290	135.040
4500.000	33.077	120.098	115.592	138.342
4600.000	33.189	120.827	118.905	141.655
4700.000	33.293	121.541	122.229	144.979
4800.000	33.388	122.244	125.563	148.313
4900.000	33.473	122.933	128.907	151.657
5000.000	33.548	123.610	132.258	155.008
5100.000	33.611	124.275	135.616	158.366
5200.000	33.663	124.928	138.980	161.730
5300.000	33.700	125.570	142.348	165.098
5400.000	33.724	126.200	145.719	168.469
5500.000	33.731	126.819	149.092	171.842
5600.000	33.722	127.426	152.465	175.215
5700.000	33.694	128.023	155.836	178.586
5800.000	33.646	128.609	159.203	181.953
5900.000	33.576	129.183	162.564	185.314
6000.000	33.484	129.747	165.917	188.667

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
H2O*	23	18.016	-68.320	H 2 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	5.298	3.227	-2.495	-70.815
200.000	12.871	9.253	-1.582	-69.902
298.150	19.046	15.607	0.000	-68.320
300.000	19.140	15.723	.035	-68.285
400.000	22.985	21.822	2.164	-66.156
500.000	23.905	27.106	4.533	-63.787
600.000	22.012	31.336	6.851	-61.469
700.000	18.035	34.450	8.866	-59.454
800.000	13.320	36.549	10.432	-57.888
900.000	9.827	37.892	11.570	-56.750
1000.000	10.132	38.897	12.523	-55.797
1100.000	10.218	39.867	13.541	-54.779
1200.000	10.318	40.760	14.568	-53.752
1300.000	10.431	41.590	15.605	-52.715
1400.000	10.555	42.368	16.654	-51.666
1500.000	10.687	43.100	17.716	-50.604
1600.000	10.826	43.795	18.792	-49.528
1700.000	10.971	44.455	19.882	-48.438
1800.000	11.119	45.085	20.986	-47.334
1900.000	11.269	45.692	22.105	-46.215
2000.000	11.421	46.274	23.240	-45.080
2100.000	11.572	46.834	24.390	-43.930
2200.000	11.722	47.376	25.554	-42.766
2300.000	11.870	47.901	26.734	-41.586
2400.000	12.013	48.409	27.928	-40.392
2500.000	12.152	48.902	29.136	-39.184
2600.000	12.286	49.381	30.358	-37.962
2700.000	12.414	49.847	31.593	-36.727
2800.000	12.535	50.301	32.841	-35.479
2900.000	12.649	50.743	34.100	-34.220
3000.000	12.755	51.174	35.370	-32.950
3100.000	12.853	51.593	36.651	-31.669
3200.000	12.943	52.003	37.941	-30.379
3300.000	13.024	52.402	39.239	-29.081
3400.000	13.097	52.792	40.545	-27.775
3500.000	13.162	53.173	41.858	-26.462
3600.000	13.217	53.544	43.177	-25.143
3700.000	13.265	53.907	44.502	-23.818
3800.000	13.305	54.262	45.830	-22.490
3900.000	13.337	54.608	47.162	-21.158
4000.000	13.363	54.946	48.497	-19.823
4100.000	13.381	55.276	49.835	-18.485
4200.000	13.394	55.599	51.173	-17.147
4300.000	13.402	55.914	52.513	-15.807
4400.000	13.406	56.222	53.854	-14.466
4500.000	13.406	56.523	55.194	-13.126
4600.000	13.404	56.818	56.535	-11.785
4700.000	13.401	57.106	57.875	-10.445
4800.000	13.398	57.388	59.215	-9.105
4900.000	13.397	57.665	60.555	-7.765
5000.000	13.398	57.935	61.894	-6.426
5100.000	13.403	58.200	63.234	-5.086
5200.000	13.415	58.461	64.575	-3.745
5300.000	13.434	58.716	65.918	-2.402
5400.000	13.462	58.968	67.262	-1.058
5500.000	13.502	59.215	68.610	.290
5600.000	13.554	59.459	69.963	1.643
5700.000	13.622	59.699	71.322	3.002
5800.000	13.707	59.937	72.688	4.368
5900.000	13.812	60.172	74.064	5.744
6000.000	13.939	60.405	75.451	7.131

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
NH3*	24	17.032	-18.060	N 1 H 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	20.663	4.723	-3.945	-22.005
200.000	19.074	18.154	-2.017	-20.077
298.150	22.604	26.311	0.000	-18.060
300.000	22.689	26.455	.043	-18.017
400.000	28.304	33.735	2.587	-15.473
500.000	33.493	40.634	5.688	-12.372
600.000	36.602	47.055	9.215	-8.845
700.000	36.752	52.750	12.909	-5.151
800.000	33.839	57.499	16.463	-1.597
900.000	28.534	61.197	19.596	1.536
1000.000	22.280	63.879	22.137	4.077
1100.000	22.316	66.005	24.367	6.307
1200.000	22.315	67.947	26.599	8.539
1300.000	22.280	69.732	28.829	10.769
1400.000	22.216	71.381	31.054	12.994
1500.000	22.127	72.910	33.271	15.211
1600.000	22.016	74.335	35.479	17.419
1700.000	21.887	75.666	37.674	19.614
1800.000	21.742	76.913	39.856	21.796
1900.000	21.586	78.084	42.022	23.962
2000.000	21.420	79.187	44.173	26.113
2100.000	21.249	80.228	46.306	28.246
2200.000	21.073	81.213	48.422	30.362
2300.000	20.896	82.146	50.521	32.461
2400.000	20.720	83.031	52.601	34.541
2500.000	20.547	83.874	54.665	36.605
2600.000	20.379	84.676	56.711	38.651
2700.000	20.216	85.442	58.741	40.681
2800.000	20.062	86.175	60.755	42.695
2900.000	19.917	86.876	62.753	44.693
3000.000	19.782	87.549	64.738	46.678
3100.000	19.658	88.195	66.710	48.650
3200.000	19.546	88.818	68.670	50.610
3300.000	19.446	89.413	70.620	52.560
3400.000	19.359	89.997	72.560	54.500
3500.000	19.285	90.557	74.492	56.432
3600.000	19.225	91.099	76.417	58.357
3700.000	19.177	91.626	78.337	60.277
3800.000	19.142	92.136	80.253	62.193
3900.000	19.119	92.633	82.166	64.106
4000.000	19.107	93.117	84.077	66.017
4100.000	19.106	93.589	85.988	67.928
4200.000	19.115	94.050	87.899	69.839
4300.000	19.131	94.499	89.811	71.751
4400.000	19.154	94.939	91.725	73.665
4500.000	19.183	95.370	93.642	75.582
4600.000	19.215	95.792	95.562	77.502
4700.000	19.248	96.205	97.485	79.425
4800.000	19.281	96.611	99.412	81.352
4900.000	19.311	97.009	101.341	83.281
5000.000	19.335	97.400	103.274	85.214
5100.000	19.352	97.783	105.208	87.148
5200.000	19.357	98.159	107.144	89.084
5300.000	19.348	98.527	109.079	91.019
5400.000	19.322	98.889	111.013	92.953
5500.000	19.275	99.243	112.943	94.883
5600.000	19.204	99.590	114.867	96.807
5700.000	19.105	99.929	116.782	98.722
5800.000	18.973	100.260	118.687	100.627
5900.000	18.806	100.583	120.576	102.516
6000.000	18.598	100.897	122.447	104.387

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C*	25	12.011	0.000	C 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	.612	.158	-.245	-.245
200.000	1.216	.754	-.156	-.156
298.150	1.972	1.377	0.000	0.000
300.000	1.986	1.389	.004	.004
400.000	2.778	2.070	.242	.242
500.000	3.490	2.769	.557	.557
600.000	4.061	3.458	.935	.935
700.000	4.470	4.117	1.363	1.363
800.000	4.741	4.733	1.825	1.825
900.000	4.937	5.303	2.309	2.309
1000.000	5.162	5.834	2.813	2.813
1100.000	5.282	6.332	3.336	3.336
1200.000	5.389	6.796	3.869	3.869
1300.000	5.485	7.231	4.413	4.413
1400.000	5.569	7.641	4.966	4.966
1500.000	5.644	8.027	5.527	5.527
1600.000	5.710	8.394	6.094	6.094
1700.000	5.767	8.742	6.668	6.668
1800.000	5.817	9.073	7.247	7.247
1900.000	5.860	9.389	7.831	7.831
2000.000	5.898	9.690	8.419	8.419
2100.000	5.929	9.979	9.011	9.011
2200.000	5.957	10.255	9.605	9.605
2300.000	5.980	10.520	10.202	10.202
2400.000	6.000	10.775	10.801	10.801
2500.000	6.017	11.021	11.402	11.402
2600.000	6.031	11.257	12.004	12.004
2700.000	6.044	11.483	12.608	12.608
2800.000	6.055	11.705	13.213	13.213
2900.000	6.065	11.917	13.819	13.819
3000.000	6.075	12.123	14.426	14.426
3100.000	6.084	12.322	15.034	15.034
3200.000	6.093	12.516	15.643	15.643
3300.000	6.102	12.704	16.252	16.252
3400.000	6.112	12.886	16.863	16.863
3500.000	6.123	13.063	17.475	17.475
3600.000	6.134	13.236	18.088	18.088
3700.000	6.147	13.404	18.702	18.702
3800.000	6.160	13.568	19.317	19.317
3900.000	6.175	13.728	19.934	19.934
4000.000	6.191	13.885	20.552	20.552
4100.000	6.209	14.038	21.172	21.172
4200.000	6.228	14.188	21.794	21.794
4300.000	6.248	14.334	22.418	22.418
4400.000	6.269	14.478	23.043	23.043
4500.000	6.291	14.620	23.671	23.671
4600.000	6.314	14.758	24.302	24.302
4700.000	6.337	14.894	24.934	24.934
4800.000	6.362	15.028	25.569	25.569
4900.000	6.386	15.159	26.207	26.207
5000.000	6.410	15.288	26.846	26.846
5100.000	6.434	15.416	27.488	27.488
5200.000	6.456	15.541	28.133	28.133
5300.000	6.478	15.664	28.780	28.780
5400.000	6.498	15.785	29.429	29.429
5500.000	6.516	15.905	30.079	30.079
5600.000	6.532	16.022	30.732	30.732
5700.000	6.544	16.138	31.386	31.386
5800.000	6.553	16.252	32.040	32.040
5900.000	6.557	16.364	32.696	32.696
6000.000	6.557	16.474	33.352	33.352

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C	26	12.011	170.890	C 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.525	32.420	-.573	169.917
200.000	4.966	35.715	-.495	170.395
298.150	5.089	37.728	0.000	170.890
300.000	5.090	37.760	.009	170.899
400.000	5.053	39.222	.517	171.407
500.000	4.972	40.341	1.019	171.909
600.000	4.920	41.242	1.513	172.403
700.000	4.928	42.000	2.005	172.895
800.000	4.982	42.661	2.500	173.390
900.000	5.028	43.251	3.001	173.891
1000.000	4.969	43.779	3.502	174.392
1100.000	4.964	44.253	3.999	174.889
1200.000	4.962	44.685	4.495	175.385
1300.000	4.962	45.082	4.991	175.881
1400.000	4.965	45.449	5.487	176.377
1500.000	4.969	45.792	5.984	176.874
1600.000	4.975	46.113	6.481	177.371
1700.000	4.982	46.415	6.979	177.869
1800.000	4.991	46.700	7.478	178.368
1900.000	5.001	46.970	7.977	178.867
2000.000	5.013	47.227	8.478	179.368
2100.000	5.025	47.472	8.980	179.870
2200.000	5.039	47.706	9.483	180.373
2300.000	5.053	47.930	9.988	180.878
2400.000	5.069	48.145	10.494	181.384
2500.000	5.084	48.353	11.001	181.891
2600.000	5.101	48.552	11.511	182.401
2700.000	5.118	48.745	12.022	182.912
2800.000	5.135	48.932	12.534	183.424
2900.000	5.152	49.112	13.049	183.939
3000.000	5.170	49.287	13.565	184.455
3100.000	5.188	49.457	14.083	184.973
3200.000	5.205	49.622	14.602	185.492
3300.000	5.223	49.782	15.124	186.014
3400.000	5.241	49.938	15.647	186.537
3500.000	5.258	50.091	16.172	187.062
3600.000	5.275	50.239	16.699	187.589
3700.000	5.292	50.384	17.227	188.117
3800.000	5.309	50.525	17.757	188.647
3900.000	5.325	50.663	18.289	189.179
4000.000	5.341	50.798	18.822	189.712
4100.000	5.356	50.930	19.357	190.247
4200.000	5.371	51.060	19.893	190.783
4300.000	5.386	51.186	20.431	191.321
4400.000	5.399	51.310	20.970	191.860
4500.000	5.412	51.432	21.511	192.401
4600.000	5.425	51.551	22.053	192.943
4700.000	5.437	51.668	22.596	193.486
4800.000	5.449	51.782	23.140	194.030
4900.000	5.460	51.895	23.686	194.576
5000.000	5.470	52.005	24.232	195.122
5100.000	5.480	52.113	24.780	195.670
5200.000	5.489	52.220	25.328	196.218
5300.000	5.497	52.324	25.877	196.767
5400.000	5.505	52.427	26.428	197.318
5500.000	5.513	52.528	26.978	197.868
5600.000	5.520	52.628	27.530	198.420
5700.000	5.526	52.726	28.082	198.972
5800.000	5.533	52.822	28.635	199.525
5900.000	5.538	52.916	29.189	200.079
6000.000	5.544	53.009	29.743	200.633

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CH	27	13.019	142.000	C 1 H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.273	36.281	-1.356	140.644
200.000	6.924	40.863	-.692	141.308
298.150	7.115	43.672	0.000	142.000
300.000	7.117	43.718	.013	142.013
400.000	7.094	45.765	.725	142.725
500.000	7.034	47.341	1.431	143.431
600.000	7.049	48.623	2.134	144.134
700.000	7.184	49.718	2.845	144.845
800.000	7.419	50.692	3.574	145.574
900.000	7.668	51.581	4.329	146.329
1000.000	7.779	52.395	5.103	147.103
1100.000	8.007	53.148	5.893	147.893
1200.000	8.216	53.854	6.704	148.704
1300.000	8.409	54.520	7.535	149.535
1400.000	8.586	55.149	8.385	150.385
1500.000	8.747	55.747	9.252	151.252
1600.000	8.894	56.317	10.134	152.134
1700.000	9.028	56.860	11.030	153.030
1800.000	9.149	57.379	11.939	153.939
1900.000	9.259	57.877	12.860	154.860
2000.000	9.357	58.354	13.791	155.791
2100.000	9.446	58.813	14.731	156.731
2200.000	9.525	59.255	15.680	157.680
2300.000	9.595	59.679	16.636	158.636
2400.000	9.657	60.089	17.598	159.598
2500.000	9.712	60.485	18.567	160.567
2600.000	9.760	60.865	19.540	161.540
2700.000	9.802	61.236	20.519	162.519
2800.000	9.839	61.593	21.501	163.501
2900.000	9.870	61.938	22.486	164.486
3000.000	9.897	62.274	23.475	165.475
3100.000	9.921	62.599	24.466	166.466
3200.000	9.941	62.914	25.459	167.459
3300.000	9.958	63.220	26.454	168.454
3400.000	9.972	63.517	27.450	169.450
3500.000	9.984	63.807	28.448	170.448
3600.000	9.995	64.088	29.447	171.447
3700.000	10.004	64.362	30.447	172.447
3800.000	10.013	64.629	31.448	173.448
3900.000	10.020	64.889	32.449	174.449
4000.000	10.027	65.143	33.452	175.452
4100.000	10.034	65.391	34.455	176.455
4200.000	10.041	65.633	35.459	177.459
4300.000	10.048	65.869	36.463	178.463
4400.000	10.056	66.100	37.468	179.468
4500.000	10.064	66.326	38.474	180.474
4600.000	10.073	66.547	39.481	181.481
4700.000	10.083	66.764	40.489	182.489
4800.000	10.093	66.977	41.498	183.498
4900.000	10.105	67.185	42.508	184.508
5000.000	10.118	67.389	43.519	185.519
5100.000	10.131	67.590	44.531	186.531
5200.000	10.145	67.786	45.545	187.545
5300.000	10.161	67.980	46.560	188.560
5400.000	10.177	68.170	47.577	189.577
5500.000	10.194	68.357	48.596	190.596
5600.000	10.211	68.541	49.616	191.616
5700.000	10.229	68.721	50.638	192.638
5800.000	10.247	68.899	51.662	193.662
5900.000	10.265	69.075	52.687	194.687
6000.000	10.283	69.247	53.715	195.715

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
HCN	28	27.027	31.200	C 1 H 1 N 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.362	40.123	-1.504	29.696
200.000	7.651	44.949	-.801	30.399
298.150	8.621	48.191	0.000	31.200
300.000	8.637	48.246	.016	31.216
400.000	9.408	50.841	.920	32.120
500.000	10.034	53.009	1.893	33.093
600.000	10.568	54.887	2.923	34.123
700.000	11.043	56.552	4.004	35.204
800.000	11.474	58.055	5.130	36.330
900.000	11.860	59.430	6.298	37.498
1000.000	12.177	60.696	7.500	38.700
1100.000	12.479	61.871	8.733	39.933
1200.000	12.756	62.969	9.995	41.195
1300.000	13.010	64.000	11.284	42.484
1400.000	13.243	64.973	12.596	43.796
1500.000	13.456	65.894	13.931	45.131
1600.000	13.651	66.769	15.287	46.487
1700.000	13.829	67.602	16.661	47.861
1800.000	13.990	68.397	18.052	49.252
1900.000	14.137	69.157	19.459	50.659
2000.000	14.271	69.885	20.879	52.079
2100.000	14.393	70.585	22.312	53.512
2200.000	14.503	71.258	23.757	54.957
2300.000	14.603	71.904	25.213	56.413
2400.000	14.694	72.528	26.678	57.878
2500.000	14.776	73.129	28.151	59.351
2600.000	14.852	73.710	29.633	60.833
2700.000	14.920	74.272	31.121	62.321
2800.000	14.983	74.815	32.617	63.817
2900.000	15.041	75.343	34.118	65.318
3000.000	15.094	75.854	35.625	66.825
3100.000	15.144	76.349	37.137	68.337
3200.000	15.191	76.831	38.653	69.853
3300.000	15.235	77.299	40.175	71.375
3400.000	15.277	77.755	41.700	72.900
3500.000	15.318	78.198	43.230	74.430
3600.000	15.357	78.630	44.764	75.964
3700.000	15.395	79.051	46.301	77.501
3800.000	15.433	79.462	47.843	79.043
3900.000	15.470	79.864	49.388	80.588
4000.000	15.508	80.256	50.937	82.137
4100.000	15.545	80.639	52.490	83.690
4200.000	15.582	81.014	54.046	85.246
4300.000	15.620	81.381	55.606	86.806
4400.000	15.657	81.741	57.170	88.370
4500.000	15.695	82.093	58.737	89.937
4600.000	15.732	82.439	60.309	91.509
4700.000	15.770	82.777	61.884	93.084
4800.000	15.807	83.110	63.463	94.663
4900.000	15.843	83.436	65.045	96.245
5000.000	15.879	83.756	66.631	97.831
5100.000	15.913	84.071	68.221	99.421
5200.000	15.946	84.381	69.814	101.014
5300.000	15.977	84.685	71.410	102.610
5400.000	16.005	84.983	73.009	104.209
5500.000	16.030	85.278	74.611	105.811
5600.000	16.051	85.566	76.215	107.415
5700.000	16.068	85.851	77.821	109.021
5800.000	16.080	86.130	79.429	110.629
5900.000	16.086	86.405	81.037	112.237
6000.000	16.085	86.676	82.645	113.845

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
HCNO	29	43.027	-27.900	C 1 H 1 O 1 N 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.418	47.229	-1.812	-29.712
200.000	9.203	52.933	-.979	-28.879
298.150	10.709	56.895	0.000	-27.900
300.000	10.736	56.963	.020	-27.880
400.000	12.027	60.234	1.160	-26.740
500.000	13.094	63.036	2.418	-25.482
600.000	13.962	65.503	3.772	-24.128
700.000	14.660	67.709	5.204	-22.696
800.000	15.224	69.705	6.700	-21.200
900.000	15.696	71.526	8.246	-19.654
1000.000	16.125	73.202	9.837	-18.063
1100.000	16.476	74.756	11.468	-16.432
1200.000	16.796	76.204	13.132	-14.768
1300.000	17.087	77.559	14.826	-13.074
1400.000	17.351	78.836	16.548	-11.352
1500.000	17.589	80.041	18.295	-9.605
1600.000	17.804	81.183	20.065	-7.835
1700.000	17.997	82.263	21.855	-6.045
1800.000	18.170	83.302	23.664	-4.236
1900.000	18.325	84.289	25.489	-2.411
2000.000	18.462	85.232	27.328	-.572
2100.000	18.584	86.136	29.181	1.281
2200.000	18.692	87.003	31.045	3.145
2300.000	18.787	87.836	32.919	5.019
2400.000	18.870	88.637	34.802	6.902
2500.000	18.942	89.409	36.692	8.792
2600.000	19.006	90.153	38.590	10.690
2700.000	19.062	90.872	40.493	12.593
2800.000	19.110	91.566	42.402	14.502
2900.000	19.152	92.237	44.315	16.415
3000.000	19.189	92.887	46.232	18.332
3100.000	19.221	93.517	48.153	20.253
3200.000	19.250	94.128	50.076	22.176
3300.000	19.275	94.720	52.002	24.102
3400.000	19.298	95.296	53.931	26.031
3500.000	19.320	95.853	55.862	27.962
3600.000	19.340	96.400	57.795	29.895
3700.000	19.359	96.931	59.730	31.830
3800.000	19.378	97.447	61.667	33.767
3900.000	19.397	97.951	63.606	35.706
4000.000	19.415	98.442	65.546	37.646
4100.000	19.435	98.922	67.489	39.589
4200.000	19.454	99.390	69.433	41.533
4300.000	19.474	99.848	71.380	43.480
4400.000	19.494	100.296	73.328	45.428
4500.000	19.515	100.735	75.278	47.378
4600.000	19.537	101.164	77.231	49.331
4700.000	19.558	101.584	79.186	51.286
4800.000	19.579	101.996	81.143	53.243
4900.000	19.600	102.400	83.102	55.202
5000.000	19.619	102.796	85.062	57.162
5100.000	19.638	103.185	87.025	59.125
5200.000	19.655	103.566	88.990	61.090
5300.000	19.669	103.941	90.956	63.056
5400.000	19.681	104.309	92.924	65.024
5500.000	19.688	104.670	94.892	66.992
5600.000	19.692	105.025	96.861	68.961
5700.000	19.690	105.373	98.830	70.930
5800.000	19.682	105.715	100.799	72.899
5900.000	19.667	106.052	102.767	74.867
6000.000	19.643	106.382	104.732	76.832

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
HCO	30	29.019	-2.900	C 1 H 1 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.160	45.135	-1.565	-4.465
200.000	7.954	50.365	-.806	-3.706
298.150	8.444	53.638	0.000	-2.900
300.000	8.452	53.691	.016	-2.884
400.000	8.818	56.175	.880	-2.020
500.000	9.168	58.179	1.779	-1.121
600.000	9.569	59.885	2.715	-.185
700.000	10.034	61.395	3.695	.795
800.000	10.527	62.767	4.723	1.823
900.000	10.965	64.033	5.798	2.898
1000.000	11.209	65.203	6.909	4.009
1100.000	11.473	66.284	8.044	5.144
1200.000	11.713	67.293	9.203	6.303
1300.000	11.931	68.239	10.385	7.485
1400.000	12.127	69.131	11.589	8.689
1500.000	12.305	69.974	12.810	9.910
1600.000	12.464	70.773	14.049	11.149
1700.000	12.606	71.533	15.303	12.403
1800.000	12.733	72.257	16.570	13.670
1900.000	12.846	72.949	17.849	14.949
2000.000	12.946	73.610	19.139	16.239
2100.000	13.034	74.244	20.438	17.538
2200.000	13.111	74.852	21.745	18.845
2300.000	13.179	75.435	23.060	20.160
2400.000	13.238	75.999	24.381	21.481
2500.000	13.289	76.540	25.707	22.807
2600.000	13.333	77.062	27.038	24.138
2700.000	13.371	77.566	28.373	25.473
2800.000	13.404	78.053	29.712	26.812
2900.000	13.432	78.524	31.054	28.154
3000.000	13.456	78.980	32.398	29.498
3100.000	13.477	79.421	33.745	30.845
3200.000	13.495	79.849	35.093	32.193
3300.000	13.512	80.265	36.444	33.544
3400.000	13.526	80.669	37.796	34.896
3500.000	13.540	81.061	39.149	36.249
3600.000	13.553	81.442	40.504	37.604
3700.000	13.565	81.814	41.860	38.960
3800.000	13.577	82.176	43.217	40.317
3900.000	13.589	82.529	44.575	41.675
4000.000	13.602	82.873	45.935	43.035
4100.000	13.615	83.209	47.295	44.395
4200.000	13.628	83.537	48.658	45.758
4300.000	13.642	83.858	50.021	47.121
4400.000	13.656	84.172	51.386	48.486
4500.000	13.671	84.479	52.752	49.852
4600.000	13.686	84.779	54.120	51.220
4700.000	13.702	85.074	55.490	52.590
4800.000	13.717	85.363	56.861	53.961
4900.000	13.732	85.646	58.233	55.333
5000.000	13.746	85.923	59.607	56.707
5100.000	13.760	86.195	60.982	58.082
5200.000	13.772	86.463	62.359	59.459
5300.000	13.782	86.725	63.737	60.837
5400.000	13.789	86.983	65.115	62.215
5500.000	13.794	87.235	66.494	63.594
5600.000	13.796	87.485	67.874	64.974
5700.000	13.793	87.729	69.253	66.353
5800.000	13.784	87.963	70.632	67.732
5900.000	13.771	88.204	72.010	69.110
6000.000	13.750	88.435	73.386	70.486

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CH2	31	14.027	92.070	C 1 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.259	35.717	-1.388	90.682
200.000	7.036	40.305	-.722	91.348
298.150	7.658	43.232	0.000	92.070
300.000	7.669	43.281	.014	92.084
400.000	8.235	45.565	.810	92.880
500.000	8.784	47.462	1.661	93.731
600.000	9.342	49.113	2.567	94.637
700.000	9.911	50.595	3.529	95.599
800.000	10.469	51.956	4.549	96.619
900.000	10.971	53.219	5.621	97.691
1000.000	11.345	54.395	6.739	98.809
1100.000	11.709	55.494	7.892	99.962
1200.000	12.041	56.527	9.079	101.149
1300.000	12.343	57.503	10.299	102.369
1400.000	12.618	58.428	11.547	103.617
1500.000	12.866	59.307	12.821	104.891
1600.000	13.091	60.145	14.120	106.190
1700.000	13.293	60.945	15.439	107.509
1800.000	13.474	61.710	16.777	108.847
1900.000	13.636	62.443	18.133	110.203
2000.000	13.781	63.146	19.504	111.574
2100.000	13.910	63.821	20.889	112.959
2200.000	14.024	64.471	22.286	114.356
2300.000	14.124	65.097	23.693	115.763
2400.000	14.213	65.700	25.110	117.180
2500.000	14.291	66.282	26.535	118.605
2600.000	14.359	66.843	27.968	120.038
2700.000	14.419	67.387	29.407	121.477
2800.000	14.471	67.912	30.851	122.921
2900.000	14.517	68.421	32.301	124.371
3000.000	14.558	68.913	33.755	125.825
3100.000	14.593	69.391	35.212	127.282
3200.000	14.625	69.855	36.673	128.743
3300.000	14.653	70.306	38.137	130.207
3400.000	14.679	70.744	39.604	131.674
3500.000	14.703	71.169	41.073	133.143
3600.000	14.726	71.584	42.544	134.614
3700.000	14.747	71.988	44.018	136.088
3800.000	14.768	72.381	45.494	137.564
3900.000	14.788	72.765	46.972	139.042
4000.000	14.808	73.140	48.451	140.521
4100.000	14.829	73.506	49.933	142.003
4200.000	14.850	73.863	51.417	143.487
4300.000	14.871	74.213	52.903	144.973
4400.000	14.892	74.555	54.391	146.461
4500.000	14.914	74.890	55.882	147.952
4600.000	14.936	75.218	57.374	149.444
4700.000	14.958	75.539	58.869	150.939
4800.000	14.980	75.855	60.366	152.436
4900.000	15.001	76.164	61.865	153.935
5000.000	15.021	76.467	63.366	155.436
5100.000	15.040	76.765	64.869	156.939
5200.000	15.057	77.057	66.374	158.444
5300.000	15.071	77.344	67.881	159.951
5400.000	15.082	77.626	69.388	161.458
5500.000	15.089	77.902	70.897	162.967
5600.000	15.092	78.174	72.406	164.476
5700.000	15.089	78.441	73.915	165.985
5800.000	15.080	78.704	75.424	167.494
5900.000	15.063	78.961	76.931	169.001
6000.000	15.038	79.214	78.436	170.506

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
HCHO	32	30.027	-27.700	C 1 H 2 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.177	43.704	-1.572	-29.272
200.000	7.940	48.915	-.816	-28.516
298.150	8.687	52.222	0.000	-27.700
300.000	8.702	52.277	.016	-27.684
400.000	9.519	54.891	.927	-26.773
500.000	10.416	57.110	1.923	-25.777
600.000	11.387	59.094	3.012	-24.688
700.000	12.394	60.925	4.201	-23.499
800.000	13.371	62.644	5.490	-22.210
900.000	14.218	64.270	6.871	-20.829
1000.000	14.807	65.801	8.325	-19.375
1100.000	15.323	67.237	9.832	-17.868
1200.000	15.791	68.591	11.388	-16.312
1300.000	16.213	69.872	12.989	-14.711
1400.000	16.594	71.088	14.629	-13.071
1500.000	16.935	72.244	16.306	-11.394
1600.000	17.241	73.347	18.015	-9.685
1700.000	17.513	74.401	19.753	-7.947
1800.000	17.754	75.409	21.517	-6.183
1900.000	17.967	76.374	23.303	-4.397
2000.000	18.154	77.301	25.109	-2.591
2100.000	18.318	78.191	26.933	-.767
2200.000	18.460	79.046	28.772	1.072
2300.000	18.584	79.869	30.624	2.924
2400.000	18.690	80.663	32.488	4.788
2500.000	18.782	81.427	34.362	6.662
2600.000	18.860	82.166	36.244	8.544
2700.000	18.926	82.879	38.134	10.434
2800.000	18.982	83.568	40.029	12.329
2900.000	19.030	84.235	41.930	14.230
3000.000	19.071	84.881	43.835	16.135
3100.000	19.106	85.507	45.744	18.044
3200.000	19.136	86.114	47.656	19.956
3300.000	19.163	86.703	49.571	21.871
3400.000	19.187	87.275	51.488	23.788
3500.000	19.209	87.832	53.408	25.708
3600.000	19.230	88.374	55.330	27.630
3700.000	19.251	88.901	57.254	29.554
3800.000	19.272	89.414	59.180	31.480
3900.000	19.293	89.915	61.108	33.408
4000.000	19.316	90.404	63.039	35.339
4100.000	19.340	90.881	64.972	37.272
4200.000	19.365	91.348	66.907	39.207
4300.000	19.391	91.804	68.845	41.145
4400.000	19.419	92.250	70.785	43.085
4500.000	19.448	92.686	72.729	45.029
4600.000	19.477	93.114	74.675	46.975
4700.000	19.507	93.533	76.624	48.924
4800.000	19.537	93.944	78.576	50.876
4900.000	19.566	94.347	80.531	52.831
5000.000	19.593	94.743	82.489	54.789
5100.000	19.618	95.131	84.450	56.750
5200.000	19.640	95.512	86.413	58.713
5300.000	19.658	95.887	88.378	60.678
5400.000	19.670	96.254	90.344	62.644
5500.000	19.675	96.615	92.312	64.612
5600.000	19.673	96.970	94.279	66.579
5700.000	19.661	97.318	96.246	68.546
5800.000	19.638	97.660	98.211	70.511
5900.000	19.602	97.995	100.173	72.473
6000.000	19.552	98.324	102.131	74.431

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CH3	33	15.035	34.820	C 1 H 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.313	37.333	-1.670	33.150
200.000	8.485	42.787	-.878	33.942
298.150	9.360	46.343	0.000	34.820
300.000	9.376	46.403	.017	34.837
400.000	10.116	49.204	.993	35.813
500.000	10.801	51.535	2.039	36.859
600.000	11.488	53.565	3.153	37.973
700.000	12.196	55.388	4.337	39.157
800.000	12.907	57.063	5.592	40.412
900.000	13.567	58.623	6.917	41.737
1000.000	14.082	60.081	8.301	43.121
1100.000	14.596	61.447	9.735	44.555
1200.000	15.065	62.738	11.219	46.039
1300.000	15.495	63.961	12.747	47.567
1400.000	15.887	65.124	14.316	49.136
1500.000	16.243	66.232	15.923	50.743
1600.000	16.566	67.291	17.564	52.384
1700.000	16.858	68.304	19.235	54.055
1800.000	17.122	69.275	20.934	55.754
1900.000	17.359	70.207	22.659	57.479
2000.000	17.572	71.103	24.405	59.225
2100.000	17.763	71.965	26.172	60.992
2200.000	17.933	72.796	27.957	62.777
2300.000	18.084	73.596	29.758	64.578
2400.000	18.219	74.369	31.574	66.394
2500.000	18.338	75.115	33.402	68.222
2600.000	18.443	75.836	35.241	70.061
2700.000	18.536	76.534	37.090	71.910
2800.000	18.619	77.210	38.948	73.768
2900.000	18.691	77.864	40.813	75.633
3000.000	18.756	78.499	42.686	77.506
3100.000	18.813	79.115	44.564	79.384
3200.000	18.864	79.713	46.448	81.268
3300.000	18.910	80.294	48.337	83.157
3400.000	18.952	80.860	50.230	85.050
3500.000	18.990	81.410	52.127	86.947
3600.000	19.025	81.945	54.028	88.848
3700.000	19.059	82.467	55.932	90.752
3800.000	19.091	82.975	57.839	92.659
3900.000	19.122	83.472	59.750	94.570
4000.000	19.152	83.956	61.664	96.484
4100.000	19.183	84.430	63.580	98.400
4200.000	19.213	84.892	65.500	100.320
4300.000	19.243	85.345	67.423	102.243
4400.000	19.273	85.787	69.349	104.169
4500.000	19.304	86.221	71.278	106.098
4600.000	19.334	86.645	73.209	108.029
4700.000	19.365	87.061	75.144	109.964
4800.000	19.395	87.469	77.082	111.902
4900.000	19.424	87.870	79.023	113.843
5000.000	19.452	88.262	80.967	115.787
5100.000	19.479	88.648	82.914	117.734
5200.000	19.503	89.026	84.863	119.683
5300.000	19.524	89.398	86.814	121.634
5400.000	19.542	89.763	88.768	123.588
5500.000	19.555	90.122	90.722	125.542
5600.000	19.562	90.474	92.678	127.498
5700.000	19.563	90.820	94.635	129.455
5800.000	19.557	91.161	96.591	131.411
5900.000	19.542	91.495	98.546	133.366
6000.000	19.516	91.823	100.499	135.319

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CH2OH	34	31.035	-14.000	C 1 H 3 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.679	44.503	-1.845	-15.845
200.000	9.334	50.335	-.994	-14.994
298.150	10.910	54.356	0.000	-14.000
300.000	10.939	54.426	.020	-13.980
400.000	12.443	57.781	1.190	-12.810
500.000	13.809	60.708	2.504	-11.496
600.000	15.014	63.334	3.947	-10.053
700.000	16.047	65.729	5.501	-8.499
800.000	16.910	67.930	7.150	-6.850
900.000	17.620	69.964	8.878	-5.122
1000.000	18.206	71.851	10.670	-3.330
1100.000	18.477	73.599	12.505	-1.495
1200.000	18.710	75.218	14.364	.364
1300.000	18.909	76.723	16.246	2.246
1400.000	19.076	78.131	18.145	4.145
1500.000	19.214	79.452	20.060	6.060
1600.000	19.328	80.695	21.987	7.987
1700.000	19.419	81.870	23.925	9.925
1800.000	19.491	82.982	25.870	11.870
1900.000	19.546	84.038	27.822	13.822
2000.000	19.587	85.041	29.779	15.779
2100.000	19.616	85.998	31.739	17.739
2200.000	19.635	86.911	33.702	19.702
2300.000	19.646	87.784	35.666	21.666
2400.000	19.652	88.620	37.631	23.631
2500.000	19.654	89.422	39.596	25.596
2600.000	19.654	90.193	41.562	27.562
2700.000	19.653	90.935	43.527	29.527
2800.000	19.652	91.649	45.492	31.492
2900.000	19.654	92.339	47.457	33.457
3000.000	19.659	93.006	49.423	35.423
3100.000	19.668	93.650	51.389	37.389
3200.000	19.683	94.275	53.357	39.357
3300.000	19.702	94.881	55.326	41.326
3400.000	19.729	95.470	57.298	43.298
3500.000	19.762	96.042	59.272	45.272
3600.000	19.802	96.599	61.250	47.250
3700.000	19.849	97.142	63.233	49.233
3800.000	19.903	97.672	65.220	51.220
3900.000	19.965	98.190	67.214	53.214
4000.000	20.034	98.696	69.213	55.213
4100.000	20.109	99.192	71.221	57.221
4200.000	20.190	99.677	73.235	59.235
4300.000	20.276	100.154	75.259	61.259
4400.000	20.367	100.621	77.291	63.291
4500.000	20.462	101.079	79.332	65.332
4600.000	20.559	101.530	81.383	67.383
4700.000	20.657	101.974	83.444	69.444
4800.000	20.755	102.409	85.515	71.515
4900.000	20.852	102.838	87.595	73.595
5000.000	20.946	103.261	89.685	75.685
5100.000	21.035	103.676	91.784	77.784
5200.000	21.117	104.086	93.892	79.892
5300.000	21.191	104.488	96.007	82.007
5400.000	21.253	104.885	98.130	84.130
5500.000	21.303	105.276	100.258	86.258
5600.000	21.336	105.660	102.390	88.390
5700.000	21.351	106.038	104.524	90.524
5800.000	21.346	106.409	106.659	92.659
5900.000	21.316	106.774	108.792	94.792
6000.000	21.260	107.131	110.922	96.922

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CH4	35	16.043	-17.895	C 1 H 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.188	35.939	-1.572	-19.467
200.000	7.918	41.133	-.818	-18.713
298.150	8.775	44.452	0.000	-17.895
300.000	8.793	44.508	.016	-17.879
400.000	9.829	47.176	.946	-16.949
500.000	11.018	49.494	1.987	-15.908
600.000	12.325	51.617	3.154	-14.741
700.000	13.690	53.619	4.454	-13.441
800.000	15.027	55.535	5.891	-12.004
900.000	16.225	57.376	7.455	-10.440
1000.000	17.145	59.137	9.126	-8.769
1100.000	17.971	60.810	10.883	-7.012
1200.000	18.724	62.407	12.718	-5.177
1300.000	19.408	63.933	14.625	-3.270
1400.000	20.027	65.394	16.598	-1.297
1500.000	20.587	66.795	18.629	.734
1600.000	21.090	68.140	20.713	2.818
1700.000	21.542	69.433	22.845	4.950
1800.000	21.946	70.675	25.020	7.125
1900.000	22.306	71.872	27.233	9.338
2000.000	22.626	73.024	29.480	11.585
2100.000	22.909	74.135	31.757	13.862
2200.000	23.159	75.207	34.060	16.165
2300.000	23.378	76.241	36.388	18.493
2400.000	23.570	77.240	38.735	20.840
2500.000	23.738	78.206	41.101	23.206
2600.000	23.884	79.140	43.482	25.587
2700.000	24.011	80.044	45.877	27.982
2800.000	24.122	80.919	48.284	30.389
2900.000	24.218	81.767	50.701	32.806
3000.000	24.302	82.590	53.127	35.232
3100.000	24.375	83.388	55.561	37.666
3200.000	24.440	84.163	58.002	40.107
3300.000	24.499	84.916	60.449	42.554
3400.000	24.551	85.648	62.901	45.006
3500.000	24.600	86.360	65.359	47.464
3600.000	24.646	87.054	67.821	49.926
3700.000	24.690	87.730	70.288	52.393
3800.000	24.733	88.389	72.759	54.864
3900.000	24.776	89.032	75.234	57.339
4000.000	24.819	89.660	77.714	59.819
4100.000	24.863	90.273	80.198	62.303
4200.000	24.908	90.873	82.687	64.792
4300.000	24.953	91.459	85.180	67.285
4400.000	25.000	92.033	87.677	69.782
4500.000	25.048	92.596	90.180	72.285
4600.000	25.097	93.147	92.687	74.792
4700.000	25.145	93.687	95.199	77.304
4800.000	25.193	94.217	97.716	79.821
4900.000	25.239	94.737	100.238	82.343
5000.000	25.283	95.247	102.764	84.869
5100.000	25.323	95.748	105.294	87.399
5200.000	25.358	96.240	107.828	89.933
5300.000	25.387	96.724	110.366	92.471
5400.000	25.408	97.198	112.905	95.010
5500.000	25.420	97.665	115.447	97.552
5600.000	25.420	98.123	117.989	100.094
5700.000	25.406	98.573	120.530	102.635
5800.000	25.376	99.014	123.070	105.175
5900.000	25.329	99.448	125.605	107.710
6000.000	25.261	99.873	128.135	110.240

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CH3OH	36	32.043	-47.940	C 1 H 4 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.963	47.196	-1.513	-49.853
200.000	9.675	53.244	-1.030	-48.970
298.150	11.321	57.412	0.000	-47.940
300.000	11.352	57.484	.021	-47.919
400.000	13.027	60.979	1.240	-46.700
500.000	14.701	64.066	2.626	-45.314
600.000	16.346	66.892	4.179	-43.761
700.000	17.902	69.531	5.893	-42.047
800.000	19.277	72.014	7.753	-40.187
900.000	20.351	74.350	9.738	-38.202
1000.000	20.972	76.531	11.809	-36.131
1100.000	21.038	78.533	13.909	-34.031
1200.000	21.089	80.366	16.016	-31.924
1300.000	21.127	82.055	18.127	-29.813
1400.000	21.153	83.622	20.241	-27.699
1500.000	21.169	85.082	22.357	-25.583
1600.000	21.177	86.443	24.474	-23.466
1700.000	21.177	87.732	26.592	-21.348
1800.000	21.169	88.943	28.709	-19.231
1900.000	21.157	90.087	30.826	-17.114
2000.000	21.140	91.172	32.941	-14.999
2100.000	21.119	92.203	35.054	-12.886
2200.000	21.095	93.184	37.164	-10.776
2300.000	21.070	94.122	39.273	-8.667
2400.000	21.043	95.018	41.378	-6.562
2500.000	21.017	95.876	43.481	-4.459
2600.000	20.990	96.700	45.582	-2.358
2700.000	20.964	97.492	47.679	-.261
2800.000	20.939	98.254	49.774	1.834
2900.000	20.917	98.988	51.867	3.927
3000.000	20.896	99.697	53.958	6.018
3100.000	20.878	100.382	56.047	8.107
3200.000	20.863	101.044	58.134	10.194
3300.000	20.851	101.686	60.219	12.279
3400.000	20.842	102.309	62.304	14.364
3500.000	20.836	102.912	64.388	16.448
3600.000	20.833	103.499	66.471	18.531
3700.000	20.834	104.070	68.554	20.614
3800.000	20.838	104.625	70.638	22.698
3900.000	20.845	105.167	72.722	24.782
4000.000	20.855	105.695	74.807	26.867
4100.000	20.868	106.210	76.893	28.953
4200.000	20.882	106.713	78.981	31.041
4300.000	20.899	107.205	81.070	33.130
4400.000	20.917	107.686	83.161	35.221
4500.000	20.936	108.155	85.253	37.313
4600.000	20.955	108.616	87.348	39.408
4700.000	20.973	109.067	89.444	41.504
4800.000	20.991	109.509	91.542	43.602
4900.000	21.007	109.942	93.642	45.702
5000.000	21.020	110.366	95.744	47.804
5100.000	21.030	110.783	97.846	49.906
5200.000	21.035	111.191	99.950	52.010
5300.000	21.035	111.592	102.053	54.113
5400.000	21.029	111.985	104.156	56.216
5500.000	21.014	112.371	106.259	58.319
5600.000	20.991	112.749	108.359	60.419
5700.000	20.958	113.120	110.457	62.517
5800.000	20.913	113.485	112.550	64.610
5900.000	20.856	113.841	114.639	66.699
6000.000	20.784	114.191	116.721	68.781

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CO	37	28.011	-26.417	C 1 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.260	39.799	-1.352	-27.769
200.000	6.896	44.365	-.690	-27.107
298.150	7.108	47.166	0.000	-26.417
300.000	7.110	47.212	.013	-26.404
400.000	7.133	49.263	.726	-25.691
500.000	7.130	50.853	1.439	-24.978
600.000	7.199	52.158	2.154	-24.263
700.000	7.377	53.280	2.882	-23.535
800.000	7.631	54.281	3.632	-22.785
900.000	7.867	55.194	4.408	-22.009
1000.000	7.923	56.028	5.200	-21.217
1100.000	8.038	56.789	5.998	-20.419
1200.000	8.142	57.493	6.807	-19.610
1300.000	8.236	58.148	7.626	-18.791
1400.000	8.322	58.762	8.454	-17.963
1500.000	8.399	59.339	9.290	-17.127
1600.000	8.468	59.883	10.134	-16.283
1700.000	8.529	60.398	10.984	-15.433
1800.000	8.585	60.887	11.839	-14.578
1900.000	8.634	61.353	12.700	-13.717
2000.000	8.677	61.797	13.566	-12.851
2100.000	8.716	62.221	14.436	-11.981
2200.000	8.750	62.627	15.309	-11.108
2300.000	8.779	63.017	16.185	-10.232
2400.000	8.806	63.391	17.065	-9.352
2500.000	8.829	63.751	17.946	-8.471
2600.000	8.849	64.093	18.830	-7.587
2700.000	8.866	64.432	19.716	-6.701
2800.000	8.882	64.755	20.603	-5.814
2900.000	8.895	65.067	21.492	-4.925
3000.000	8.908	65.368	22.382	-4.035
3100.000	8.919	65.661	23.274	-3.143
3200.000	8.929	65.944	24.166	-2.251
3300.000	8.938	66.219	25.059	-1.358
3400.000	8.947	66.486	25.954	-.463
3500.000	8.956	66.745	26.849	.432
3600.000	8.964	66.998	27.745	1.328
3700.000	8.973	67.244	28.642	2.225
3800.000	8.981	67.483	29.539	3.122
3900.000	8.990	67.716	30.438	4.021
4000.000	8.999	67.944	31.337	4.920
4100.000	9.009	68.166	32.238	5.821
4200.000	9.019	68.383	33.139	6.722
4300.000	9.029	68.595	34.042	7.625
4400.000	9.039	68.803	34.945	8.528
4500.000	9.050	69.007	35.849	9.432
4600.000	9.062	69.206	36.755	10.338
4700.000	9.073	69.401	37.662	11.245
4800.000	9.085	69.592	38.570	12.153
4900.000	9.096	69.779	39.479	13.062
5000.000	9.108	69.963	40.389	13.972
5100.000	9.119	70.144	41.300	14.883
5200.000	9.129	70.321	42.213	15.796
5300.000	9.139	70.495	43.126	16.709
5400.000	9.147	70.666	44.040	17.623
5500.000	9.155	70.834	44.956	18.539
5600.000	9.161	70.999	45.871	19.454
5700.000	9.164	71.161	46.788	20.371
5800.000	9.166	71.320	47.704	21.287
5900.000	9.165	71.477	48.621	22.204
6000.000	9.161	71.631	49.537	23.120

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CO2	38	44.011	-94.054	C 1 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.254	42.736	-1.551	-95.605
200.000	7.872	47.574	-.843	-94.897
298.150	9.264	50.984	0.000	-94.054
300.000	9.287	51.043	.017	-94.037
400.000	10.386	53.873	1.004	-93.050
500.000	11.123	56.277	2.082	-91.972
600.000	11.523	58.345	3.217	-90.837
700.000	11.680	60.135	4.378	-89.676
800.000	11.759	61.699	5.550	-88.504
900.000	11.991	63.095	6.735	-87.319
1000.000	12.681	64.389	7.964	-86.090
1100.000	12.977	65.611	9.247	-84.807
1200.000	13.242	66.752	10.558	-83.496
1300.000	13.479	67.821	11.894	-82.160
1400.000	13.690	68.828	13.253	-80.801
1500.000	13.876	69.779	14.631	-79.423
1600.000	14.039	70.680	16.027	-78.027
1700.000	14.183	71.535	17.439	-76.615
1800.000	14.307	72.350	18.863	-75.191
1900.000	14.415	73.126	20.299	-73.755
2000.000	14.508	73.868	21.746	-72.308
2100.000	14.587	74.578	23.201	-70.853
2200.000	14.654	75.258	24.663	-69.391
2300.000	14.710	75.911	26.131	-67.923
2400.000	14.757	76.538	27.604	-66.450
2500.000	14.795	77.140	29.082	-64.972
2600.000	14.827	77.722	30.563	-63.491
2700.000	14.854	78.282	32.047	-62.007
2800.000	14.876	78.823	33.534	-60.520
2900.000	14.894	79.345	35.022	-59.032
3000.000	14.909	79.850	36.512	-57.542
3100.000	14.923	80.339	38.004	-56.050
3200.000	14.935	80.813	39.497	-54.557
3300.000	14.947	81.273	40.991	-53.063
3400.000	14.959	81.719	42.486	-51.568
3500.000	14.971	82.153	43.983	-50.071
3600.000	14.985	82.575	45.481	-48.573
3700.000	15.000	82.986	46.980	-47.074
3800.000	15.017	83.386	48.481	-45.573
3900.000	15.036	83.776	49.983	-44.071
4000.000	15.057	84.157	51.488	-42.566
4100.000	15.080	84.530	52.995	-41.059
4200.000	15.105	84.893	54.504	-39.550
4300.000	15.132	85.249	56.016	-38.038
4400.000	15.161	85.597	57.530	-36.524
4500.000	15.192	85.938	59.048	-35.006
4600.000	15.223	86.272	60.569	-33.485
4700.000	15.256	86.600	62.093	-31.961
4800.000	15.289	86.922	63.620	-30.434
4900.000	15.322	87.237	65.151	-28.903
5000.000	15.354	87.547	66.684	-27.370
5100.000	15.385	87.852	68.221	-25.833
5200.000	15.413	88.151	69.761	-24.293
5300.000	15.438	88.444	71.304	-22.750
5400.000	15.459	88.733	72.849	-21.205
5500.000	15.475	89.017	74.396	-19.658
5600.000	15.485	89.296	75.944	-18.110
5700.000	15.487	89.570	77.492	-16.562
5800.000	15.481	89.839	79.041	-15.013
5900.000	15.465	90.104	80.588	-13.466
6000.000	15.437	90.364	82.134	-11.920

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CN	39	26.019	109.000	C 1 N 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.224	41.018	-1.348	107.652
200.000	6.875	45.563	-.688	108.312
298.150	7.103	48.359	0.000	109.000
300.000	7.106	48.404	.013	109.013
400.000	7.144	50.456	.726	109.726
500.000	7.155	52.051	1.441	110.441
600.000	7.237	53.361	2.160	111.160
700.000	7.424	54.489	2.892	111.892
800.000	7.687	55.497	3.647	112.647
900.000	7.930	56.418	4.429	113.429
1000.000	7.991	57.259	5.227	114.227
1100.000	8.081	58.025	6.031	115.031
1200.000	8.176	58.732	6.844	115.844
1300.000	8.275	59.390	7.666	116.666
1400.000	8.378	60.007	8.499	117.499
1500.000	8.483	60.589	9.342	118.342
1600.000	8.590	61.140	10.195	119.195
1700.000	8.700	61.664	11.060	120.060
1800.000	8.810	62.164	11.935	120.935
1900.000	8.921	62.643	12.822	121.822
2000.000	9.031	63.104	13.719	122.719
2100.000	9.142	63.547	14.628	123.628
2200.000	9.252	63.975	15.548	124.548
2300.000	9.360	64.388	16.478	125.478
2400.000	9.467	64.789	17.420	126.420
2500.000	9.572	65.178	18.372	127.372
2600.000	9.674	65.555	19.334	128.334
2700.000	9.774	65.922	20.306	129.306
2800.000	9.871	66.279	21.289	130.289
2900.000	9.965	66.627	22.281	131.281
3000.000	10.055	66.967	23.282	132.282
3100.000	10.142	67.298	24.292	133.292
3200.000	10.225	67.621	25.310	134.310
3300.000	10.305	67.937	26.337	135.337
3400.000	10.380	68.246	27.371	136.371
3500.000	10.450	68.548	28.412	137.412
3600.000	10.517	68.843	29.461	138.461
3700.000	10.579	69.132	30.516	139.516
3800.000	10.637	69.415	31.576	140.576
3900.000	10.691	69.692	32.643	141.643
4000.000	10.740	69.963	33.714	142.714
4100.000	10.785	70.229	34.791	143.791
4200.000	10.826	70.490	35.871	144.871
4300.000	10.863	70.745	36.956	145.956
4400.000	10.896	70.995	38.044	147.044
4500.000	10.925	71.240	39.135	148.135
4600.000	10.951	71.480	40.229	149.229
4700.000	10.973	71.716	41.325	150.325
4800.000	10.992	71.947	42.423	151.423
4900.000	11.008	72.174	43.523	152.523
5000.000	11.021	72.397	44.625	153.625
5100.000	11.032	72.615	45.727	154.727
5200.000	11.041	72.829	46.831	155.831
5300.000	11.049	73.040	47.936	156.936
5400.000	11.055	73.246	49.041	158.041
5500.000	11.061	73.449	50.147	159.147
5600.000	11.066	73.649	51.253	160.253
5700.000	11.071	73.845	52.360	161.360
5800.000	11.077	74.037	53.467	162.467
5900.000	11.083	74.227	54.575	163.575
6000.000	11.092	74.413	55.684	164.684

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2*	40	24.022	0.000	C 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	1.227	.323	-.491	-.491
200.000	2.435	1.516	-.312	-.312
298.150	3.944	2.764	0.000	0.000
300.000	3.973	2.788	.007	.007
400.000	5.558	4.150	.484	.484
500.000	6.987	5.548	1.114	1.114
600.000	8.138	6.928	1.872	1.872
700.000	8.967	8.249	2.730	2.730
800.000	9.510	9.485	3.656	3.656
900.000	9.884	10.627	4.627	4.627
1000.000	10.283	11.683	5.634	5.634
1100.000	10.530	12.680	6.675	6.675
1200.000	10.750	13.605	7.739	7.739
1300.000	10.946	14.474	8.824	8.824
1400.000	11.120	15.292	9.927	9.927
1500.000	11.274	16.064	11.047	11.047
1600.000	11.408	16.796	12.182	12.182
1700.000	11.525	17.491	13.328	13.328
1800.000	11.627	18.153	14.486	14.486
1900.000	11.715	18.784	15.653	15.653
2000.000	11.791	19.387	16.829	16.829
2100.000	11.856	19.964	18.011	18.011
2200.000	11.911	20.517	19.200	19.200
2300.000	11.958	21.048	20.393	20.393
2400.000	11.998	21.557	21.591	21.591
2500.000	12.031	22.048	22.792	22.792
2600.000	12.060	22.520	23.997	23.997
2700.000	12.085	22.976	25.204	25.204
2800.000	12.107	23.416	26.414	26.414
2900.000	12.127	23.841	27.626	27.626
3000.000	12.146	24.252	28.839	28.839
3100.000	12.164	24.651	30.055	30.055
3200.000	12.182	25.037	31.272	31.272
3300.000	12.200	25.413	32.491	32.491
3400.000	12.220	25.777	33.712	33.712
3500.000	12.242	26.132	34.935	34.935
3600.000	12.265	26.477	36.161	36.161
3700.000	12.290	26.813	37.388	37.388
3800.000	12.318	27.141	38.619	38.619
3900.000	12.349	27.462	39.852	39.852
4000.000	12.382	27.775	41.088	41.088
4100.000	12.417	28.081	42.328	42.328
4200.000	12.456	28.380	43.572	43.572
4300.000	12.497	28.674	44.820	44.820
4400.000	12.540	28.962	46.071	46.071
4500.000	12.585	29.244	47.328	47.328
4600.000	12.631	29.521	48.588	48.588
4700.000	12.679	29.793	49.854	49.854
4800.000	12.728	30.061	51.124	51.124
4900.000	12.776	30.324	52.400	52.400
5000.000	12.825	30.582	53.680	53.680
5100.000	12.872	30.837	54.964	54.964
5200.000	12.917	31.087	56.254	56.254
5300.000	12.959	31.334	57.548	57.548
5400.000	12.998	31.576	58.846	58.846
5500.000	13.032	31.815	60.147	60.147
5600.000	13.060	32.050	61.452	61.452
5700.000	13.082	32.282	62.759	62.759
5800.000	13.095	32.509	64.068	64.068
5900.000	13.099	32.733	65.378	65.378
6000.000	13.092	32.953	66.687	66.687

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2	41	24.022	199.000	C 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.171	37.931	-1.797	197.203
200.000	9.340	43.683	-.955	198.045
298.150	9.921	47.557	0.000	199.000
300.000	9.924	47.620	.018	199.018
400.000	9.660	50.452	1.002	200.002
500.000	9.104	52.549	1.941	200.941
600.000	8.627	54.164	2.825	201.825
700.000	8.419	55.474	3.675	202.675
800.000	8.486	56.600	4.519	203.519
900.000	8.651	57.610	5.376	204.376
1000.000	8.556	58.521	6.240	205.240
1100.000	8.632	59.340	7.100	206.100
1200.000	8.707	60.094	7.967	206.967
1300.000	8.780	60.794	8.841	207.841
1400.000	8.851	61.447	9.723	208.723
1500.000	8.921	62.060	10.611	209.611
1600.000	8.988	62.638	11.507	210.507
1700.000	9.054	63.185	12.409	211.409
1800.000	9.117	63.704	13.318	212.318
1900.000	9.177	64.199	14.232	213.232
2000.000	9.236	64.671	15.153	214.153
2100.000	9.291	65.123	16.079	215.079
2200.000	9.344	65.557	17.011	216.011
2300.000	9.395	65.973	17.948	216.948
2400.000	9.442	66.374	18.890	217.890
2500.000	9.487	66.760	19.836	218.836
2600.000	9.529	67.133	20.787	219.787
2700.000	9.569	67.494	21.742	220.742
2800.000	9.605	67.842	22.701	221.701
2900.000	9.639	68.180	23.663	222.663
3000.000	9.670	68.507	24.629	223.629
3100.000	9.699	68.825	25.597	224.597
3200.000	9.725	69.133	26.568	225.568
3300.000	9.748	69.433	27.542	226.542
3400.000	9.768	69.724	28.518	227.518
3500.000	9.786	70.007	29.496	228.496
3600.000	9.802	70.283	30.475	229.475
3700.000	9.816	70.552	31.456	230.456
3800.000	9.827	70.814	32.438	231.438
3900.000	9.836	71.069	33.421	232.421
4000.000	9.844	71.313	34.405	233.405
4100.000	9.849	71.562	35.390	234.390
4200.000	9.853	71.799	36.375	235.375
4300.000	9.856	72.031	37.361	236.361
4400.000	9.857	72.258	38.346	237.346
4500.000	9.857	72.479	39.332	238.332
4600.000	9.856	72.696	40.318	239.318
4700.000	9.855	72.903	41.303	240.303
4800.000	9.853	73.115	42.289	241.289
4900.000	9.851	73.318	43.274	242.274
5000.000	9.849	73.517	44.259	243.259
5100.000	9.847	73.712	45.244	244.244
5200.000	9.846	73.903	46.228	245.228
5300.000	9.846	74.091	47.213	246.213
5400.000	9.847	74.275	48.197	247.197
5500.000	9.849	74.456	49.182	248.182
5600.000	9.853	74.633	50.167	249.167
5700.000	9.859	74.808	51.153	250.153
5800.000	9.868	74.979	52.139	251.139
5900.000	9.879	75.148	53.126	252.126
6000.000	9.893	75.314	54.115	253.115

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H	42	25.030	114.000	C 2 H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.450	41.273	-1.542	112.458
200.000	7.851	46.199	-.823	113.177
298.150	8.862	49.531	0.000	114.000
300.000	8.878	49.587	.016	114.016
400.000	9.644	52.251	.944	114.944
500.000	10.239	54.470	1.939	115.939
600.000	10.729	56.381	2.988	116.988
700.000	11.159	58.068	4.083	118.083
800.000	11.549	59.584	5.219	119.219
900.000	11.895	60.965	6.392	120.392
1000.000	12.171	62.233	7.596	121.596
1100.000	12.414	63.404	8.825	122.825
1200.000	12.647	64.495	10.078	124.078
1300.000	12.869	65.516	11.354	125.354
1400.000	13.081	66.477	12.652	126.652
1500.000	13.283	67.387	13.970	127.970
1600.000	13.475	68.250	15.308	129.308
1700.000	13.658	69.073	16.665	130.665
1800.000	13.832	69.858	18.039	132.039
1900.000	13.998	70.611	19.431	133.431
2000.000	14.156	71.333	20.839	134.839
2100.000	14.305	72.027	22.262	136.262
2200.000	14.447	72.696	23.699	137.699
2300.000	14.582	73.341	25.151	139.151
2400.000	14.709	73.964	26.616	140.616
2500.000	14.830	74.567	28.092	142.092
2600.000	14.944	75.151	29.581	143.581
2700.000	15.052	75.717	31.081	145.081
2800.000	15.154	76.266	32.591	146.591
2900.000	15.250	76.800	34.112	148.112
3000.000	15.341	77.318	35.641	149.641
3100.000	15.426	77.823	37.180	151.180
3200.000	15.506	78.314	38.726	152.726
3300.000	15.581	78.792	40.281	154.281
3400.000	15.651	79.258	41.842	155.842
3500.000	15.717	79.713	43.411	157.411
3600.000	15.779	80.157	44.986	158.986
3700.000	15.836	80.590	46.566	160.566
3800.000	15.889	81.013	48.153	162.153
3900.000	15.937	81.426	49.744	163.744
4000.000	15.982	81.830	51.340	165.340
4100.000	16.024	82.225	52.940	166.940
4200.000	16.061	82.612	54.545	168.545
4300.000	16.095	82.990	56.152	170.152
4400.000	16.125	83.361	57.763	171.763
4500.000	16.152	83.723	59.377	173.377
4600.000	16.176	84.079	60.994	174.994
4700.000	16.196	84.427	62.612	176.612
4800.000	16.213	84.768	64.233	178.233
4900.000	16.227	85.102	65.855	179.855
5000.000	16.237	85.430	67.478	181.478
5100.000	16.244	85.752	69.102	183.102
5200.000	16.248	86.067	70.727	184.727
5300.000	16.249	86.377	72.352	186.352
5400.000	16.246	86.680	73.976	187.976
5500.000	16.241	86.979	75.601	189.601
5600.000	16.232	87.271	77.224	191.224
5700.000	16.219	87.558	78.847	192.847
5800.000	16.203	87.840	80.468	194.468
5900.000	16.184	88.117	82.088	196.088
6000.000	16.161	88.389	83.705	197.705

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H0	43	41.030	54.000	C 2 H 1 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.820	45.553	-1.598	52.002
200.000	10.149	51.703	-1.097	52.903
298.150	12.156	56.138	0.000	54.000
300.000	12.191	56.214	.022	54.022
400.000	13.916	59.966	1.331	55.331
500.000	15.313	63.227	2.795	56.795
600.000	16.391	66.119	4.383	58.383
700.000	17.178	68.708	6.063	60.063
800.000	17.722	71.040	7.810	61.810
900.000	18.093	73.150	9.602	63.602
1000.000	18.378	75.071	11.426	65.426
1100.000	18.706	76.838	13.280	67.280
1200.000	19.028	78.480	15.167	69.167
1300.000	19.341	80.015	17.085	71.085
1400.000	19.643	81.460	19.034	73.034
1500.000	19.934	82.825	21.013	75.013
1600.000	20.213	84.121	23.021	77.021
1700.000	20.479	85.354	25.056	79.056
1800.000	20.730	86.532	27.116	81.116
1900.000	20.966	87.659	29.201	83.201
2000.000	21.186	88.740	31.309	85.309
2100.000	21.389	89.779	33.438	87.438
2200.000	21.577	90.778	35.586	89.586
2300.000	21.747	91.741	37.752	91.752
2400.000	21.900	92.670	39.935	93.935
2500.000	22.036	93.567	42.132	96.132
2600.000	22.154	94.433	44.341	98.341
2700.000	22.256	95.271	46.562	100.562
2800.000	22.342	96.082	48.792	102.792
2900.000	22.412	96.868	51.030	105.030
3000.000	22.466	97.628	53.274	107.274
3100.000	22.505	98.366	55.523	109.523
3200.000	22.531	99.081	57.775	111.775
3300.000	22.544	99.774	60.029	114.029
3400.000	22.545	100.447	62.283	116.283
3500.000	22.536	101.101	64.537	118.537
3600.000	22.517	101.735	66.790	120.790
3700.000	22.491	102.352	69.040	123.040
3800.000	22.458	102.951	71.288	125.288
3900.000	22.421	103.534	73.532	127.532
4000.000	22.382	104.101	75.772	129.772
4100.000	22.342	104.653	78.008	132.008
4200.000	22.303	105.191	80.241	134.241
4300.000	22.268	105.715	82.469	136.469
4400.000	22.239	106.227	84.694	138.694
4500.000	22.218	106.727	86.917	140.917
4600.000	22.208	107.215	89.138	143.138
4700.000	22.212	107.693	91.359	145.359
4800.000	22.232	108.160	93.581	147.581
4900.000	22.273	108.619	95.806	149.806
5000.000	22.335	109.070	98.036	152.036
5100.000	22.423	109.513	100.274	154.274
5200.000	22.541	109.950	102.522	156.522
5300.000	22.690	110.380	104.783	158.783
5400.000	22.876	110.806	107.061	161.061
5500.000	23.102	111.228	109.360	163.360
5600.000	23.371	111.646	111.683	165.683
5700.000	23.688	112.063	114.036	168.036
5800.000	24.056	112.478	116.422	170.422
5900.000	24.480	112.893	118.849	172.849
6000.000	24.965	113.308	121.321	175.321

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H02	44	57.030	32.000	C 2 H 1 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.646	49.695	-2.458	29.542
200.000	12.489	57.274	-1.348	30.652
298.150	14.907	62.723	0.000	32.000
300.000	14.949	62.817	.027	32.027
400.000	16.997	67.408	1.628	33.628
500.000	18.633	71.384	3.413	35.413
600.000	19.881	74.897	5.342	37.342
700.000	20.797	78.034	7.378	39.378
800.000	21.464	80.857	9.493	41.493
900.000	21.991	83.416	11.666	43.666
1000.000	22.518	85.760	13.891	45.891
1100.000	22.901	87.924	16.162	48.162
1200.000	23.265	89.932	18.471	50.471
1300.000	23.610	91.809	20.815	52.815
1400.000	23.936	93.570	23.192	55.192
1500.000	24.242	95.232	25.601	57.601
1600.000	24.529	96.806	28.040	60.040
1700.000	24.796	98.301	30.506	62.506
1800.000	25.045	99.726	32.999	64.999
1900.000	25.275	101.086	35.515	67.515
2000.000	25.486	102.388	38.053	70.053
2100.000	25.679	103.636	40.611	72.611
2200.000	25.855	104.835	43.188	75.188
2300.000	26.013	105.988	45.782	77.782
2400.000	26.154	107.098	48.390	80.390
2500.000	26.279	108.168	51.012	83.012
2600.000	26.389	109.201	53.646	85.646
2700.000	26.483	110.199	56.289	88.289
2800.000	26.564	111.163	58.942	90.942
2900.000	26.631	112.097	61.602	93.602
3000.000	26.685	113.000	64.267	96.267
3100.000	26.728	113.876	66.938	98.938
3200.000	26.760	114.725	69.613	101.613
3300.000	26.782	115.549	72.290	104.290
3400.000	26.795	116.349	74.969	106.969
3500.000	26.801	117.126	77.649	109.649
3600.000	26.801	117.881	80.329	112.329
3700.000	26.795	118.615	83.008	115.008
3800.000	26.785	119.329	85.688	117.688
3900.000	26.773	120.025	88.365	120.365
4000.000	26.760	120.703	91.042	123.042
4100.000	26.747	121.363	93.717	125.717
4200.000	26.736	122.008	96.392	128.392
4300.000	26.728	122.637	99.065	131.065
4400.000	26.725	123.251	101.737	133.737
4500.000	26.729	123.852	104.410	136.410
4600.000	26.740	124.439	107.083	139.083
4700.000	26.763	125.015	109.758	141.758
4800.000	26.797	125.578	112.436	144.436
4900.000	26.845	126.131	115.118	147.118
5000.000	26.908	126.674	117.806	149.806
5100.000	26.990	127.208	120.500	152.500
5200.000	27.091	127.733	123.204	155.204
5300.000	27.214	128.250	125.919	157.919
5400.000	27.361	128.760	128.648	160.648
5500.000	27.534	129.264	131.392	163.392
5600.000	27.736	129.761	134.156	166.156
5700.000	27.970	130.255	136.941	168.941
5800.000	28.236	130.743	139.751	171.751
5900.000	28.538	131.228	142.589	174.589
6000.000	28.878	131.711	145.459	177.459

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H2	45	26.038	54.190	C 2 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.585	38.993	-1.702	52.488
200.000	8.655	44.213	-.538	53.252
298.150	10.408	48.004	0.000	54.190
300.000	10.439	48.070	.019	54.209
400.000	11.922	51.283	1.140	55.330
500.000	13.111	54.076	2.394	56.584
600.000	14.032	56.552	3.753	57.943
700.000	14.733	58.770	5.193	59.383
800.000	15.284	60.774	6.695	60.885
900.000	15.774	62.603	8.248	62.438
1000.000	16.313	64.292	9.851	64.041
1100.000	16.771	65.869	11.505	65.695
1200.000	17.192	67.345	13.204	67.394
1300.000	17.581	68.738	14.943	69.133
1400.000	17.938	70.054	16.719	70.909
1500.000	18.266	71.303	18.530	72.720
1600.000	18.567	72.492	20.371	74.561
1700.000	18.843	73.626	22.242	76.432
1800.000	19.095	74.710	24.139	78.329
1900.000	19.325	75.749	26.060	80.250
2000.000	19.535	76.745	28.003	82.193
2100.000	19.726	77.703	29.967	84.157
2200.000	19.901	78.625	31.948	86.138
2300.000	20.061	79.513	33.946	88.136
2400.000	20.206	80.370	35.960	90.150
2500.000	20.339	81.197	37.987	92.177
2600.000	20.460	81.997	40.027	94.217
2700.000	20.571	82.772	42.079	96.269
2800.000	20.674	83.522	44.141	98.331
2900.000	20.768	84.249	46.213	100.403
3000.000	20.855	84.954	48.295	102.485
3100.000	20.937	85.640	50.384	104.574
3200.000	21.013	86.306	52.482	106.672
3300.000	21.085	86.953	54.587	108.777
3400.000	21.154	87.584	56.699	110.889
3500.000	21.219	88.198	58.817	113.007
3600.000	21.283	88.797	60.942	115.132
3700.000	21.344	89.381	63.074	117.264
3800.000	21.404	89.951	65.211	119.401
3900.000	21.464	90.507	67.355	121.545
4000.000	21.523	91.052	69.504	123.694
4100.000	21.581	91.584	71.659	125.849
4200.000	21.639	92.104	73.820	128.010
4300.000	21.698	92.614	75.987	130.177
4400.000	21.756	93.114	78.160	132.350
4500.000	21.814	93.603	80.338	134.528
4600.000	21.873	94.084	82.523	136.713
4700.000	21.931	94.555	84.713	138.903
4800.000	21.988	95.017	86.909	141.099
4900.000	22.045	95.471	89.110	143.300
5000.000	22.101	95.917	91.318	145.508
5100.000	22.155	96.355	93.531	147.721
5200.000	22.208	96.786	95.749	149.939
5300.000	22.258	97.209	97.972	152.162
5400.000	22.304	97.626	100.200	154.390
5500.000	22.347	98.035	102.433	156.623
5600.000	22.385	98.438	104.669	158.859
5700.000	22.417	98.835	106.909	161.099
5800.000	22.443	99.225	109.152	163.342
5900.000	22.462	99.609	111.398	165.588
6000.000	22.472	99.986	113.645	167.835

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H2O	46	42.038	4.000	C 2 H 2 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.751	45.388	-2.062	1.938
200.000	10.468	51.603	-1.150	2.850
298.150	12.921	56.247	0.000	4.000
300.000	12.965	56.328	.024	4.024
400.000	15.144	60.365	1.432	5.432
500.000	16.951	63.945	3.040	7.040
600.000	18.377	67.168	4.810	8.810
700.000	19.457	70.086	6.704	10.704
800.000	20.270	72.739	8.692	12.692
900.000	20.938	75.165	10.753	14.753
1000.000	21.629	77.407	12.880	16.880
1100.000	22.099	79.490	15.067	19.067
1200.000	22.554	81.433	17.300	21.300
1300.000	22.993	83.256	19.577	23.577
1400.000	23.416	84.975	21.898	25.898
1500.000	23.822	86.605	24.260	28.260
1600.000	24.209	88.155	26.661	30.661
1700.000	24.577	89.633	29.101	33.101
1800.000	24.925	91.048	31.576	35.576
1900.000	25.253	92.405	34.085	38.085
2000.000	25.561	93.708	36.626	40.626
2100.000	25.848	94.962	39.197	43.197
2200.000	26.115	96.171	41.795	45.795
2300.000	26.360	97.337	44.419	48.419
2400.000	26.585	98.464	47.066	51.066
2500.000	26.788	99.553	49.735	53.735
2600.000	26.972	100.607	52.424	56.424
2700.000	27.135	101.628	55.129	59.129
2800.000	27.279	102.618	57.850	61.850
2900.000	27.404	103.577	60.584	64.584
3000.000	27.511	104.508	63.330	67.330
3100.000	27.600	105.412	66.086	70.086
3200.000	27.673	106.289	68.850	72.850
3300.000	27.731	107.142	71.620	75.620
3400.000	27.774	107.970	74.395	78.395
3500.000	27.804	108.776	77.174	81.174
3600.000	27.822	109.559	79.956	83.956
3700.000	27.831	110.322	82.738	86.738
3800.000	27.831	111.064	85.522	89.522
3900.000	27.823	111.787	88.304	92.304
4000.000	27.811	112.491	91.086	95.086
4100.000	27.796	113.178	93.866	97.866
4200.000	27.779	113.847	96.645	100.645
4300.000	27.763	114.501	99.422	103.422
4400.000	27.750	115.139	102.198	106.198
4500.000	27.743	115.762	104.973	108.973
4600.000	27.744	116.372	107.747	111.747
4700.000	27.755	116.969	110.522	114.522
4800.000	27.780	117.554	113.298	117.298
4900.000	27.820	118.127	116.078	120.078
5000.000	27.879	118.689	118.863	122.863
5100.000	27.960	119.242	121.655	125.655
5200.000	28.066	119.786	124.456	128.456
5300.000	28.200	120.322	127.269	131.269
5400.000	28.365	120.851	130.097	134.097
5500.000	28.566	121.373	132.943	136.943
5600.000	28.804	121.890	135.811	139.811
5700.000	29.085	122.402	138.705	142.705
5800.000	29.411	122.910	141.630	145.630
5900.000	29.787	123.416	144.589	148.589
6000.000	30.217	123.921	147.589	151.589

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H2O2	47	58.038	-8.000	C 2 H 2 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	10.146	50.329	-2.587	-10.587
200.000	13.115	58.278	-1.424	-9.424
298.150	15.851	64.031	0.000	-8.000
300.000	15.900	64.131	.029	-7.971
400.000	18.372	69.052	1.746	-6.254
500.000	20.454	73.383	3.691	-4.309
600.000	22.118	77.265	5.823	-2.177
700.000	23.387	80.775	8.101	.101
800.000	24.335	83.963	10.489	2.489
900.000	25.087	86.874	12.961	4.961
1000.000	25.818	89.554	15.506	7.506
1100.000	26.422	92.043	18.118	10.118
1200.000	26.979	94.367	20.789	12.789
1300.000	27.491	96.546	23.513	15.513
1400.000	27.960	98.601	26.286	18.286
1500.000	28.389	100.545	29.103	21.103
1600.000	28.780	102.390	31.962	23.962
1700.000	29.135	104.146	34.858	26.858
1800.000	29.457	105.820	37.788	29.788
1900.000	29.747	107.421	40.748	32.748
2000.000	30.008	108.953	43.736	35.736
2100.000	30.242	110.423	46.749	38.749
2200.000	30.451	111.835	49.784	41.784
2300.000	30.636	113.193	52.838	44.838
2400.000	30.800	114.500	55.910	47.910
2500.000	30.944	115.760	58.998	50.998
2600.000	31.070	116.977	62.099	54.099
2700.000	31.180	118.151	65.211	57.211
2800.000	31.274	119.287	68.334	60.334
2900.000	31.356	120.386	71.466	63.466
3000.000	31.426	121.450	74.605	66.605
3100.000	31.486	122.481	77.751	69.751
3200.000	31.536	123.482	80.902	72.902
3300.000	31.579	124.453	84.058	76.058
3400.000	31.615	125.396	87.217	79.217
3500.000	31.646	126.313	90.380	82.380
3600.000	31.673	127.205	93.546	85.546
3700.000	31.697	128.073	96.715	88.715
3800.000	31.719	128.919	99.886	91.886
3900.000	31.740	129.743	103.059	95.059
4000.000	31.760	130.547	106.234	98.234
4100.000	31.781	131.331	109.411	101.411
4200.000	31.803	132.097	112.590	104.590
4300.000	31.827	132.846	115.771	107.771
4400.000	31.853	133.578	118.955	110.955
4500.000	31.883	134.294	122.142	114.142
4600.000	31.916	134.995	125.332	117.332
4700.000	31.953	135.682	128.525	120.525
4800.000	31.995	136.355	131.723	123.723
4900.000	32.042	137.015	134.925	126.925
5000.000	32.093	137.663	138.131	130.131
5100.000	32.150	138.299	141.343	133.343
5200.000	32.212	138.924	144.561	136.561
5300.000	32.280	139.538	147.786	139.786
5400.000	32.353	140.142	151.018	143.018
5500.000	32.432	140.737	154.257	146.257
5600.000	32.516	141.322	157.504	149.504
5700.000	32.605	141.898	160.760	152.760
5800.000	32.699	142.466	164.025	156.025
5900.000	32.798	143.026	167.300	159.300
6000.000	32.901	143.578	170.585	162.585

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H3	48	27.046	66.900	C 2 H 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.632	44.624	-1.843	65.057
200.000	9.329	50.439	-.994	65.906
298.150	10.909	54.460	0.000	66.900
300.000	10.938	54.529	.020	66.920
400.000	12.439	57.884	1.190	68.090
500.000	13.820	60.811	2.504	69.404
600.000	15.072	63.443	3.950	70.850
700.000	16.194	65.852	5.514	72.414
800.000	17.187	68.081	7.184	74.084
900.000	18.060	70.157	8.947	75.847
1000.000	18.828	72.100	10.793	77.693
1100.000	19.377	73.921	12.703	79.603
1200.000	19.902	75.629	14.667	81.567
1300.000	20.401	77.242	16.683	83.583
1400.000	20.874	78.771	18.747	85.647
1500.000	21.322	80.227	20.857	87.757
1600.000	21.743	81.617	23.010	89.910
1700.000	22.137	82.947	25.204	92.104
1800.000	22.504	84.223	27.437	94.337
1900.000	22.845	85.449	29.704	96.604
2000.000	23.159	86.628	32.005	98.905
2100.000	23.447	87.763	34.335	101.235
2200.000	23.708	88.862	36.693	103.593
2300.000	23.944	89.921	39.076	105.976
2400.000	24.154	90.945	41.481	108.381
2500.000	24.340	91.935	43.906	110.806
2600.000	24.502	92.893	46.348	113.248
2700.000	24.641	93.820	48.806	115.706
2800.000	24.758	94.718	51.276	118.176
2900.000	24.854	95.589	53.756	120.656
3000.000	24.930	96.433	56.246	123.146
3100.000	24.988	97.251	58.742	125.642
3200.000	25.028	98.045	61.243	128.143
3300.000	25.052	98.816	63.747	130.647
3400.000	25.062	99.564	66.253	133.153
3500.000	25.060	100.291	68.759	135.659
3600.000	25.047	100.996	71.264	138.164
3700.000	25.025	101.682	73.768	140.668
3800.000	24.996	102.349	76.269	143.169
3900.000	24.962	102.998	78.767	145.667
4000.000	24.926	103.630	81.261	148.161
4100.000	24.889	104.245	83.752	150.652
4200.000	24.854	104.844	86.239	153.139
4300.000	24.824	105.428	88.723	155.623
4400.000	24.801	105.999	91.204	158.104
4500.000	24.789	106.556	93.684	160.584
4600.000	24.788	107.101	96.162	163.062
4700.000	24.804	107.634	98.642	165.542
4800.000	24.838	108.157	101.124	168.024
4900.000	24.895	108.669	103.610	170.510
5000.000	24.976	109.173	106.104	173.004
5100.000	25.086	109.669	108.606	175.506
5200.000	25.227	110.157	111.122	178.022
5300.000	25.404	110.639	113.653	180.553
5400.000	25.621	111.116	116.204	183.104
5500.000	25.880	111.588	118.779	185.679
5600.000	26.186	112.057	121.381	188.281
5700.000	26.542	112.524	124.017	190.917
5800.000	26.954	112.989	126.692	193.592
5900.000	27.424	113.454	129.410	196.310
6000.000	27.958	113.919	132.179	199.079

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H3O	49	43.046	-10.000	C 2 H 3 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.535	46.142	-2.202	-12.202
200.000	11.137	52.850	-1.219	-11.219
298.150	13.693	57.775	0.000	-10.000
300.000	13.740	57.861	.025	-9.975
400.000	16.169	62.152	1.523	-8.477
500.000	18.307	65.996	3.249	-6.751
600.000	20.091	69.497	5.172	-4.828
700.000	21.518	72.706	7.256	-2.744
800.000	22.640	75.655	9.466	-.534
900.000	23.567	78.377	11.777	1.777
1000.000	24.469	80.906	14.178	4.178
1100.000	25.234	83.274	16.664	6.664
1200.000	25.942	85.501	19.223	9.223
1300.000	26.595	87.603	21.850	11.850
1400.000	27.197	89.596	24.540	14.540
1500.000	27.750	91.492	27.288	17.288
1600.000	28.257	93.299	30.089	20.089
1700.000	28.719	95.026	32.938	22.938
1800.000	29.140	96.680	35.831	25.831
1900.000	29.522	98.266	38.765	28.765
2000.000	29.867	99.789	41.734	31.734
2100.000	30.178	101.254	44.737	34.737
2200.000	30.457	102.664	47.769	37.769
2300.000	30.706	104.024	50.827	40.827
2400.000	30.926	105.336	53.909	43.909
2500.000	31.121	106.602	57.012	47.012
2600.000	31.292	107.826	60.133	50.133
2700.000	31.442	109.010	63.269	53.269
2800.000	31.571	110.156	66.420	56.420
2900.000	31.682	111.266	69.583	59.583
3000.000	31.777	112.341	72.756	62.756
3100.000	31.858	113.385	75.938	65.938
3200.000	31.925	114.397	79.127	69.127
3300.000	31.981	115.381	82.323	72.323
3400.000	32.028	116.336	85.523	75.523
3500.000	32.066	117.265	88.728	78.728
3600.000	32.098	118.169	91.936	81.936
3700.000	32.124	119.048	95.147	85.147
3800.000	32.146	119.905	98.361	88.361
3900.000	32.165	120.741	101.576	91.576
4000.000	32.183	121.555	104.794	94.794
4100.000	32.200	122.350	108.013	98.013
4200.000	32.218	123.126	111.234	101.234
4300.000	32.238	123.885	114.457	104.457
4400.000	32.261	124.626	117.681	107.681
4500.000	32.287	125.351	120.909	110.909
4600.000	32.318	126.061	124.139	114.139
4700.000	32.355	126.757	127.373	117.373
4800.000	32.398	127.438	130.610	120.610
4900.000	32.447	128.107	133.852	123.852
5000.000	32.504	128.763	137.100	127.100
5100.000	32.570	129.407	140.354	130.354
5200.000	32.644	130.040	143.614	133.614
5300.000	32.727	130.663	146.883	136.883
5400.000	32.821	131.276	150.160	140.160
5500.000	32.924	131.879	153.447	143.447
5600.000	33.037	132.473	156.745	146.745
5700.000	33.161	133.059	160.055	150.055
5800.000	33.296	133.637	163.378	153.378
5900.000	33.442	134.207	166.714	156.714
6000.000	33.599	134.770	170.066	160.066

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CH3CO	50	43.046	-6.000	C 2 H 3 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.060	51.126	-2.033	-8.033
200.000	10.382	57.475	-1.104	-7.104
298.150	12.041	61.942	0.000	-6.000
300.000	12.070	62.013	.022	-5.978
400.000	13.530	65.692	1.303	-4.697
500.000	15.039	68.871	2.730	-3.270
600.000	16.747	71.760	4.317	-1.683
700.000	18.675	74.484	6.087	.087
800.000	20.716	77.111	8.056	2.056
900.000	22.635	79.664	10.226	4.226
1000.000	24.069	82.129	12.567	6.567
1100.000	25.221	84.479	15.033	9.033
1200.000	26.215	86.717	17.606	11.606
1300.000	27.063	88.850	20.271	14.271
1400.000	27.780	90.882	23.014	17.014
1500.000	28.377	92.820	25.823	19.823
1600.000	28.866	94.667	28.686	22.686
1700.000	29.259	96.430	31.593	25.593
1800.000	29.565	98.111	34.535	28.535
1900.000	29.796	99.716	37.504	31.504
2000.000	29.961	101.249	40.492	34.492
2100.000	30.069	102.713	43.494	37.494
2200.000	30.129	104.114	46.504	40.504
2300.000	30.148	105.454	49.518	43.518
2400.000	30.135	106.737	52.533	46.533
2500.000	30.096	107.965	55.544	49.544
2600.000	30.038	109.145	58.551	52.551
2700.000	29.966	110.278	61.552	55.552
2800.000	29.887	111.365	64.544	58.544
2900.000	29.804	112.413	67.529	61.529
3000.000	29.723	113.422	70.505	64.505
3100.000	29.646	114.396	73.474	67.474
3200.000	29.577	115.336	76.435	70.435
3300.000	29.520	116.245	79.389	73.389
3400.000	29.475	117.126	82.339	76.339
3500.000	29.445	117.980	85.285	79.285
3600.000	29.430	118.809	88.228	82.228
3700.000	29.432	119.615	91.171	85.171
3800.000	29.450	120.400	94.115	88.115
3900.000	29.483	121.166	97.062	91.062
4000.000	29.531	121.913	100.013	94.013
4100.000	29.592	122.643	102.969	96.969
4200.000	29.664	123.357	105.931	99.931
4300.000	29.744	124.055	108.902	102.902
4400.000	29.828	124.740	111.880	105.880
4500.000	29.914	125.412	114.867	108.867
4600.000	29.997	126.070	117.863	111.863
4700.000	30.072	126.716	120.867	114.867
4800.000	30.133	127.350	123.877	117.877
4900.000	30.175	127.972	126.893	120.893
5000.000	30.191	128.581	129.911	123.911
5100.000	30.174	129.179	132.930	126.930
5200.000	30.118	129.765	135.945	129.945
5300.000	30.013	130.337	138.952	132.952
5400.000	29.851	130.897	141.945	135.945
5500.000	29.622	131.443	144.919	138.919
5600.000	29.318	131.974	147.867	141.867
5700.000	28.929	132.489	150.780	144.780
5800.000	28.442	132.983	153.650	147.650
5900.000	27.848	133.470	156.465	150.465
6000.000	27.134	133.932	159.215	153.215

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H3O2	51	59.046	-26.000	C 2 H 3 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	10.488	50.891	-2.739	-28.739
200.000	13.891	59.213	-1.519	-27.519
298.150	17.015	65.350	0.000	-26.000
300.000	17.071	65.457	.031	-25.969
400.000	19.907	70.765	1.883	-24.117
500.000	22.328	75.475	3.999	-22.001
600.000	24.313	79.728	6.335	-19.665
700.000	25.887	83.599	8.848	-17.152
800.000	27.123	87.140	11.501	-14.499
900.000	28.143	90.395	14.265	-11.735
1000.000	29.116	93.410	17.128	-8.872
1100.000	29.934	96.224	20.081	-5.919
1200.000	30.676	98.861	23.112	-2.888
1300.000	31.349	101.343	26.214	.214
1400.000	31.957	103.689	29.379	3.379
1500.000	32.504	105.913	32.603	6.603
1600.000	32.996	108.027	35.878	9.878
1700.000	33.436	110.040	39.201	13.201
1800.000	33.829	111.963	42.564	16.564
1900.000	34.179	113.802	45.965	19.965
2000.000	34.489	115.563	49.399	23.399
2100.000	34.764	117.252	52.862	26.862
2200.000	35.007	118.875	56.350	30.350
2300.000	35.220	120.436	59.862	33.862
2400.000	35.408	121.939	63.394	37.394
2500.000	35.572	123.388	66.943	40.943
2600.000	35.717	124.786	70.507	44.507
2700.000	35.844	126.137	74.086	48.086
2800.000	35.956	127.442	77.676	51.676
2900.000	36.055	128.706	81.276	55.276
3000.000	36.144	129.930	84.887	58.887
3100.000	36.223	131.116	88.505	62.505
3200.000	36.296	132.267	92.131	66.131
3300.000	36.362	133.385	95.764	69.764
3400.000	36.425	134.471	99.403	73.403
3500.000	36.484	135.528	103.049	77.049
3600.000	36.541	136.557	106.700	80.700
3700.000	36.597	137.559	110.357	84.357
3800.000	36.653	138.535	114.019	88.019
3900.000	36.708	139.483	117.687	91.687
4000.000	36.764	140.418	121.361	95.361
4100.000	36.820	141.327	125.040	99.040
4200.000	36.876	142.215	128.725	102.725
4300.000	36.933	143.083	132.416	106.416
4400.000	36.989	143.933	136.112	110.112
4500.000	37.044	144.765	139.813	113.813
4600.000	37.098	145.580	143.521	117.521
4700.000	37.149	146.378	147.233	121.233
4800.000	37.197	147.161	150.950	124.950
4900.000	37.240	147.928	154.672	128.672
5000.000	37.276	148.681	158.398	132.398
5100.000	37.305	149.419	162.127	136.127
5200.000	37.323	150.144	165.859	139.859
5300.000	37.330	150.855	169.591	143.591
5400.000	37.323	151.553	173.324	147.324
5500.000	37.300	152.237	177.056	151.056
5600.000	37.258	152.909	180.784	154.784
5700.000	37.195	153.568	184.506	158.506
5800.000	37.107	154.214	188.222	162.222
5900.000	36.992	154.847	191.927	165.927
6000.000	36.847	155.468	195.619	169.619

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2O2H3	52	59.046	0.000	C 2 H 3 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	10.314	45.410	-2.741	-2.741
200.000	13.938	53.693	-1.526	-1.526
298.150	17.066	59.855	0.000	0.000
300.000	17.120	59.963	.031	.031
400.000	19.773	65.265	1.881	1.881
500.000	21.866	69.912	3.967	3.967
600.000	23.418	74.044	6.236	6.236
700.000	24.504	77.740	8.635	8.635
800.000	25.247	81.064	11.125	11.125
900.000	25.826	84.071	13.679	13.679
1000.000	26.471	86.824	16.292	16.292
1100.000	27.021	89.373	18.967	18.967
1200.000	27.527	91.746	21.695	21.695
1300.000	27.991	93.968	24.471	24.471
1400.000	28.416	96.058	27.292	27.292
1500.000	28.803	98.032	30.153	30.153
1600.000	29.156	99.903	33.052	33.052
1700.000	29.477	101.680	35.983	35.983
1800.000	29.767	103.373	38.946	38.946
1900.000	30.030	104.990	41.936	41.936
2000.000	30.266	106.536	44.951	44.951
2100.000	30.479	108.018	47.989	47.989
2200.000	30.670	109.441	51.046	51.046
2300.000	30.841	110.803	54.122	54.122
2400.000	30.993	112.124	57.214	57.214
2500.000	31.128	113.392	60.320	60.320
2600.000	31.249	114.615	63.439	63.439
2700.000	31.356	115.795	66.569	66.569
2800.000	31.450	116.938	69.710	69.710
2900.000	31.534	118.044	72.859	72.859
3000.000	31.608	119.114	76.016	76.016
3100.000	31.674	120.151	79.180	79.180
3200.000	31.733	121.153	82.351	82.351
3300.000	31.786	122.135	85.527	85.527
3400.000	31.833	123.085	88.708	88.708
3500.000	31.877	124.008	91.893	91.893
3600.000	31.917	124.907	95.083	95.083
3700.000	31.954	125.782	98.276	98.276
3800.000	31.989	126.635	101.474	101.474
3900.000	32.022	127.465	104.674	104.674
4000.000	32.055	128.277	107.878	107.878
4100.000	32.086	129.069	111.085	111.085
4200.000	32.118	129.842	114.295	114.295
4300.000	32.150	130.599	117.509	117.509
4400.000	32.182	131.338	120.725	120.725
4500.000	32.214	132.062	123.945	123.945
4600.000	32.246	132.770	127.168	127.168
4700.000	32.279	133.464	130.394	130.394
4800.000	32.312	134.144	133.624	133.624
4900.000	32.345	134.810	136.857	136.857
5000.000	32.377	135.464	140.093	140.093
5100.000	32.409	136.105	143.332	143.332
5200.000	32.439	136.735	146.574	146.574
5300.000	32.468	137.353	149.820	149.820
5400.000	32.495	137.961	153.068	153.068
5500.000	32.518	138.557	156.319	156.319
5600.000	32.538	139.143	159.572	159.572
5700.000	32.553	139.719	162.826	162.826
5800.000	32.563	140.285	166.082	166.082
5900.000	32.566	140.842	169.339	169.339
6000.000	32.562	141.390	172.595	172.595

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H4	53	28.054	12.496	C 2 H 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.208	43.262	-1.727	10.769
200.000	8.639	48.655	-.940	11.556
298.150	10.585	52.454	0.000	12.496
300.000	10.624	52.521	.020	12.516
400.000	12.839	55.878	1.192	13.688
500.000	15.037	58.981	2.587	15.083
600.000	17.048	61.904	4.193	16.689
700.000	18.783	64.666	5.987	18.483
800.000	20.226	67.271	7.940	20.436
900.000	21.443	69.726	10.025	22.521
1000.000	22.575	72.043	12.225	24.721
1100.000	23.460	74.237	14.528	27.024
1200.000	24.266	76.314	16.915	29.411
1300.000	24.997	78.285	19.379	31.875
1400.000	25.659	80.162	21.912	34.408
1500.000	26.257	81.954	24.508	37.004
1600.000	26.794	83.665	27.161	39.657
1700.000	27.275	85.305	29.865	42.361
1800.000	27.705	86.876	32.615	45.111
1900.000	28.088	88.384	35.405	47.901
2000.000	28.428	89.834	38.231	50.727
2100.000	28.728	91.228	41.089	53.585
2200.000	28.992	92.571	43.975	56.471
2300.000	29.223	93.865	46.886	59.382
2400.000	29.426	95.113	49.819	62.315
2500.000	29.602	96.318	52.771	65.267
2600.000	29.755	97.482	55.739	68.235
2700.000	29.888	98.603	58.721	71.217
2800.000	30.003	99.697	61.716	74.212
2900.000	30.102	100.751	64.721	77.217
3000.000	30.189	101.773	67.736	80.232
3100.000	30.264	102.764	70.758	83.254
3200.000	30.331	103.726	73.788	86.284
3300.000	30.390	104.661	76.824	89.320
3400.000	30.444	105.569	79.866	92.362
3500.000	30.494	106.452	82.913	95.409
3600.000	30.540	107.312	85.965	98.461
3700.000	30.586	108.149	89.021	101.517
3800.000	30.630	108.965	92.082	104.578
3900.000	30.674	109.761	95.147	107.643
4000.000	30.718	110.539	98.217	110.713
4100.000	30.764	111.298	101.291	113.787
4200.000	30.811	112.040	104.370	116.866
4300.000	30.860	112.765	107.453	119.949
4400.000	30.910	113.475	110.542	123.038
4500.000	30.961	114.170	113.635	126.131
4600.000	31.013	114.851	116.734	129.230
4700.000	31.065	115.519	119.838	132.334
4800.000	31.116	116.173	122.947	135.443
4900.000	31.167	116.816	126.061	138.557
5000.000	31.214	117.446	129.180	141.676
5100.000	31.259	118.064	132.303	144.799
5200.000	31.298	118.672	135.431	147.927
5300.000	31.331	119.263	138.563	151.059
5400.000	31.355	119.854	141.697	154.193
5500.000	31.370	120.430	144.834	157.330
5600.000	31.372	120.995	147.971	160.467
5700.000	31.360	121.550	151.107	163.603
5800.000	31.331	122.095	154.242	166.738
5900.000	31.283	122.630	157.373	169.869
6000.000	31.213	123.156	160.498	172.994

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H4O	54	44.054	-52.000	C 2 H 4 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.113	46.850	-2.357	-54.357
200.000	11.921	54.024	-1.305	-53.305
298.150	14.664	59.297	0.000	-52.000
300.000	14.715	59.389	.027	-51.973
400.000	17.350	63.988	1.632	-50.368
500.000	19.726	68.120	3.488	-48.512
600.000	21.787	71.904	5.567	-46.433
700.000	23.521	75.397	7.835	-44.165
800.000	24.960	78.634	10.261	-41.739
900.000	26.181	81.646	12.819	-39.181
1000.000	27.305	84.463	15.494	-36.506
1100.000	28.358	87.116	18.278	-33.722
1200.000	29.313	89.625	21.162	-30.838
1300.000	30.176	92.006	24.137	-27.863
1400.000	30.952	94.271	27.195	-24.805
1500.000	31.649	96.431	30.325	-21.675
1600.000	32.273	98.494	33.522	-18.478
1700.000	32.828	100.467	36.778	-15.222
1800.000	33.320	102.358	40.085	-11.915
1900.000	33.755	104.171	43.440	-8.560
2000.000	34.137	105.912	46.835	-5.165
2100.000	34.472	107.586	50.265	-1.735
2200.000	34.763	109.197	53.728	1.728
2300.000	35.016	110.743	57.217	5.217
2400.000	35.235	112.243	60.730	8.730
2500.000	35.422	113.685	64.263	12.263
2600.000	35.583	115.077	67.813	15.813
2700.000	35.720	116.423	71.378	19.378
2800.000	35.838	117.724	74.957	22.957
2900.000	35.938	118.984	78.545	26.545
3000.000	36.023	120.204	82.144	30.144
3100.000	36.097	121.386	85.750	33.750
3200.000	36.162	122.533	89.363	37.363
3300.000	36.219	123.647	92.982	40.982
3400.000	36.272	124.729	96.606	44.606
3500.000	36.320	125.781	100.236	48.236
3600.000	36.367	126.805	103.870	51.870
3700.000	36.413	127.802	107.509	55.509
3800.000	36.459	128.773	111.153	59.153
3900.000	36.507	129.721	114.801	62.801
4000.000	36.556	130.645	118.454	66.454
4100.000	36.607	131.549	122.112	70.112
4200.000	36.661	132.432	125.776	73.776
4300.000	36.717	133.295	129.445	77.445
4400.000	36.775	134.140	133.119	81.119
4500.000	36.835	134.967	136.800	84.800
4600.000	36.896	135.778	140.486	88.486
4700.000	36.956	136.572	144.179	92.179
4800.000	37.016	137.350	147.878	95.878
4900.000	37.073	138.114	151.582	99.582
5000.000	37.126	138.864	155.292	103.292
5100.000	37.172	139.599	159.007	107.007
5200.000	37.211	140.322	162.726	110.726
5300.000	37.240	141.031	166.449	114.449
5400.000	37.256	141.727	170.174	118.174
5500.000	37.257	142.411	173.900	121.900
5600.000	37.240	143.082	177.625	125.625
5700.000	37.201	143.741	181.347	129.347
5800.000	37.138	144.387	185.064	133.064
5900.000	37.046	145.021	188.774	136.774
6000.000	36.923	145.643	192.473	140.473

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CH3CHO	55	44.054	-39.670	C 2 H 4 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.137	51.943	-2.115	-41.785
200.000	10.695	58.369	-1.174	-40.844
298.150	13.233	63.112	0.000	-39.670
300.000	13.280	63.195	.025	-39.645
400.000	15.812	67.365	1.480	-38.190
500.000	18.223	71.155	3.183	-36.487
600.000	20.460	74.673	5.119	-34.551
700.000	22.480	77.987	7.268	-32.402
800.000	24.256	81.107	9.607	-30.063
900.000	25.772	84.054	12.110	-27.560
1000.000	27.025	86.837	14.752	-24.918
1100.000	27.887	89.454	17.499	-22.171
1200.000	28.634	91.913	20.326	-19.344
1300.000	29.274	94.231	23.222	-16.448
1400.000	29.816	96.421	26.177	-13.493
1500.000	30.269	98.494	29.182	-10.488
1600.000	30.643	100.460	32.229	-7.441
1700.000	30.943	102.327	35.308	-4.362
1800.000	31.180	104.103	38.415	-1.255
1900.000	31.358	105.793	41.542	1.872
2000.000	31.487	107.403	44.685	5.015
2100.000	31.571	108.944	47.838	8.168
2200.000	31.617	110.414	50.998	11.328
2300.000	31.632	111.820	54.161	14.491
2400.000	31.620	113.166	57.324	17.654
2500.000	31.587	114.455	60.484	20.814
2600.000	31.538	115.694	63.640	23.970
2700.000	31.476	116.883	66.791	27.121
2800.000	31.406	118.025	69.935	30.265
2900.000	31.331	119.127	73.072	33.402
3000.000	31.256	120.183	76.202	36.532
3100.000	31.182	121.212	79.323	39.653
3200.000	31.112	122.201	82.438	42.768
3300.000	31.049	123.157	85.546	45.876
3400.000	30.994	124.083	88.648	48.978
3500.000	30.949	124.981	91.745	52.075
3600.000	30.915	125.852	94.838	55.168
3700.000	30.893	126.699	97.928	58.258
3800.000	30.882	127.523	101.017	61.347
3900.000	30.884	128.325	104.105	64.435
4000.000	30.898	129.107	107.194	67.524
4100.000	30.923	129.870	110.285	70.615
4200.000	30.958	130.616	113.379	73.709
4300.000	31.002	131.345	116.477	76.807
4400.000	31.053	132.053	119.580	79.910
4500.000	31.108	132.755	122.688	83.018
4600.000	31.166	133.441	125.802	86.132
4700.000	31.223	134.112	128.921	89.251
4800.000	31.277	134.770	132.046	92.376
4900.000	31.322	135.415	135.176	95.506
5000.000	31.357	136.043	138.310	98.640
5100.000	31.376	136.669	141.447	101.777
5200.000	31.375	137.279	144.585	104.915
5300.000	31.348	137.875	147.721	108.051
5400.000	31.290	138.461	150.853	111.183
5500.000	31.196	139.035	153.978	114.308
5600.000	31.059	139.595	157.091	117.421
5700.000	30.873	140.144	160.188	120.518
5800.000	30.631	140.679	163.264	123.594
5900.000	30.326	141.203	166.312	126.642
6000.000	29.950	141.707	169.327	129.657

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H4O2	56	60.054	-78.000	C 2 H 4 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	10.218	52.180	-2.755	-80.755
200.000	13.945	60.401	-1.548	-79.548
298.150	17.569	66.648	0.000	-78.000
300.000	17.635	66.758	.032	-77.968
400.000	21.070	72.310	1.971	-76.029
500.000	24.106	77.346	4.233	-73.767
600.000	26.670	81.975	6.776	-71.224
700.000	28.757	86.249	9.551	-68.449
800.000	30.437	90.203	12.514	-65.486
900.000	31.847	93.871	15.629	-62.371
1000.000	33.198	97.296	18.881	-59.119
1100.000	34.323	100.513	22.258	-55.742
1200.000	35.321	103.544	25.742	-52.258
1300.000	36.203	106.405	29.319	-48.681
1400.000	36.978	109.113	32.979	-45.021
1500.000	37.656	111.693	36.711	-41.289
1600.000	38.246	114.143	40.507	-37.493
1700.000	38.757	116.477	44.358	-33.642
1800.000	39.197	118.705	48.256	-29.744
1900.000	39.574	120.835	52.195	-25.805
2000.000	39.895	122.873	56.169	-21.831
2100.000	40.168	124.827	60.173	-17.827
2200.000	40.398	126.700	64.201	-13.799
2300.000	40.592	128.501	68.251	-9.749
2400.000	40.756	130.232	72.319	-5.681
2500.000	40.896	131.899	76.401	-1.599
2600.000	41.015	133.505	80.497	2.497
2700.000	41.120	135.055	84.604	6.604
2800.000	41.213	136.552	88.721	10.721
2900.000	41.298	138.000	92.846	14.846
3000.000	41.379	139.401	96.980	18.980
3100.000	41.459	140.759	101.122	23.122
3200.000	41.540	142.077	105.272	27.272
3300.000	41.623	143.355	109.430	31.430
3400.000	41.711	144.600	113.597	35.597
3500.000	41.805	145.811	117.772	39.772
3600.000	41.906	146.990	121.958	43.958
3700.000	42.013	148.139	126.154	48.154
3800.000	42.127	149.261	130.361	52.361
3900.000	42.248	150.357	134.579	56.579
4000.000	42.373	151.423	138.811	60.811
4100.000	42.503	152.476	143.054	65.054
4200.000	42.636	153.502	147.311	69.311
4300.000	42.768	154.507	151.581	73.581
4400.000	42.898	155.491	155.865	77.865
4500.000	43.023	156.457	160.161	82.161
4600.000	43.139	157.404	164.469	86.469
4700.000	43.242	158.333	168.788	90.788
4800.000	43.329	159.244	173.117	95.117
4900.000	43.393	160.138	177.453	99.453
5000.000	43.432	161.015	181.795	103.795
5100.000	43.438	161.875	186.139	108.139
5200.000	43.406	162.719	190.481	112.481
5300.000	43.330	163.545	194.818	116.818
5400.000	43.203	164.354	199.145	121.145
5500.000	43.017	165.145	203.457	125.457
5600.000	42.766	165.918	207.747	129.747
5700.000	42.441	166.672	212.008	134.008
5800.000	42.034	167.407	216.232	138.232
5900.000	41.536	168.121	220.411	142.411
6000.000	40.937	168.814	224.536	146.536

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2O2H4	57	60.054	-4.000	C 2 H 4 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	10.488	50.891	-2.739	-6.739
200.000	13.891	59.213	-1.519	-5.519
298.150	17.015	65.350	0.000	-4.000
300.000	17.071	65.457	.031	-3.969
400.000	19.907	70.765	1.883	-2.117
500.000	22.328	75.475	3.999	-.001
600.000	24.313	79.728	6.335	2.335
700.000	25.887	83.599	8.848	4.848
800.000	27.123	87.140	11.501	7.501
900.000	28.143	90.395	14.265	10.265
1000.000	29.116	93.410	17.128	13.128
1100.000	29.934	96.224	20.081	16.081
1200.000	30.676	98.861	23.112	19.112
1300.000	31.349	101.343	26.214	22.214
1400.000	31.957	103.689	29.379	25.379
1500.000	32.504	105.913	32.603	28.603
1600.000	32.996	108.027	35.878	31.878
1700.000	33.436	110.040	39.201	35.201
1800.000	33.829	111.963	42.564	38.564
1900.000	34.179	113.802	45.965	41.965
2000.000	34.489	115.563	49.399	45.399
2100.000	34.764	117.252	52.862	48.862
2200.000	35.007	118.875	56.350	52.350
2300.000	35.220	120.436	59.862	55.862
2400.000	35.408	121.939	63.394	59.394
2500.000	35.572	123.388	66.943	62.943
2600.000	35.717	124.786	70.507	66.507
2700.000	35.844	126.137	74.086	70.086
2800.000	35.956	127.442	77.676	73.676
2900.000	36.055	128.706	81.276	77.276
3000.000	36.144	129.930	84.887	80.887
3100.000	36.223	131.116	88.505	84.505
3200.000	36.296	132.267	92.131	88.131
3300.000	36.362	133.385	95.764	91.764
3400.000	36.425	134.471	99.403	95.403
3500.000	36.484	135.528	103.049	99.049
3600.000	36.541	136.557	106.700	102.700
3700.000	36.597	137.559	110.357	106.357
3800.000	36.653	138.535	114.019	110.019
3900.000	36.708	139.483	117.687	113.687
4000.000	36.764	140.418	121.361	117.361
4100.000	36.820	141.327	125.040	121.040
4200.000	36.876	142.215	128.725	124.725
4300.000	36.933	143.083	132.416	128.416
4400.000	36.989	143.933	136.112	132.112
4500.000	37.044	144.765	139.813	135.813
4600.000	37.098	145.580	143.521	139.521
4700.000	37.149	146.378	147.233	143.233
4800.000	37.197	147.161	150.950	146.950
4900.000	37.240	147.923	154.672	150.672
5000.000	37.276	148.681	158.398	154.398
5100.000	37.305	149.419	162.127	158.127
5200.000	37.323	150.144	165.859	161.859
5300.000	37.330	150.855	169.591	165.591
5400.000	37.323	151.553	173.324	169.324
5500.000	37.300	152.237	177.056	173.056
5600.000	37.258	152.909	180.784	176.784
5700.000	37.195	153.568	184.506	180.506
5800.000	37.107	154.214	188.222	184.222
5900.000	36.992	154.847	191.927	187.927
6000.000	36.847	155.468	195.619	191.619

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H5	58	29.062	26.362	C 2 H 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.374	43.221	-2.105	24.257
200.000	10.515	50.014	-1.118	25.244
298.150	12.361	54.537	0.000	26.362
300.000	12.399	54.615	.023	26.385
400.000	14.659	58.485	1.374	27.736
500.000	17.007	62.010	2.958	29.320
600.000	19.239	65.311	4.772	31.134
700.000	21.230	68.430	6.797	33.159
800.000	22.942	71.380	9.008	35.370
900.000	24.416	74.169	11.378	37.740
1000.000	25.775	76.812	13.888	40.250
1100.000	26.926	79.323	16.523	42.885
1200.000	27.969	81.712	19.269	45.631
1300.000	28.913	83.988	22.114	48.476
1400.000	29.763	86.163	25.048	51.410
1500.000	30.527	88.243	28.064	54.426
1600.000	31.211	90.235	31.151	57.513
1700.000	31.820	92.146	34.303	60.665
1800.000	32.361	93.980	37.513	63.875
1900.000	32.840	95.743	40.773	67.135
2000.000	33.262	97.438	44.079	70.441
2100.000	33.632	99.070	47.424	73.786
2200.000	33.955	100.643	50.804	77.166
2300.000	34.235	102.158	54.214	80.576
2400.000	34.478	103.621	57.650	84.012
2500.000	34.687	105.032	61.108	87.470
2600.000	34.867	106.396	64.586	90.948
2700.000	35.020	107.715	68.081	94.443
2800.000	35.151	108.991	71.589	97.951
2900.000	35.264	110.227	75.110	101.472
3000.000	35.360	111.424	78.642	105.004
3100.000	35.442	112.585	82.182	108.544
3200.000	35.514	113.711	85.730	112.092
3300.000	35.578	114.805	89.284	115.646
3400.000	35.636	115.868	92.845	119.207
3500.000	35.689	116.902	96.411	122.773
3600.000	35.739	117.903	99.983	126.345
3700.000	35.788	118.883	103.559	129.921
3800.000	35.836	119.843	107.140	133.502
3900.000	35.886	120.774	110.727	137.089
4000.000	35.936	121.684	114.318	140.680
4100.000	35.988	122.572	117.914	144.276
4200.000	36.042	123.439	121.515	147.877
4300.000	36.098	124.283	125.122	151.484
4400.000	36.155	125.119	128.735	155.097
4500.000	36.213	125.932	132.353	158.715
4600.000	36.272	126.728	135.977	162.339
4700.000	36.329	127.509	139.607	165.969
4800.000	36.385	128.274	143.243	169.605
4900.000	36.437	129.025	146.884	173.246
5000.000	36.485	129.762	150.531	176.893
5100.000	36.525	130.485	154.181	180.543
5200.000	36.555	131.194	157.835	184.197
5300.000	36.574	131.891	161.492	187.854
5400.000	36.579	132.574	165.150	191.512
5500.000	36.566	133.245	168.807	195.169
5600.000	36.533	133.904	172.462	198.824
5700.000	36.476	134.550	176.113	202.475
5800.000	36.392	135.184	179.756	206.118
5900.000	36.276	135.805	183.390	209.752
6000.000	36.125	136.414	187.010	213.372

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H4OH	59	45.062	-24.000	C 2 H 5 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.318	53.346	-2.219	-26.219
200.000	11.161	59.949	-1.250	-25.250
298.150	14.346	64.991	0.000	-24.000
300.000	14.406	65.081	.027	-23.973
400.000	17.702	69.679	1.633	-22.367
500.000	20.786	73.966	3.560	-20.440
600.000	23.484	78.001	5.777	-18.223
700.000	25.714	81.795	8.241	-15.759
800.000	27.484	85.349	10.905	-13.095
900.000	28.889	88.670	13.726	-10.274
1000.000	30.118	91.773	16.676	-7.324
1100.000	30.584	94.671	19.712	-4.288
1200.000	30.998	97.350	22.791	-1.209
1300.000	31.362	99.846	25.910	1.910
1400.000	31.681	102.182	29.062	5.062
1500.000	31.958	104.378	32.245	8.245
1600.000	32.195	106.443	35.453	11.453
1700.000	32.396	108.405	38.683	14.683
1800.000	32.563	110.262	41.931	17.931
1900.000	32.699	112.027	45.194	21.194
2000.000	32.807	113.707	48.469	24.469
2100.000	32.889	115.310	51.754	27.754
2200.000	32.948	116.841	55.047	31.047
2300.000	32.987	118.307	58.343	34.343
2400.000	33.007	119.711	61.643	37.643
2500.000	33.011	121.059	64.944	40.944
2600.000	33.000	122.353	68.245	44.245
2700.000	32.978	123.593	71.544	47.544
2800.000	32.945	124.797	74.840	50.840
2900.000	32.904	125.952	78.133	54.133
3000.000	32.857	127.067	81.421	57.421
3100.000	32.804	128.144	84.704	60.704
3200.000	32.748	129.184	87.981	63.981
3300.000	32.690	130.191	91.253	67.253
3400.000	32.631	131.165	94.519	70.519
3500.000	32.573	132.111	97.780	73.780
3600.000	32.517	133.028	101.034	77.034
3700.000	32.464	133.918	104.283	80.283
3800.000	32.414	134.783	107.527	83.527
3900.000	32.369	135.625	110.766	86.766
4000.000	32.330	136.444	114.001	90.001
4100.000	32.297	137.242	117.232	93.232
4200.000	32.271	138.020	120.461	96.461
4300.000	32.252	138.779	123.687	99.687
4400.000	32.240	139.520	126.911	102.911
4500.000	32.237	140.244	130.135	106.135
4600.000	32.242	140.953	133.359	109.359
4700.000	32.256	141.646	136.584	112.584
4800.000	32.277	142.326	139.810	115.810
4900.000	32.308	142.992	143.040	119.040
5000.000	32.346	143.645	146.272	122.272
5100.000	32.393	144.286	149.509	125.509
5200.000	32.447	144.915	152.751	128.751
5300.000	32.508	145.534	155.999	131.999
5400.000	32.576	146.142	159.253	135.253
5500.000	32.650	146.740	162.514	138.514
5600.000	32.729	147.329	165.783	141.783
5700.000	32.813	147.909	169.060	145.060
5800.000	32.901	148.481	172.346	148.346
5900.000	32.991	149.044	175.640	151.640
6000.000	33.083	149.599	178.944	154.944

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H6	60	30.070	-20.236	C 2 H 6

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.084	43.670	-2.086	-22.322
200.000	10.514	50.000	-1.159	-21.395
298.150	13.134	54.680	0.000	-20.236
300.000	13.185	54.763	.024	-20.212
400.000	15.933	58.932	1.480	-18.756
500.000	18.630	62.779	3.209	-17.027
600.000	21.174	66.403	5.201	-15.035
700.000	23.498	69.845	7.437	-12.799
800.000	25.565	73.121	9.892	-10.344
900.000	27.368	76.233	12.541	-7.695
1000.000	28.932	79.205	15.358	-4.878
1100.000	30.465	82.035	18.329	-1.907
1200.000	31.851	84.747	21.446	1.210
1300.000	33.098	87.346	24.694	4.458
1400.000	34.217	89.841	28.061	7.825
1500.000	35.218	92.236	31.534	11.298
1600.000	36.109	94.533	35.101	14.865
1700.000	36.899	96.752	38.752	18.516
1800.000	37.597	98.881	42.478	22.242
1900.000	38.210	100.930	46.269	26.033
2000.000	38.746	102.904	50.117	29.881
2100.000	39.213	104.806	54.016	33.780
2200.000	39.618	106.640	57.958	37.722
2300.000	39.967	108.409	61.937	41.701
2400.000	40.267	110.117	65.950	45.714
2500.000	40.523	111.765	69.989	49.753
2600.000	40.741	113.359	74.053	53.817
2700.000	40.926	114.900	78.136	57.900
2800.000	41.083	116.392	82.237	62.001
2900.000	41.217	117.836	86.352	66.116
3000.000	41.332	119.235	90.480	70.244
3100.000	41.432	120.592	94.618	74.382
3200.000	41.520	121.909	98.766	78.530
3300.000	41.599	123.188	102.922	82.686
3400.000	41.672	124.431	107.085	86.849
3500.000	41.741	125.640	111.256	91.020
3600.000	41.810	126.815	115.434	95.198
3700.000	41.878	127.963	119.618	99.382
3800.000	41.948	129.081	123.809	103.573
3900.000	42.020	130.171	128.008	107.772
4000.000	42.096	131.236	132.213	111.977
4100.000	42.175	132.275	136.427	116.191
4200.000	42.258	133.294	140.649	120.413
4300.000	42.344	134.289	144.879	124.643
4400.000	42.432	135.264	149.118	128.882
4500.000	42.522	136.218	153.365	133.129
4600.000	42.612	137.154	157.622	137.386
4700.000	42.699	138.071	161.888	141.652
4800.000	42.783	138.971	166.162	145.926
4900.000	42.859	139.854	170.444	150.208
5000.000	42.927	140.720	174.733	154.497
5100.000	42.981	141.571	179.029	158.793
5200.000	43.020	142.405	183.329	163.093
5300.000	43.038	143.226	187.632	167.396
5400.000	43.032	144.030	191.936	171.700
5500.000	42.996	144.819	196.237	176.001
5600.000	42.927	145.594	200.534	180.298
5700.000	42.819	146.353	204.822	184.586
5800.000	42.665	147.096	209.096	188.860
5900.000	42.461	147.824	213.353	193.117
6000.000	42.199	148.535	217.586	197.350

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H5OH	61	46.070	-56.170	C 2 H 6 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.629	55.383	-2.336	-58.506
200.000	11.731	62.271	-1.324	-57.494
298.150	15.310	67.611	0.000	-56.170
300.000	15.379	67.707	.028	-56.142
400.000	19.146	72.648	1.755	-54.415
500.000	22.709	77.310	3.851	-52.319
600.000	25.844	81.735	6.283	-49.887
700.000	28.429	85.920	9.001	-47.169
800.000	30.444	89.854	11.949	-44.221
900.000	31.969	93.532	15.074	-41.096
1000.000	33.186	96.965	18.233	-37.837
1100.000	33.450	100.141	21.665	-34.505
1200.000	33.661	103.061	25.021	-31.149
1300.000	33.825	105.762	28.396	-27.774
1400.000	33.948	108.273	31.785	-24.385
1500.000	34.034	110.618	35.184	-20.986
1600.000	34.090	112.817	38.590	-17.580
1700.000	34.118	114.885	42.001	-14.169
1800.000	34.124	116.835	45.413	-10.757
1900.000	34.112	118.680	48.825	-7.345
2000.000	34.085	120.429	52.235	-3.935
2100.000	34.047	122.091	55.642	-.528
2200.000	34.001	123.674	59.044	2.874
2300.000	33.950	125.184	62.442	6.272
2400.000	33.897	126.628	65.834	9.664
2500.000	33.844	128.010	69.221	13.051
2600.000	33.794	129.337	72.603	16.433
2700.000	33.748	130.611	75.980	19.810
2800.000	33.708	131.838	79.353	23.183
2900.000	33.675	133.020	82.722	26.552
3000.000	33.651	134.161	86.088	29.918
3100.000	33.635	135.265	89.453	33.283
3200.000	33.630	136.332	92.816	36.646
3300.000	33.634	137.367	96.179	40.009
3400.000	33.648	138.372	99.543	43.373
3500.000	33.672	139.347	102.909	46.739
3600.000	33.704	140.295	106.278	50.108
3700.000	33.745	141.220	109.650	53.480
3800.000	33.794	142.121	113.027	56.857
3900.000	33.848	142.999	116.409	60.239
4000.000	33.906	143.857	119.797	63.627
4100.000	33.966	144.695	123.190	67.020
4200.000	34.027	145.514	126.590	70.420
4300.000	34.085	146.315	129.995	73.825
4400.000	34.138	147.100	133.407	77.237
4500.000	34.183	147.867	136.823	80.653
4600.000	34.216	148.619	140.243	84.073
4700.000	34.235	149.355	143.665	87.495
4800.000	34.235	150.076	147.089	90.919
4900.000	34.212	150.782	150.512	94.342
5000.000	34.162	151.472	153.931	97.761
5100.000	34.080	152.148	157.343	101.173
5200.000	33.962	152.809	160.745	104.575
5300.000	33.802	153.454	164.134	107.964
5400.000	33.595	154.084	167.504	111.334
5500.000	33.334	154.693	170.851	114.681
5600.000	33.015	155.295	174.169	117.999
5700.000	32.631	155.877	177.452	121.282
5800.000	32.175	156.441	180.693	124.523
5900.000	31.641	156.985	183.884	127.714
6000.000	31.021	157.513	187.018	130.848

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2N2	62	52.038	73.870	C 2 N 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.919	45.667	-2.260	71.610
200.000	11.553	52.709	-1.229	72.641
298.150	13.386	57.683	0.000	73.870
300.000	13.416	57.767	.025	73.895
400.000	14.728	61.817	1.436	75.306
500.000	15.670	65.211	2.958	76.828
600.000	16.380	68.133	4.562	78.432
700.000	16.955	70.702	6.230	80.100
800.000	17.451	73.000	7.950	81.820
900.000	17.884	75.081	9.718	83.588
1000.000	18.226	76.984	11.524	85.394
1100.000	18.513	78.735	13.361	87.231
1200.000	18.771	80.357	15.226	89.096
1300.000	19.003	81.868	17.115	90.985
1400.000	19.212	83.285	19.026	92.896
1500.000	19.397	84.616	20.956	94.826
1600.000	19.562	85.874	22.904	96.774
1700.000	19.708	87.064	24.868	98.738
1800.000	19.836	88.194	26.846	100.716
1900.000	19.948	89.270	28.835	102.705
2000.000	20.046	90.295	30.835	104.705
2100.000	20.130	91.276	32.844	106.714
2200.000	20.203	92.214	34.860	108.730
2300.000	20.265	93.113	36.884	110.754
2400.000	20.317	93.977	38.913	112.783
2500.000	20.361	94.807	40.947	114.817
2600.000	20.398	95.607	42.985	116.855
2700.000	20.428	96.377	45.026	118.896
2800.000	20.453	97.120	47.070	120.940
2900.000	20.474	97.833	49.117	122.987
3000.000	20.490	98.533	51.165	125.035
3100.000	20.504	99.205	53.215	127.085
3200.000	20.516	99.856	55.266	129.136
3300.000	20.526	100.483	57.318	131.188
3400.000	20.535	101.101	59.371	133.241
3500.000	20.543	101.696	61.425	135.295
3600.000	20.552	102.275	63.480	137.350
3700.000	20.560	102.838	65.535	139.405
3800.000	20.569	103.386	67.592	141.462
3900.000	20.578	103.921	69.649	143.519
4000.000	20.589	104.442	71.707	145.577
4100.000	20.601	104.950	73.767	147.637
4200.000	20.613	105.447	75.828	149.698
4300.000	20.627	105.932	77.890	151.760
4400.000	20.642	106.407	79.953	153.823
4500.000	20.658	106.871	82.018	155.888
4600.000	20.674	107.325	84.085	157.955
4700.000	20.691	107.770	86.153	160.023
4800.000	20.708	108.206	88.223	162.093
4900.000	20.724	108.633	90.294	164.164
5000.000	20.740	109.052	92.368	166.238
5100.000	20.755	109.462	94.442	168.312
5200.000	20.767	109.865	96.518	170.388
5300.000	20.777	110.261	98.596	172.466
5400.000	20.784	110.650	100.674	174.544
5500.000	20.787	111.031	102.752	176.622
5600.000	20.785	111.405	104.831	178.701
5700.000	20.777	111.773	106.909	180.779
5800.000	20.763	112.135	108.986	182.856
5900.000	20.741	112.489	111.061	184.931
6000.000	20.710	112.838	113.134	187.004

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2O	63	40.022	68.500	C 2 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.354	46.135	-1.780	66.720
200.000	9.082	51.799	-.553	67.547
298.150	10.261	55.658	0.000	68.500
300.000	10.280	55.723	.019	68.519
400.000	11.122	58.802	1.091	69.591
500.000	11.745	61.354	2.236	70.736
600.000	12.245	63.541	3.436	71.936
700.000	12.684	65.462	4.683	73.183
800.000	13.081	67.182	5.972	74.472
900.000	13.420	68.743	7.297	75.797
1000.000	13.647	70.170	8.652	77.152
1100.000	13.883	71.482	10.029	78.529
1200.000	14.097	72.699	11.428	79.928
1300.000	14.291	73.835	12.847	81.347
1400.000	14.466	74.901	14.285	82.785
1500.000	14.623	75.905	15.740	84.240
1600.000	14.763	76.853	17.209	85.709
1700.000	14.888	77.752	18.692	87.192
1800.000	14.998	78.605	20.187	88.687
1900.000	15.095	79.419	21.691	90.191
2000.000	15.180	80.195	23.205	91.705
2100.000	15.253	80.938	24.727	93.227
2200.000	15.316	81.649	26.255	94.755
2300.000	15.369	82.331	27.790	96.290
2400.000	15.413	82.985	29.329	97.829
2500.000	15.450	83.616	30.872	99.372
2600.000	15.479	84.223	32.419	100.919
2700.000	15.502	84.807	33.968	102.468
2800.000	15.520	85.372	35.519	104.019
2900.000	15.532	85.916	37.072	105.572
3000.000	15.540	86.443	38.625	107.125
3100.000	15.545	86.953	40.180	108.680
3200.000	15.546	87.446	41.734	110.234
3300.000	15.544	87.925	43.289	111.789
3400.000	15.540	88.389	44.843	113.343
3500.000	15.535	88.839	46.397	114.897
3600.000	15.528	89.277	47.950	116.450
3700.000	15.520	89.702	49.502	118.002
3800.000	15.511	90.116	51.054	119.554
3900.000	15.502	90.519	52.604	121.104
4000.000	15.493	90.911	54.154	122.654
4100.000	15.484	91.293	55.703	124.203
4200.000	15.475	91.666	57.251	125.751
4300.000	15.467	92.030	58.798	127.298
4400.000	15.459	92.386	60.344	128.844
4500.000	15.452	92.733	61.890	130.390
4600.000	15.445	93.073	63.435	131.935
4700.000	15.438	93.405	64.979	133.479
4800.000	15.432	93.730	66.522	135.022
4900.000	15.427	94.048	68.065	136.565
5000.000	15.421	94.360	69.608	138.108
5100.000	15.416	94.665	71.150	139.650
5200.000	15.411	94.964	72.691	141.191
5300.000	15.405	95.258	74.232	142.732
5400.000	15.399	95.545	75.772	144.272
5500.000	15.391	95.828	77.312	145.812
5600.000	15.382	96.105	78.850	147.350
5700.000	15.372	96.378	80.388	148.888
5800.000	15.359	96.645	81.924	150.424
5900.000	15.344	96.907	83.460	151.960
6000.000	15.325	97.165	84.993	153.493

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2O2	64	56.022	62.000	C 2 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.860	47.834	-1.974	60.026
200.000	10.138	53.654	-1.115	60.885
298.150	12.458	58.159	0.000	62.000
300.000	12.495	58.237	.023	62.023
400.000	14.159	62.074	1.360	63.360
500.000	15.324	65.366	2.838	64.838
600.000	16.156	68.238	4.414	66.414
700.000	16.785	70.777	6.063	68.063
800.000	17.315	73.054	7.768	69.768
900.000	17.814	75.122	9.525	71.525
1000.000	18.320	77.025	11.331	73.331
1100.000	18.607	78.785	13.178	75.178
1200.000	18.866	80.415	15.052	77.052
1300.000	19.097	81.934	16.950	78.950
1400.000	19.304	83.357	18.870	80.870
1500.000	19.489	84.696	20.810	82.810
1600.000	19.651	85.959	22.767	84.767
1700.000	19.794	87.155	24.740	86.740
1800.000	19.920	88.289	26.726	88.726
1900.000	20.029	89.369	28.723	90.723
2000.000	20.123	90.399	30.731	92.731
2100.000	20.204	91.383	32.747	94.747
2200.000	20.273	92.325	34.771	96.771
2300.000	20.331	93.227	36.801	98.801
2400.000	20.379	94.093	38.837	100.837
2500.000	20.419	94.925	40.877	102.877
2600.000	20.452	95.728	42.921	104.921
2700.000	20.479	96.503	44.967	106.967
2800.000	20.500	97.245	47.016	109.016
2900.000	20.517	97.965	49.067	111.067
3000.000	20.531	98.661	51.119	113.119
3100.000	20.541	99.334	53.173	115.173
3200.000	20.550	99.986	55.228	117.228
3300.000	20.557	100.619	57.283	119.283
3400.000	20.564	101.233	59.339	121.339
3500.000	20.570	101.829	61.396	123.396
3600.000	20.576	102.408	63.453	125.453
3700.000	20.583	102.972	65.511	127.511
3800.000	20.590	103.521	67.570	129.570
3900.000	20.598	104.056	69.629	131.629
4000.000	20.608	104.573	71.689	133.689
4100.000	20.619	105.087	73.751	135.751
4200.000	20.631	105.584	75.813	137.813
4300.000	20.644	106.069	77.877	139.877
4400.000	20.659	106.544	79.942	141.942
4500.000	20.674	107.009	82.009	144.009
4600.000	20.691	107.463	84.077	146.077
4700.000	20.707	107.908	86.147	148.147
4800.000	20.724	108.345	88.218	150.218
4900.000	20.741	108.772	90.292	152.292
5000.000	20.757	109.191	92.366	154.366
5100.000	20.771	109.602	94.443	156.443
5200.000	20.784	110.006	96.521	158.521
5300.000	20.793	110.402	98.599	160.599
5400.000	20.800	110.791	100.679	162.679
5500.000	20.802	111.172	102.759	164.759
5600.000	20.799	111.547	104.839	166.839
5700.000	20.790	111.915	106.919	168.919
5800.000	20.774	112.277	108.997	170.997
5900.000	20.749	112.631	111.073	173.073
6000.000	20.715	112.980	113.147	175.147

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3*	65	36.033	0.000	C 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	1.769	.512	-.728	-.728
200.000	3.617	2.263	-.465	-.465
298.150	5.905	4.126	0.000	0.000
300.000	5.949	4.162	.011	.011
400.000	8.337	6.204	.726	.726
500.000	10.478	8.301	1.670	1.670
600.000	12.191	10.370	2.807	2.807
700.000	13.420	12.347	4.092	4.092
800.000	14.231	14.196	5.477	5.477
900.000	14.817	15.907	6.931	6.931
1000.000	15.493	17.501	8.444	8.444
1100.000	15.851	18.994	10.011	10.011
1200.000	16.171	20.388	11.613	11.613
1300.000	16.456	21.693	13.244	13.244
1400.000	16.708	22.922	14.903	14.903
1500.000	16.932	24.083	16.585	16.585
1600.000	17.128	25.182	18.288	18.288
1700.000	17.300	26.225	20.010	20.010
1800.000	17.449	27.219	21.747	21.747
1900.000	17.579	28.165	23.499	23.499
2000.000	17.691	29.070	25.263	25.263
2100.000	17.786	29.936	27.036	27.036
2200.000	17.868	30.765	28.819	28.819
2300.000	17.938	31.561	30.610	30.610
2400.000	17.998	32.325	32.407	32.407
2500.000	18.049	33.062	34.209	34.209
2600.000	18.092	33.770	36.016	36.016
2700.000	18.130	34.454	37.827	37.827
2800.000	18.164	35.114	39.642	39.642
2900.000	18.195	35.752	41.460	41.460
3000.000	18.223	36.369	43.281	43.281
3100.000	18.251	36.967	45.105	45.105
3200.000	18.278	37.547	46.931	46.931
3300.000	18.306	38.110	48.760	48.760
3400.000	18.336	38.657	50.592	50.592
3500.000	18.368	39.189	52.428	52.428
3600.000	18.403	39.707	54.266	54.266
3700.000	18.440	40.211	56.108	56.108
3800.000	18.481	40.704	57.954	57.954
3900.000	18.526	41.184	59.805	59.805
4000.000	18.575	41.654	61.660	61.660
4100.000	18.628	42.113	63.520	63.520
4200.000	18.684	42.563	65.385	65.385
4300.000	18.744	43.003	67.257	67.257
4400.000	18.807	43.435	69.134	69.134
4500.000	18.873	43.858	71.018	71.018
4600.000	18.942	44.274	72.909	72.909
4700.000	19.013	44.682	74.807	74.807
4800.000	19.085	45.083	76.712	76.712
4900.000	19.157	45.477	78.624	78.624
5000.000	19.229	45.865	80.543	80.543
5100.000	19.300	46.245	82.469	82.469
5200.000	19.368	46.622	84.403	84.403
5300.000	19.433	46.992	86.343	86.343
5400.000	19.493	47.355	88.289	88.289
5500.000	19.547	47.714	90.241	90.241
5600.000	19.593	48.065	92.198	92.198
5700.000	19.630	48.413	94.160	94.160
5800.000	19.655	48.755	96.124	96.124
5900.000	19.668	49.091	98.090	98.090
6000.000	19.667	49.421	100.057	100.057

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3	66	36.033	196.000	C 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.997	46.454	-1.848	194.152
200.000	9.395	52.847	-.923	195.077
298.150	9.366	56.599	0.000	196.000
300.000	9.365	56.659	.017	196.017
400.000	9.215	59.332	.946	196.946
500.000	9.155	61.379	1.863	197.863
600.000	9.299	63.053	2.784	198.784
700.000	9.659	64.516	3.730	199.730
800.000	10.151	65.837	4.720	200.720
900.000	10.593	67.060	5.759	201.759
1000.000	10.703	68.185	6.828	202.828
1100.000	10.915	69.215	7.909	203.909
1200.000	11.110	70.175	9.011	205.011
1300.000	11.291	71.071	10.131	206.131
1400.000	11.458	71.914	11.268	207.268
1500.000	11.612	72.710	12.422	208.422
1600.000	11.754	73.464	13.590	209.590
1700.000	11.885	74.180	14.772	210.772
1800.000	12.005	74.863	15.967	211.967
1900.000	12.116	75.515	17.173	213.173
2000.000	12.218	76.139	18.390	214.390
2100.000	12.311	76.738	19.616	215.616
2200.000	12.398	77.312	20.852	216.852
2300.000	12.477	77.865	22.096	218.096
2400.000	12.550	78.398	23.347	219.347
2500.000	12.618	78.912	24.605	220.605
2600.000	12.681	79.408	25.870	221.870
2700.000	12.739	79.887	27.141	223.141
2800.000	12.793	80.352	28.418	224.418
2900.000	12.844	80.802	29.700	225.700
3000.000	12.892	81.233	30.987	226.987
3100.000	12.937	81.661	32.278	228.278
3200.000	12.979	82.073	33.574	229.574
3300.000	13.020	82.473	34.874	230.874
3400.000	13.059	82.862	36.178	232.178
3500.000	13.097	83.241	37.486	233.486
3600.000	13.134	83.610	38.798	234.798
3700.000	13.170	83.971	40.113	236.113
3800.000	13.205	84.323	41.431	237.431
3900.000	13.239	84.665	42.754	238.754
4000.000	13.273	85.002	44.079	240.079
4100.000	13.307	85.330	45.408	241.408
4200.000	13.341	85.651	46.741	242.741
4300.000	13.374	85.965	48.076	244.076
4400.000	13.407	86.273	49.415	245.415
4500.000	13.439	86.575	50.758	246.758
4600.000	13.472	86.870	52.103	248.103
4700.000	13.503	87.160	53.452	249.452
4800.000	13.535	87.445	54.804	250.804
4900.000	13.565	87.724	56.159	252.159
5000.000	13.595	87.999	57.517	253.517
5100.000	13.623	88.268	58.878	254.878
5200.000	13.650	88.533	60.242	256.242
5300.000	13.675	88.793	61.608	257.608
5400.000	13.698	89.049	62.977	258.977
5500.000	13.719	89.301	64.347	260.347
5600.000	13.737	89.548	65.720	261.720
5700.000	13.752	89.791	67.095	263.095
5800.000	13.763	90.031	68.471	264.471
5900.000	13.770	90.265	69.847	265.847
6000.000	13.772	90.497	71.224	267.224

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3H	67	37.041	127.100	C 3 H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.071	45.903	-1.756	125.344
200.000	8.909	51.377	-.556	126.144
298.150	10.534	55.242	0.000	127.100
300.000	10.563	55.309	.019	127.119
400.000	12.013	58.551	1.150	128.250
500.000	13.252	61.369	2.415	129.515
600.000	14.287	63.883	3.794	130.894
700.000	15.140	66.148	5.266	132.366
800.000	15.848	68.217	6.817	133.917
900.000	16.462	70.120	8.433	135.533
1000.000	17.047	71.885	10.108	137.208
1100.000	17.442	73.523	11.833	138.933
1200.000	17.806	75.062	13.596	140.696
1300.000	18.139	76.503	15.393	142.493
1400.000	18.442	77.855	17.222	144.322
1500.000	18.719	79.133	19.081	146.181
1600.000	18.970	80.354	20.965	148.065
1700.000	19.196	81.511	22.874	149.974
1800.000	19.400	82.614	24.804	151.904
1900.000	19.583	83.668	26.753	153.853
2000.000	19.746	84.677	28.720	155.820
2100.000	19.891	85.644	30.702	157.802
2200.000	20.019	86.572	32.697	159.797
2300.000	20.131	87.464	34.705	161.805
2400.000	20.229	88.323	36.723	163.823
2500.000	20.314	89.151	38.750	165.850
2600.000	20.386	89.949	40.785	167.885
2700.000	20.448	90.720	42.827	169.927
2800.000	20.501	91.464	44.875	171.975
2900.000	20.545	92.184	46.927	174.027
3000.000	20.581	92.882	48.983	176.083
3100.000	20.611	93.557	51.043	178.143
3200.000	20.636	94.212	53.106	180.206
3300.000	20.656	94.847	55.170	182.270
3400.000	20.673	95.464	57.237	184.337
3500.000	20.687	96.063	59.305	186.405
3600.000	20.698	96.645	61.374	188.474
3700.000	20.709	97.214	63.444	190.544
3800.000	20.720	97.765	65.516	192.616
3900.000	20.730	98.304	67.588	194.688
4000.000	20.742	98.829	69.662	196.762
4100.000	20.756	99.342	71.737	198.837
4200.000	20.771	99.842	73.813	200.913
4300.000	20.790	100.331	75.891	202.991
4400.000	20.812	100.809	77.971	205.071
4500.000	20.837	101.277	80.054	207.154
4600.000	20.867	101.735	82.139	209.239
4700.000	20.902	102.185	84.227	211.327
4800.000	20.941	102.625	86.319	213.419
4900.000	20.986	103.057	88.416	215.516
5000.000	21.037	103.482	90.517	217.617
5100.000	21.094	103.899	92.623	219.723
5200.000	21.156	104.309	94.736	221.836
5300.000	21.225	104.713	96.855	223.955
5400.000	21.301	105.110	98.981	226.081
5500.000	21.383	105.502	101.115	228.215
5600.000	21.472	105.888	103.258	230.358
5700.000	21.567	106.269	105.410	232.510
5800.000	21.669	106.645	107.571	234.671
5900.000	21.778	107.015	109.744	236.844
6000.000	21.893	107.383	111.927	239.027

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3H2	68	38.049	106.700	C 3 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.749	45.398	-2.062	104.638
200.000	10.466	51.612	-1.150	105.550
298.150	12.917	56.255	0.000	106.700
300.000	12.960	56.336	.024	106.724
400.000	15.136	60.371	1.432	108.132
500.000	16.942	63.950	3.039	109.739
600.000	18.369	67.171	4.807	111.507
700.000	19.449	70.087	6.701	113.401
800.000	20.259	72.740	8.688	115.388
900.000	20.918	75.165	10.748	117.448
1000.000	21.587	77.403	12.872	119.572
1100.000	22.080	79.483	15.056	121.756
1200.000	22.554	81.425	17.287	123.987
1300.000	23.007	83.248	19.566	126.266
1400.000	23.439	84.969	21.888	128.588
1500.000	23.851	86.601	24.253	130.953
1600.000	24.241	88.152	26.658	133.358
1700.000	24.610	89.633	29.100	135.800
1800.000	24.956	91.050	31.579	138.279
1900.000	25.281	92.403	34.091	140.791
2000.000	25.583	93.712	36.634	143.334
2100.000	25.864	94.967	39.207	145.907
2200.000	26.123	96.177	41.806	148.506
2300.000	26.360	97.343	44.431	151.131
2400.000	26.577	98.470	47.078	153.778
2500.000	26.772	99.559	49.745	156.445
2600.000	26.947	100.612	52.431	159.131
2700.000	27.103	101.632	55.134	161.834
2800.000	27.240	102.620	57.851	164.551
2900.000	27.359	103.573	60.581	167.281
3000.000	27.460	104.503	63.323	170.023
3100.000	27.545	105.410	66.073	172.773
3200.000	27.615	106.285	68.831	175.531
3300.000	27.670	107.135	71.595	178.295
3400.000	27.713	107.963	74.365	181.065
3500.000	27.744	108.766	77.138	183.838
3600.000	27.764	109.548	79.913	186.613
3700.000	27.776	110.309	82.690	189.390
3800.000	27.780	111.050	85.468	192.168
3900.000	27.779	111.771	88.246	194.946
4000.000	27.774	112.475	91.024	197.724
4100.000	27.766	113.160	93.801	200.501
4200.000	27.758	113.829	96.577	203.277
4300.000	27.752	114.483	99.352	206.052
4400.000	27.750	115.120	102.127	208.827
4500.000	27.754	115.744	104.903	211.603
4600.000	27.766	116.354	107.679	214.379
4700.000	27.789	116.952	110.456	217.156
4800.000	27.824	117.537	113.237	219.937
4900.000	27.876	118.111	116.022	222.722
5000.000	27.945	118.675	118.812	225.512
5100.000	28.035	119.229	121.611	228.311
5200.000	28.148	119.775	124.420	231.120
5300.000	28.288	120.312	127.242	233.942
5400.000	28.457	120.842	130.079	236.779
5500.000	28.658	121.366	132.934	239.634
5600.000	28.895	121.885	135.811	242.511
5700.000	29.170	122.399	138.714	245.414
5800.000	29.487	122.909	141.647	248.347
5900.000	29.850	123.415	144.613	251.313
6000.000	30.261	123.921	147.618	254.318

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3H3	69	39.057	77.300	C 3 H 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.853	47.853	-2.276	75.024
200.000	11.535	54.813	-1.255	76.045
298.150	14.007	59.890	0.000	77.300
300.000	14.051	59.978	.026	77.326
400.000	16.317	64.333	1.547	78.847
500.000	18.283	68.195	3.279	80.579
600.000	19.934	71.680	5.193	82.493
700.000	21.286	74.858	7.256	84.556
800.000	22.392	77.775	9.442	86.742
900.000	23.337	80.468	11.729	89.029
1000.000	24.240	82.973	14.108	91.408
1100.000	24.976	85.318	16.569	93.869
1200.000	25.637	87.521	19.100	96.400
1300.000	26.230	89.596	21.694	98.994
1400.000	26.759	91.560	24.344	101.644
1500.000	27.231	93.423	27.044	104.344
1600.000	27.649	95.194	29.789	107.089
1700.000	28.018	96.881	32.572	109.872
1800.000	28.344	98.492	35.391	112.691
1900.000	28.631	100.032	38.240	115.540
2000.000	28.883	101.508	41.116	118.416
2100.000	29.103	102.922	44.015	121.315
2200.000	29.295	104.281	46.935	124.235
2300.000	29.464	105.587	49.874	127.174
2400.000	29.611	106.844	52.827	130.127
2500.000	29.741	108.055	55.795	133.095
2600.000	29.855	109.224	58.775	136.075
2700.000	29.958	110.353	61.766	139.066
2800.000	30.050	111.444	64.766	142.066
2900.000	30.134	112.500	67.776	145.076
3000.000	30.212	113.523	70.793	148.093
3100.000	30.286	114.515	73.818	151.118
3200.000	30.356	115.477	76.850	154.150
3300.000	30.426	116.412	79.889	157.189
3400.000	30.494	117.322	82.935	160.235
3500.000	30.563	118.207	85.988	163.288
3600.000	30.633	119.069	89.048	166.348
3700.000	30.703	119.909	92.114	169.414
3800.000	30.775	120.729	95.188	172.488
3900.000	30.848	121.529	98.270	175.570
4000.000	30.922	122.311	101.358	178.658
4100.000	30.996	123.075	104.454	181.754
4200.000	31.070	123.823	107.557	184.857
4300.000	31.143	124.555	110.668	187.968
4400.000	31.212	125.272	113.786	191.086
4500.000	31.278	125.974	116.910	194.210
4600.000	31.338	126.662	120.041	197.341
4700.000	31.390	127.337	123.178	200.478
4800.000	31.433	127.993	126.319	203.619
4900.000	31.464	128.647	129.464	206.764
5000.000	31.480	129.283	132.611	209.911
5100.000	31.479	129.905	135.759	213.059
5200.000	31.458	130.517	138.907	216.207
5300.000	31.413	131.115	142.050	219.350
5400.000	31.341	131.702	145.188	222.488
5500.000	31.239	132.275	148.317	225.617
5600.000	31.102	132.833	151.435	228.735
5700.000	30.927	133.387	154.537	231.837
5800.000	30.709	133.923	157.619	234.919
5900.000	30.443	134.445	160.677	237.977
6000.000	30.125	134.955	163.706	241.006

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3H4	70	40.065	46.017	C 3 H 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.113	46.850	-2.357	43.660
200.000	11.921	54.024	-1.305	44.712
298.150	14.664	59.297	0.000	46.017
300.000	14.715	59.389	.027	46.044
400.000	17.350	63.988	1.632	47.649
500.000	19.726	68.120	3.488	49.505
600.000	21.787	71.904	5.567	51.584
700.000	23.521	75.397	7.835	53.852
800.000	24.960	78.634	10.261	56.278
900.000	26.181	81.646	12.819	58.836
1000.000	27.305	84.463	15.494	61.511
1100.000	28.349	87.115	18.277	64.294
1200.000	29.297	89.623	21.161	67.178
1300.000	30.154	92.003	24.134	70.151
1400.000	30.928	94.266	27.189	73.206
1500.000	31.623	96.424	30.317	76.334
1600.000	32.245	98.485	33.511	79.528
1700.000	32.800	100.457	36.764	82.781
1800.000	33.294	102.345	40.069	86.086
1900.000	33.731	104.153	43.420	89.437
2000.000	34.116	105.898	46.813	92.830
2100.000	34.454	107.571	50.242	96.259
2200.000	34.749	109.181	53.702	99.719
2300.000	35.006	110.731	57.191	103.208
2400.000	35.229	112.225	60.703	106.720
2500.000	35.421	113.668	64.235	110.252
2600.000	35.586	115.061	67.786	113.803
2700.000	35.727	116.407	71.352	117.369
2800.000	35.849	117.703	74.931	120.948
2900.000	35.952	118.963	78.521	124.538
3000.000	36.042	120.183	82.121	128.138
3100.000	36.119	121.371	85.729	131.746
3200.000	36.186	122.519	89.344	135.361
3300.000	36.246	123.634	92.966	138.983
3400.000	36.300	124.715	96.593	142.610
3500.000	36.350	125.769	100.225	146.242
3600.000	36.397	126.794	103.863	149.880
3700.000	36.444	127.792	107.505	153.522
3800.000	36.490	128.765	111.151	157.168
3900.000	36.536	129.713	114.803	160.820
4000.000	36.584	130.639	118.459	164.476
4100.000	36.634	131.542	122.120	168.137
4200.000	36.686	132.425	125.786	171.803
4300.000	36.740	133.290	129.457	175.474
4400.000	36.795	134.135	133.134	179.151
4500.000	36.852	134.963	136.816	182.833
4600.000	36.909	135.773	140.504	186.521
4700.000	36.967	136.568	144.198	190.215
4800.000	37.023	137.346	147.897	193.914
4900.000	37.077	138.110	151.602	197.619
5000.000	37.127	138.860	155.313	201.330
5100.000	37.171	139.595	159.028	205.045
5200.000	37.207	140.318	162.747	208.764
5300.000	37.234	141.027	166.469	212.486
5400.000	37.249	141.723	170.193	216.210
5500.000	37.249	142.405	173.918	219.935
5600.000	37.233	143.073	177.642	223.659
5700.000	37.195	143.736	181.364	227.381
5800.000	37.135	144.383	185.081	231.098
5900.000	37.047	145.017	188.790	234.807
6000.000	36.930	145.638	192.489	238.506

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3H5	71	41.073	34.900	C 3 H 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.558	59.332	-2.452	32.448
200.000	12.351	66.786	-1.361	33.539
298.150	15.411	72.280	0.000	34.900
300.000	15.470	72.377	.029	34.929
400.000	18.638	77.263	1.735	36.635
500.000	21.647	81.750	3.751	38.651
600.000	24.355	85.941	6.054	40.954
700.000	26.686	89.876	8.609	43.509
800.000	28.633	93.570	11.378	46.278
900.000	30.254	97.039	14.325	49.225
1000.000	31.674	100.301	17.422	52.322
1100.000	32.800	103.374	20.647	55.547
1200.000	33.836	106.273	23.979	58.879
1300.000	34.786	109.019	27.411	62.311
1400.000	35.656	111.629	30.934	65.834
1500.000	36.449	114.117	34.539	69.439
1600.000	37.170	116.492	38.221	73.121
1700.000	37.823	118.765	41.971	76.871
1800.000	38.413	120.945	45.783	80.683
1900.000	38.944	123.036	49.652	84.552
2000.000	39.419	125.045	53.570	88.470
2100.000	39.842	126.979	57.534	92.434
2200.000	40.217	128.842	61.537	95.437
2300.000	40.549	130.637	65.576	100.476
2400.000	40.839	132.369	69.646	104.546
2500.000	41.092	134.041	73.742	108.642
2600.000	41.311	135.657	77.863	112.763
2700.000	41.498	137.220	82.003	116.903
2800.000	41.658	138.732	86.161	121.061
2900.000	41.793	140.197	90.334	125.234
3000.000	41.905	141.615	94.519	129.419
3100.000	41.998	142.991	98.715	133.615
3200.000	42.074	144.325	102.918	137.818
3300.000	42.136	145.621	107.129	142.029
3400.000	42.185	146.880	111.345	146.245
3500.000	42.224	148.103	115.566	150.466
3600.000	42.255	149.293	119.790	154.690
3700.000	42.281	150.451	124.016	158.916
3800.000	42.303	151.579	128.246	163.146
3900.000	42.322	152.673	132.477	167.377
4000.000	42.341	153.750	136.710	171.610
4100.000	42.361	154.796	140.945	175.845
4200.000	42.383	155.817	145.182	180.082
4300.000	42.409	156.814	149.422	184.322
4400.000	42.440	157.790	153.664	188.564
4500.000	42.477	158.744	157.910	192.810
4600.000	42.521	159.678	162.160	197.060
4700.000	42.573	160.593	166.414	201.314
4800.000	42.633	161.490	170.675	205.575
4900.000	42.702	162.370	174.941	209.841
5000.000	42.782	163.233	179.215	214.115
5100.000	42.871	164.081	183.498	218.398
5200.000	42.970	164.914	187.790	222.690
5300.000	43.080	165.734	192.092	226.992
5400.000	43.201	166.540	196.406	231.306
5500.000	43.332	167.334	200.733	235.633
5600.000	43.473	168.115	205.073	239.973
5700.000	43.624	168.887	209.428	244.328
5800.000	43.785	169.647	213.798	248.698
5900.000	43.955	170.397	218.185	253.085
6000.000	44.133	171.137	222.589	257.489

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3H5O	72	57.073	-9.000	C 3 H 5 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.634	58.903	-2.408	-11.408
200.000	12.380	65.972	-1.368	-10.368
298.150	15.701	71.490	0.000	-9.000
300.000	15.767	71.583	.029	-8.971
400.000	19.326	76.613	1.784	-7.216
500.000	22.798	81.300	3.891	-5.109
600.000	26.134	85.754	6.339	-2.661
700.000	29.295	90.023	9.112	.112
800.000	32.255	94.130	12.192	3.192
900.000	34.994	98.090	15.556	6.556
1000.000	37.505	101.908	19.183	10.183
1100.000	39.307	105.570	23.026	14.026
1200.000	40.848	109.053	27.036	18.036
1300.000	42.149	112.380	31.187	22.187
1400.000	43.231	115.545	35.458	26.458
1500.000	44.116	118.559	39.827	30.827
1600.000	44.823	121.429	44.275	35.275
1700.000	45.370	124.164	48.786	39.786
1800.000	45.775	126.769	53.345	44.345
1900.000	46.056	129.252	57.937	48.937
2000.000	46.229	131.619	62.552	53.552
2100.000	46.308	133.877	67.180	58.180
2200.000	46.309	136.032	71.811	62.811
2300.000	46.243	138.089	76.439	67.439
2400.000	46.125	140.055	81.058	72.058
2500.000	45.966	141.935	85.663	76.663
2600.000	45.777	143.734	90.250	81.250
2700.000	45.568	145.458	94.818	85.818
2800.000	45.348	147.111	99.364	90.364
2900.000	45.125	148.693	103.887	94.887
3000.000	44.907	150.224	108.389	99.389
3100.000	44.700	151.693	112.869	103.869
3200.000	44.510	153.109	117.329	108.329
3300.000	44.341	154.475	121.772	112.772
3400.000	44.198	155.798	126.198	117.198
3500.000	44.084	157.073	130.612	121.612
3600.000	44.001	158.318	135.016	126.016
3700.000	43.950	159.523	139.414	130.414
3800.000	43.932	160.695	143.807	134.807
3900.000	43.946	161.836	148.201	139.201
4000.000	43.991	162.949	152.598	143.598
4100.000	44.064	164.036	157.000	148.000
4200.000	44.164	165.099	161.411	152.411
4300.000	44.285	166.140	165.834	156.834
4400.000	44.424	167.159	170.269	161.269
4500.000	44.574	168.159	174.719	165.719
4600.000	44.728	169.141	179.184	170.184
4700.000	44.881	170.104	183.664	174.664
4800.000	45.023	171.051	188.160	179.160
4900.000	45.145	171.980	192.668	183.668
5000.000	45.237	172.894	197.188	188.188
5100.000	45.289	173.790	201.714	192.714
5200.000	45.288	174.669	206.244	197.244
5300.000	45.222	175.532	210.770	201.770
5400.000	45.078	176.375	215.286	206.286
5500.000	44.841	177.201	219.782	210.782
5600.000	44.497	178.005	224.250	215.250
5700.000	44.028	178.789	228.678	219.678
5800.000	43.418	179.550	233.051	224.051
5900.000	42.650	180.286	237.356	228.356
6000.000	41.704	180.995	241.575	232.575

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3H6	73	42.081	4.880	C 3 H 6

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.279	50.853	-2.459	2.421
200.000	12.397	58.223	-1.379	3.501
298.150	15.728	63.787	0.000	4.880
300.000	15.791	63.886	.029	4.909
400.000	19.210	68.899	1.780	6.660
500.000	22.466	73.540	3.866	8.746
600.000	25.429	77.903	6.263	11.143
700.000	28.034	82.023	8.940	13.820
800.000	30.273	85.915	11.858	16.738
900.000	32.203	89.595	14.984	19.864
1000.000	33.941	93.080	18.292	23.172
1100.000	35.566	96.392	21.769	26.649
1200.000	37.032	99.551	25.400	30.280
1300.000	38.350	102.568	29.170	34.050
1400.000	39.530	105.454	33.065	37.945
1500.000	40.583	108.218	37.072	41.952
1600.000	41.520	110.868	41.178	46.058
1700.000	42.349	113.410	45.372	50.252
1800.000	43.081	115.852	49.645	54.525
1900.000	43.723	118.199	53.985	58.865
2000.000	44.286	120.456	58.387	63.267
2100.000	44.776	122.629	62.840	67.720
2200.000	45.201	124.722	67.340	72.220
2300.000	45.569	126.740	71.878	76.758
2400.000	45.886	128.685	76.452	81.332
2500.000	46.159	130.565	81.054	85.934
2600.000	46.394	132.380	85.682	90.562
2700.000	46.596	134.135	90.332	95.212
2800.000	46.771	135.833	95.000	99.880
2900.000	46.923	137.477	99.685	104.565
3000.000	47.057	139.070	104.384	109.264
3100.000	47.176	140.615	109.096	113.976
3200.000	47.285	142.114	113.819	118.699
3300.000	47.386	143.571	118.553	123.433
3400.000	47.481	144.987	123.296	128.176
3500.000	47.574	146.364	128.049	132.929
3600.000	47.667	147.706	132.811	137.691
3700.000	47.759	149.013	137.582	142.462
3800.000	47.854	150.283	142.363	147.243
3900.000	47.951	151.532	147.153	152.033
4000.000	48.050	152.743	151.953	156.833
4100.000	48.151	153.935	156.763	161.643
4200.000	48.255	155.097	161.584	166.464
4300.000	48.359	156.234	166.414	171.294
4400.000	48.463	157.347	171.255	176.135
4500.000	48.563	158.437	176.107	180.987
4600.000	48.660	159.505	180.968	185.848
4700.000	48.748	160.553	185.838	190.718
4800.000	48.827	161.580	190.717	195.597
4900.000	48.891	162.587	195.603	200.483
5000.000	48.937	163.575	200.495	205.375
5100.000	48.962	164.545	205.390	210.270
5200.000	48.959	165.496	210.286	215.166
5300.000	48.924	166.428	215.181	220.061
5400.000	48.852	167.342	220.070	224.950
5500.000	48.736	168.237	224.950	229.830
5600.000	48.571	169.114	229.815	234.695
5700.000	48.349	169.972	234.662	239.542
5800.000	48.062	170.810	239.483	244.363
5900.000	47.705	171.629	244.272	249.152
6000.000	47.268	172.427	249.021	253.901

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H6CO	74	58.081	-48.000	C 3 H 6 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.300	59.460	-2.557	-50.557
200.000	12.807	66.916	-1.461	-49.461
298.150	17.048	72.803	0.000	-48.000
300.000	17.130	72.910	.032	-47.968
400.000	21.666	78.460	1.972	-46.028
500.000	25.973	83.764	4.357	-43.643
600.000	29.772	88.845	7.149	-40.851
700.000	32.945	93.680	10.290	-37.710
800.000	35.535	98.254	13.719	-34.281
900.000	37.749	102.570	17.385	-30.615
1000.000	39.954	106.659	21.268	-26.732
1100.000	41.149	110.524	25.324	-22.676
1200.000	42.193	114.151	29.493	-18.507
1300.000	43.098	117.564	33.758	-14.242
1400.000	43.874	120.787	38.108	-9.892
1500.000	44.531	123.838	42.529	-5.471
1600.000	45.078	126.729	47.010	-.990
1700.000	45.525	129.476	51.541	3.541
1800.000	45.881	132.089	56.112	8.112
1900.000	46.154	134.577	60.715	12.715
2000.000	46.353	136.950	65.341	17.341
2100.000	46.485	139.215	69.983	21.983
2200.000	46.559	141.379	74.636	26.636
2300.000	46.581	143.450	79.293	31.293
2400.000	46.558	145.432	83.951	35.951
2500.000	46.498	147.331	88.604	40.604
2600.000	46.405	149.153	93.249	45.249
2700.000	46.287	150.903	97.884	49.884
2800.000	46.148	152.583	102.506	54.506
2900.000	45.995	154.200	107.113	59.113
3000.000	45.831	155.757	111.704	63.704
3100.000	45.662	157.257	116.279	68.279
3200.000	45.491	158.704	120.837	72.837
3300.000	45.323	160.101	125.377	77.377
3400.000	45.161	161.452	129.902	81.902
3500.000	45.008	162.758	134.410	86.410
3600.000	44.868	164.024	138.904	90.904
3700.000	44.742	165.252	143.384	95.384
3800.000	44.633	166.444	147.853	99.853
3900.000	44.543	167.602	152.311	104.311
4000.000	44.474	168.729	156.762	108.762
4100.000	44.425	169.826	161.207	113.207
4200.000	44.400	170.896	165.648	117.648
4300.000	44.397	171.941	170.087	122.087
4400.000	44.417	172.962	174.528	126.528
4500.000	44.460	173.961	178.971	130.971
4600.000	44.525	174.938	183.421	135.421
4700.000	44.612	175.897	187.877	139.877
4800.000	44.719	176.837	192.344	144.344
4900.000	44.845	177.761	196.822	148.822
5000.000	44.988	178.668	201.313	153.313
5100.000	45.146	179.560	205.820	157.820
5200.000	45.316	180.439	210.343	162.343
5300.000	45.495	181.303	214.883	166.883
5400.000	45.681	182.155	219.442	171.442
5500.000	45.869	182.995	224.019	176.019
5600.000	46.056	183.824	228.616	180.616
5700.000	46.237	184.640	233.230	185.230
5800.000	46.409	185.446	237.863	189.863
5900.000	46.565	186.241	242.511	194.511
6000.000	46.701	187.025	247.175	199.175

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3H7	75	43.089	21.778	C 3 H 7

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	12.070	49.652	-2.516	18.862
200.000	14.657	58.773	-1.585	20.193
298.150	17.716	65.181	0.000	21.778
300.000	17.776	65.293	.033	21.811
400.000	21.156	70.866	1.978	23.756
500.000	24.573	75.955	4.265	26.043
600.000	27.850	80.723	6.888	28.666
700.000	30.862	85.251	9.826	31.604
800.000	33.529	89.550	13.049	34.827
900.000	35.822	93.636	16.520	38.298
1000.000	37.758	97.513	20.201	41.979
1100.000	39.524	101.196	24.067	45.845
1200.000	41.112	104.704	28.100	49.878
1300.000	42.533	108.052	32.284	54.062
1400.000	43.801	111.252	36.602	58.380
1500.000	44.927	114.313	41.039	62.817
1600.000	45.923	117.245	45.583	67.361
1700.000	46.801	120.055	50.220	71.998
1800.000	47.572	122.753	54.939	76.717
1900.000	48.244	125.344	59.731	81.509
2000.000	48.829	127.833	64.585	86.363
2100.000	49.334	130.228	69.494	91.272
2200.000	49.770	132.534	74.450	96.228
2300.000	50.144	134.755	79.446	101.224
2400.000	50.464	136.895	84.477	106.255
2500.000	50.737	138.961	89.537	111.315
2600.000	50.970	140.956	94.623	116.401
2700.000	51.170	142.883	99.730	121.508
2800.000	51.341	144.747	104.856	126.634
2900.000	51.490	146.552	109.998	131.776
3000.000	51.621	148.300	115.153	136.931
3100.000	51.738	149.994	120.321	142.099
3200.000	51.846	151.639	125.501	147.279
3300.000	51.947	153.235	130.690	152.468
3400.000	52.045	154.783	135.890	157.668
3500.000	52.141	156.298	141.099	162.877
3600.000	52.238	157.768	146.318	168.096
3700.000	52.337	159.200	151.547	173.325
3800.000	52.439	160.598	156.786	178.564
3900.000	52.545	161.961	162.035	183.813
4000.000	52.653	163.293	167.295	189.073
4100.000	52.765	164.594	172.566	194.344
4200.000	52.877	165.867	177.848	199.626
4300.000	52.990	167.113	183.141	204.919
4400.000	53.101	168.332	188.446	210.224
4500.000	53.207	169.527	193.761	215.539
4600.000	53.305	170.697	199.087	220.865
4700.000	53.392	171.843	204.422	226.200
4800.000	53.464	172.970	209.765	231.543
4900.000	53.516	174.072	215.114	236.892
5000.000	53.544	175.154	220.467	242.245
5100.000	53.541	176.214	225.822	247.600
5200.000	53.502	177.254	231.174	252.952
5300.000	53.420	178.272	236.521	258.299
5400.000	53.289	179.269	241.857	263.635
5500.000	53.101	180.245	247.177	268.955
5600.000	52.847	181.200	252.475	274.253
5700.000	52.521	182.133	257.744	279.522
5800.000	52.111	183.043	262.976	284.754
5900.000	51.610	183.930	268.163	289.941
6000.000	51.007	184.792	273.295	295.073

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3H6OH	76	59.089	-32.000	C 3 H 7 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	10.067	60.595	-2.726	-34.726
200.000	13.581	68.546	-1.559	-33.559
298.150	18.314	74.823	0.000	-32.000
300.000	18.407	74.937	.034	-31.966
400.000	23.618	80.946	2.135	-29.865
500.000	28.540	86.756	4.748	-27.252
600.000	32.742	92.343	7.819	-24.181
700.000	36.043	97.650	11.266	-20.734
800.000	38.509	102.632	14.999	-17.001
900.000	40.456	107.283	18.950	-13.050
1000.000	42.445	111.643	23.092	-8.908
1100.000	43.253	115.729	27.378	-4.622
1200.000	43.947	119.523	31.739	-.261
1300.000	44.536	123.065	36.164	4.164
1400.000	45.030	126.384	40.643	8.643
1500.000	45.437	129.503	45.167	13.167
1600.000	45.765	132.448	49.727	17.727
1700.000	46.022	135.231	54.317	22.317
1800.000	46.215	137.867	58.930	26.930
1900.000	46.352	140.370	63.558	31.558
2000.000	46.439	142.750	68.198	36.198
2100.000	46.483	145.017	72.845	40.845
2200.000	46.490	147.179	77.494	45.494
2300.000	46.465	149.245	82.142	50.142
2400.000	46.415	151.222	86.786	54.786
2500.000	46.344	153.115	91.424	59.424
2600.000	46.257	154.931	96.054	64.054
2700.000	46.159	156.675	100.675	68.675
2800.000	46.053	158.352	105.286	73.286
2900.000	45.943	159.966	109.886	77.886
3000.000	45.833	161.522	114.474	82.474
3100.000	45.726	163.023	119.052	87.052
3200.000	45.624	164.473	123.620	91.620
3300.000	45.529	165.875	128.177	96.177
3400.000	45.444	167.234	132.726	100.726
3500.000	45.370	168.550	137.267	105.267
3600.000	45.309	169.827	141.800	109.800
3700.000	45.262	171.069	146.329	114.329
3800.000	45.228	172.274	150.853	118.853
3900.000	45.209	173.449	155.375	123.375
4000.000	45.204	174.593	159.895	127.895
4100.000	45.214	175.710	164.416	132.416
4200.000	45.236	176.799	168.939	136.939
4300.000	45.270	177.864	173.464	141.464
4400.000	45.315	178.905	177.993	145.993
4500.000	45.369	179.924	182.527	150.527
4600.000	45.430	180.922	187.067	155.067
4700.000	45.494	181.900	191.613	159.613
4800.000	45.560	182.858	196.166	164.166
4900.000	45.624	183.798	200.725	168.725
5000.000	45.683	184.721	205.291	173.291
5100.000	45.733	185.626	209.862	177.862
5200.000	45.769	186.514	214.437	182.437
5300.000	45.787	187.385	219.015	187.015
5400.000	45.782	188.242	223.593	191.593
5500.000	45.749	189.082	228.170	196.170
5600.000	45.682	189.905	232.742	200.742
5700.000	45.576	190.713	237.305	205.305
5800.000	45.424	191.505	241.856	209.856
5900.000	45.219	192.280	246.388	214.388
6000.000	44.955	193.038	250.898	218.898

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3H8	77	44.097	-24.820	C 3 H 8

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.943	50.005	-2.758	-27.578
200.000	13.920	58.100	-1.567	-26.387
298.150	18.031	64.419	0.000	-24.820
300.000	18.109	64.532	.033	-24.787
400.000	22.322	70.320	2.056	-22.764
500.000	26.396	75.743	4.493	-20.327
600.000	30.198	80.897	7.326	-17.494
700.000	33.620	85.814	10.520	-14.300
800.000	36.585	90.502	14.034	-10.786
900.000	39.041	94.958	17.820	-7.000
1000.000	40.964	99.175	21.825	-2.995
1100.000	43.068	103.180	26.028	1.208
1200.000	44.976	107.011	30.432	5.612
1300.000	46.701	110.680	35.017	10.197
1400.000	48.256	114.199	39.766	14.946
1500.000	49.652	117.577	44.663	19.843
1600.000	50.901	120.822	49.692	24.872
1700.000	52.014	123.942	54.839	30.019
1800.000	53.002	126.944	60.091	35.271
1900.000	53.875	129.833	65.435	40.615
2000.000	54.643	132.617	70.862	46.042
2100.000	55.315	135.299	76.361	51.541
2200.000	55.901	137.885	81.922	57.102
2300.000	56.409	140.383	87.538	62.718
2400.000	56.846	142.793	93.202	68.382
2500.000	57.222	145.121	98.906	74.086
2600.000	57.543	147.372	104.644	79.824
2700.000	57.816	149.549	110.412	85.592
2800.000	58.047	151.656	116.206	91.386
2900.000	58.243	153.696	122.021	97.201
3000.000	58.410	155.674	127.854	103.034
3100.000	58.552	157.592	133.702	108.882
3200.000	58.674	159.452	139.563	114.743
3300.000	58.781	161.260	145.436	120.616
3400.000	58.876	163.016	151.319	126.499
3500.000	58.964	164.724	157.211	132.391
3600.000	59.047	166.386	163.112	138.292
3700.000	59.127	168.005	169.020	144.200
3800.000	59.208	169.583	174.937	150.117
3900.000	59.290	171.122	180.862	156.042
4000.000	59.376	172.624	186.795	161.975
4100.000	59.466	174.091	192.737	167.917
4200.000	59.561	175.525	198.689	173.869
4300.000	59.661	176.928	204.650	179.830
4400.000	59.766	178.301	210.621	185.801
4500.000	59.874	179.645	216.603	191.783
4600.000	59.985	180.962	222.596	197.776
4700.000	60.098	182.253	228.600	203.780
4800.000	60.209	183.520	234.616	209.796
4900.000	60.318	184.763	240.642	215.822
5000.000	60.420	185.982	246.679	221.859
5100.000	60.514	187.180	252.726	227.906
5200.000	60.594	188.355	258.781	233.961
5300.000	60.657	189.510	264.844	240.024
5400.000	60.699	190.645	270.912	246.092
5500.000	60.714	191.758	276.983	252.163
5600.000	60.697	192.852	283.054	258.234
5700.000	60.642	193.926	289.121	264.301
5800.000	60.543	194.980	295.181	270.361
5900.000	60.394	196.014	301.228	276.408
6000.000	60.187	197.027	307.258	282.438

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3H7OH	78	60.097	-61.820	C 3 H 8 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	11.046	62.527	-2.896	-64.716
200.000	14.382	71.074	-1.644	-63.464
298.150	19.304	77.697	0.000	-61.820
300.000	19.402	77.818	.036	-61.784
400.000	25.017	84.165	2.256	-59.564
500.000	30.412	90.337	5.032	-56.788
600.000	35.049	96.306	8.313	-53.507
700.000	38.665	101.994	12.007	-49.813
800.000	41.274	107.333	16.012	-45.808
900.000	43.167	112.313	20.238	-41.582
1000.000	44.910	116.950	24.640	-37.180
1100.000	45.182	121.243	29.145	-32.675
1200.000	45.416	125.185	33.675	-28.145
1300.000	45.617	128.823	38.227	-23.593
1400.000	45.786	132.215	42.797	-19.023
1500.000	45.927	135.379	47.383	-14.437
1600.000	46.042	138.347	51.982	-9.838
1700.000	46.133	141.141	56.591	-5.229
1800.000	46.203	143.780	61.208	-.612
1900.000	46.254	146.279	65.831	4.011
2000.000	46.288	148.653	70.458	8.638
2100.000	46.308	150.912	75.088	13.268
2200.000	46.314	153.066	79.719	17.899
2300.000	46.311	155.125	84.350	22.530
2400.000	46.298	157.093	88.981	27.161
2500.000	46.277	158.985	93.610	31.790
2600.000	46.251	160.800	98.236	36.416
2700.000	46.220	162.545	102.860	41.040
2800.000	46.186	164.225	107.480	45.660
2900.000	46.149	165.845	112.097	50.277
3000.000	46.112	167.409	116.710	54.890
3100.000	46.076	168.920	121.319	59.499
3200.000	46.040	170.383	125.925	64.105
3300.000	46.006	171.799	130.527	68.707
3400.000	45.975	173.172	135.126	73.306
3500.000	45.946	174.504	139.722	77.902
3600.000	45.921	175.798	144.316	82.496
3700.000	45.901	177.055	148.907	87.087
3800.000	45.884	178.280	153.496	91.676
3900.000	45.872	179.471	158.084	96.264
4000.000	45.864	180.633	162.670	100.850
4100.000	45.860	181.765	167.257	105.437
4200.000	45.861	182.870	171.843	110.023
4300.000	45.866	183.949	176.429	114.609
4400.000	45.874	185.004	181.016	119.196
4500.000	45.885	186.035	185.604	123.784
4600.000	45.899	187.044	190.193	128.373
4700.000	45.914	188.031	194.784	132.964
4800.000	45.931	188.998	199.376	137.556
4900.000	45.947	189.945	203.970	142.150
5000.000	45.963	190.873	208.565	146.745
5100.000	45.976	191.784	213.162	151.342
5200.000	45.986	192.677	217.760	155.940
5300.000	45.992	193.553	222.359	160.539
5400.000	45.992	194.412	226.959	165.139
5500.000	45.984	195.256	231.557	169.737
5600.000	45.966	196.084	236.155	174.335
5700.000	45.938	196.898	240.750	178.930
5800.000	45.897	197.697	245.342	183.522
5900.000	45.843	198.481	249.929	188.109
6000.000	45.769	199.251	254.510	192.690

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C3O2	79	68.033	-8.300	C 3 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.336	48.093	-2.492	-10.792
200.000	12.712	55.640	-1.384	-9.684
298.150	15.391	61.233	0.000	-8.300
300.000	15.436	61.330	.028	-8.272
400.000	17.586	66.078	1.684	-6.616
500.000	19.244	70.188	3.529	-4.771
600.000	20.495	73.813	5.519	-2.781
700.000	21.431	77.046	7.618	-.682
800.000	22.144	79.955	9.798	1.498
900.000	22.733	82.599	12.042	3.742
1000.000	23.298	85.023	14.344	6.044
1100.000	23.693	87.262	16.693	8.393
1200.000	24.049	89.340	19.081	10.781
1300.000	24.368	91.277	21.502	13.202
1400.000	24.654	93.094	23.953	15.653
1500.000	24.907	94.804	26.432	18.132
1600.000	25.132	96.419	28.934	20.634
1700.000	25.330	97.948	31.457	23.157
1800.000	25.503	99.401	33.999	25.699
1900.000	25.654	100.784	36.557	28.257
2000.000	25.785	102.103	39.129	30.829
2100.000	25.897	103.364	41.713	33.413
2200.000	25.992	104.571	44.308	36.008
2300.000	26.073	105.728	46.911	38.611
2400.000	26.141	106.840	49.522	41.222
2500.000	26.197	107.908	52.139	43.839
2600.000	26.243	108.936	54.761	46.461
2700.000	26.281	109.927	57.387	49.087
2800.000	26.311	110.884	60.017	51.717
2900.000	26.335	111.807	62.649	54.349
3000.000	26.355	112.700	65.284	56.984
3100.000	26.370	113.565	67.920	59.620
3200.000	26.383	114.402	70.558	62.258
3300.000	26.394	115.214	73.197	64.897
3400.000	26.403	116.003	75.837	67.537
3500.000	26.412	116.763	78.477	70.177
3600.000	26.421	117.512	81.119	72.819
3700.000	26.431	118.235	83.762	75.462
3800.000	26.441	118.941	86.405	78.105
3900.000	26.453	119.623	89.050	80.750
4000.000	26.466	120.293	91.696	83.396
4100.000	26.481	120.952	94.343	86.043
4200.000	26.498	121.590	96.992	88.692
4300.000	26.517	122.214	99.643	91.343
4400.000	26.537	122.824	102.296	93.996
4500.000	26.559	123.420	104.950	96.650
4600.000	26.581	124.004	107.607	99.307
4700.000	26.604	124.575	110.267	101.967
4800.000	26.628	125.137	112.928	104.628
4900.000	26.651	125.685	115.592	107.292
5000.000	26.673	126.224	118.258	109.958
5100.000	26.693	126.753	120.927	112.627
5200.000	26.710	127.271	123.597	115.297
5300.000	26.724	127.780	126.269	117.969
5400.000	26.733	128.280	128.942	120.642
5500.000	26.737	128.770	131.615	123.315
5600.000	26.733	129.252	134.289	125.989
5700.000	26.721	129.725	136.962	128.662
5800.000	26.700	130.190	139.633	131.333
5900.000	26.667	130.645	142.301	134.001
6000.000	26.622	131.094	144.966	136.666

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4*	80	48.044	0.000	C 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	2.450	.633	-.980	-.980
200.000	4.865	3.015	-.623	-.623
298.150	7.886	5.509	0.000	0.000
300.000	7.944	5.558	.015	.015
400.000	11.111	8.280	.969	.969
500.000	13.959	11.074	2.226	2.226
600.000	16.241	13.831	3.741	3.741
700.000	17.882	16.465	5.453	5.453
800.000	18.968	18.929	7.299	7.299
900.000	19.752	21.210	9.236	9.236
1000.000	20.654	23.334	11.253	11.253
1100.000	21.132	25.325	13.343	13.343
1200.000	21.559	27.183	15.478	15.478
1300.000	21.939	28.924	17.653	17.653
1400.000	22.277	30.563	19.864	19.864
1500.000	22.575	32.110	22.107	22.107
1600.000	22.837	33.575	24.378	24.378
1700.000	23.067	34.967	26.674	26.674
1800.000	23.266	36.291	28.991	28.991
1900.000	23.439	37.554	31.326	31.326
2000.000	23.589	38.760	33.678	33.678
2100.000	23.717	39.914	36.043	36.043
2200.000	23.826	41.020	38.420	38.420
2300.000	23.919	42.081	40.808	40.808
2400.000	23.999	43.101	43.204	43.204
2500.000	24.067	44.082	45.607	45.607
2600.000	24.125	45.027	48.017	48.017
2700.000	24.176	45.939	50.432	50.432
2800.000	24.220	46.819	52.852	52.852
2900.000	24.261	47.669	55.276	55.276
3000.000	24.299	48.493	57.704	57.704
3100.000	24.335	49.290	60.136	60.136
3200.000	24.372	50.063	62.571	62.571
3300.000	24.409	50.813	65.010	65.010
3400.000	24.449	51.543	67.453	67.453
3500.000	24.491	52.252	69.900	69.900
3600.000	24.537	52.943	72.351	72.351
3700.000	24.587	53.615	74.807	74.807
3800.000	24.642	54.272	77.269	77.269
3900.000	24.702	54.913	79.736	79.736
4000.000	24.766	55.539	82.209	82.209
4100.000	24.836	56.151	84.689	84.689
4200.000	24.911	56.751	87.177	87.177
4300.000	24.991	57.333	89.672	89.672
4400.000	25.075	57.914	92.175	92.175
4500.000	25.163	58.478	94.687	94.687
4600.000	25.255	59.032	97.208	97.208
4700.000	25.350	59.575	99.738	99.738
4800.000	25.446	60.111	102.278	102.278
4900.000	25.542	60.637	104.827	104.827
5000.000	25.639	61.153	107.386	107.386
5100.000	25.733	61.662	109.955	109.955
5200.000	25.825	62.163	112.533	112.533
5300.000	25.912	62.655	115.120	115.120
5400.000	25.992	63.141	117.715	117.715
5500.000	26.064	63.618	120.318	120.318
5600.000	26.126	64.083	122.927	122.927
5700.000	26.176	64.551	125.543	125.543
5800.000	26.212	65.007	128.162	128.162
5900.000	26.231	65.455	130.784	130.784
6000.000	26.230	65.895	133.408	133.408

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4	81	48.044	232.000	C 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.027	44.628	-1.885	230.115
200.000	9.594	50.305	-1.051	230.949
298.150	11.765	54.552	0.000	232.000
300.000	11.803	54.625	.022	232.022
400.000	13.628	58.280	1.296	233.296
500.000	15.071	61.483	2.735	234.735
600.000	16.158	64.332	4.299	236.299
700.000	16.940	66.885	5.956	237.956
800.000	17.498	69.185	7.679	239.679
900.000	17.936	71.272	9.451	241.451
1000.000	18.384	73.184	11.267	243.267
1100.000	18.671	74.950	13.120	245.120
1200.000	18.929	76.586	15.000	247.000
1300.000	19.159	78.111	16.905	248.905
1400.000	19.365	79.538	18.831	250.831
1500.000	19.547	80.881	20.777	252.777
1600.000	19.708	82.147	22.740	254.740
1700.000	19.849	83.346	24.718	256.718
1800.000	19.972	84.485	26.709	258.709
1900.000	20.079	85.567	28.712	260.712
2000.000	20.171	86.600	30.724	262.724
2100.000	20.249	87.586	32.745	264.745
2200.000	20.316	88.529	34.774	266.774
2300.000	20.371	89.434	36.808	268.808
2400.000	20.417	90.302	38.848	270.848
2500.000	20.455	91.136	40.891	272.891
2600.000	20.485	91.939	42.938	274.938
2700.000	20.510	92.712	44.988	276.988
2800.000	20.529	93.459	47.040	279.040
2900.000	20.543	94.179	49.094	281.094
3000.000	20.555	94.876	51.149	283.149
3100.000	20.563	95.550	53.205	285.205
3200.000	20.570	96.203	55.261	287.261
3300.000	20.576	96.836	57.319	289.319
3400.000	20.580	97.450	59.376	291.376
3500.000	20.585	98.047	61.435	293.435
3600.000	20.590	98.627	63.493	295.493
3700.000	20.595	99.191	65.553	297.553
3800.000	20.601	99.740	67.612	299.612
3900.000	20.609	100.275	69.673	301.673
4000.000	20.617	100.793	71.734	303.734
4100.000	20.627	101.307	73.796	305.796
4200.000	20.639	101.804	75.860	307.860
4300.000	20.652	102.290	77.924	309.924
4400.000	20.666	102.765	79.990	311.990
4500.000	20.682	103.229	82.058	314.058
4600.000	20.698	103.684	84.127	316.127
4700.000	20.715	104.129	86.197	318.197
4800.000	20.732	104.565	88.269	320.269
4900.000	20.749	104.993	90.344	322.344
5000.000	20.765	105.413	92.419	324.419
5100.000	20.780	105.824	94.497	326.497
5200.000	20.793	106.228	96.575	328.575
5300.000	20.803	106.624	98.655	330.655
5400.000	20.811	107.013	100.736	332.736
5500.000	20.813	107.395	102.817	334.817
5600.000	20.811	107.770	104.898	336.898
5700.000	20.802	108.133	106.979	338.979
5800.000	20.787	108.500	109.058	341.058
5900.000	20.762	108.855	111.136	343.136
6000.000	20.729	109.204	113.211	345.211

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4H	82	49.052	154.000	C 4 H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.646	49.695	-2.458	151.542
200.000	12.489	57.274	-1.348	152.652
298.150	14.907	62.723	0.000	154.000
300.000	14.949	62.817	.027	154.027
400.000	16.997	67.408	1.628	155.628
500.000	18.633	71.384	3.413	157.413
600.000	19.881	74.897	5.342	159.342
700.000	20.797	78.034	7.378	161.378
800.000	21.464	80.857	9.493	163.493
900.000	21.991	83.415	11.666	165.666
1000.000	22.518	85.760	13.891	167.891
1100.000	22.901	87.924	16.162	170.162
1200.000	23.265	89.932	18.471	172.471
1300.000	23.610	91.809	20.815	174.815
1400.000	23.936	93.570	23.192	177.192
1500.000	24.242	95.232	25.601	179.601
1600.000	24.529	96.806	28.040	182.040
1700.000	24.796	98.301	30.506	184.506
1800.000	25.045	99.726	32.999	186.999
1900.000	25.275	101.086	35.515	189.515
2000.000	25.486	102.388	38.053	192.053
2100.000	25.679	103.636	40.611	194.611
2200.000	25.855	104.835	43.188	197.188
2300.000	26.013	105.988	45.782	199.782
2400.000	26.154	107.093	48.390	202.390
2500.000	26.279	108.163	51.012	205.012
2600.000	26.389	109.201	53.646	207.646
2700.000	26.483	110.199	56.289	210.289
2800.000	26.564	111.163	58.942	212.942
2900.000	26.631	112.097	61.602	215.602
3000.000	26.685	113.000	64.267	218.267
3100.000	26.728	113.876	66.938	220.938
3200.000	26.760	114.725	69.613	223.613
3300.000	26.782	115.549	72.290	226.290
3400.000	26.795	116.349	74.969	228.969
3500.000	26.801	117.126	77.649	231.649
3600.000	26.801	117.881	80.329	234.329
3700.000	26.795	118.615	83.008	237.008
3800.000	26.785	119.329	85.688	239.688
3900.000	26.773	120.025	88.365	242.365
4000.000	26.760	120.703	91.042	245.042
4100.000	26.747	121.363	93.717	247.717
4200.000	26.736	122.008	96.392	250.392
4300.000	26.728	122.637	99.065	253.065
4400.000	26.725	123.251	101.737	255.737
4500.000	26.729	123.852	104.410	258.410
4600.000	26.740	124.439	107.083	261.083
4700.000	26.763	125.015	109.758	263.758
4800.000	26.797	125.573	112.436	266.436
4900.000	26.845	126.131	115.118	269.118
5000.000	26.908	126.674	117.806	271.806
5100.000	26.990	127.203	120.500	274.500
5200.000	27.091	127.733	123.204	277.204
5300.000	27.214	128.250	125.919	279.919
5400.000	27.361	128.760	128.648	282.648
5500.000	27.534	129.264	131.392	285.392
5600.000	27.736	129.761	134.156	288.156
5700.000	27.970	130.255	136.941	290.941
5800.000	28.236	130.743	139.751	293.751
5900.000	28.538	131.228	142.589	296.589
6000.000	28.878	131.711	145.459	299.459

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4H2	83	50.060	111.300	C 4 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	10.314	45.410	-2.741	108.559
200.000	13.938	53.693	-1.526	109.774
298.150	17.066	59.855	0.000	111.300
300.000	17.120	59.963	.031	111.331
400.000	19.773	65.265	1.881	113.181
500.000	21.866	69.912	3.967	115.267
600.000	23.418	74.044	6.236	117.536
700.000	24.504	77.740	8.635	119.935
800.000	25.247	81.064	11.125	122.425
900.000	25.826	84.071	13.679	124.979
1000.000	26.471	86.824	16.292	127.592
1100.000	27.021	89.373	18.967	130.267
1200.000	27.527	91.746	21.695	132.995
1300.000	27.991	93.968	24.471	135.771
1400.000	28.416	96.058	27.292	138.592
1500.000	28.803	98.032	30.153	141.453
1600.000	29.156	99.903	33.052	144.352
1700.000	29.477	101.680	35.983	147.283
1800.000	29.767	103.373	38.946	150.246
1900.000	30.030	104.990	41.936	153.236
2000.000	30.266	106.536	44.951	156.251
2100.000	30.479	108.018	47.989	159.289
2200.000	30.670	109.441	51.046	162.346
2300.000	30.841	110.808	54.122	165.422
2400.000	30.993	112.124	57.214	168.514
2500.000	31.128	113.392	60.320	171.620
2600.000	31.249	114.615	63.439	174.739
2700.000	31.356	115.796	66.569	177.869
2800.000	31.450	116.933	69.710	181.010
2900.000	31.534	118.044	72.859	184.159
3000.000	31.608	119.114	76.016	187.316
3100.000	31.674	120.151	79.180	190.480
3200.000	31.733	121.158	82.351	193.651
3300.000	31.786	122.135	85.527	196.827
3400.000	31.833	123.085	88.708	200.008
3500.000	31.877	124.003	91.893	203.193
3600.000	31.917	124.907	95.083	206.383
3700.000	31.954	125.782	98.276	209.576
3800.000	31.989	126.635	101.474	212.774
3900.000	32.022	127.466	104.674	215.974
4000.000	32.055	128.277	107.878	219.178
4100.000	32.086	129.069	111.085	222.385
4200.000	32.118	129.842	114.295	225.595
4300.000	32.150	130.599	117.509	228.809
4400.000	32.182	131.338	120.725	232.025
4500.000	32.214	132.062	123.945	235.245
4600.000	32.246	132.770	127.168	238.468
4700.000	32.279	133.464	130.394	241.694
4800.000	32.312	134.144	133.624	244.924
4900.000	32.345	134.810	136.857	248.157
5000.000	32.377	135.464	140.093	251.393
5100.000	32.409	136.105	143.332	254.632
5200.000	32.439	136.735	146.574	257.874
5300.000	32.468	137.353	149.820	261.120
5400.000	32.495	137.961	153.068	264.368
5500.000	32.518	138.557	156.319	267.619
5600.000	32.538	139.143	159.572	270.872
5700.000	32.553	139.719	162.826	274.126
5800.000	32.563	140.285	166.082	277.382
5900.000	32.566	140.842	169.339	280.639
6000.000	32.562	141.390	172.595	283.895

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4H3	84	51.068	108.950	C 4 H 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	10.488	50.891	-2.739	106.211
200.000	13.891	59.213	-1.519	107.431
298.150	17.015	65.350	0.000	108.950
300.000	17.071	65.457	.031	108.981
400.000	19.907	70.765	1.883	110.833
500.000	22.328	75.475	3.999	112.949
600.000	24.313	79.723	6.335	115.285
700.000	25.887	83.599	8.848	117.798
800.000	27.123	87.140	11.501	120.451
900.000	28.143	90.395	14.265	123.215
1000.000	29.116	93.410	17.128	126.078
1100.000	29.934	96.224	20.081	129.031
1200.000	30.676	98.861	23.112	132.062
1300.000	31.349	101.343	26.214	135.164
1400.000	31.957	103.683	29.379	138.329
1500.000	32.504	105.913	32.603	141.553
1600.000	32.996	108.027	35.878	144.828
1700.000	33.436	110.040	39.201	148.151
1800.000	33.829	111.963	42.564	151.514
1900.000	34.179	113.802	45.965	154.915
2000.000	34.489	115.563	49.399	158.349
2100.000	34.764	117.252	52.862	161.812
2200.000	35.007	118.875	56.350	165.300
2300.000	35.220	120.435	59.862	168.812
2400.000	35.408	121.939	63.394	172.344
2500.000	35.572	123.388	66.943	175.893
2600.000	35.717	124.785	70.507	179.457
2700.000	35.844	126.137	74.086	183.036
2800.000	35.956	127.442	77.676	186.626
2900.000	36.055	128.706	81.276	190.226
3000.000	36.144	129.930	84.887	193.837
3100.000	36.223	131.116	88.505	197.455
3200.000	36.296	132.267	92.131	201.081
3300.000	36.362	133.385	95.764	204.714
3400.000	36.425	134.471	99.403	208.353
3500.000	36.484	135.528	103.049	211.999
3600.000	36.541	136.557	106.700	215.650
3700.000	36.597	137.559	110.357	219.307
3800.000	36.653	138.535	114.019	222.969
3900.000	36.708	139.483	117.687	226.637
4000.000	36.764	140.413	121.361	230.311
4100.000	36.820	141.327	125.040	233.990
4200.000	36.876	142.215	128.725	237.675
4300.000	36.933	143.083	132.416	241.366
4400.000	36.989	143.933	136.112	245.062
4500.000	37.044	144.765	139.813	248.763
4600.000	37.098	145.580	143.521	252.471
4700.000	37.149	146.378	147.233	256.183
4800.000	37.197	147.161	150.950	259.900
4900.000	37.240	147.928	154.672	263.622
5000.000	37.276	148.681	158.398	267.348
5100.000	37.305	149.419	162.127	271.077
5200.000	37.323	150.144	165.859	274.809
5300.000	37.330	150.855	169.591	278.541
5400.000	37.323	151.553	173.324	282.274
5500.000	37.300	152.237	177.056	286.006
5600.000	37.258	152.909	180.784	289.734
5700.000	37.195	153.568	184.506	293.456
5800.000	37.107	154.214	188.222	297.172
5900.000	36.992	154.847	191.927	300.877
6000.000	36.847	155.468	195.619	304.569

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4H4	85	52.076	62.850	C 4 H 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	10.218	52.180	-2.755	60.095
200.000	13.945	60.401	-1.548	61.302
298.150	17.569	66.648	0.000	62.850
300.000	17.635	66.758	.032	62.882
400.000	21.070	72.310	1.971	64.821
500.000	24.106	77.346	4.233	67.083
600.000	26.670	81.975	6.776	69.626
700.000	28.757	86.249	9.551	72.401
800.000	30.437	90.203	12.514	75.364
900.000	31.847	93.871	15.629	78.479
1000.000	33.198	97.296	18.881	81.731
1100.000	34.323	100.513	22.258	85.108
1200.000	35.321	103.544	25.742	88.592
1300.000	36.203	106.406	29.319	92.169
1400.000	36.978	109.118	32.979	95.829
1500.000	37.656	111.693	36.711	99.561
1600.000	38.246	114.143	40.507	103.357
1700.000	38.757	116.477	44.358	107.208
1800.000	39.197	118.705	48.256	111.106
1900.000	39.574	120.835	52.195	115.045
2000.000	39.895	122.873	56.169	119.019
2100.000	40.168	124.827	60.173	123.023
2200.000	40.398	126.700	64.201	127.051
2300.000	40.592	128.501	68.251	131.101
2400.000	40.756	130.232	72.319	135.169
2500.000	40.896	131.899	76.401	139.251
2600.000	41.015	133.505	80.497	143.347
2700.000	41.120	135.055	84.604	147.454
2800.000	41.213	136.552	88.721	151.571
2900.000	41.298	138.000	92.846	155.696
3000.000	41.379	139.401	96.980	159.830
3100.000	41.459	140.759	101.122	163.972
3200.000	41.540	142.077	105.272	168.122
3300.000	41.623	143.356	109.430	172.280
3400.000	41.711	144.600	113.597	176.447
3500.000	41.805	145.811	117.772	180.622
3600.000	41.906	146.990	121.958	184.808
3700.000	42.013	148.139	126.154	189.004
3800.000	42.127	149.261	130.361	193.211
3900.000	42.248	150.357	134.579	197.429
4000.000	42.373	151.428	138.811	201.661
4100.000	42.503	152.476	143.054	205.904
4200.000	42.636	153.502	147.311	210.161
4300.000	42.768	154.507	151.581	214.431
4400.000	42.898	155.491	155.865	218.715
4500.000	43.023	156.457	160.161	223.011
4600.000	43.139	157.404	164.469	227.319
4700.000	43.242	158.333	168.788	231.638
4800.000	43.329	159.244	173.117	235.967
4900.000	43.393	160.133	177.453	240.303
5000.000	43.432	161.015	181.795	244.645
5100.000	43.438	161.875	186.139	248.989
5200.000	43.406	162.719	190.481	253.331
5300.000	43.330	163.545	194.818	257.668
5400.000	43.203	164.354	199.145	261.995
5500.000	43.017	165.145	203.457	266.307
5600.000	42.766	165.918	207.747	270.597
5700.000	42.441	166.672	212.008	274.858
5800.000	42.034	167.407	216.232	279.082
5900.000	41.536	168.121	220.411	283.261
6000.000	40.937	168.814	224.536	287.386

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4H5	86	53.084	81.250	C 4 H 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	11.513	52.163	-3.071	78.179
200.000	15.587	61.411	-1.713	79.537
298.150	19.263	68.329	0.000	81.250
300.000	19.329	68.450	.036	81.286
400.000	22.720	74.484	2.141	83.391
500.000	25.752	79.886	4.568	85.818
600.000	28.441	84.824	7.280	88.530
700.000	30.815	89.390	10.245	91.495
800.000	32.923	93.645	13.434	94.684
900.000	34.828	97.635	16.823	98.073
1000.000	36.614	101.397	20.396	101.646
1100.000	38.104	104.958	24.133	105.383
1200.000	39.444	108.332	28.011	109.261
1300.000	40.647	111.537	32.017	113.267
1400.000	41.721	114.590	36.137	117.387
1500.000	42.678	117.501	40.357	121.607
1600.000	43.526	120.284	44.669	125.919
1700.000	44.275	122.945	49.059	130.309
1800.000	44.933	125.495	53.521	134.771
1900.000	45.509	127.940	58.043	139.293
2000.000	46.012	130.288	62.620	143.870
2100.000	46.447	132.543	67.243	148.493
2200.000	46.823	134.713	71.907	153.157
2300.000	47.147	136.802	76.606	157.856
2400.000	47.425	138.814	81.335	162.585
2500.000	47.662	140.755	86.090	167.340
2600.000	47.866	142.629	90.867	172.117
2700.000	48.040	144.438	95.662	176.912
2800.000	48.189	146.188	100.474	181.724
2900.000	48.320	147.882	105.299	186.549
3000.000	48.434	149.522	110.137	191.387
3100.000	48.536	151.111	114.986	196.236
3200.000	48.629	152.654	119.844	201.094
3300.000	48.716	154.152	124.711	205.961
3400.000	48.801	155.607	129.587	210.837
3500.000	48.883	157.023	134.471	215.721
3600.000	48.966	158.401	139.364	220.614
3700.000	49.052	159.744	144.265	225.515
3800.000	49.139	161.053	149.174	230.424
3900.000	49.230	162.331	154.093	235.343
4000.000	49.325	163.578	159.020	240.270
4100.000	49.422	164.793	163.958	245.208
4200.000	49.523	165.990	168.905	250.155
4300.000	49.625	167.156	173.862	255.112
4400.000	49.727	168.298	178.830	260.080
4500.000	49.827	169.417	183.808	265.058
4600.000	49.923	170.513	188.795	270.045
4700.000	50.014	171.588	193.792	275.042
4800.000	50.094	172.642	198.798	280.048
4900.000	50.162	173.675	203.811	285.061
5000.000	50.214	174.689	208.829	290.079
5100.000	50.244	175.684	213.853	295.103
5200.000	50.250	176.660	218.877	300.127
5300.000	50.225	177.617	223.901	305.151
5400.000	50.165	178.555	228.921	310.171
5500.000	50.064	179.475	233.933	315.183
5600.000	49.915	180.375	238.932	320.182
5700.000	49.713	181.257	243.914	325.164
5800.000	49.449	182.120	248.873	330.123
5900.000	49.118	182.962	253.802	335.052
6000.000	48.711	183.784	258.694	339.944

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4H6	87	54.092	35.150	C 4 H 6

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	11.142	53.669	-3.038	32.112
200.000	15.382	62.692	-1.712	33.438
298.150	19.481	69.601	0.000	35.150
300.000	19.557	69.723	.036	35.186
400.000	23.516	75.898	2.192	37.342
500.000	27.146	81.542	4.728	39.878
600.000	30.374	86.783	7.608	42.758
700.000	33.161	91.680	10.788	45.938
800.000	35.510	96.267	14.225	49.375
900.000	37.460	100.565	17.877	53.027
1000.000	39.090	104.599	21.707	56.857
1100.000	40.812	108.407	25.703	60.853
1200.000	42.366	112.026	29.863	65.013
1300.000	43.764	115.473	34.171	69.321
1400.000	45.017	118.763	38.611	73.761
1500.000	46.136	121.908	43.170	78.320
1600.000	47.131	124.918	47.834	82.984
1700.000	48.013	127.802	52.593	87.743
1800.000	48.791	130.569	57.434	92.584
1900.000	49.474	133.225	62.348	97.498
2000.000	50.071	135.779	67.326	102.476
2100.000	50.590	138.234	72.359	107.509
2200.000	51.041	140.599	77.441	112.591
2300.000	51.428	142.876	82.565	117.715
2400.000	51.762	145.072	87.725	122.875
2500.000	52.047	147.191	92.916	128.066
2600.000	52.290	149.237	98.133	133.283
2700.000	52.498	151.215	103.373	138.523
2800.000	52.675	153.127	108.632	143.782
2900.000	52.827	154.978	113.907	149.057
3000.000	52.959	156.772	119.196	154.346
3100.000	53.074	158.510	124.498	159.648
3200.000	53.177	160.197	129.811	164.961
3300.000	53.270	161.834	135.133	170.283
3400.000	53.358	163.426	140.465	175.615
3500.000	53.442	164.974	145.805	180.955
3600.000	53.525	166.481	151.153	186.303
3700.000	53.609	167.948	156.510	191.660
3800.000	53.695	169.379	161.875	197.025
3900.000	53.784	170.775	167.249	202.399
4000.000	53.876	172.138	172.632	207.782
4100.000	53.972	173.469	178.024	213.174
4200.000	54.072	174.771	183.427	218.577
4300.000	54.174	176.045	188.839	223.989
4400.000	54.277	177.291	194.261	229.411
4500.000	54.381	178.512	199.694	234.844
4600.000	54.483	179.709	205.137	240.287
4700.000	54.580	180.881	210.591	245.741
4800.000	54.671	182.031	216.053	251.203
4900.000	54.751	183.160	221.524	256.674
5000.000	54.818	184.266	227.003	262.153
5100.000	54.867	185.352	232.487	267.637
5200.000	54.894	186.418	237.976	273.126
5300.000	54.894	187.464	243.465	278.615
5400.000	54.862	188.490	248.954	284.104
5500.000	54.792	189.496	254.437	289.587
5600.000	54.679	190.482	259.911	295.061
5700.000	54.514	191.449	265.371	300.521
5800.000	54.293	192.395	270.812	305.962
5900.000	54.007	193.321	276.227	311.377
6000.000	53.649	194.225	281.611	316.761

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4H7	88	55.100	39.060	C 4 H 7

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	13.520	53.108	-3.333	35.727
200.000	16.759	63.429	-1.825	37.235
298.150	20.497	70.802	0.000	39.060
300.000	20.570	70.932	.038	39.098
400.000	24.600	77.400	2.296	41.356
500.000	28.567	83.318	4.956	44.016
600.000	32.265	88.859	8.000	47.060
700.000	35.556	94.086	11.395	50.455
800.000	38.376	99.023	15.096	54.156
900.000	40.730	103.683	19.055	58.115
1000.000	42.699	108.079	23.229	62.289
1100.000	44.545	112.237	27.593	66.653
1200.000	46.188	116.185	32.131	71.191
1300.000	47.645	119.941	36.824	75.884
1400.000	48.930	123.520	41.654	80.714
1500.000	50.058	126.935	46.605	85.665
1600.000	51.044	130.198	51.661	90.721
1700.000	51.901	133.319	56.810	95.870
1800.000	52.641	136.307	62.038	101.098
1900.000	53.278	139.170	67.334	106.394
2000.000	53.822	141.917	72.690	111.750
2100.000	54.284	144.555	78.096	117.156
2200.000	54.674	147.089	83.544	122.604
2300.000	55.003	149.527	89.029	128.089
2400.000	55.279	151.874	94.543	133.603
2500.000	55.511	154.136	100.083	139.143
2600.000	55.707	156.317	105.644	144.704
2700.000	55.873	158.422	111.223	150.283
2800.000	56.016	160.457	116.818	155.878
2900.000	56.142	162.425	122.426	161.486
3000.000	56.257	164.330	128.046	167.106
3100.000	56.364	166.176	133.677	172.737
3200.000	56.468	167.968	139.319	178.379
3300.000	56.573	169.707	144.971	184.031
3400.000	56.680	171.397	150.633	189.693
3500.000	56.793	173.042	156.307	195.367
3600.000	56.913	174.643	161.992	201.052
3700.000	57.039	176.204	167.690	206.750
3800.000	57.174	177.727	173.400	212.460
3900.000	57.315	179.214	179.125	218.185
4000.000	57.463	180.667	184.864	223.924
4100.000	57.616	182.088	190.618	229.678
4200.000	57.771	183.478	196.387	235.447
4300.000	57.925	184.840	202.172	241.232
4400.000	58.074	186.175	207.972	247.032
4500.000	58.216	187.480	213.786	252.846
4600.000	58.344	188.761	219.615	258.675
4700.000	58.454	190.017	225.455	264.515
4800.000	58.538	191.248	231.304	270.364
4900.000	58.592	192.456	237.161	276.221
5000.000	58.606	193.640	243.021	282.081
5100.000	58.574	194.800	248.881	287.941
5200.000	58.486	195.937	254.734	293.794
5300.000	58.334	197.049	260.576	299.636
5400.000	58.107	198.138	266.399	305.459
5500.000	57.796	199.201	272.195	311.255
5600.000	57.388	200.239	277.955	317.015
5700.000	56.873	201.251	283.669	322.729
5800.000	56.237	202.234	289.325	328.385
5900.000	55.469	203.189	294.912	333.972
6000.000	54.554	204.114	300.414	339.474

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4H704	89	119.100	-102.000	C 4 H 7 O 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	24.000	49.348	-5.247	-107.247
200.000	26.368	66.657	-2.737	-104.737
298.150	29.532	77.744	0.000	-102.000
300.000	29.598	77.932	.055	-101.945
400.000	33.535	86.971	3.206	-98.794
500.000	37.991	94.925	6.779	-95.221
600.000	42.741	102.269	10.814	-91.186
700.000	47.527	109.219	15.329	-86.671
800.000	52.057	115.865	20.311	-81.689
900.000	56.004	122.232	25.721	-76.279
1000.000	59.006	128.298	31.481	-70.519
1100.000	61.185	134.026	37.492	-64.508
1200.000	62.653	139.435	43.711	-58.289
1300.000	64.926	144.562	50.116	-51.884
1400.000	66.514	149.432	56.690	-45.310
1500.000	67.929	154.071	63.413	-38.587
1600.000	69.184	158.496	70.270	-31.730
1700.000	70.290	162.724	77.245	-24.755
1800.000	71.258	166.770	84.324	-17.676
1900.000	72.098	170.645	91.493	-10.507
2000.000	72.820	174.362	98.739	-3.261
2100.000	73.435	177.931	106.053	4.053
2200.000	73.952	181.359	113.423	11.423
2300.000	74.380	184.656	120.840	18.840
2400.000	74.727	187.829	128.296	26.296
2500.000	75.003	190.886	135.784	33.784
2600.000	75.215	193.832	143.295	41.295
2700.000	75.370	196.673	150.825	48.825
2800.000	75.477	199.416	158.367	56.367
2900.000	75.541	202.066	165.919	63.919
3000.000	75.570	204.628	173.474	71.474
3100.000	75.570	207.106	181.032	79.032
3200.000	75.546	209.505	188.588	86.588
3300.000	75.504	211.829	196.140	94.140
3400.000	75.449	214.082	203.688	101.688
3500.000	75.386	216.268	211.230	109.230
3600.000	75.319	218.391	218.765	116.765
3700.000	75.253	220.454	226.294	124.294
3800.000	75.189	222.460	233.816	131.816
3900.000	75.133	224.412	241.332	139.332
4000.000	75.087	226.314	248.843	146.843
4100.000	75.053	228.167	256.350	154.350
4200.000	75.034	229.976	263.854	161.854
4300.000	75.030	231.741	271.357	169.357
4400.000	75.045	233.466	278.860	176.860
4500.000	75.078	235.153	286.366	184.366
4600.000	75.131	236.804	293.877	191.877
4700.000	75.204	238.420	301.393	199.393
4800.000	75.296	240.004	308.918	206.918
4900.000	75.407	241.558	316.453	214.453
5000.000	75.538	243.083	324.000	222.000
5100.000	75.685	244.580	331.561	229.561
5200.000	75.848	246.051	339.138	237.138
5300.000	76.026	247.498	346.731	244.731
5400.000	76.215	248.921	354.343	252.343
5500.000	76.413	250.321	361.975	259.975
5600.000	76.617	251.699	369.626	267.626
5700.000	76.824	253.057	377.298	275.298
5800.000	77.030	254.395	384.991	282.991
5900.000	77.231	255.714	392.704	290.704
6000.000	77.423	257.015	400.437	298.437

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4H8	90	56.108	-4.040	C 4 H 8

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	15.082	50.945	-3.689	-7.729
200.000	18.609	62.464	-2.007	-6.047
298.150	22.324	70.578	0.000	-4.040
300.000	22.396	70.719	.041	-3.999
400.000	26.338	77.699	2.477	-1.563
500.000	30.325	84.005	5.311	1.271
600.000	34.238	89.881	8.540	4.500
700.000	37.950	95.441	12.151	8.111
800.000	41.326	100.734	16.119	12.079
900.000	44.224	105.774	20.401	16.361
1000.000	46.492	110.557	24.942	20.902
1100.000	48.513	115.085	29.694	25.654
1200.000	50.326	119.385	34.638	30.598
1300.000	51.945	123.478	39.753	35.713
1400.000	53.386	127.382	45.021	40.981
1500.000	54.661	131.109	50.425	46.385
1600.000	55.785	134.674	55.948	51.908
1700.000	56.770	138.086	61.577	57.537
1800.000	57.628	141.356	67.298	63.258
1900.000	58.371	144.492	73.099	69.059
2000.000	59.010	147.503	78.969	74.929
2100.000	59.556	150.395	84.898	80.858
2200.000	60.019	153.177	90.877	86.837
2300.000	60.408	155.854	96.899	92.859
2400.000	60.732	158.432	102.957	98.917
2500.000	61.001	160.917	109.044	105.004
2600.000	61.221	163.313	115.155	111.115
2700.000	61.401	165.627	121.286	117.246
2800.000	61.546	167.863	127.434	123.394
2900.000	61.665	170.025	133.595	129.555
3000.000	61.761	172.117	139.766	135.726
3100.000	61.842	174.144	145.947	141.907
3200.000	61.910	176.108	152.134	148.094
3300.000	61.972	178.014	158.328	154.288
3400.000	62.029	179.865	164.528	160.488
3500.000	62.086	181.664	170.734	166.694
3600.000	62.145	183.414	176.946	172.906
3700.000	62.208	185.117	183.163	179.123
3800.000	62.277	186.777	189.388	185.348
3900.000	62.352	188.396	195.619	191.579
4000.000	62.434	189.975	201.858	197.818
4100.000	62.523	191.518	208.106	204.066
4200.000	62.619	193.026	214.363	210.323
4300.000	62.720	194.501	220.630	216.590
4400.000	62.824	195.944	226.907	222.867
4500.000	62.930	197.357	233.195	229.155
4600.000	63.035	198.741	239.493	235.453
4700.000	63.134	200.098	245.802	241.762
4800.000	63.226	201.428	252.120	248.080
4900.000	63.304	202.733	258.446	254.406
5000.000	63.365	204.012	264.780	260.740
5100.000	63.403	205.267	271.119	267.079
5200.000	63.411	206.499	277.460	273.420
5300.000	63.384	207.706	283.800	279.760
5400.000	63.314	208.891	290.135	286.095
5500.000	63.194	210.051	296.461	292.421
5600.000	63.016	211.188	302.772	298.732
5700.000	62.771	212.302	309.062	305.022
5800.000	62.450	213.391	315.324	311.284
5900.000	62.043	214.455	321.549	317.509
6000.000	61.540	215.494	327.729	323.689

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4H9	91	57.116	14.448	C 4 H 9

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	18.627	49.094	-4.329	10.119
200.000	21.884	63.016	-2.301	12.147
298.150	25.027	72.334	0.000	14.448
300.000	25.088	72.493	.046	14.494
400.000	28.471	80.167	2.722	17.170
500.000	32.141	86.909	5.750	20.198
600.000	36.082	93.114	9.160	23.608
700.000	40.153	98.982	12.971	27.419
800.000	44.089	104.604	17.186	31.634
900.000	47.501	110.001	21.772	36.220
1000.000	49.876	115.140	26.652	41.100
1100.000	51.996	119.995	31.747	46.195
1200.000	53.894	124.602	37.043	51.491
1300.000	55.585	128.984	42.519	56.967
1400.000	57.086	133.160	48.154	62.602
1500.000	58.410	137.144	53.930	68.378
1600.000	59.571	140.952	59.831	74.279
1700.000	60.583	144.594	65.839	80.287
1800.000	61.459	148.083	71.943	86.391
1900.000	62.211	151.426	78.127	92.575
2000.000	62.851	154.634	84.381	98.829
2100.000	63.389	157.714	90.694	105.142
2200.000	63.838	160.673	97.056	111.504
2300.000	64.207	163.520	103.459	117.907
2400.000	64.506	166.259	109.895	124.343
2500.000	64.744	168.897	116.358	130.806
2600.000	64.928	171.440	122.842	137.290
2700.000	65.069	173.893	129.342	143.790
2800.000	65.172	176.262	135.854	150.302
2900.000	65.245	178.550	142.376	156.824
3000.000	65.294	180.763	148.903	163.351
3100.000	65.325	182.904	155.434	169.882
3200.000	65.343	184.979	161.967	176.415
3300.000	65.353	186.989	168.502	182.950
3400.000	65.359	188.940	175.037	189.485
3500.000	65.365	190.835	181.574	196.022
3600.000	65.374	192.677	188.111	202.559
3700.000	65.388	194.468	194.649	209.097
3800.000	65.410	196.212	201.189	215.637
3900.000	65.441	197.912	207.731	222.179
4000.000	65.482	199.569	214.277	228.725
4100.000	65.533	201.186	220.828	235.276
4200.000	65.594	202.766	227.384	241.832
4300.000	65.664	204.310	233.947	248.395
4400.000	65.743	205.821	240.517	254.965
4500.000	65.828	207.299	247.096	261.544
4600.000	65.917	208.747	253.683	268.131
4700.000	66.007	210.165	260.279	274.727
4800.000	66.095	211.556	266.884	281.332
4900.000	66.176	212.920	273.498	287.946
5000.000	66.247	214.258	280.119	294.567
5100.000	66.302	215.570	286.747	301.195
5200.000	66.335	216.858	293.379	307.827
5300.000	66.341	218.122	300.013	314.461
5400.000	66.312	219.361	306.646	321.094
5500.000	66.242	220.578	313.274	327.722
5600.000	66.123	221.770	319.892	334.340
5700.000	65.946	222.939	326.496	340.944
5800.000	65.702	224.084	333.079	347.527
5900.000	65.383	225.204	339.634	354.082
6000.000	64.977	226.300	346.153	360.601

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C4H10	92	58.124	-32.150	C 4 H 10

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	19.718	48.225	-4.589	-36.739
200.000	23.210	62.984	-2.440	-34.590
298.150	26.514	72.861	0.000	-32.150
300.000	26.577	73.029	.049	-32.101
400.000	30.130	81.155	2.682	-29.268
500.000	34.022	88.289	6.087	-26.063
600.000	38.254	94.862	9.698	-22.452
700.000	42.674	101.090	13.744	-18.406
800.000	46.977	107.073	18.229	-13.921
900.000	50.703	112.829	23.120	-9.030
1000.000	53.241	118.315	28.330	-3.820
1100.000	55.525	123.500	33.771	1.621
1200.000	57.584	128.421	39.428	7.278
1300.000	59.432	133.104	45.280	13.130
1400.000	61.084	137.570	51.308	19.158
1500.000	62.552	141.836	57.491	25.341
1600.000	63.851	145.915	63.812	31.662
1700.000	64.992	149.821	70.256	38.106
1800.000	65.989	153.565	76.806	44.656
1900.000	66.852	157.155	83.449	51.299
2000.000	67.593	160.605	90.172	58.022
2100.000	68.223	163.918	96.964	64.814
2200.000	68.752	167.105	103.814	71.664
2300.000	69.191	170.171	110.712	78.562
2400.000	69.549	173.123	117.649	85.499
2500.000	69.834	175.968	124.619	92.469
2600.000	70.057	178.712	131.614	99.464
2700.000	70.224	181.359	138.628	106.478
2800.000	70.343	183.915	145.657	113.507
2900.000	70.423	186.385	152.696	120.546
3000.000	70.469	188.774	159.741	127.591
3100.000	70.488	191.085	166.789	134.639
3200.000	70.486	193.323	173.837	141.687
3300.000	70.469	195.491	180.885	148.735
3400.000	70.442	197.595	187.931	155.781
3500.000	70.408	199.636	194.973	162.823
3600.000	70.373	201.619	202.013	169.863
3700.000	70.340	203.547	209.048	176.898
3800.000	70.312	205.422	216.081	183.931
3900.000	70.292	207.248	223.111	190.961
4000.000	70.283	209.023	230.140	197.990
4100.000	70.286	210.763	237.168	205.018
4200.000	70.303	212.457	244.197	212.047
4300.000	70.335	214.112	251.229	219.079
4400.000	70.382	215.729	258.265	226.115
4500.000	70.445	217.312	265.306	233.156
4600.000	70.523	218.861	272.354	240.204
4700.000	70.615	220.378	279.411	247.261
4800.000	70.721	221.866	286.478	254.328
4900.000	70.838	223.326	293.556	261.406
5000.000	70.965	224.758	300.646	268.496
5100.000	71.098	226.165	307.749	275.599
5200.000	71.235	227.547	314.866	282.716
5300.000	71.373	228.905	321.996	289.846
5400.000	71.506	230.240	329.140	296.990
5500.000	71.632	231.553	336.297	304.147
5600.000	71.745	232.845	343.466	311.316
5700.000	71.840	234.116	350.645	318.495
5800.000	71.912	235.366	357.833	325.683
5900.000	71.953	236.596	365.027	332.877
6000.000	71.958	237.805	372.223	340.073

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5	93	60.055	234.000	C 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.439	46.555	-2.167	231.833
200.000	11.036	52.834	-1.241	232.759
298.150	14.171	57.839	0.000	234.000
300.000	14.226	57.928	.026	234.026
400.000	16.897	62.399	1.587	235.587
500.000	18.996	66.406	3.386	237.386
600.000	20.536	70.013	5.367	239.367
700.000	21.589	73.264	7.477	241.477
800.000	22.288	76.195	9.673	243.673
900.000	22.833	78.852	11.930	245.930
1000.000	23.481	81.289	14.243	248.243
1100.000	23.869	83.546	16.611	250.611
1200.000	24.216	85.638	19.016	253.016
1300.000	24.528	87.588	21.453	255.453
1400.000	24.805	89.417	23.920	257.920
1500.000	25.051	91.137	26.413	260.413
1600.000	25.268	92.760	28.929	262.929
1700.000	25.458	94.293	31.466	265.466
1800.000	25.624	95.758	34.020	268.020
1900.000	25.768	97.147	36.590	270.590
2000.000	25.891	98.472	39.173	273.173
2100.000	25.997	99.738	41.768	275.768
2200.000	26.086	100.950	44.372	278.372
2300.000	26.160	102.111	46.984	280.984
2400.000	26.222	103.226	49.604	283.604
2500.000	26.273	104.297	52.228	286.228
2600.000	26.313	105.328	54.858	288.858
2700.000	26.346	106.322	57.491	291.491
2800.000	26.371	107.281	60.127	294.127
2900.000	26.391	108.206	62.765	296.765
3000.000	26.406	109.102	65.405	299.405
3100.000	26.418	109.968	68.046	302.046
3200.000	26.427	110.806	70.688	304.688
3300.000	26.434	111.620	73.331	307.331
3400.000	26.441	112.409	75.975	309.975
3500.000	26.447	113.175	78.620	312.620
3600.000	26.454	113.921	81.265	315.265
3700.000	26.461	114.646	83.910	317.910
3800.000	26.470	115.351	86.557	320.557
3900.000	26.480	116.039	89.204	323.204
4000.000	26.492	116.710	91.853	325.853
4100.000	26.506	117.364	94.503	328.503
4200.000	26.522	118.003	97.154	331.154
4300.000	26.540	118.627	99.807	333.807
4400.000	26.559	119.238	102.462	336.462
4500.000	26.580	119.835	105.119	339.119
4600.000	26.603	120.419	107.779	341.779
4700.000	26.625	120.991	110.440	344.440
4800.000	26.649	121.552	113.104	347.104
4900.000	26.671	122.102	115.770	349.770
5000.000	26.693	122.641	118.438	352.438
5100.000	26.713	123.170	121.108	355.108
5200.000	26.730	123.689	123.780	357.780
5300.000	26.743	124.193	126.454	360.454
5400.000	26.751	124.698	129.129	363.129
5500.000	26.754	125.189	131.804	365.804
5600.000	26.749	125.671	134.479	368.479
5700.000	26.736	126.144	137.154	371.154
5800.000	26.712	126.609	139.826	373.826
5900.000	26.677	127.065	142.496	376.496
6000.000	26.629	127.513	145.161	379.161

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H	94	61.062	185.400	C 5 H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	11.543	52.813	-2.556	182.444
200.000	14.996	61.884	-1.628	183.772
298.150	18.110	68.462	0.000	185.400
300.000	18.164	68.575	.033	185.433
400.000	20.896	74.187	1.991	187.391
500.000	23.104	79.097	4.195	189.595
600.000	24.767	83.465	6.593	191.993
700.000	25.931	87.376	9.132	194.532
800.000	26.708	90.893	11.766	197.166
900.000	27.275	94.072	14.466	199.866
1000.000	27.877	96.976	17.222	202.622
1100.000	28.351	99.655	20.034	205.434
1200.000	28.793	102.141	22.891	208.291
1300.000	29.203	104.462	25.791	211.191
1400.000	29.584	106.640	28.731	214.131
1500.000	29.935	108.694	31.707	217.107
1600.000	30.259	110.636	34.717	220.117
1700.000	30.556	112.479	37.758	223.158
1800.000	30.827	114.234	40.827	226.227
1900.000	31.073	115.907	43.923	229.323
2000.000	31.295	117.507	47.041	232.441
2100.000	31.496	119.039	50.181	235.581
2200.000	31.675	120.508	53.340	238.740
2300.000	31.833	121.920	56.515	241.915
2400.000	31.973	123.278	59.706	245.106
2500.000	32.094	124.585	62.909	248.309
2600.000	32.199	125.846	66.124	251.524
2700.000	32.288	127.063	69.349	254.749
2800.000	32.363	128.239	72.581	257.981
2900.000	32.424	129.375	75.821	261.221
3000.000	32.473	130.475	79.066	264.466
3100.000	32.512	131.541	82.315	267.715
3200.000	32.540	132.574	85.568	270.968
3300.000	32.560	133.575	88.823	274.223
3400.000	32.572	134.547	92.079	277.479
3500.000	32.579	135.492	95.337	280.737
3600.000	32.580	136.410	98.595	283.995
3700.000	32.578	137.302	101.853	287.253
3800.000	32.573	138.171	105.110	290.510
3900.000	32.567	139.017	108.367	293.767
4000.000	32.561	139.841	111.624	297.024
4100.000	32.555	140.645	114.880	300.280
4200.000	32.553	141.430	118.135	303.535
4300.000	32.554	142.196	121.390	306.790
4400.000	32.561	142.944	124.646	310.046
4500.000	32.573	143.676	127.903	313.303
4600.000	32.593	144.392	131.161	316.561
4700.000	32.622	145.093	134.422	319.822
4800.000	32.661	145.781	137.686	323.086
4900.000	32.712	146.455	140.954	326.354
5000.000	32.776	147.116	144.229	329.629
5100.000	32.853	147.766	147.510	332.910
5200.000	32.946	148.405	150.800	336.200
5300.000	33.056	149.033	154.100	339.500
5400.000	33.184	149.652	157.411	342.811
5500.000	33.331	150.263	160.737	346.137
5600.000	33.499	150.865	164.078	349.478
5700.000	33.689	151.459	167.438	352.838
5800.000	33.903	152.047	170.817	356.217
5900.000	34.142	152.628	174.219	359.619
6000.000	34.407	153.204	177.646	363.046

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H2	95	62.071	165.000	C 5 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	11.567	50.264	-3.033	161.967
200.000	15.354	59.438	-1.688	163.312
298.150	18.992	66.253	0.000	165.000
300.000	19.057	66.372	.035	165.035
400.000	22.389	72.322	2.111	167.111
500.000	25.164	77.628	4.494	169.494
600.000	27.304	82.414	7.123	172.123
700.000	28.836	86.746	9.935	174.935
800.000	29.889	90.669	12.874	177.874
900.000	30.702	94.238	15.904	180.904
1000.000	31.616	97.517	19.018	184.018
1100.000	32.358	100.566	22.217	187.217
1200.000	33.035	103.411	25.487	190.487
1300.000	33.650	106.079	28.822	193.822
1400.000	34.207	108.594	32.215	197.215
1500.000	34.711	110.971	35.662	200.662
1600.000	35.165	113.226	39.156	204.156
1700.000	35.573	115.371	42.693	207.693
1800.000	35.939	117.415	46.269	211.269
1900.000	36.266	119.367	49.880	214.880
2000.000	36.557	121.234	53.521	218.521
2100.000	36.816	123.024	57.190	222.190
2200.000	37.045	124.742	60.883	225.883
2300.000	37.247	126.394	64.598	229.598
2400.000	37.426	127.983	68.332	233.332
2500.000	37.583	129.514	72.082	237.082
2600.000	37.721	130.991	75.848	240.848
2700.000	37.843	132.417	79.626	244.626
2800.000	37.949	133.795	83.416	248.416
2900.000	38.044	135.128	87.216	252.216
3000.000	38.127	136.419	91.024	256.024
3100.000	38.202	137.671	94.841	259.841
3200.000	38.269	138.885	98.664	263.664
3300.000	38.330	140.063	102.494	267.494
3400.000	38.387	141.208	106.330	271.330
3500.000	38.439	142.322	110.172	275.172
3600.000	38.489	143.405	114.018	279.018
3700.000	38.538	144.461	117.869	282.869
3800.000	38.585	145.489	121.726	286.726
3900.000	38.632	146.492	125.586	290.586
4000.000	38.678	147.471	129.452	294.452
4100.000	38.725	148.426	133.322	298.322
4200.000	38.772	149.360	137.197	302.197
4300.000	38.820	150.273	141.077	306.077
4400.000	38.867	151.166	144.961	309.961
4500.000	38.915	152.040	148.850	313.850
4600.000	38.961	152.896	152.744	317.744
4700.000	39.007	153.734	156.642	321.642
4800.000	39.051	154.556	160.545	325.545
4900.000	39.092	155.361	164.452	329.452
5000.000	39.129	156.152	168.363	333.363
5100.000	39.161	156.927	172.278	337.278
5200.000	39.187	157.687	176.195	341.195
5300.000	39.205	158.434	180.115	345.115
5400.000	39.213	159.167	184.036	349.036
5500.000	39.211	159.886	187.957	352.957
5600.000	39.196	160.593	191.878	356.878
5700.000	39.166	161.286	195.796	360.796
5800.000	39.118	161.967	199.710	364.710
5900.000	39.052	162.635	203.619	368.619
6000.000	38.963	163.291	207.520	372.520

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H3	96	63.079	143.600	C 5 H 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	11.572	50.574	-3.081	140.519
200.000	15.568	59.801	-1.727	141.873
298.150	19.610	66.772	0.000	143.600
300.000	19.684	66.895	.036	143.636
400.000	23.531	73.095	2.200	145.800
500.000	26.849	78.713	4.725	148.325
600.000	29.506	83.854	7.548	151.148
700.000	31.497	88.560	10.604	154.204
800.000	32.944	92.865	13.829	157.429
900.000	34.096	96.813	17.182	160.782
1000.000	35.330	100.466	20.651	164.251
1100.000	36.324	103.881	24.235	167.835
1200.000	37.226	107.081	27.913	171.513
1300.000	38.042	110.093	31.677	175.277
1400.000	38.778	112.940	35.519	179.119
1500.000	39.440	115.639	39.430	183.030
1600.000	40.033	118.203	43.404	187.004
1700.000	40.563	120.645	47.435	191.035
1800.000	41.035	122.979	51.515	195.115
1900.000	41.455	125.209	55.640	199.240
2000.000	41.826	127.345	59.804	203.404
2100.000	42.153	129.393	64.004	207.604
2200.000	42.442	131.361	68.234	211.834
2300.000	42.695	133.253	72.491	216.091
2400.000	42.917	135.075	76.772	220.372
2500.000	43.111	136.831	81.073	224.673
2600.000	43.281	138.526	85.393	228.993
2700.000	43.429	140.162	89.729	233.329
2800.000	43.560	141.744	94.078	237.678
2900.000	43.676	143.274	98.440	242.040
3000.000	43.778	144.757	102.813	246.413
3100.000	43.870	146.194	107.195	250.795
3200.000	43.954	147.588	111.587	255.187
3300.000	44.031	148.942	115.986	259.586
3400.000	44.103	150.257	120.393	263.993
3500.000	44.172	151.537	124.806	268.406
3600.000	44.238	152.782	129.227	272.827
3700.000	44.303	153.995	133.654	277.254
3800.000	44.367	155.177	138.087	281.687
3900.000	44.430	156.331	142.527	286.127
4000.000	44.494	157.456	146.973	290.573
4100.000	44.558	158.555	151.426	295.026
4200.000	44.622	159.630	155.885	299.485
4300.000	44.686	160.681	160.351	303.951
4400.000	44.749	161.709	164.822	308.422
4500.000	44.810	162.715	169.300	312.900
4600.000	44.868	163.701	173.784	317.384
4700.000	44.922	164.666	178.274	321.874
4800.000	44.970	165.613	182.768	326.368
4900.000	45.010	166.540	187.267	330.867
5000.000	45.042	167.450	191.770	335.370
5100.000	45.061	168.342	196.275	339.875
5200.000	45.067	169.217	200.782	344.382
5300.000	45.056	170.075	205.288	348.888
5400.000	45.026	170.917	209.793	353.393
5500.000	44.974	171.743	214.293	357.893
5600.000	44.895	172.553	218.786	362.386
5700.000	44.787	173.347	223.271	366.871
5800.000	44.646	174.124	227.743	371.343
5900.000	44.468	174.886	232.199	375.799
6000.000	44.249	175.632	236.635	380.235

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H4	97	64.087	97.500	C 5 H 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	12.175	51.254	-3.213	94.287
200.000	16.227	60.914	-1.797	95.703
298.150	20.376	68.165	0.000	97.500
300.000	20.453	68.293	.038	97.538
400.000	24.487	74.738	2.288	99.788
500.000	28.078	80.598	4.920	102.420
600.000	31.083	85.992	7.883	105.383
700.000	33.473	90.970	11.116	108.616
800.000	35.329	95.566	14.560	112.060
900.000	36.843	99.817	18.170	115.670
1000.000	38.318	103.774	21.927	119.427
1100.000	39.537	107.484	25.821	123.321
1200.000	40.645	110.973	29.831	127.331
1300.000	41.648	114.266	33.946	131.446
1400.000	42.554	117.386	38.157	135.657
1500.000	43.369	120.351	42.454	139.954
1600.000	44.100	123.173	46.828	144.328
1700.000	44.754	125.867	51.272	148.772
1800.000	45.335	128.442	55.777	153.277
1900.000	45.851	130.907	60.337	157.837
2000.000	46.307	133.271	64.945	162.445
2100.000	46.708	135.540	69.596	167.096
2200.000	47.058	137.721	74.285	171.785
2300.000	47.364	139.820	79.006	176.506
2400.000	47.629	141.841	83.756	181.256
2500.000	47.859	143.790	88.531	186.031
2600.000	48.056	145.671	93.327	190.827
2700.000	48.225	147.488	98.141	195.641
2800.000	48.370	149.245	102.971	200.471
2900.000	48.494	150.944	107.815	205.315
3000.000	48.600	152.590	112.669	210.169
3100.000	48.691	154.185	117.534	215.034
3200.000	48.770	155.733	122.407	219.907
3300.000	48.840	157.234	127.288	224.788
3400.000	48.901	158.693	132.175	229.675
3500.000	48.957	160.112	137.068	234.568
3600.000	49.009	161.492	141.966	239.466
3700.000	49.058	162.835	146.870	244.370
3800.000	49.107	164.144	151.778	249.278
3900.000	49.155	165.420	156.691	254.191
4000.000	49.203	166.665	161.609	259.109
4100.000	49.253	167.881	166.532	264.032
4200.000	49.303	169.068	171.459	268.959
4300.000	49.355	170.229	176.392	273.892
4400.000	49.408	171.364	181.330	278.830
4500.000	49.462	172.475	186.274	283.774
4600.000	49.515	173.563	191.223	288.723
4700.000	49.567	174.628	196.177	293.677
4800.000	49.618	175.672	201.136	298.636
4900.000	49.664	176.696	206.100	303.600
5000.000	49.705	177.700	211.069	308.569
5100.000	49.739	178.684	216.041	313.541
5200.000	49.763	179.650	221.016	318.516
5300.000	49.776	180.599	225.993	323.493
5400.000	49.774	181.529	230.971	328.471
5500.000	49.754	182.442	235.947	333.447
5600.000	49.715	183.338	240.921	338.421
5700.000	49.651	184.218	245.890	343.390
5800.000	49.560	185.081	250.850	348.350
5900.000	49.438	185.927	255.800	353.300
6000.000	49.280	186.755	260.737	358.237

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H5	98	65.095	104.400	C 5 H 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	11.719	53.493	-3.223	101.177
200.000	16.292	63.003	-1.825	102.575
298.150	20.885	70.364	0.000	104.400
300.000	20.970	70.495	.039	104.439
400.000	25.454	77.149	2.362	106.762
500.000	29.527	83.276	5.116	109.516
600.000	33.058	88.980	8.250	112.650
700.000	36.002	94.305	11.708	116.108
800.000	38.397	99.274	15.432	119.832
900.000	40.365	103.913	19.373	123.773
1000.000	42.116	108.258	23.497	127.897
1100.000	43.727	112.349	27.791	132.191
1200.000	45.156	116.216	32.237	136.637
1300.000	46.418	119.881	36.817	141.217
1400.000	47.528	123.363	41.515	145.915
1500.000	48.500	126.676	46.318	150.718
1600.000	49.346	129.834	51.211	155.611
1700.000	50.078	132.848	56.183	160.583
1800.000	50.709	135.728	61.223	165.623
1900.000	51.249	138.485	66.322	170.722
2000.000	51.710	141.126	71.471	175.871
2100.000	52.101	143.658	76.662	181.062
2200.000	52.432	146.090	81.889	186.289
2300.000	52.711	148.427	87.146	191.546
2400.000	52.947	150.676	92.430	196.830
2500.000	53.147	152.841	97.735	202.135
2600.000	53.318	154.929	103.058	207.458
2700.000	53.466	156.944	108.397	212.797
2800.000	53.598	158.891	113.751	218.151
2900.000	53.718	160.774	119.117	223.517
3000.000	53.831	162.597	124.494	228.894
3100.000	53.941	164.364	129.883	234.283
3200.000	54.051	166.078	135.282	239.682
3300.000	54.164	167.743	140.693	245.093
3400.000	54.282	169.362	146.115	250.515
3500.000	54.407	170.937	151.550	255.950
3600.000	54.539	172.472	156.997	261.397
3700.000	54.678	173.968	162.458	266.858
3800.000	54.825	175.428	167.933	272.333
3900.000	54.979	176.854	173.423	277.823
4000.000	55.138	178.248	178.929	283.329
4100.000	55.300	179.611	184.451	288.851
4200.000	55.462	180.946	189.989	294.389
4300.000	55.621	182.253	195.543	299.943
4400.000	55.773	183.533	201.113	305.513
4500.000	55.913	184.788	206.697	311.097
4600.000	56.037	186.019	212.295	316.695
4700.000	56.138	187.225	217.904	322.304
4800.000	56.210	188.408	223.521	327.921
4900.000	56.247	189.567	229.145	333.545
5000.000	56.241	190.703	234.769	339.169
5100.000	56.182	191.817	240.391	344.791
5200.000	56.064	192.907	246.004	350.404
5300.000	55.876	193.973	251.602	356.002
5400.000	55.609	195.015	257.176	361.576
5500.000	55.251	196.032	262.720	367.120
5600.000	54.792	197.024	268.223	372.623
5700.000	54.220	197.989	273.675	378.075
5800.000	53.522	198.926	279.063	383.463
5900.000	52.686	199.834	284.375	388.775
6000.000	51.697	200.711	289.595	393.995

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H6	99	66.103	58.300	C 5 H 6

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	13.569	53.169	-3.516	54.784
200.000	17.723	63.815	-1.956	56.344
298.150	22.166	71.712	0.000	58.300
300.000	22.250	71.851	.041	58.341
400.000	26.791	78.877	2.494	60.794
500.000	31.077	85.323	5.391	63.691
600.000	34.929	91.337	8.695	66.995
700.000	38.255	96.973	12.359	70.659
800.000	41.052	102.274	16.328	74.628
900.000	43.408	107.249	20.554	78.854
1000.000	45.497	111.932	25.001	83.301
1100.000	47.294	116.354	29.642	87.942
1200.000	48.889	120.539	34.453	92.753
1300.000	50.298	124.509	39.414	97.714
1400.000	51.537	128.283	44.507	102.807
1500.000	52.620	131.876	49.716	108.016
1600.000	53.563	135.303	55.026	113.326
1700.000	54.378	138.575	60.424	118.724
1800.000	55.078	141.704	65.898	124.198
1900.000	55.677	144.698	71.437	129.737
2000.000	56.185	147.568	77.030	135.330
2100.000	56.614	150.319	82.671	140.971
2200.000	56.974	152.962	88.351	146.651
2300.000	57.274	155.501	94.064	152.364
2400.000	57.525	157.944	99.804	158.104
2500.000	57.733	160.297	105.567	163.867
2600.000	57.908	162.565	111.350	169.650
2700.000	58.056	164.753	117.148	175.448
2800.000	58.183	166.867	122.960	181.260
2900.000	58.296	168.910	128.784	187.084
3000.000	58.399	170.889	134.619	192.919
3100.000	58.497	172.805	140.464	198.764
3200.000	58.595	174.664	146.318	204.618
3300.000	58.695	176.468	152.183	210.483
3400.000	58.799	178.222	158.057	216.357
3500.000	58.910	179.928	163.943	222.243
3600.000	59.029	181.589	169.840	228.140
3700.000	59.157	183.208	175.749	234.049
3800.000	59.293	184.788	181.671	239.971
3900.000	59.437	186.330	187.608	245.908
4000.000	59.588	187.837	193.559	251.859
4100.000	59.743	189.310	199.526	257.826
4200.000	59.901	190.751	205.508	263.808
4300.000	60.056	192.163	211.506	269.806
4400.000	60.207	193.545	217.519	275.819
4500.000	60.348	194.900	223.547	281.847
4600.000	60.473	196.227	229.588	287.888
4700.000	60.578	197.529	235.641	293.941
4800.000	60.655	198.805	241.703	300.003
4900.000	60.697	200.055	247.771	306.071
5000.000	60.697	201.283	253.841	312.141
5100.000	60.645	202.484	259.908	318.208
5200.000	60.534	203.661	265.968	324.268
5300.000	60.352	204.812	272.013	330.313
5400.000	60.090	205.938	278.035	336.335
5500.000	59.737	207.038	284.028	342.328
5600.000	59.280	208.110	289.979	348.279
5700.000	58.708	209.155	295.880	354.180
5800.000	58.007	210.170	301.717	360.017
5900.000	57.164	211.154	307.477	365.777
6000.000	56.164	212.107	313.144	371.444

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H7	100	67.111	76.710	C 5 H 7

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	15.154	52.730	-3.831	72.879
200.000	19.323	64.487	-2.111	74.599
298.150	23.724	73.014	0.000	76.710
300.000	23.808	73.164	.044	76.754
400.000	28.354	80.636	2.652	79.362
500.000	32.755	87.440	5.710	82.420
600.000	36.855	93.780	9.193	85.903
700.000	40.546	99.744	13.067	89.777
800.000	43.772	105.375	17.287	93.997
900.000	46.522	110.693	21.806	98.516
1000.000	48.838	115.718	26.577	103.287
1100.000	50.833	120.469	31.562	108.272
1200.000	52.600	124.969	36.736	113.446
1300.000	54.159	129.242	42.076	118.786
1400.000	55.526	133.307	47.561	124.271
1500.000	56.719	137.179	53.175	129.885
1600.000	57.753	140.874	58.900	135.610
1700.000	58.644	144.402	64.721	141.431
1800.000	59.407	147.777	70.624	147.334
1900.000	60.055	151.006	76.598	153.308
2000.000	60.601	154.101	82.632	159.342
2100.000	61.059	157.069	88.716	165.426
2200.000	61.440	159.919	94.841	171.551
2300.000	61.755	162.657	101.001	177.711
2400.000	62.013	165.291	107.190	183.900
2500.000	62.225	167.827	113.403	190.113
2600.000	62.400	170.271	119.634	196.344
2700.000	62.545	172.629	125.881	202.591
2800.000	62.667	174.906	132.142	208.852
2900.000	62.774	177.107	138.414	215.124
3000.000	62.871	179.236	144.697	221.407
3100.000	62.963	181.299	150.988	227.698
3200.000	63.054	183.300	157.289	233.999
3300.000	63.149	185.242	163.599	240.309
3400.000	63.250	187.128	169.919	246.629
3500.000	63.360	188.963	176.250	252.960
3600.000	63.478	190.750	182.591	259.301
3700.000	63.608	192.491	188.946	265.656
3800.000	63.748	194.189	195.313	272.023
3900.000	63.897	195.847	201.696	278.406
4000.000	64.055	197.466	208.093	284.803
4100.000	64.218	199.050	214.507	291.217
4200.000	64.385	200.600	220.937	297.647
4300.000	64.550	202.117	227.384	304.094
4400.000	64.711	203.602	233.847	310.557
4500.000	64.861	205.058	240.325	317.035
4600.000	64.994	206.485	246.818	323.528
4700.000	65.105	207.884	253.323	330.033
4800.000	65.186	209.256	259.838	336.548
4900.000	65.228	210.601	266.359	343.069
5000.000	65.222	211.918	272.882	349.592
5100.000	65.160	213.209	279.402	356.112
5200.000	65.031	214.474	285.912	362.622
5300.000	64.824	215.711	292.406	369.116
5400.000	64.527	216.920	298.874	375.584
5500.000	64.127	218.100	305.307	382.017
5600.000	63.612	219.251	311.695	388.405
5700.000	62.967	220.372	318.026	394.736
5800.000	62.177	221.460	324.284	400.994
5900.000	61.228	222.515	330.456	407.166
6000.000	60.102	223.535	336.524	413.234

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H8	101	68.119	30.610	C 5 H 8

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	17.681	52.054	-4.223	26.387
200.000	21.255	65.365	-2.282	28.328
298.150	25.326	74.593	0.000	30.610
300.000	25.406	74.753	.047	30.657
400.000	29.866	82.668	2.809	33.419
500.000	34.399	89.820	6.023	36.633
600.000	38.801	96.484	9.684	40.294
700.000	42.899	102.778	13.773	44.383
800.000	46.551	108.751	18.249	48.859
900.000	49.648	114.418	23.064	53.674
1000.000	52.110	119.782	28.158	58.768
1100.000	54.259	124.852	33.478	64.088
1200.000	56.166	129.656	39.001	69.611
1300.000	57.851	134.220	44.704	75.314
1400.000	59.331	138.562	50.565	81.175
1500.000	60.623	142.701	56.564	87.174
1600.000	61.745	146.650	62.684	93.294
1700.000	62.713	150.423	68.908	99.518
1800.000	63.541	154.032	75.221	105.831
1900.000	64.244	157.487	81.612	112.222
2000.000	64.836	160.797	88.067	118.677
2100.000	65.330	163.973	94.576	125.186
2200.000	65.738	167.022	101.130	131.740
2300.000	66.072	169.952	107.721	138.331
2400.000	66.342	172.770	114.342	144.952
2500.000	66.559	175.483	120.988	151.598
2600.000	66.732	178.097	127.652	158.262
2700.000	66.870	180.618	134.333	164.943
2800.000	66.980	183.052	141.026	171.636
2900.000	67.070	185.404	147.728	178.338
3000.000	67.146	187.679	154.439	185.049
3100.000	67.213	189.882	161.157	191.767
3200.000	67.278	192.017	167.882	198.492
3300.000	67.343	194.088	174.613	205.223
3400.000	67.413	196.099	181.350	211.960
3500.000	67.490	198.055	188.095	218.705
3600.000	67.576	199.957	194.849	225.459
3700.000	67.673	201.810	201.611	232.221
3800.000	67.782	203.616	208.384	238.994
3900.000	67.901	205.378	215.168	245.778
4000.000	68.030	207.099	221.964	252.574
4100.000	68.168	208.780	228.774	259.384
4200.000	68.312	210.425	235.598	266.208
4300.000	68.459	212.034	242.436	273.046
4400.000	68.605	213.609	249.290	279.900
4500.000	68.746	215.153	256.157	286.767
4600.000	68.876	216.665	263.038	293.648
4700.000	68.989	218.148	269.932	300.542
4800.000	69.080	219.601	276.836	307.446
4900.000	69.139	221.026	283.747	314.357
5000.000	69.159	222.423	290.662	321.272
5100.000	69.131	223.792	297.577	328.187
5200.000	69.046	225.134	304.486	335.096
5300.000	68.892	226.448	311.384	341.994
5400.000	68.660	227.734	318.262	348.872
5500.000	68.336	228.991	325.113	355.723
5600.000	67.908	230.218	331.926	362.536
5700.000	67.363	231.416	338.690	369.300
5800.000	66.687	232.582	345.394	376.004
5900.000	65.865	233.715	352.023	382.633
6000.000	64.882	234.814	358.562	389.172

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H9	102	69.127	37.510	C 5 H 9

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	20.582	50.820	-4.702	32.808
200.000	23.645	65.981	-2.497	35.013
298.150	27.335	76.085	0.000	37.510
300.000	27.409	76.260	.051	37.561
400.000	31.659	84.713	3.001	40.511
500.000	36.183	92.265	6.392	43.902
600.000	40.771	99.268	10.240	47.750
700.000	45.212	105.890	14.541	52.051
800.000	49.300	112.199	19.270	56.780
900.000	52.826	118.215	24.382	61.892
1000.000	55.585	123.932	29.810	67.320
1100.000	57.704	129.331	35.476	72.986
1200.000	59.612	134.435	41.344	78.854
1300.000	61.325	139.275	47.392	84.902
1400.000	62.854	143.877	53.602	91.112
1500.000	64.214	148.261	59.957	97.467
1600.000	65.436	152.444	66.440	103.950
1700.000	66.472	156.442	73.036	110.546
1800.000	67.395	160.269	79.730	117.240
1900.000	68.195	163.934	86.510	124.020
2000.000	68.882	167.450	93.365	130.875
2100.000	69.468	170.825	100.284	137.794
2200.000	69.962	174.069	107.256	144.766
2300.000	70.372	177.188	114.273	151.783
2400.000	70.710	180.191	121.328	158.838
2500.000	70.981	183.083	128.413	165.923
2600.000	71.196	185.871	135.522	173.032
2700.000	71.361	188.561	142.650	180.160
2800.000	71.484	191.159	149.793	187.303
2900.000	71.570	193.669	156.946	194.456
3000.000	71.628	196.096	164.106	201.616
3100.000	71.661	198.445	171.271	208.781
3200.000	71.676	200.721	178.438	215.948
3300.000	71.678	202.927	185.605	223.115
3400.000	71.671	205.066	192.773	230.283
3500.000	71.659	207.144	199.940	237.450
3600.000	71.646	209.162	207.105	244.615
3700.000	71.635	211.125	214.269	251.779
3800.000	71.629	213.035	221.432	258.942
3900.000	71.630	214.896	228.595	266.105
4000.000	71.640	216.710	235.758	273.268
4100.000	71.660	218.479	242.923	280.433
4200.000	71.691	220.206	250.091	287.601
4300.000	71.734	221.894	257.262	294.772
4400.000	71.789	223.543	264.438	301.948
4500.000	71.855	225.157	271.620	309.130
4600.000	71.932	226.737	278.809	316.319
4700.000	72.018	228.285	286.007	323.517
4800.000	72.112	229.802	293.213	330.723
4900.000	72.212	231.290	300.429	337.939
5000.000	72.315	232.750	307.656	345.166
5100.000	72.417	234.183	314.892	352.402
5200.000	72.517	235.591	322.139	359.649
5300.000	72.608	236.973	329.395	366.905
5400.000	72.688	238.331	336.660	374.170
5500.000	72.752	239.665	343.933	381.443
5600.000	72.794	240.976	351.210	388.720
5700.000	72.808	242.265	358.490	396.000
5800.000	72.789	243.531	365.771	403.281
5900.000	72.729	244.775	373.047	410.557
6000.000	72.623	245.997	380.315	417.825

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H10	103	70.135	-8.590	C 5 H 10

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	24.000	49.348	-5.247	-13.837
200.000	26.368	66.657	-2.737	-11.327
298.150	29.532	77.744	0.000	-8.590
300.000	29.598	77.932	.055	-8.535
400.000	33.535	86.971	3.206	-5.384
500.000	37.991	94.925	6.779	-1.811
600.000	42.741	102.269	10.814	2.224
700.000	47.527	109.219	15.329	6.739
800.000	52.057	115.865	20.311	11.721
900.000	56.004	122.232	25.721	17.131
1000.000	59.006	128.298	31.481	22.891
1100.000	61.185	134.026	37.492	28.902
1200.000	63.153	139.435	43.711	35.121
1300.000	64.926	144.562	50.116	41.526
1400.000	66.514	149.432	56.690	48.100
1500.000	67.929	154.071	63.413	54.823
1600.000	69.184	158.496	70.270	61.680
1700.000	70.290	162.724	77.245	68.655
1800.000	71.258	166.770	84.324	75.734
1900.000	72.098	170.645	91.493	82.903
2000.000	72.820	174.362	98.739	90.149
2100.000	73.435	177.931	106.053	97.463
2200.000	73.952	181.359	113.423	104.833
2300.000	74.380	184.656	120.840	112.250
2400.000	74.727	187.829	128.296	119.706
2500.000	75.003	190.886	135.784	127.194
2600.000	75.215	193.832	143.295	134.705
2700.000	75.370	196.673	150.825	142.235
2800.000	75.477	199.416	158.367	149.777
2900.000	75.541	202.066	165.918	157.328
3000.000	75.570	204.628	173.474	164.884
3100.000	75.570	207.106	181.031	172.441
3200.000	75.546	209.503	188.587	179.997
3300.000	75.504	211.829	196.140	187.550
3400.000	75.449	214.082	203.688	195.098
3500.000	75.386	216.268	211.230	202.640
3600.000	75.320	218.391	218.765	210.175
3700.000	75.253	220.454	226.294	217.704
3800.000	75.190	222.460	233.816	225.226
3900.000	75.134	224.412	241.332	232.742
4000.000	75.087	226.314	248.843	240.253
4100.000	75.053	228.167	256.350	247.760
4200.000	75.034	229.975	263.854	255.264
4300.000	75.031	231.741	271.357	262.767
4400.000	75.046	233.466	278.861	270.271
4500.000	75.079	235.153	286.367	277.777
4600.000	75.132	236.804	293.877	285.287
4700.000	75.204	238.420	301.394	292.804
4800.000	75.296	240.005	308.919	300.329
4900.000	75.408	241.558	316.454	307.864
5000.000	75.538	243.083	324.001	315.411
5100.000	75.685	244.580	331.562	322.972
5200.000	75.848	246.051	339.138	330.548
5300.000	76.026	247.498	346.732	338.142
5400.000	76.214	248.921	354.344	345.754
5500.000	76.412	250.321	361.975	353.385
5600.000	76.616	251.699	369.627	361.037
5700.000	76.823	253.057	377.298	368.708
5800.000	77.028	254.395	384.991	376.401
5900.000	77.229	255.714	392.704	384.114
6000.000	77.420	257.013	400.437	391.847

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H11	104	71.143	8.298	C 5 H 11

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	27.968	47.671	-5.850	2.448
200.000	29.355	67.414	-2.594	5.304
298.150	31.833	79.555	0.000	8.298
300.000	31.889	79.759	.059	8.357
400.000	35.444	89.397	3.418	11.716
500.000	39.824	97.764	7.176	15.474
600.000	44.763	105.455	11.402	19.700
700.000	49.926	112.743	16.136	24.434
800.000	54.907	119.739	21.381	29.679
900.000	59.233	126.465	27.096	35.394
1000.000	62.360	132.881	33.188	41.486
1100.000	64.725	138.937	39.544	47.842
1200.000	66.840	144.662	46.124	54.422
1300.000	68.722	150.087	52.904	61.202
1400.000	70.387	155.243	59.862	68.160
1500.000	71.852	160.150	66.975	75.273
1600.000	73.131	164.829	74.226	82.524
1700.000	74.239	169.296	81.596	89.894
1800.000	75.192	173.567	89.068	97.366
1900.000	76.002	177.655	96.629	104.927
2000.000	76.682	181.571	104.264	112.562
2100.000	77.246	185.327	111.962	120.260
2200.000	77.706	188.931	119.710	128.008
2300.000	78.072	192.394	127.500	135.798
2400.000	78.355	195.723	135.322	143.620
2500.000	78.566	198.926	143.168	151.466
2600.000	78.715	202.010	151.033	159.331
2700.000	78.811	204.983	158.910	167.208
2800.000	78.863	207.850	166.794	175.092
2900.000	78.877	210.613	174.681	182.979
3000.000	78.863	213.292	182.568	190.866
3100.000	78.826	215.877	190.453	198.751
3200.000	78.774	218.379	198.333	206.631
3300.000	78.711	220.802	206.207	214.505
3400.000	78.644	223.151	214.075	222.373
3500.000	78.576	225.430	221.936	230.234
3600.000	78.513	227.642	229.791	238.089
3700.000	78.456	229.793	237.639	245.937
3800.000	78.410	231.884	245.482	253.780
3900.000	78.376	233.921	253.321	261.619
4000.000	78.356	235.905	261.158	269.456
4100.000	78.352	237.840	268.993	277.291
4200.000	78.365	239.728	276.829	285.127
4300.000	78.394	241.572	284.667	292.965
4400.000	78.438	243.375	292.508	300.806
4500.000	78.498	245.138	300.355	308.653
4600.000	78.570	246.864	308.208	316.506
4700.000	78.654	248.555	316.069	324.367
4800.000	78.745	250.212	323.939	332.237
4900.000	78.842	251.835	331.818	340.116
5000.000	78.940	253.430	339.707	348.005
5100.000	79.034	254.994	347.606	355.904
5200.000	79.120	256.530	355.514	363.812
5300.000	79.192	258.038	363.430	371.728
5400.000	79.244	259.518	371.352	379.650
5500.000	79.269	260.973	379.278	387.576
5600.000	79.259	262.401	387.204	395.502
5700.000	79.208	263.803	395.128	403.426
5800.000	79.106	265.180	403.044	411.342
5900.000	78.944	266.531	410.947	419.245
6000.000	78.714	267.855	418.831	427.129

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5H12	105	72.151	-38.300	C 5 H 12

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	32.331	45.527	-6.536	-44.836
200.000	32.783	68.002	-3.291	-41.591
298.150	34.503	81.362	0.000	-38.300
300.000	34.547	81.584	.664	-38.236
400.000	37.589	91.910	3.661	-34.639
500.000	41.754	100.726	7.620	-30.680
600.000	46.774	108.772	12.040	-26.260
700.000	52.260	116.392	16.990	-21.310
800.000	57.708	123.729	22.491	-15.809
900.000	62.496	130.813	28.510	-9.790
1000.000	65.884	137.588	34.944	-3.356
1100.000	68.231	143.980	41.652	3.352
1200.000	70.340	150.009	48.582	10.282
1300.000	72.226	155.715	55.712	17.412
1400.000	73.903	161.130	63.020	24.720
1500.000	75.385	166.280	70.486	32.186
1600.000	76.686	171.188	78.091	39.791
1700.000	77.819	175.872	85.818	47.518
1800.000	78.797	180.349	93.650	55.350
1900.000	79.631	184.632	101.573	63.273
2000.000	80.334	188.735	109.572	71.272
2100.000	80.918	192.669	117.635	79.335
2200.000	81.392	196.444	125.752	87.452
2300.000	81.768	200.071	133.911	95.611
2400.000	82.055	203.557	142.102	103.802
2500.000	82.264	206.912	150.319	112.019
2600.000	82.403	210.141	158.553	120.253
2700.000	82.482	213.253	166.798	128.498
2800.000	82.509	216.253	175.048	136.748
2900.000	82.491	219.148	183.298	144.998
3000.000	82.437	221.944	191.545	153.245
3100.000	82.353	224.645	199.784	161.484
3200.000	82.247	227.259	208.014	169.714
3300.000	82.123	229.788	216.233	177.933
3400.000	81.989	232.237	224.439	186.139
3500.000	81.850	234.612	232.631	194.331
3600.000	81.710	236.915	240.809	202.509
3700.000	81.574	239.153	248.973	210.673
3800.000	81.446	241.326	257.124	218.824
3900.000	81.331	243.440	265.262	226.962
4000.000	81.230	245.498	273.390	235.090
4100.000	81.148	247.503	281.509	243.209
4200.000	81.086	249.458	289.620	251.320
4300.000	81.046	251.365	297.727	259.427
4400.000	81.030	253.228	305.830	267.530
4500.000	81.039	255.049	313.934	275.634
4600.000	81.075	256.831	322.039	283.739
4700.000	81.136	258.575	330.149	291.849
4800.000	81.223	260.284	338.267	299.967
4900.000	81.335	261.960	346.395	308.095
5000.000	81.471	263.604	354.535	316.235
5100.000	81.631	265.219	362.690	324.390
5200.000	81.811	266.806	370.862	332.562
5300.000	82.010	268.366	379.053	340.753
5400.000	82.224	269.901	387.264	348.964
5500.000	82.452	271.412	395.498	357.198
5600.000	82.688	272.900	403.755	365.455
5700.000	82.930	274.365	412.036	373.736
5800.000	83.173	275.810	420.341	382.041
5900.000	83.411	277.234	428.670	390.370
6000.000	83.640	278.637	437.023	398.723

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6	106	72.066	200.000	C 6

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.208	43.263	-1.727	198.273
200.000	8.639	48.656	-.940	199.060
298.150	10.585	52.454	0.000	200.000
300.000	10.624	52.521	.020	200.020
400.000	12.838	55.879	1.192	201.192
500.000	15.036	58.982	2.587	202.587
600.000	17.048	61.905	4.193	204.193
700.000	18.782	64.667	5.987	205.987
800.000	20.226	67.272	7.940	207.940
900.000	21.442	69.726	10.024	210.024
1000.000	22.572	72.044	12.225	212.225
1100.000	23.457	74.237	14.527	214.527
1200.000	24.264	76.313	16.914	216.914
1300.000	24.996	78.285	19.377	219.377
1400.000	25.658	80.162	21.911	221.911
1500.000	26.256	81.953	24.507	224.507
1600.000	26.793	83.665	27.160	227.160
1700.000	27.275	85.304	29.864	229.864
1800.000	27.705	86.875	32.613	232.613
1900.000	28.088	88.384	35.403	235.403
2000.000	28.428	89.833	38.229	238.229
2100.000	28.728	91.228	41.087	241.087
2200.000	28.993	92.570	43.974	243.974
2300.000	29.224	93.864	46.885	246.885
2400.000	29.427	95.112	49.818	249.818
2500.000	29.603	96.317	52.769	252.769
2600.000	29.756	97.481	55.738	255.738
2700.000	29.889	98.607	58.720	258.720
2800.000	30.004	99.696	61.715	261.715
2900.000	30.103	100.751	64.720	264.720
3000.000	30.190	101.773	67.735	267.735
3100.000	30.265	102.764	70.758	270.758
3200.000	30.332	103.726	73.788	273.788
3300.000	30.391	104.660	76.824	276.824
3400.000	30.445	105.568	79.866	279.866
3500.000	30.495	106.452	82.913	282.913
3600.000	30.541	107.311	85.965	285.965
3700.000	30.586	108.149	89.021	289.021
3800.000	30.630	108.965	92.082	292.082
3900.000	30.674	109.761	95.147	295.147
4000.000	30.719	110.538	98.217	298.217
4100.000	30.765	111.297	101.291	301.291
4200.000	30.812	112.039	104.370	304.370
4300.000	30.860	112.765	107.453	307.453
4400.000	30.910	113.475	110.542	310.542
4500.000	30.961	114.170	113.635	313.635
4600.000	31.013	114.851	116.734	316.734
4700.000	31.065	115.519	119.838	319.838
4800.000	31.117	116.173	122.947	322.947
4900.000	31.167	116.815	126.061	326.061
5000.000	31.215	117.445	129.180	329.180
5100.000	31.259	118.064	132.304	332.304
5200.000	31.298	118.671	135.432	335.432
5300.000	31.331	119.268	138.563	338.563
5400.000	31.356	119.854	141.698	341.698
5500.000	31.370	120.429	144.834	344.834
5600.000	31.372	120.995	147.971	347.971
5700.000	31.360	121.550	151.108	351.108
5800.000	31.331	122.095	154.243	354.243
5900.000	31.283	122.630	157.374	357.374
6000.000	31.212	123.155	160.499	360.499

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H	107	73.074	211.300	C 6 H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	13.142	55.874	-3.478	207.822
200.000	17.683	66.404	-1.933	209.367
298.150	21.604	74.213	0.000	211.300
300.000	21.672	74.349	.040	211.340
400.000	25.002	81.056	2.379	213.679
500.000	27.632	86.931	5.017	216.317
600.000	29.582	92.151	7.883	219.183
700.000	30.935	96.819	10.913	222.213
800.000	31.839	101.013	14.055	225.355
900.000	32.502	104.802	17.273	228.573
1000.000	33.196	108.261	20.556	231.856
1100.000	33.758	111.452	23.904	235.204
1200.000	34.276	114.412	27.306	238.606
1300.000	34.751	117.174	30.758	242.058
1400.000	35.187	119.765	34.255	245.555
1500.000	35.584	122.207	37.794	249.094
1600.000	35.945	124.515	41.371	252.671
1700.000	36.272	126.704	44.982	256.282
1800.000	36.567	128.786	48.624	259.924
1900.000	36.832	130.771	52.294	263.594
2000.000	37.069	132.665	55.990	267.290
2100.000	37.278	134.480	59.707	271.007
2200.000	37.463	136.218	63.445	274.745
2300.000	37.625	137.887	67.199	278.499
2400.000	37.766	139.492	70.969	282.269
2500.000	37.886	141.036	74.752	286.052
2600.000	37.989	142.524	78.545	289.845
2700.000	38.075	143.959	82.349	293.649
2800.000	38.147	145.345	86.160	297.460
2900.000	38.205	146.685	89.978	301.278
3000.000	38.251	147.981	93.801	305.101
3100.000	38.287	149.236	97.628	308.928
3200.000	38.313	150.452	101.458	312.758
3300.000	38.332	151.631	105.290	316.590
3400.000	38.345	152.776	109.124	320.424
3500.000	38.352	153.887	112.959	324.259
3600.000	38.356	154.968	116.794	328.094
3700.000	38.358	156.019	120.630	331.930
3800.000	38.357	157.042	124.466	335.766
3900.000	38.357	158.038	128.302	339.602
4000.000	38.358	159.009	132.137	343.437
4100.000	38.360	159.956	135.973	347.273
4200.000	38.366	160.881	139.809	351.109
4300.000	38.375	161.783	143.646	354.946
4400.000	38.390	162.665	147.485	358.785
4500.000	38.410	163.529	151.325	362.625
4600.000	38.438	164.373	155.167	366.467
4700.000	38.473	165.200	159.012	370.312
4800.000	38.516	166.011	162.862	374.162
4900.000	38.568	166.806	166.716	378.016
5000.000	38.631	167.585	170.576	381.876
5100.000	38.704	168.351	174.442	385.742
5200.000	38.789	169.103	178.317	389.617
5300.000	38.885	169.843	182.201	393.501
5400.000	38.995	170.571	186.094	397.394
5500.000	39.117	171.283	190.000	401.300
5600.000	39.253	171.994	193.918	405.218
5700.000	39.403	172.690	197.851	409.151
5800.000	39.567	173.376	201.799	413.099
5900.000	39.747	174.054	205.765	417.065
6000.000	39.942	174.724	209.749	421.049

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H2	108	74.082	168.600	C 6 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	12.617	52.259	-3.361	165.239
200.000	16.994	62.330	-1.883	166.717
298.150	21.341	69.929	0.000	168.600
300.000	21.419	70.063	.039	168.639
400.000	25.468	76.792	2.388	170.988
500.000	28.864	82.854	5.111	173.711
600.000	31.478	88.360	8.135	176.735
700.000	33.332	93.360	11.381	179.981
800.000	34.592	97.899	14.781	183.381
900.000	35.574	102.030	18.290	186.890
1000.000	36.742	105.835	21.502	190.502
1100.000	37.702	109.383	25.625	194.225
1200.000	38.566	112.701	29.439	198.039
1300.000	39.341	115.819	33.335	201.935
1400.000	40.034	118.760	37.305	205.905
1500.000	40.652	121.544	41.340	209.940
1600.000	41.202	124.185	45.433	214.033
1700.000	41.689	126.698	49.578	218.178
1800.000	42.120	129.093	53.769	222.369
1900.000	42.500	131.381	58.000	226.600
2000.000	42.834	133.570	62.267	230.867
2100.000	43.128	135.667	66.566	235.166
2200.000	43.386	137.679	70.892	239.492
2300.000	43.612	139.613	75.242	243.842
2400.000	43.811	141.473	79.613	248.213
2500.000	43.987	143.266	84.003	252.603
2600.000	44.144	144.994	88.410	257.010
2700.000	44.284	146.663	92.832	261.432
2800.000	44.411	148.275	97.266	265.866
2900.000	44.527	149.836	101.713	270.313
3000.000	44.635	151.347	106.171	274.771
3100.000	44.737	152.812	110.640	279.240
3200.000	44.835	154.234	115.119	283.719
3300.000	44.931	155.615	119.607	288.207
3400.000	45.025	156.958	124.105	292.705
3500.000	45.119	158.265	128.612	297.212
3600.000	45.214	159.537	133.129	301.729
3700.000	45.310	160.777	137.655	306.255
3800.000	45.407	161.987	142.191	310.791
3900.000	45.505	163.167	146.736	315.336
4000.000	45.604	164.321	151.292	319.892
4100.000	45.703	165.448	155.857	324.457
4200.000	45.801	166.551	160.432	329.032
4300.000	45.896	167.630	165.017	333.617
4400.000	45.987	168.685	169.611	338.211
4500.000	46.073	169.720	174.214	342.814
4600.000	46.151	170.734	178.826	347.426
4700.000	46.219	171.727	183.444	352.044
4800.000	46.274	172.701	188.069	356.669
4900.000	46.313	173.655	192.699	361.299
5000.000	46.332	174.591	197.331	365.931
5100.000	46.329	175.508	201.964	370.564
5200.000	46.299	176.408	206.596	375.196
5300.000	46.238	177.289	211.223	379.823
5400.000	46.142	178.153	215.842	384.442
5500.000	46.007	178.998	220.450	389.050
5600.000	45.826	179.826	225.042	393.642
5700.000	45.595	180.635	229.614	398.214
5800.000	45.308	181.425	234.159	402.759
5900.000	44.959	182.197	238.673	407.273
6000.000	44.543	182.949	243.149	411.749

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6OH2	109	90.082	58.000	C 6 H 2 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.279	50.858	-2.459	55.541
200.000	12.397	58.223	-1.379	56.621
298.150	15.728	63.787	0.000	58.000
300.000	15.791	63.886	.029	58.029
400.000	19.210	68.899	1.780	59.780
500.000	22.466	73.540	3.866	61.866
600.000	25.429	77.903	6.263	64.263
700.000	28.034	82.023	8.940	66.940
800.000	30.273	85.916	11.858	69.858
900.000	32.203	89.596	14.984	72.984
1000.000	33.941	93.080	18.292	76.292
1100.000	35.566	96.392	21.769	79.769
1200.000	37.032	99.551	25.400	83.400
1300.000	38.350	102.568	29.170	87.170
1400.000	39.530	105.454	33.065	91.065
1500.000	40.583	108.218	37.072	95.072
1600.000	41.520	110.863	41.178	99.178
1700.000	42.349	113.410	45.372	103.372
1800.000	43.081	115.852	49.645	107.645
1900.000	43.723	118.199	53.985	111.985
2000.000	44.286	120.456	58.387	116.387
2100.000	44.776	122.629	62.840	120.840
2200.000	45.201	124.722	67.340	125.340
2300.000	45.569	126.740	71.878	129.878
2400.000	45.886	128.686	76.452	134.452
2500.000	46.159	130.565	81.054	139.054
2600.000	46.394	132.380	85.682	143.682
2700.000	46.596	134.135	90.332	148.332
2800.000	46.771	135.833	95.000	153.000
2900.000	46.923	137.477	99.685	157.685
3000.000	47.057	139.070	104.384	162.384
3100.000	47.176	140.615	109.096	167.096
3200.000	47.285	142.114	113.819	171.819
3300.000	47.386	143.571	118.553	176.553
3400.000	47.481	144.987	123.296	181.296
3500.000	47.574	146.364	128.049	186.049
3600.000	47.667	147.706	132.811	190.811
3700.000	47.759	149.013	137.582	195.582
3800.000	47.854	150.288	142.363	200.363
3900.000	47.951	151.532	147.153	205.153
4000.000	48.050	152.748	151.953	209.953
4100.000	48.151	153.935	156.763	214.763
4200.000	48.255	155.097	161.584	219.584
4300.000	48.359	156.234	166.414	224.414
4400.000	48.463	157.347	171.255	229.255
4500.000	48.563	158.437	176.107	234.107
4600.000	48.660	159.505	180.968	238.968
4700.000	48.748	160.553	185.838	243.838
4800.000	48.827	161.580	190.717	248.717
4900.000	48.891	162.587	195.603	253.603
5000.000	48.937	163.575	200.495	258.495
5100.000	48.962	164.545	205.390	263.390
5200.000	48.959	165.496	210.286	268.286
5300.000	48.924	166.428	215.181	273.181
5400.000	48.852	167.342	220.070	278.070
5500.000	48.736	168.237	224.950	282.950
5600.000	48.571	169.114	229.815	287.815
5700.000	48.349	169.972	234.662	292.662
5800.000	48.062	170.810	239.483	297.483
5900.000	47.705	171.629	244.272	302.272
6000.000	47.268	172.427	249.021	307.021

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H3	110	75.090	165.640	C 6 H 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	13.287	52.079	-3.502	162.138
200.000	17.696	62.621	-1.956	163.684
298.150	22.136	70.516	0.000	165.640
300.000	22.217	70.655	.041	165.681
400.000	26.454	77.637	2.478	168.118
500.000	30.139	83.948	5.313	170.953
600.000	33.132	89.719	8.483	174.123
700.000	35.423	95.007	11.916	177.556
800.000	37.129	99.854	15.548	181.188
900.000	38.494	104.307	19.330	184.970
1000.000	39.892	108.433	23.248	188.888
1100.000	41.026	112.289	27.294	192.934
1200.000	42.054	115.904	31.449	197.089
1300.000	42.982	119.307	35.702	201.342
1400.000	43.817	122.524	40.043	205.683
1500.000	44.566	125.573	44.462	210.102
1600.000	45.236	128.471	48.953	214.593
1700.000	45.834	131.231	53.507	219.147
1800.000	46.364	133.867	58.118	223.758
1900.000	46.833	136.386	62.778	228.418
2000.000	47.247	138.799	67.482	233.122
2100.000	47.610	141.113	72.226	237.866
2200.000	47.928	143.336	77.003	242.643
2300.000	48.205	145.472	81.810	247.450
2400.000	48.446	147.529	86.643	252.283
2500.000	48.655	149.511	91.498	257.138
2600.000	48.836	151.423	96.373	262.013
2700.000	48.993	153.269	101.265	266.905
2800.000	49.129	155.053	106.171	271.811
2900.000	49.248	156.779	111.090	276.730
3000.000	49.352	158.451	116.020	281.660
3100.000	49.444	160.071	120.960	286.600
3200.000	49.526	161.642	125.908	291.548
3300.000	49.600	163.167	130.865	296.505
3400.000	49.670	164.649	135.828	301.468
3500.000	49.735	166.089	140.798	306.438
3600.000	49.798	167.491	145.775	311.415
3700.000	49.859	168.857	150.758	316.398
3800.000	49.920	170.187	155.747	321.387
3900.000	49.981	171.484	160.742	326.382
4000.000	50.042	172.751	165.743	331.383
4100.000	50.104	173.987	170.750	336.390
4200.000	50.166	175.195	175.764	341.404
4300.000	50.228	176.376	180.783	346.423
4400.000	50.289	177.532	185.809	351.449
4500.000	50.349	178.663	190.841	356.481
4600.000	50.406	179.770	195.879	361.519
4700.000	50.458	180.855	200.922	366.562
4800.000	50.504	181.917	205.970	371.610
4900.000	50.542	182.959	211.023	376.663
5000.000	50.570	183.980	216.078	381.718
5100.000	50.585	184.982	221.136	386.776
5200.000	50.584	185.964	226.195	391.835
5300.000	50.565	186.923	231.252	396.892
5400.000	50.524	187.873	236.307	401.947
5500.000	50.458	188.799	241.356	406.996
5600.000	50.362	189.707	246.398	412.038
5700.000	50.234	190.598	251.428	417.068
5800.000	50.068	191.470	256.443	422.083
5900.000	49.859	192.324	261.440	427.080
6000.000	49.604	193.160	266.413	432.053

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H4	111	76.098	119.540	C 6 H 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	13.961	51.893	-3.644	115.896
200.000	18.402	62.910	-2.029	117.511
298.150	22.934	71.101	0.000	119.540
300.000	23.017	71.245	.042	119.582
400.000	27.441	78.481	2.568	122.108
500.000	31.414	85.041	5.515	125.055
600.000	34.787	91.076	8.831	128.371
700.000	37.517	96.652	12.451	131.991
800.000	39.669	101.808	16.315	135.855
900.000	41.418	106.584	20.372	139.912
1000.000	43.044	111.031	24.594	144.134
1100.000	44.352	115.196	28.965	148.505
1200.000	45.542	119.107	33.461	153.001
1300.000	46.622	122.795	38.070	157.610
1400.000	47.598	126.287	42.782	162.322
1500.000	48.479	129.602	47.586	167.126
1600.000	49.269	132.755	52.474	172.014
1700.000	49.977	135.765	57.437	176.977
1800.000	50.607	138.639	62.467	182.007
1900.000	51.166	141.391	67.556	187.096
2000.000	51.659	144.028	72.698	192.238
2100.000	52.092	146.559	77.886	197.426
2200.000	52.470	148.992	83.115	202.655
2300.000	52.798	151.331	88.378	207.918
2400.000	53.081	153.584	93.673	213.213
2500.000	53.324	155.755	98.993	218.533
2600.000	53.530	157.852	104.336	223.876
2700.000	53.704	159.876	109.698	229.238
2800.000	53.849	161.831	115.076	234.616
2900.000	53.970	163.723	120.467	240.007
3000.000	54.070	165.555	125.869	245.409
3100.000	54.151	167.329	131.281	250.821
3200.000	54.217	169.049	136.699	256.239
3300.000	54.271	170.718	142.124	261.664
3400.000	54.315	172.339	147.553	267.093
3500.000	54.351	173.914	152.986	272.526
3600.000	54.382	175.446	158.423	277.963
3700.000	54.408	176.936	163.863	283.403
3800.000	54.433	178.387	169.305	288.845
3900.000	54.456	179.802	174.749	294.289
4000.000	54.479	181.181	180.196	299.736
4100.000	54.504	182.526	185.645	305.185
4200.000	54.530	183.840	191.097	310.637
4300.000	54.559	185.123	196.551	316.091
4400.000	54.589	186.378	202.008	321.548
4500.000	54.622	187.605	207.469	327.009
4600.000	54.657	188.805	212.933	332.473
4700.000	54.694	189.982	218.401	337.941
4800.000	54.732	191.134	223.872	343.412
4900.000	54.769	192.263	229.347	348.887
5000.000	54.806	193.370	234.826	354.366
5100.000	54.839	194.455	240.308	359.848
5200.000	54.869	195.520	245.793	365.333
5300.000	54.892	196.566	251.281	370.821
5400.000	54.908	197.592	256.772	376.312
5500.000	54.912	198.600	262.263	381.803
5600.000	54.904	199.589	267.754	387.294
5700.000	54.880	200.560	273.243	392.783
5800.000	54.837	201.515	278.729	398.269
5900.000	54.773	202.452	284.210	403.750
6000.000	54.682	203.371	289.683	409.223

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6O2H4	112	108.098	-68.000	C 6 H 4 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	11.831	53.183	-3.266	-71.266
200.000	16.504	62.801	-1.852	-69.852
298.150	21.237	70.271	0.000	-68.000
300.000	21.326	70.404	.039	-67.961
400.000	26.067	77.193	2.411	-65.589
500.000	30.544	83.497	5.244	-62.756
600.000	34.619	89.433	8.506	-59.494
700.000	38.200	95.045	12.151	-55.849
800.000	41.244	100.350	16.128	-51.872
900.000	43.755	105.358	20.382	-47.618
1000.000	45.780	110.077	24.863	-43.137
1100.000	48.098	114.551	29.559	-38.441
1200.000	50.186	118.827	34.475	-33.525
1300.000	52.059	122.919	39.589	-28.411
1400.000	53.733	126.840	44.880	-23.120
1500.000	55.224	130.599	50.329	-17.671
1600.000	56.546	134.206	55.919	-12.081
1700.000	57.713	137.670	61.633	-6.367
1800.000	58.739	140.993	67.457	-.543
1900.000	59.636	144.199	73.377	5.377
2000.000	60.417	147.278	79.380	11.380
2100.000	61.094	150.243	85.457	17.457
2200.000	61.677	153.099	91.596	23.596
2300.000	62.177	155.851	97.789	29.789
2400.000	62.604	158.507	104.029	36.029
2500.000	62.968	161.070	110.308	42.308
2600.000	63.277	163.546	116.621	48.621
2700.000	63.539	165.939	122.962	54.962
2800.000	63.761	168.254	129.327	61.327
2900.000	63.952	170.495	135.713	67.713
3000.000	64.116	172.666	142.117	74.117
3100.000	64.261	174.771	148.536	80.536
3200.000	64.390	176.813	154.968	86.968
3300.000	64.510	178.796	161.413	93.413
3400.000	64.623	180.724	167.870	99.870
3500.000	64.733	182.599	174.338	106.338
3600.000	64.844	184.424	180.817	112.817
3700.000	64.956	186.202	187.307	119.307
3800.000	65.073	187.936	193.808	125.808
3900.000	65.195	189.627	200.321	132.321
4000.000	65.322	191.280	206.847	138.847
4100.000	65.454	192.894	213.386	145.386
4200.000	65.592	194.473	219.938	151.938
4300.000	65.732	196.018	226.504	158.504
4400.000	65.875	197.531	233.085	165.085
4500.000	66.016	199.013	239.679	171.679
4600.000	66.153	200.465	246.288	178.288
4700.000	66.283	201.890	252.910	184.910
4800.000	66.401	203.286	259.544	191.544
4900.000	66.503	204.657	266.189	198.189
5000.000	66.582	206.001	272.844	204.844
5100.000	66.633	207.320	279.505	211.505
5200.000	66.649	208.614	286.169	218.169
5300.000	66.624	209.883	292.833	224.833
5400.000	66.549	211.128	299.492	231.492
5500.000	66.416	212.348	306.141	238.141
5600.000	66.216	213.543	312.773	244.773
5700.000	65.940	214.713	319.382	251.382
5800.000	65.577	215.857	325.958	257.958
5900.000	65.117	216.974	332.494	264.494
6000.000	64.548	218.064	338.978	270.978

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H5	113	77.106	137.940	C 6 H 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	14.629	51.712	-3.785	134.155
200.000	19.104	63.201	-2.102	135.838
298.150	23.730	71.686	0.000	137.940
300.000	23.817	71.836	.044	137.984
400.000	28.429	79.325	2.658	140.598
500.000	32.691	86.135	5.718	143.658
600.000	36.442	92.435	9.179	147.119
700.000	39.609	98.298	12.987	150.927
800.000	42.206	103.763	17.082	155.022
900.000	44.338	108.861	21.413	159.353
1000.000	46.195	113.630	25.940	163.880
1100.000	47.676	118.103	30.635	168.575
1200.000	49.030	122.310	35.471	173.411
1300.000	50.262	126.284	40.437	178.377
1400.000	51.381	130.051	45.520	183.460
1500.000	52.392	133.631	50.710	188.650
1600.000	53.303	137.042	55.995	193.935
1700.000	54.121	140.293	61.367	199.307
1800.000	54.851	143.413	66.816	204.756
1900.000	55.499	146.396	72.335	210.275
2000.000	56.071	149.257	77.914	215.854
2100.000	56.574	152.006	83.547	221.487
2200.000	57.012	154.648	89.226	227.166
2300.000	57.391	157.191	94.947	232.887
2400.000	57.716	159.640	100.703	238.643
2500.000	57.991	162.002	106.489	244.429
2600.000	58.222	164.281	112.300	250.240
2700.000	58.413	166.482	118.132	256.072
2800.000	58.568	168.609	123.981	261.921
2900.000	58.691	170.667	129.844	267.784
3000.000	58.787	172.658	135.718	273.658
3100.000	58.858	174.587	141.601	279.541
3200.000	58.908	176.457	147.489	285.429
3300.000	58.941	178.270	153.382	291.322
3400.000	58.960	180.030	159.277	297.217
3500.000	58.967	181.739	165.173	303.113
3600.000	58.965	183.400	171.070	309.010
3700.000	58.957	185.016	176.966	314.906
3800.000	58.945	186.588	182.861	320.801
3900.000	58.931	188.119	188.755	326.695
4000.000	58.917	189.611	194.648	332.588
4100.000	58.905	191.065	200.539	338.479
4200.000	58.895	192.485	206.429	344.369
4300.000	58.890	193.870	212.318	350.258
4400.000	58.890	195.224	218.207	356.147
4500.000	58.897	196.548	224.096	362.036
4600.000	58.911	197.842	229.986	367.926
4700.000	58.932	199.109	235.878	373.818
4800.000	58.961	200.350	241.773	379.713
4900.000	58.998	201.567	247.671	385.611
5000.000	59.043	202.759	253.573	391.513
5100.000	59.094	203.929	259.480	397.420
5200.000	59.153	205.077	265.392	403.332
5300.000	59.219	206.204	271.311	409.251
5400.000	59.289	207.312	277.236	415.176
5500.000	59.364	208.400	283.168	421.108
5600.000	59.441	209.471	289.109	427.049
5700.000	59.520	210.523	295.057	432.997
5800.000	59.598	211.559	301.013	438.953
5900.000	59.675	212.579	306.976	444.916
6000.000	59.746	213.582	312.947	450.887

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C645	114	77.106	70.000	C 6 H 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	13.914	52.121	-3.701	66.299
200.000	18.711	63.225	-2.071	67.929
298.150	23.480	71.585	0.000	70.000
300.000	23.568	71.733	.043	70.043
400.000	28.212	79.157	2.635	72.635
500.000	32.446	85.915	5.672	75.672
600.000	36.150	92.167	9.107	79.107
700.000	39.279	97.982	12.883	82.883
800.000	41.866	103.402	16.944	86.944
900.000	44.022	108.461	21.242	91.242
1000.000	45.930	113.199	25.740	95.740
1100.000	47.349	117.644	30.405	100.405
1200.000	48.652	121.820	35.206	105.206
1300.000	49.844	125.762	40.132	110.132
1400.000	50.933	129.497	45.172	115.172
1500.000	51.923	133.045	50.315	120.315
1600.000	52.821	136.425	55.553	125.553
1700.000	53.631	139.652	60.876	130.876
1800.000	54.359	142.739	66.276	136.276
1900.000	55.011	145.695	71.746	141.746
2000.000	55.590	148.532	77.276	147.276
2100.000	56.103	151.257	82.861	152.861
2200.000	56.554	153.878	88.495	158.495
2300.000	56.947	156.400	94.170	164.170
2400.000	57.288	158.832	99.882	169.882
2500.000	57.579	161.176	105.626	175.626
2600.000	57.826	163.440	111.397	181.397
2700.000	58.032	165.626	117.190	187.190
2800.000	58.202	167.739	123.002	193.002
2900.000	58.338	169.784	128.829	198.829
3000.000	58.445	171.764	134.669	204.669
3100.000	58.525	173.682	140.517	210.517
3200.000	58.583	175.541	146.373	216.373
3300.000	58.621	177.344	152.233	222.233
3400.000	58.643	179.095	158.097	228.097
3500.000	58.650	180.795	163.961	233.961
3600.000	58.646	182.447	169.826	239.826
3700.000	58.633	184.053	175.690	245.690
3800.000	58.614	185.617	181.553	251.553
3900.000	58.590	187.139	187.413	257.413
4000.000	58.565	188.622	193.271	263.271
4100.000	58.539	190.068	199.126	269.126
4200.000	58.515	191.478	204.979	274.979
4300.000	58.494	192.855	210.829	280.829
4400.000	58.477	194.199	216.677	286.677
4500.000	58.467	195.513	222.525	292.525
4600.000	58.464	196.798	228.371	298.371
4700.000	58.468	198.056	234.218	304.218
4800.000	58.483	199.287	240.065	310.065
4900.000	58.507	200.493	245.914	315.914
5000.000	58.541	201.675	251.767	321.767
5100.000	58.586	202.835	257.623	327.623
5200.000	58.643	203.973	263.484	333.484
5300.000	58.711	205.091	269.352	339.352
5400.000	58.790	206.189	275.227	345.227
5500.000	58.880	207.269	281.110	351.110
5600.000	58.982	208.330	287.003	357.003
5700.000	59.093	209.375	292.907	362.907
5800.000	59.215	210.404	298.822	368.822
5900.000	59.345	211.417	304.750	374.750
6000.000	59.484	212.415	310.692	380.692

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H6	115	78.114	91.840	C 6 H 6

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	15.303	51.527	-3.926	87.914
200.000	19.810	63.490	-2.175	89.665
298.150	24.528	72.272	0.000	91.840
300.000	24.617	72.427	.045	91.885
400.000	29.416	80.169	2.748	94.588
500.000	33.966	87.228	5.920	97.760
600.000	38.097	93.793	9.527	101.367
700.000	41.702	99.944	13.522	105.362
800.000	44.746	105.717	17.849	109.689
900.000	47.261	111.138	22.454	114.294
1000.000	49.344	116.228	27.287	119.127
1100.000	51.000	121.010	32.305	124.145
1200.000	52.517	125.513	37.482	129.322
1300.000	53.902	129.773	42.804	134.644
1400.000	55.162	133.814	48.258	140.098
1500.000	56.305	137.659	53.833	145.673
1600.000	57.337	141.327	59.516	151.356
1700.000	58.265	144.831	65.297	157.137
1800.000	59.094	148.185	71.165	163.005
1900.000	59.832	151.401	77.112	168.952
2000.000	60.484	154.486	83.129	174.969
2100.000	61.057	157.452	89.207	181.047
2200.000	61.555	160.304	95.338	187.178
2300.000	61.985	163.050	101.515	193.355
2400.000	62.351	165.696	107.733	199.573
2500.000	62.660	168.243	113.584	205.824
2600.000	62.916	170.710	120.263	212.103
2700.000	63.123	173.089	126.565	218.405
2800.000	63.288	175.388	132.886	224.726
2900.000	63.413	177.611	139.221	231.061
3000.000	63.504	179.762	145.568	237.408
3100.000	63.565	181.846	151.921	243.761
3200.000	63.600	183.864	158.280	250.120
3300.000	63.611	185.822	164.640	256.480
3400.000	63.605	187.720	171.001	262.841
3500.000	63.583	189.564	177.361	269.201
3600.000	63.549	191.355	183.718	275.558
3700.000	63.506	193.095	190.070	281.910
3800.000	63.457	194.783	196.419	288.259
3900.000	63.406	196.436	202.762	294.602
4000.000	63.354	198.041	209.100	300.940
4100.000	63.304	199.604	215.433	307.273
4200.000	63.259	201.129	221.761	313.601
4300.000	63.220	202.617	228.085	319.925
4400.000	63.190	204.070	234.405	326.245
4500.000	63.171	205.490	240.723	332.563
4600.000	63.163	206.878	247.040	338.880
4700.000	63.169	208.237	253.356	345.196
4800.000	63.190	209.567	259.674	351.514
4900.000	63.226	210.870	265.995	357.835
5000.000	63.279	212.148	272.320	364.160
5100.000	63.350	213.402	278.651	370.491
5200.000	63.439	214.633	284.990	376.830
5300.000	63.547	215.842	291.339	383.179
5400.000	63.673	217.031	297.700	389.540
5500.000	63.819	218.201	304.075	395.915
5600.000	63.983	219.352	310.465	402.305
5700.000	64.166	220.486	316.872	408.712
5800.000	64.367	221.604	323.299	415.139
5900.000	64.586	222.706	329.746	421.586
6000.000	64.822	223.794	336.216	428.056

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H6	116	78.114	19.820	C 6 H 6

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	9.602	49.816	-2.961	16.859
200.000	14.870	58.021	-1.747	18.073
298.150	20.786	65.048	0.000	19.820
300.000	20.898	65.177	.039	19.859
400.000	26.982	72.023	2.435	22.255
500.000	32.608	78.666	5.420	25.240
600.000	37.451	85.052	8.930	28.750
700.000	41.381	91.132	12.879	32.699
800.000	44.455	96.867	17.177	36.997
900.000	46.925	102.250	21.750	41.570
1000.000	49.232	107.312	26.557	46.377
1100.000	51.113	112.094	31.575	51.395
1200.000	52.831	116.616	36.774	56.594
1300.000	54.395	120.908	42.136	61.956
1400.000	55.814	124.992	47.648	67.468
1500.000	57.096	128.887	53.295	73.115
1600.000	58.250	132.609	59.063	78.883
1700.000	59.285	136.172	64.941	84.761
1800.000	60.208	139.588	70.916	90.736
1900.000	61.028	142.865	76.979	96.799
2000.000	61.752	146.015	83.119	102.939
2100.000	62.386	149.043	89.326	109.146
2200.000	62.939	151.958	95.593	115.413
2300.000	63.418	154.767	101.912	121.732
2400.000	63.828	157.475	108.274	128.094
2500.000	64.175	160.088	114.675	134.495
2600.000	64.468	162.611	121.108	140.928
2700.000	64.710	165.048	127.567	147.387
2800.000	64.908	167.405	134.048	153.868
2900.000	65.066	169.686	140.547	160.367
3000.000	65.191	171.894	147.060	166.880
3100.000	65.287	174.033	153.584	173.404
3200.000	65.358	176.107	160.117	179.937
3300.000	65.410	178.119	166.655	186.475
3400.000	65.445	180.072	173.198	193.018
3500.000	65.469	181.970	179.744	199.564
3600.000	65.484	183.814	186.292	206.112
3700.000	65.494	185.609	192.841	212.661
3800.000	65.503	187.355	199.391	219.211
3900.000	65.512	189.057	205.941	225.761
4000.000	65.525	190.716	212.493	232.313
4100.000	65.545	192.334	219.047	238.867
4200.000	65.573	193.914	225.602	245.422
4300.000	65.611	195.457	232.162	251.982
4400.000	65.661	196.965	238.725	258.545
4500.000	65.724	198.442	245.294	265.114
4600.000	65.802	199.888	251.870	271.690
4700.000	65.896	201.304	258.455	278.275
4800.000	66.006	202.692	265.050	284.870
4900.000	66.132	204.055	271.657	291.477
5000.000	66.276	205.392	278.277	298.097
5100.000	66.436	206.705	284.913	304.733
5200.000	66.613	207.998	291.565	311.385
5300.000	66.806	209.269	298.236	318.056
5400.000	67.015	210.519	304.927	324.747
5500.000	67.237	211.751	311.639	331.459
5600.000	67.473	212.965	318.374	338.194
5700.000	67.720	214.161	325.134	344.954
5800.000	67.977	215.341	331.919	351.739
5900.000	68.242	216.505	338.730	358.550
6000.000	68.512	217.654	345.567	365.387

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6O3H6	117	126.114	-122.000	C 6 H 6 O 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	24.000	49.343	-5.247	-127.247
200.000	26.368	66.657	-2.737	-124.737
298.150	29.532	77.744	0.000	-122.000
300.000	29.598	77.932	.055	-121.945
400.000	33.535	86.972	3.206	-118.794
500.000	37.990	94.926	6.779	-115.221
600.000	42.740	102.269	10.814	-111.186
700.000	47.527	109.218	15.328	-106.672
800.000	52.057	115.865	20.311	-101.689
900.000	56.003	122.232	25.720	-96.280
1000.000	59.002	128.297	31.480	-90.520
1100.000	61.179	134.025	37.491	-84.509
1200.000	63.147	139.434	43.709	-78.291
1300.000	64.918	144.560	50.114	-71.886
1400.000	66.506	149.430	56.687	-65.313
1500.000	67.922	154.063	63.409	-58.591
1600.000	69.178	158.492	70.266	-51.734
1700.000	70.284	162.720	77.240	-44.760
1800.000	71.253	166.765	84.318	-37.682
1900.000	72.094	170.641	91.486	-30.514
2000.000	72.818	174.353	98.733	-23.267
2100.000	73.434	177.926	106.046	-15.954
2200.000	73.952	181.354	113.416	-8.584
2300.000	74.381	184.651	120.833	-1.167
2400.000	74.729	187.824	128.290	6.290
2500.000	75.006	190.881	135.777	13.777
2600.000	75.219	193.827	143.289	21.289
2700.000	75.376	196.669	150.819	28.819
2800.000	75.483	199.412	158.362	36.362
2900.000	75.548	202.062	165.914	43.914
3000.000	75.578	204.624	173.471	51.471
3100.000	75.579	207.102	181.029	59.029
3200.000	75.555	209.502	188.586	66.586
3300.000	75.514	211.826	196.139	74.139
3400.000	75.459	214.079	203.688	81.688
3500.000	75.396	216.266	211.231	89.231
3600.000	75.329	218.389	218.767	95.767
3700.000	75.261	220.452	226.296	104.296
3800.000	75.198	222.458	233.819	111.819
3900.000	75.141	224.411	241.336	119.336
4000.000	75.094	226.312	248.848	126.848
4100.000	75.059	228.166	256.355	134.355
4200.000	75.038	229.975	263.860	141.860
4300.000	75.034	231.740	271.364	149.364
4400.000	75.048	233.465	278.868	156.868
4500.000	75.080	235.152	286.374	164.374
4600.000	75.131	236.803	293.884	171.884
4700.000	75.203	238.419	301.401	179.401
4800.000	75.294	240.004	308.925	186.925
4900.000	75.405	241.557	316.460	194.460
5000.000	75.534	243.082	324.007	202.007
5100.000	75.681	244.579	331.568	209.568
5200.000	75.844	246.050	339.144	217.144
5300.000	76.021	247.497	346.737	224.737
5400.000	76.210	248.919	354.348	232.348
5500.000	76.409	250.320	361.979	239.979
5600.000	76.614	251.698	369.630	247.630
5700.000	76.823	253.056	377.302	255.302
5800.000	77.031	254.394	384.995	262.995
5900.000	77.235	255.712	392.708	270.708
6000.000	77.430	257.012	400.441	278.441

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H7	118	79.122	98.740	C 6 H 7

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	16.643	50.744	-4.182	94.558
200.000	21.087	63.612	-2.300	96.440
298.150	25.827	72.905	0.000	98.740
300.000	25.917	73.068	.048	98.788
400.000	30.848	81.199	2.886	101.626
500.000	35.646	88.603	6.213	104.953
600.000	40.129	95.504	10.005	108.745
700.000	44.166	101.999	14.224	112.964
800.000	47.680	108.132	18.821	117.561
900.000	50.644	113.925	23.741	122.481
1000.000	53.084	119.391	28.932	127.672
1100.000	54.867	124.535	34.331	133.071
1200.000	56.505	129.381	39.900	138.640
1300.000	58.004	133.963	45.627	144.367
1400.000	59.371	138.313	51.497	150.237
1500.000	60.613	142.452	57.497	156.237
1600.000	61.738	146.400	63.616	162.356
1700.000	62.751	150.174	69.841	168.581
1800.000	63.659	153.787	76.162	174.902
1900.000	64.468	157.251	82.569	181.309
2000.000	65.185	160.577	89.053	187.793
2100.000	65.814	163.773	95.603	194.343
2200.000	66.363	166.847	102.213	200.953
2300.000	66.837	169.808	108.874	207.614
2400.000	67.241	172.661	115.578	214.318
2500.000	67.580	175.413	122.320	221.060
2600.000	67.861	178.069	129.092	227.832
2700.000	68.087	180.635	135.890	234.630
2800.000	68.265	183.114	142.708	241.448
2900.000	68.398	185.512	149.542	248.282
3000.000	68.492	187.833	156.386	255.126
3100.000	68.551	190.080	163.239	261.979
3200.000	68.580	192.257	170.096	268.836
3300.000	68.581	194.367	176.954	275.694
3400.000	68.561	196.414	183.811	282.551
3500.000	68.522	198.401	190.665	289.405
3600.000	68.469	200.331	197.515	296.255
3700.000	68.405	202.206	204.359	303.099
3800.000	68.333	204.029	211.196	309.936
3900.000	68.257	205.803	218.025	316.765
4000.000	68.181	207.530	224.847	323.587
4100.000	68.106	209.213	231.662	330.402
4200.000	68.037	210.853	238.469	337.209
4300.000	67.976	212.453	245.269	344.009
4400.000	67.925	214.016	252.064	350.804
4500.000	67.888	215.542	258.855	357.595
4600.000	67.865	217.033	265.642	364.382
4700.000	67.861	218.493	272.428	371.168
4800.000	67.876	219.922	279.215	377.955
4900.000	67.912	221.322	286.004	384.744
5000.000	67.972	222.694	292.798	391.538
5100.000	68.056	224.041	299.599	398.339
5200.000	68.168	225.364	306.410	405.150
5300.000	68.306	226.663	313.234	411.974
5400.000	68.474	227.942	320.073	418.813
5500.000	68.672	229.200	326.930	425.670
5600.000	68.900	230.439	333.808	432.548
5700.000	69.160	231.661	340.711	439.451
5800.000	69.452	232.866	347.641	446.381
5900.000	69.777	234.056	354.602	453.342
6000.000	70.135	235.232	361.598	460.338

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H8	119	80.130	52.650	C 6 H 8

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	18.550	50.122	-4.522	48.128
200.000	22.782	64.242	-2.461	50.189
298.150	27.418	74.187	0.000	52.650
300.000	27.507	74.361	.051	52.701
400.000	32.471	82.951	3.049	55.699
500.000	37.447	90.733	6.545	59.195
600.000	42.240	97.988	10.532	63.182
700.000	46.685	104.839	14.582	67.632
800.000	50.647	111.337	19.853	72.503
900.000	54.018	117.503	25.092	77.742
1000.000	56.725	123.341	30.634	83.284
1100.000	58.633	128.838	36.404	89.054
1200.000	60.393	134.016	42.356	95.006
1300.000	62.010	138.915	48.478	101.128
1400.000	63.490	143.566	54.754	107.404
1500.000	64.840	147.993	61.171	113.821
1600.000	66.065	152.217	67.717	120.367
1700.000	67.172	156.256	74.380	127.030
1800.000	68.167	160.124	81.148	133.798
1900.000	69.055	163.834	88.010	140.660
2000.000	69.842	167.397	94.956	147.606
2100.000	70.533	170.821	101.975	154.625
2200.000	71.135	174.117	109.059	161.709
2300.000	71.653	177.291	116.200	168.850
2400.000	72.093	180.350	123.388	176.038
2500.000	72.460	183.300	130.616	183.266
2600.000	72.758	186.148	137.877	190.527
2700.000	72.994	188.899	145.165	197.815
2800.000	73.173	191.557	152.474	205.124
2900.000	73.300	194.127	159.798	212.448
3000.000	73.380	196.614	167.133	219.783
3100.000	73.418	199.020	174.473	227.123
3200.000	73.418	201.351	181.815	234.465
3300.000	73.387	203.610	189.155	241.805
3400.000	73.328	205.800	196.491	249.141
3500.000	73.246	207.925	203.820	256.470
3600.000	73.146	209.987	211.140	263.790
3700.000	73.033	211.989	218.449	271.099
3800.000	72.910	213.935	225.746	278.396
3900.000	72.783	215.828	233.031	285.681
4000.000	72.656	217.669	240.303	292.953
4100.000	72.534	219.461	247.562	300.212
4200.000	72.419	221.203	254.810	307.460
4300.000	72.317	222.911	262.047	314.697
4400.000	72.232	224.572	269.274	321.924
4500.000	72.168	226.195	276.494	329.144
4600.000	72.128	227.780	283.708	336.358
4700.000	72.117	229.331	290.920	343.570
4800.000	72.138	230.850	298.133	350.783
4900.000	72.195	232.338	305.349	357.999
5000.000	72.293	233.797	312.573	365.223
5100.000	72.433	235.230	319.809	372.459
5200.000	72.621	236.638	327.061	379.711
5300.000	72.859	238.024	334.335	386.985
5400.000	73.151	239.388	341.635	394.285
5500.000	73.500	240.734	348.967	401.617
5600.000	73.910	242.062	356.337	408.987
5700.000	74.383	243.374	363.751	416.401
5800.000	74.924	244.672	371.216	423.866
5900.000	75.534	245.958	378.738	431.388
6000.000	76.217	247.233	386.325	438.975

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6O4H8	120	144.130	-177.000	C 6 H 8 O 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	30.046	48.579	-6.469	-183.469
200.000	32.489	70.087	-3.352	-180.352
298.150	36.003	83.672	0.000	-177.000
300.000	36.078	83.902	.067	-176.933
400.000	40.660	94.887	3.896	-173.104
500.000	46.010	104.523	8.225	-168.775
600.000	51.833	113.422	13.114	-163.886
700.000	57.761	121.658	18.595	-158.405
800.000	63.359	129.943	24.656	-152.344
900.000	68.117	137.691	31.239	-145.761
1000.000	71.459	145.055	38.232	-138.768
1100.000	74.229	152.000	45.519	-131.481
1200.000	76.690	158.565	53.067	-123.933
1300.000	78.863	164.792	60.847	-116.153
1400.000	80.770	170.708	68.831	-108.169
1500.000	82.432	176.338	76.993	-100.007
1600.000	83.868	181.706	85.310	-91.690
1700.000	85.098	186.828	93.760	-83.240
1800.000	86.140	191.722	102.323	-74.677
1900.000	87.012	196.404	110.982	-66.018
2000.000	87.731	200.886	119.721	-57.279
2100.000	88.313	205.181	128.524	-48.476
2200.000	88.773	209.300	137.379	-39.621
2300.000	89.125	213.255	146.275	-30.725
2400.000	89.384	217.053	155.201	-21.799
2500.000	89.562	220.706	164.149	-12.851
2600.000	89.671	224.221	173.111	-3.889
2700.000	89.723	227.606	182.081	5.081
2800.000	89.729	230.870	191.054	14.054
2900.000	89.698	234.018	200.026	23.026
3000.000	89.639	237.058	208.993	31.993
3100.000	89.560	239.996	217.953	40.953
3200.000	89.470	242.838	226.905	49.905
3300.000	89.374	245.590	235.847	58.847
3400.000	89.279	248.255	244.779	67.779
3500.000	89.190	250.843	253.703	76.703
3600.000	89.111	253.354	262.618	85.618
3700.000	89.046	255.795	271.525	94.525
3800.000	88.997	258.169	280.427	103.427
3900.000	88.966	260.480	289.325	112.325
4000.000	88.956	262.733	298.221	121.221
4100.000	88.966	264.929	307.117	130.117
4200.000	88.996	267.073	316.015	139.015
4300.000	89.044	269.168	324.917	147.917
4400.000	89.110	271.216	333.825	156.825
4500.000	89.190	273.219	342.739	165.739
4600.000	89.280	275.181	351.663	174.663
4700.000	89.378	277.102	360.596	183.596
4800.000	89.477	278.984	369.538	192.538
4900.000	89.572	280.830	378.491	201.491
5000.000	89.656	282.641	387.452	210.452
5100.000	89.722	284.417	396.421	219.421
5200.000	89.762	286.159	405.396	228.396
5300.000	89.767	287.870	414.373	237.373
5400.000	89.727	289.547	423.348	246.348
5500.000	89.632	291.193	432.316	255.316
5600.000	89.470	292.806	441.272	264.272
5700.000	89.230	294.383	450.208	273.208
5800.000	88.899	295.937	459.115	282.115
5900.000	88.463	297.453	467.984	290.984
6000.000	87.907	298.936	476.804	299.804

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H9	121	81.138	71.050	C 6 H 9

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	20.858	49.669	-4.916	66.134
200.000	24.741	65.274	-2.642	68.408
298.150	29.184	75.960	0.000	71.050
300.000	29.272	76.145	.054	71.104
400.000	34.219	85.236	3.226	74.276
500.000	39.355	93.422	6.904	77.954
600.000	44.458	101.050	11.096	82.146
700.000	49.312	108.273	15.788	86.838
800.000	53.704	115.150	20.943	91.993
900.000	57.429	121.698	26.506	97.556
1000.000	60.286	127.905	32.400	103.450
1100.000	62.569	133.760	38.545	109.595
1200.000	64.623	139.294	44.906	115.956
1300.000	66.463	144.541	51.462	122.512
1400.000	68.103	149.527	58.192	129.242
1500.000	69.557	154.277	65.076	136.126
1600.000	70.841	158.808	72.098	143.148
1700.000	71.966	163.137	79.239	150.289
1800.000	72.946	167.279	86.486	157.536
1900.000	73.793	171.246	93.824	164.874
2000.000	74.518	175.050	101.241	172.291
2100.000	75.134	178.701	108.724	179.774
2200.000	75.650	182.208	116.264	187.314
2300.000	76.077	185.581	123.851	194.901
2400.000	76.424	188.826	131.477	202.527
2500.000	76.702	191.952	139.134	210.184
2600.000	76.918	194.965	146.815	217.865
2700.000	77.080	197.871	154.515	225.565
2800.000	77.197	200.676	162.230	233.280
2900.000	77.276	203.387	169.954	241.004
3000.000	77.323	206.007	177.684	248.734
3100.000	77.344	208.543	185.417	256.467
3200.000	77.346	210.999	193.152	264.202
3300.000	77.332	213.379	200.886	271.936
3400.000	77.308	215.687	208.618	279.668
3500.000	77.278	217.928	216.347	287.397
3600.000	77.246	220.104	224.074	295.124
3700.000	77.214	222.220	231.797	302.847
3800.000	77.185	224.275	239.517	310.567
3900.000	77.162	226.283	247.234	318.284
4000.000	77.145	228.237	254.949	325.999
4100.000	77.136	230.142	262.663	333.713
4200.000	77.135	232.000	270.377	341.427
4300.000	77.142	233.815	278.090	349.140
4400.000	77.158	235.589	285.805	356.855
4500.000	77.180	237.323	293.522	364.572
4600.000	77.208	239.020	301.241	372.291
4700.000	77.238	240.681	308.964	380.014
4800.000	77.270	242.307	316.689	387.739
4900.000	77.299	243.901	324.418	395.468
5000.000	77.323	245.463	332.149	403.199
5100.000	77.337	246.994	339.882	410.932
5200.000	77.336	248.496	347.616	418.666
5300.000	77.316	249.969	355.348	426.398
5400.000	77.270	251.413	363.078	434.128
5500.000	77.193	252.831	370.801	441.851
5600.000	77.079	254.221	378.515	449.565
5700.000	76.919	255.584	386.216	457.266
5800.000	76.707	256.920	393.898	464.948
5900.000	76.434	258.229	401.555	472.605
6000.000	76.092	259.511	409.182	480.232

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H10	122	82.146	24.950	C 6 H 10

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	23.541	49.210	-5.372	19.578
200.000	27.013	66.539	-2.852	22.098
298.150	31.221	78.081	0.000	24.950
300.000	31.306	78.280	.058	25.008
400.000	36.199	87.944	3.429	28.379
500.000	41.457	96.582	7.310	32.260
600.000	46.830	104.616	11.724	36.674
700.000	52.055	112.231	16.671	41.621
800.000	56.856	119.502	22.121	47.071
900.000	60.942	126.443	28.019	52.969
1000.000	64.009	133.033	34.276	59.226
1100.000	66.328	139.244	40.795	65.745
1200.000	68.434	145.107	47.534	72.484
1300.000	70.337	150.661	54.475	79.425
1400.000	72.050	155.937	61.595	86.545
1500.000	73.584	160.962	68.879	93.829
1600.000	74.951	165.755	76.307	101.257
1700.000	76.161	170.336	83.863	108.813
1800.000	77.225	174.720	91.534	116.484
1900.000	78.153	178.921	99.304	124.254
2000.000	78.956	182.950	107.160	132.110
2100.000	79.643	186.820	115.091	140.041
2200.000	80.222	190.539	123.085	148.035
2300.000	80.704	194.116	131.133	156.083
2400.000	81.097	197.559	139.223	164.173
2500.000	81.409	200.876	147.349	172.299
2600.000	81.649	204.074	155.503	180.453
2700.000	81.823	207.159	163.677	188.627
2800.000	81.941	210.137	171.865	196.815
2900.000	82.008	213.014	180.063	205.013
3000.000	82.031	215.794	188.266	213.216
3100.000	82.018	218.484	196.468	221.418
3200.000	81.974	221.087	204.668	229.618
3300.000	81.905	223.609	212.862	237.812
3400.000	81.817	226.052	221.049	245.999
3500.000	81.715	228.423	229.225	254.175
3600.000	81.604	230.723	237.391	262.341
3700.000	81.488	232.958	245.546	270.496
3800.000	81.372	235.129	253.689	278.639
3900.000	81.260	237.241	261.820	286.770
4000.000	81.156	239.297	269.941	294.891
4100.000	81.063	241.300	278.052	303.002
4200.000	80.984	243.252	286.154	311.104
4300.000	80.921	245.157	294.249	319.199
4400.000	80.878	247.017	302.339	327.289
4500.000	80.856	248.834	310.426	335.376
4600.000	80.857	250.611	318.511	343.461
4700.000	80.883	252.351	326.598	351.548
4800.000	80.935	254.054	334.689	359.639
4900.000	81.013	255.724	342.786	367.736
5000.000	81.119	257.361	350.892	375.842
5100.000	81.252	258.969	359.010	383.960
5200.000	81.412	260.548	367.143	392.093
5300.000	81.600	262.101	375.294	400.244
5400.000	81.814	263.628	383.464	408.414
5500.000	82.053	265.131	391.657	416.607
5600.000	82.317	266.612	399.876	424.826
5700.000	82.602	268.072	408.122	433.072
5800.000	82.909	269.511	416.397	441.347
5900.000	83.233	270.931	424.704	449.654
6000.000	83.573	272.333	433.044	457.994

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H+05	123	162.146	-137.000	C 6 H 10 O 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	36.687	52.581	-7.972	-144.972
200.000	40.016	78.934	-4.152	-141.152
298.150	44.820	95.752	0.000	-137.000
300.000	44.922	96.038	.083	-136.917
400.000	51.078	109.779	4.875	-132.125
500.000	58.093	121.919	10.328	-126.672
600.000	65.512	133.164	16.507	-120.493
700.000	72.818	143.816	23.426	-113.574
800.000	79.428	153.982	31.047	-105.953
900.000	84.699	163.658	39.268	-97.732
1000.000	87.921	172.770	47.919	-89.081
1100.000	91.465	181.320	56.892	-80.108
1200.000	94.550	189.414	66.196	-70.804
1300.000	97.214	197.090	75.788	-61.212
1400.000	99.492	204.380	85.626	-51.374
1500.000	101.417	211.312	95.675	-41.325
1600.000	103.023	217.910	105.899	-31.101
1700.000	104.339	224.196	116.269	-20.731
1800.000	105.397	230.191	126.758	-10.242
1900.000	106.225	235.913	137.341	.341
2000.000	106.848	241.378	147.996	10.996
2100.000	107.294	246.603	158.705	21.705
2200.000	107.585	251.601	169.450	32.450
2300.000	107.745	256.388	180.217	43.217
2400.000	107.795	260.975	190.995	53.995
2500.000	107.755	265.375	201.773	64.773
2600.000	107.644	269.599	212.544	75.544
2700.000	107.478	273.658	223.300	86.300
2800.000	107.274	277.564	234.038	97.038
2900.000	107.047	281.324	244.754	107.754
3000.000	106.809	284.949	255.447	118.447
3100.000	106.571	288.447	266.116	129.116
3200.000	106.344	291.827	276.762	139.762
3300.000	106.138	295.096	287.386	150.386
3400.000	105.959	298.262	297.990	160.990
3500.000	105.813	301.332	308.579	171.579
3600.000	105.706	304.311	319.154	182.154
3700.000	105.640	307.206	329.721	192.721
3800.000	105.617	310.023	340.284	203.284
3900.000	105.639	312.766	350.846	213.846
4000.000	105.704	315.442	361.413	224.413
4100.000	105.810	318.053	371.988	234.988
4200.000	105.953	320.604	382.576	245.576
4300.000	106.128	323.100	393.180	256.180
4400.000	106.329	325.542	403.802	266.802
4500.000	106.549	327.934	414.446	277.446
4600.000	106.777	330.278	425.112	288.112
4700.000	107.004	332.577	435.802	298.802
4800.000	107.217	334.832	446.513	309.513
4900.000	107.403	337.045	457.244	320.244
5000.000	107.547	339.216	467.992	330.992
5100.000	107.634	341.347	478.752	341.752
5200.000	107.645	343.437	489.516	352.516
5300.000	107.562	345.487	500.278	363.278
5400.000	107.365	347.496	511.025	374.025
5500.000	107.031	349.463	521.746	384.746
5600.000	106.538	351.387	532.426	395.426
5700.000	105.862	353.267	543.047	406.047
5800.000	104.976	355.101	553.591	416.591
5900.000	103.852	356.886	564.035	427.035
6000.000	102.464	358.621	574.353	437.353

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6O5H+	124	162.146	-230.000	C 6 H 10 O 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	33.909	52.799	-7.437	-237.437
200.000	37.373	77.295	-3.883	-233.883
298.150	41.546	93.025	0.000	-230.000
300.000	42.042	93.293	.078	-229.922
400.000	47.754	106.147	4.560	-225.440
500.000	54.257	117.490	9.655	-220.345
600.000	61.212	127.993	15.427	-214.573
700.000	68.188	137.956	21.898	-208.102
800.000	74.666	147.493	29.048	-200.952
900.000	80.037	156.611	36.795	-193.205
1000.000	83.602	165.248	44.995	-185.005
1100.000	86.935	173.375	53.525	-176.475
1200.000	89.900	181.069	62.370	-167.630
1300.000	92.523	188.371	71.494	-158.506
1400.000	94.829	195.314	80.864	-149.136
1500.000	96.843	201.926	90.450	-139.550
1600.000	98.588	208.234	100.223	-129.777
1700.000	100.086	214.257	110.159	-119.841
1800.000	101.360	220.015	120.233	-109.767
1900.000	102.430	225.524	130.424	-99.576
2000.000	103.316	230.802	140.713	-89.287
2100.000	104.037	235.860	151.082	-78.918
2200.000	104.610	240.714	161.515	-68.485
2300.000	105.054	245.374	172.000	-58.000
2400.000	105.385	249.853	182.523	-47.477
2500.000	105.617	254.160	193.073	-36.927
2600.000	105.766	258.305	203.643	-26.357
2700.000	105.845	262.299	214.224	-15.776
2800.000	105.866	266.149	224.810	-5.190
2900.000	105.841	269.863	235.396	5.396
3000.000	105.782	273.451	245.977	15.977
3100.000	105.698	276.918	256.552	26.552
3200.000	105.597	280.272	267.116	37.116
3300.000	105.490	283.520	277.671	47.671
3400.000	105.381	286.667	288.214	58.214
3500.000	105.279	289.721	298.747	68.747
3600.000	105.188	292.685	309.270	79.270
3700.000	105.112	295.566	319.785	89.785
3800.000	105.056	298.368	330.294	100.294
3900.000	105.023	301.097	340.797	110.797
4000.000	105.013	303.756	351.299	121.299
4100.000	105.028	306.349	361.801	131.801
4200.000	105.068	308.880	372.305	142.305
4300.000	105.132	311.353	382.815	152.815
4400.000	105.219	313.771	393.333	163.333
4500.000	105.325	316.137	403.860	173.860
4600.000	105.447	318.453	414.398	184.398
4700.000	105.580	320.722	424.949	194.949
4800.000	105.719	322.946	435.514	205.514
4900.000	105.858	325.128	446.093	216.093
5000.000	105.990	327.268	456.686	226.686
5100.000	106.106	329.368	467.291	237.291
5200.000	106.198	331.429	477.906	247.906
5300.000	106.255	333.452	488.529	258.529
5400.000	106.267	335.439	499.156	269.156
5500.000	106.221	337.388	509.780	279.780
5600.000	106.106	339.301	520.397	290.397
5700.000	105.908	341.178	530.999	300.999
5800.000	105.612	343.017	541.576	311.576
5900.000	105.203	344.819	552.118	322.118
6000.000	104.665	346.583	562.612	332.612

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
H+05C6	125	162.146	-218.000	C 6 H 10 O 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	38.974	52.249	-8.179	-226.179
200.000	40.883	79.679	-4.211	-222.211
298.150	45.309	96.746	0.000	-218.000
300.000	45.410	97.035	.084	-217.916
400.000	51.816	110.940	4.933	-213.067
500.000	59.383	123.300	10.486	-207.514
600.000	67.409	134.835	16.825	-201.175
700.000	75.210	145.819	23.961	-194.039
800.000	82.121	156.327	31.838	-186.162
900.000	87.494	166.328	40.334	-177.666
1000.000	90.700	175.734	49.264	-168.736
1100.000	94.273	184.550	58.517	-159.483
1200.000	97.403	192.890	68.104	-149.896
1300.000	100.125	200.796	77.984	-140.016
1400.000	102.470	208.304	88.116	-129.884
1500.000	104.470	215.444	98.466	-119.534
1600.000	106.155	222.242	109.000	-109.000
1700.000	107.552	228.721	119.687	-98.313
1800.000	108.690	234.902	130.502	-87.498
1900.000	109.595	240.803	141.418	-76.582
2000.000	110.292	246.444	152.414	-65.586
2100.000	110.805	251.838	163.470	-54.530
2200.000	111.157	257.001	174.569	-43.431
2300.000	111.369	261.948	185.697	-32.303
2400.000	111.461	266.690	196.839	-21.161
2500.000	111.453	271.240	207.986	-10.014
2600.000	111.362	275.610	219.127	1.127
2700.000	111.206	279.810	230.256	12.256
2800.000	110.999	283.850	241.366	23.366
2900.000	110.757	287.741	252.454	34.454
3000.000	110.492	291.492	263.517	45.517
3100.000	110.217	295.110	274.553	56.553
3200.000	109.942	298.605	285.560	67.560
3300.000	109.676	301.984	296.541	78.541
3400.000	109.429	305.255	307.496	89.496
3500.000	109.207	308.423	318.428	100.428
3600.000	109.017	311.497	329.339	111.339
3700.000	108.862	314.482	340.232	122.232
3800.000	108.748	317.383	351.113	133.113
3900.000	108.676	320.207	361.983	143.983
4000.000	108.648	322.958	372.849	154.849
4100.000	108.663	325.641	383.714	165.714
4200.000	108.720	328.260	394.583	176.583
4300.000	108.818	330.819	405.460	187.460
4400.000	108.952	333.323	416.348	198.348
4500.000	109.118	335.773	427.251	209.251
4600.000	109.311	338.173	438.173	220.173
4700.000	109.522	340.526	449.114	231.114
4800.000	109.744	342.834	460.077	242.077
4900.000	109.966	345.100	471.063	253.063
5000.000	110.180	347.323	482.070	264.070
5100.000	110.372	349.507	493.098	275.098
5200.000	110.529	351.652	504.143	286.143
5300.000	110.638	353.758	515.202	297.202
5400.000	110.682	355.827	526.269	308.269
5500.000	110.646	357.858	537.336	319.336
5600.000	110.511	359.850	548.395	330.395
5700.000	110.258	361.804	559.434	341.434
5800.000	109.868	363.719	570.442	352.442
5900.000	109.318	365.592	581.402	363.402
6000.000	108.586	367.424	592.299	374.299

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H11	126	83.154	31.850	C 6 H 11

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	26.600	48.816	-5.892	25.958
200.000	29.610	68.117	-3.090	28.760
298.150	33.512	80.633	0.000	31.850
300.000	33.593	80.846	.062	31.912
400.000	38.360	91.147	3.654	35.504
500.000	43.682	100.270	7.753	39.603
600.000	49.290	108.728	12.400	44.250
700.000	54.873	116.748	17.610	49.460
800.000	60.081	124.421	23.362	55.212
900.000	64.526	131.764	29.601	61.451
1000.000	67.775	138.743	36.228	68.078
1100.000	70.526	145.334	43.146	74.996
1200.000	72.949	151.577	50.322	82.172
1300.000	75.072	157.502	57.725	89.575
1400.000	76.918	163.135	65.327	97.177
1500.000	78.511	168.497	73.101	104.951
1600.000	79.875	173.609	81.022	112.872
1700.000	81.031	178.487	89.069	120.919
1800.000	82.000	183.147	97.222	129.072
1900.000	82.801	187.602	105.463	137.313
2000.000	83.454	191.867	113.777	145.627
2100.000	83.975	195.951	122.149	153.999
2200.000	84.383	199.868	130.568	162.418
2300.000	84.693	203.626	139.023	170.873
2400.000	84.919	207.235	147.504	179.354
2500.000	85.076	210.705	156.004	187.854
2600.000	85.175	214.044	164.517	196.367
2700.000	85.230	217.260	173.038	204.888
2800.000	85.251	220.360	181.562	213.412
2900.000	85.247	223.352	190.087	221.937
3000.000	85.227	226.241	198.611	230.461
3100.000	85.199	229.035	207.132	238.982
3200.000	85.171	231.740	215.651	247.501
3300.000	85.147	234.360	224.167	256.017
3400.000	85.133	236.902	232.680	264.530
3500.000	85.132	239.370	241.194	273.044
3600.000	85.148	241.768	249.707	281.557
3700.000	85.181	244.102	258.224	290.074
3800.000	85.233	246.374	266.744	298.594
3900.000	85.304	248.589	275.271	307.121
4000.000	85.392	250.749	283.806	315.656
4100.000	85.495	252.859	292.350	324.200
4200.000	85.611	254.921	300.905	332.755
4300.000	85.734	256.937	309.472	341.322
4400.000	85.860	258.909	318.052	349.902
4500.000	85.982	260.840	326.644	358.494
4600.000	86.094	262.731	335.248	367.098
4700.000	86.186	264.584	343.862	375.712
4800.000	86.251	266.399	352.484	384.334
4900.000	86.277	268.178	361.111	392.961
5000.000	86.254	269.921	369.738	401.588
5100.000	86.169	271.628	378.360	410.210
5200.000	86.010	273.300	386.969	418.819
5300.000	85.761	274.936	395.559	427.409
5400.000	85.408	276.536	404.118	435.968
5500.000	84.935	278.099	412.636	444.486
5600.000	84.324	279.624	421.100	452.950
5700.000	83.558	281.110	429.496	461.346
5800.000	82.617	282.555	437.806	469.656
5900.000	81.480	283.958	446.013	477.863
6000.000	80.128	285.317	454.095	485.945

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H12	127	84.162	-14.250	C 6 H 12

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	30.046	48.579	-6.469	-20.719
200.000	32.489	70.087	-3.352	-17.602
298.150	36.003	83.672	0.000	-14.250
300.000	36.078	83.902	.067	-14.183
400.000	40.660	94.887	3.896	-10.354
500.000	46.010	104.523	8.225	-6.025
600.000	51.833	113.422	13.114	-1.136
700.000	57.761	121.858	18.595	4.345
800.000	63.359	129.943	24.656	10.406
900.000	68.117	137.691	31.239	16.989
1000.000	71.459	145.056	38.232	23.982
1100.000	74.229	152.000	45.519	31.269
1200.000	76.690	158.566	53.067	38.817
1300.000	78.863	164.792	60.847	46.597
1400.000	80.769	170.708	68.831	54.581
1500.000	82.431	176.338	76.993	62.743
1600.000	83.867	181.705	85.310	71.060
1700.000	85.098	186.828	93.760	79.510
1800.000	86.140	191.722	102.323	88.073
1900.000	87.012	196.404	110.982	96.732
2000.000	87.731	200.886	119.720	105.470
2100.000	88.313	205.181	128.524	114.274
2200.000	88.773	209.300	137.379	123.129
2300.000	89.126	213.254	146.275	132.025
2400.000	89.384	217.053	155.201	140.951
2500.000	89.562	220.706	164.149	149.899
2600.000	89.672	224.221	173.111	158.861
2700.000	89.724	227.606	182.081	167.831
2800.000	89.730	230.870	191.054	176.804
2900.000	89.699	234.018	200.026	185.776
3000.000	89.640	237.058	208.993	194.743
3100.000	89.561	239.996	217.953	203.703
3200.000	89.471	242.838	226.905	212.655
3300.000	89.375	245.590	235.847	221.597
3400.000	89.280	248.257	244.780	230.530
3500.000	89.191	250.843	253.704	239.454
3600.000	89.112	253.355	262.619	248.369
3700.000	89.047	255.795	271.527	257.277
3800.000	88.998	258.169	280.429	266.179
3900.000	88.967	260.481	289.327	275.077
4000.000	88.957	262.733	298.223	283.973
4100.000	88.967	264.930	307.119	292.869
4200.000	88.996	267.074	316.017	301.767
4300.000	89.045	269.168	324.919	310.669
4400.000	89.110	271.216	333.826	319.576
4500.000	89.190	273.220	342.741	328.491
4600.000	89.281	275.181	351.665	337.415
4700.000	89.378	277.102	360.598	346.348
4800.000	89.477	278.985	369.540	355.290
4900.000	89.572	280.831	378.493	364.243
5000.000	89.656	282.641	387.454	373.204
5100.000	89.722	284.417	396.423	382.173
5200.000	89.762	286.160	405.398	391.148
5300.000	89.767	287.870	414.375	400.125
5400.000	89.727	289.548	423.350	409.100
5500.000	89.632	291.193	432.318	418.068
5600.000	89.471	292.807	441.274	427.024
5700.000	89.231	294.389	450.210	435.960
5800.000	88.900	295.938	459.117	444.867
5900.000	88.465	297.454	467.987	453.737
6000.000	87.910	298.936	476.806	462.556

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H13	128	85.170	2.248	C 6 H 13

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	33.901	48.421	-7.102	-4.854
200.000	35.642	72.373	-3.637	-1.389
298.150	38.694	87.122	0.000	2.248
300.000	38.763	87.370	.072	2.320
400.000	43.125	99.092	4.157	6.405
500.000	48.489	109.275	8.730	10.978
600.000	54.522	118.642	13.877	16.125
700.000	60.793	127.517	19.643	21.891
800.000	66.774	136.032	26.026	28.274
900.000	71.841	144.202	32.967	35.215
1000.000	75.271	151.966	40.340	42.588
1100.000	78.209	159.281	48.017	50.265
1200.000	80.799	166.200	55.970	58.218
1300.000	83.067	172.759	64.166	66.414
1400.000	85.038	178.989	72.574	74.822
1500.000	86.737	184.915	81.165	83.413
1600.000	88.187	190.560	89.913	92.161
1700.000	89.412	195.944	98.795	101.043
1800.000	90.431	201.085	107.788	110.036
1900.000	91.267	205.998	116.875	119.123
2000.000	91.938	210.697	126.036	128.284
2100.000	92.463	215.195	135.257	137.505
2200.000	92.861	219.507	144.525	146.773
2300.000	93.147	223.641	153.826	156.074
2400.000	93.338	227.610	163.151	165.399
2500.000	93.448	231.422	172.491	174.739
2600.000	93.492	235.089	181.838	184.086
2700.000	93.481	238.617	191.187	193.435
2800.000	93.429	242.016	200.533	202.781
2900.000	93.345	245.293	209.872	212.120
3000.000	93.241	248.456	219.202	221.450
3100.000	93.125	251.511	228.520	230.768
3200.000	93.004	254.466	237.826	240.074
3300.000	92.887	257.326	247.121	249.369
3400.000	92.780	260.097	256.404	258.652
3500.000	92.686	262.785	265.677	267.925
3600.000	92.612	265.396	274.942	277.190
3700.000	92.559	267.932	284.200	286.448
3800.000	92.531	270.400	293.455	295.703
3900.000	92.529	272.804	302.707	304.955
4000.000	92.552	275.146	311.961	314.209
4100.000	92.601	277.432	321.219	323.467
4200.000	92.673	279.665	330.482	332.730
4300.000	92.766	281.846	339.754	342.002
4400.000	92.878	283.980	349.036	351.284
4500.000	93.002	286.069	358.330	360.578
4600.000	93.135	288.114	367.637	369.885
4700.000	93.268	290.119	376.957	379.205
4800.000	93.396	292.084	386.290	388.538
4900.000	93.510	294.011	395.636	397.884
5000.000	93.600	295.901	404.991	407.239
5100.000	93.656	297.755	414.355	416.603
5200.000	93.667	299.574	423.721	425.969
5300.000	93.621	301.358	433.086	435.334
5400.000	93.505	303.107	442.443	444.691
5500.000	93.304	304.821	451.784	454.032
5600.000	93.004	306.499	461.101	463.349
5700.000	92.588	308.142	470.381	472.629
5800.000	92.040	309.748	479.614	481.862
5900.000	91.341	311.315	488.784	491.032
6000.000	90.472	312.843	497.876	500.124

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6H14	129	86.178	-44.350	C 6 H 14

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	38.065	48.226	-7.811	-52.161
200.000	39.191	74.872	-3.960	-48.310
298.150	41.755	90.941	0.000	-44.350
300.000	41.816	91.209	.078	-44.272
400.000	45.867	103.761	4.451	-39.899
500.000	51.137	114.542	9.292	-35.058
600.000	57.284	124.399	14.707	-29.643
700.000	63.832	133.719	20.762	-23.588
800.000	70.172	142.663	27.467	-16.883
900.000	75.558	151.252	34.765	-9.585
1000.000	79.112	159.417	42.518	-1.832
1100.000	82.125	167.102	50.583	6.233
1200.000	84.777	174.364	58.931	14.581
1300.000	87.096	181.243	67.527	23.177
1400.000	89.107	187.773	76.339	31.989
1500.000	90.835	193.981	85.339	40.989
1600.000	92.305	199.892	94.498	50.148
1700.000	93.540	205.526	103.792	59.442
1800.000	94.562	210.903	113.199	68.849
1900.000	95.392	216.038	122.698	78.348
2000.000	96.050	220.949	132.272	87.922
2100.000	96.557	225.648	141.903	97.553
2200.000	96.929	230.149	151.578	107.228
2300.000	97.184	234.464	161.285	116.935
2400.000	97.340	238.603	171.012	126.662
2500.000	97.410	242.579	180.750	136.400
2600.000	97.411	246.399	190.492	146.142
2700.000	97.354	250.075	200.230	155.880
2800.000	97.254	253.614	209.961	165.611
2900.000	97.120	257.024	219.680	175.330
3000.000	96.965	260.314	229.384	185.034
3100.000	96.798	263.491	239.073	194.723
3200.000	96.627	266.561	248.744	204.394
3300.000	96.459	269.532	258.398	214.048
3400.000	96.303	272.409	268.036	223.686
3500.000	96.164	275.199	277.659	233.309
3600.000	96.045	277.906	287.269	242.919
3700.000	95.952	280.536	296.869	252.519
3800.000	95.888	283.094	306.461	262.111
3900.000	95.853	285.585	316.048	271.698
4000.000	95.850	288.011	325.632	281.282
4100.000	95.878	290.378	335.219	290.869
4200.000	95.935	292.689	344.809	300.459
4300.000	96.022	294.948	354.407	310.057
4400.000	96.133	297.156	364.014	319.664
4500.000	96.266	299.318	373.634	329.284
4600.000	96.416	301.436	383.268	338.918
4700.000	96.577	303.511	392.918	348.568
4800.000	96.742	305.546	402.584	358.234
4900.000	96.903	307.542	412.266	367.916
5000.000	97.053	309.502	421.964	377.614
5100.000	97.180	311.425	431.676	387.326
5200.000	97.275	313.313	441.399	397.049
5300.000	97.326	315.166	451.129	406.779
5400.000	97.321	316.986	460.862	416.512
5500.000	97.245	318.771	470.591	426.241
5600.000	97.086	320.522	480.308	435.958
5700.000	96.826	322.238	490.005	445.655
5800.000	96.450	323.919	499.670	455.320
5900.000	95.940	325.564	509.290	464.940
6000.000	95.279	327.171	518.853	474.503

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C7H	130	85.085	240.000	C 7 H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	13.508	56.237	-3.735	236.265
200.000	18.981	67.301	-2.107	237.893
298.150	23.841	75.805	0.000	240.000
300.000	23.926	75.954	.044	240.044
400.000	28.123	83.432	2.653	242.653
500.000	31.459	90.082	5.640	245.640
600.000	33.921	96.048	8.916	248.916
700.000	35.601	101.413	12.398	252.398
800.000	36.694	106.243	16.016	256.016
900.000	37.496	110.612	19.727	259.727
1000.000	38.410	114.607	23.519	263.519
1100.000	39.057	118.299	27.393	267.393
1200.000	39.646	121.723	31.329	271.329
1300.000	40.180	124.918	35.320	275.320
1400.000	40.665	127.913	39.363	279.363
1500.000	41.102	130.734	43.452	283.452
1600.000	41.495	133.399	47.582	287.582
1700.000	41.847	135.926	51.749	291.749
1800.000	42.162	138.327	55.950	295.950
1900.000	42.442	140.614	60.180	300.180
2000.000	42.690	142.797	64.437	304.437
2100.000	42.909	144.886	68.718	308.718
2200.000	43.102	146.886	73.018	313.018
2300.000	43.271	148.806	77.337	317.337
2400.000	43.417	150.651	81.672	321.672
2500.000	43.545	152.426	86.020	326.020
2600.000	43.655	154.136	90.380	330.380
2700.000	43.749	155.785	94.750	334.750
2800.000	43.831	157.378	99.130	339.130
2900.000	43.901	158.917	103.516	343.516
3000.000	43.961	160.407	107.909	347.909
3100.000	44.013	161.849	112.308	352.308
3200.000	44.058	163.247	116.712	356.712
3300.000	44.098	164.603	121.120	361.120
3400.000	44.133	165.920	125.531	365.531
3500.000	44.166	167.200	129.946	369.946
3600.000	44.196	168.445	134.364	374.364
3700.000	44.225	169.656	138.785	378.785
3800.000	44.254	170.836	143.209	383.209
3900.000	44.283	171.986	147.636	387.636
4000.000	44.313	173.107	152.066	392.066
4100.000	44.345	174.202	156.499	396.499
4200.000	44.378	175.271	160.935	400.935
4300.000	44.413	176.316	165.374	405.374
4400.000	44.450	177.337	169.818	409.818
4500.000	44.489	178.336	174.265	414.265
4600.000	44.529	179.315	178.715	418.715
4700.000	44.572	180.273	183.170	423.170
4800.000	44.615	181.212	187.630	427.630
4900.000	44.660	182.132	192.094	432.094
5000.000	44.704	183.035	196.562	436.562
5100.000	44.748	183.920	201.034	441.034
5200.000	44.791	184.790	205.511	445.511
5300.000	44.832	185.643	209.992	449.992
5400.000	44.869	186.482	214.478	454.478
5500.000	44.902	187.305	218.966	458.966
5600.000	44.929	188.114	223.458	463.458
5700.000	44.949	188.910	227.952	467.952
5800.000	44.961	189.692	232.447	472.447
5900.000	44.963	190.460	236.944	476.944
6000.000	44.953	191.216	241.440	481.440

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C7H2	131	86.093	220.000	C 7 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	13.771	54.656	-3.778	216.222
200.000	19.181	65.876	-2.128	217.872
298.150	24.099	74.466	0.000	220.000
300.000	24.186	74.617	.044	220.044
400.000	28.556	82.191	2.688	222.688
500.000	32.161	88.965	5.730	225.730
600.000	34.968	95.089	9.093	229.093
700.000	37.045	100.644	12.699	232.699
800.000	38.554	105.694	16.483	236.483
900.000	39.760	110.306	20.400	240.400
1000.000	41.023	114.558	24.437	244.437
1100.000	42.205	118.524	28.599	248.599
1200.000	43.262	122.243	32.874	252.874
1300.000	44.205	125.744	37.248	257.248
1400.000	45.042	129.051	41.711	261.711
1500.000	45.783	132.184	46.253	266.253
1600.000	46.436	135.160	50.865	270.865
1700.000	47.009	137.993	55.538	275.538
1800.000	47.512	140.695	60.264	280.264
1900.000	47.950	143.275	65.038	285.038
2000.000	48.331	145.745	69.852	289.852
2100.000	48.662	148.111	74.702	294.702
2200.000	48.949	150.382	79.583	299.583
2300.000	49.198	152.563	84.491	304.491
2400.000	49.414	154.662	89.422	309.422
2500.000	49.603	156.683	94.373	314.373
2600.000	49.769	158.632	99.342	319.342
2700.000	49.917	160.513	104.326	324.326
2800.000	50.050	162.331	109.324	329.324
2900.000	50.173	164.089	114.336	334.336
3000.000	50.287	165.792	119.359	339.359
3100.000	50.397	167.443	124.393	344.393
3200.000	50.504	169.044	129.438	349.438
3300.000	50.610	170.600	134.494	354.494
3400.000	50.717	172.113	139.560	359.560
3500.000	50.827	173.584	144.637	364.637
3600.000	50.939	175.018	149.726	369.726
3700.000	51.054	176.415	154.825	374.825
3800.000	51.173	177.778	159.937	379.937
3900.000	51.295	179.109	165.060	385.060
4000.000	51.418	180.409	170.196	390.196
4100.000	51.543	181.680	175.344	395.344
4200.000	51.667	182.924	180.504	400.504
4300.000	51.789	184.141	185.677	405.677
4400.000	51.905	185.333	190.862	410.862
4500.000	52.014	186.501	196.058	416.058
4600.000	52.112	187.645	201.264	421.264
4700.000	52.196	188.767	206.480	426.480
4800.000	52.261	189.866	211.703	431.703
4900.000	52.304	190.944	216.931	436.931
5000.000	52.320	192.001	222.163	442.163
5100.000	52.303	193.037	227.394	447.394
5200.000	52.248	194.052	232.622	452.622
5300.000	52.149	195.047	237.842	457.842
5400.000	52.001	196.020	243.050	463.050
5500.000	51.795	196.972	248.241	468.241
5600.000	51.526	197.904	253.407	473.407
5700.000	51.185	198.813	258.543	478.543
5800.000	50.766	199.699	263.642	483.642
5900.000	50.258	200.563	268.694	488.694
6000.000	49.655	201.403	273.690	493.690

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C7H14	132	98.189	-17.240	C 7 H 14

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	33.909	52.799	-7.437	-24.677
200.000	37.373	77.295	-3.883	-21.123
298.150	41.946	93.025	0.000	-17.240
300.000	42.042	93.293	.078	-17.162
400.000	47.754	106.147	4.560	-12.680
500.000	54.257	117.490	9.655	-7.585
600.000	61.212	127.993	15.427	-1.813
700.000	68.188	137.956	21.898	4.658
800.000	74.666	147.493	29.048	11.808
900.000	80.037	156.611	36.795	19.555
1000.000	83.602	165.248	44.995	27.755
1100.000	86.935	173.375	53.525	36.285
1200.000	89.900	181.069	62.370	45.130
1300.000	92.523	188.371	71.494	54.254
1400.000	94.830	195.314	80.864	63.624
1500.000	96.843	201.927	90.450	73.210
1600.000	98.588	208.234	100.224	82.984
1700.000	100.087	214.257	110.159	92.919
1800.000	101.361	220.015	120.233	102.993
1900.000	102.430	225.525	130.425	113.185
2000.000	103.316	230.802	140.713	123.473
2100.000	104.037	235.861	151.082	133.842
2200.000	104.611	240.714	161.516	144.276
2300.000	105.055	245.375	172.000	154.760
2400.000	105.386	249.853	182.523	165.283
2500.000	105.618	254.160	193.074	175.834
2600.000	105.767	258.306	203.644	186.404
2700.000	105.845	262.299	214.225	196.985
2800.000	105.867	266.149	224.811	207.571
2900.000	105.842	269.864	235.397	218.157
3000.000	105.783	273.451	245.978	228.738
3100.000	105.698	276.918	256.553	239.313
3200.000	105.598	280.272	267.117	249.877
3300.000	105.490	283.520	277.672	260.432
3400.000	105.382	286.668	288.216	270.976
3500.000	105.279	289.721	298.749	281.509
3600.000	105.188	292.686	309.272	292.032
3700.000	105.113	295.567	319.787	302.547
3800.000	105.057	298.369	330.295	313.055
3900.000	105.023	301.097	340.799	323.559
4000.000	105.013	303.756	351.300	334.060
4100.000	105.028	306.349	361.802	344.562
4200.000	105.069	308.881	372.307	355.067
4300.000	105.133	311.354	382.817	365.577
4400.000	105.219	313.772	393.334	376.094
4500.000	105.325	316.137	403.861	386.621
4600.000	105.447	318.454	414.400	397.160
4700.000	105.580	320.723	424.951	407.711
4800.000	105.720	322.947	435.516	418.276
4900.000	105.859	325.128	446.095	428.855
5000.000	105.990	327.268	456.687	439.447
5100.000	106.106	329.368	467.292	450.052
5200.000	106.198	331.430	477.908	460.668
5300.000	106.255	333.453	488.531	471.291
5400.000	106.266	335.440	499.157	481.917
5500.000	106.221	337.389	509.782	492.542
5600.000	106.106	339.302	520.399	503.159
5700.000	105.907	341.179	531.001	513.761
5800.000	105.611	343.018	541.578	524.338
5900.000	105.202	344.820	552.119	534.879
6000.000	104.664	346.584	562.614	545.374

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C7H15	133	99.197	-1.140	C 7 H 15

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	36.713	52.596	-7.968	-9.108
200.000	39.985	78.945	-4.148	-5.288
298.150	44.784	95.750	0.000	-1.140
300.000	44.886	96.036	.083	-1.057
400.000	51.061	109.768	4.872	3.732
500.000	58.100	121.906	10.324	9.184
600.000	65.536	133.154	16.505	15.365
700.000	72.846	143.811	23.427	22.287
800.000	79.449	153.980	31.051	29.911
900.000	84.708	163.658	39.273	38.133
1000.000	87.930	172.771	47.924	46.784
1100.000	91.471	181.322	56.898	55.758
1200.000	94.554	189.416	66.203	65.063
1300.000	97.216	197.092	75.795	74.655
1400.000	99.492	204.382	85.634	84.494
1500.000	101.417	211.314	95.682	94.542
1600.000	103.022	217.912	105.906	104.766
1700.000	104.338	224.195	116.277	115.137
1800.000	105.395	230.194	126.765	125.625
1900.000	106.222	235.915	137.348	136.208
2000.000	106.846	241.380	148.003	146.863
2100.000	107.291	246.605	158.711	157.571
2200.000	107.582	251.603	169.456	168.316
2300.000	107.742	256.389	180.223	179.083
2400.000	107.793	260.976	191.001	189.861
2500.000	107.753	265.376	201.779	200.639
2600.000	107.642	269.600	212.549	211.409
2700.000	107.477	273.660	223.305	222.165
2800.000	107.274	277.565	234.043	232.903
2900.000	107.046	281.325	244.759	243.619
3000.000	106.808	284.950	255.452	254.312
3100.000	106.571	288.449	266.121	264.981
3200.000	106.345	291.828	276.767	275.627
3300.000	106.138	295.098	287.391	286.251
3400.000	105.959	298.263	297.995	296.855
3500.000	105.814	301.333	308.584	307.444
3600.000	105.707	304.312	319.159	318.019
3700.000	105.641	307.207	329.726	328.586
3800.000	105.618	310.024	340.289	339.149
3900.000	105.640	312.768	350.852	349.712
4000.000	105.705	315.443	361.418	360.278
4100.000	105.811	318.055	371.994	370.854
4200.000	105.953	320.606	382.582	381.442
4300.000	106.129	323.101	393.186	392.046
4400.000	106.330	325.543	403.808	402.668
4500.000	106.549	327.935	414.452	413.312
4600.000	106.777	330.280	425.118	423.978
4700.000	107.003	332.578	435.807	434.667
4800.000	107.216	334.833	446.519	445.379
4900.000	107.402	337.046	457.250	456.110
5000.000	107.546	339.217	467.998	466.858
5100.000	107.633	341.348	478.757	477.617
5200.000	107.644	343.438	489.522	488.382
5300.000	107.561	345.488	500.283	499.143
5400.000	107.364	347.497	511.030	509.890
5500.000	107.031	349.464	521.751	520.611
5600.000	106.538	351.389	532.431	531.291
5700.000	105.862	353.269	543.053	541.913
5800.000	104.977	355.102	553.596	552.456
5900.000	103.855	356.888	564.040	562.900
6000.000	102.468	358.622	574.358	573.218

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C7H16	134	100.205	-47.240	C 7 H 16

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	38.934	52.271	-8.175	-55.415
200.000	40.864	79.680	-4.210	-51.450
298.150	45.303	96.743	0.000	-47.240
300.000	45.404	97.032	.084	-47.156
400.000	51.818	110.936	4.933	-42.307
500.000	59.388	123.297	10.487	-36.753
600.000	67.415	134.833	16.826	-30.414
700.000	75.216	145.818	23.962	-23.278
800.000	82.126	156.326	31.839	-15.401
900.000	87.497	166.328	40.336	-6.904
1000.000	90.700	175.734	49.266	2.026
1100.000	94.273	184.550	58.519	11.279
1200.000	97.403	192.890	68.106	20.866
1300.000	100.125	200.796	77.986	30.746
1400.000	102.471	208.304	88.119	40.879
1500.000	104.471	215.444	98.468	51.228
1600.000	106.155	222.242	109.002	61.762
1700.000	107.553	228.721	119.690	72.450
1800.000	108.691	234.902	130.504	83.264
1900.000	109.596	240.804	141.420	94.180
2000.000	110.293	246.444	152.416	105.176
2100.000	110.806	251.838	163.473	116.233
2200.000	111.158	257.002	174.572	127.332
2300.000	111.369	261.948	185.700	138.460
2400.000	111.461	266.690	196.842	149.602
2500.000	111.453	271.240	207.989	160.749
2600.000	111.363	275.610	219.130	171.890
2700.000	111.206	279.810	230.259	183.019
2800.000	111.000	283.851	241.370	194.130
2900.000	110.758	287.742	252.458	205.218
3000.000	110.493	291.492	263.520	216.280
3100.000	110.217	295.111	274.556	227.316
3200.000	109.942	298.606	285.564	238.324
3300.000	109.677	301.985	296.545	249.305
3400.000	109.429	305.255	307.500	260.260
3500.000	109.207	308.424	318.431	271.191
3600.000	109.017	311.498	329.342	282.102
3700.000	108.863	314.483	340.236	292.996
3800.000	108.748	317.384	351.116	303.876
3900.000	108.676	320.208	361.987	314.747
4000.000	108.648	322.959	372.853	325.613
4100.000	108.663	325.642	383.718	336.478
4200.000	108.720	328.261	394.587	347.347
4300.000	108.818	330.820	405.464	358.224
4400.000	108.952	333.323	416.352	369.112
4500.000	109.119	335.774	427.255	380.015
4600.000	109.311	338.174	438.176	390.936
4700.000	109.522	340.527	449.118	401.878
4800.000	109.744	342.835	460.081	412.841
4900.000	109.967	345.100	471.067	423.827
5000.000	110.180	347.324	482.074	434.834
5100.000	110.372	349.508	493.102	445.862
5200.000	110.529	351.653	504.147	456.907
5300.000	110.638	353.759	515.206	467.966
5400.000	110.683	355.828	526.273	479.033
5500.000	110.646	357.859	537.340	490.100
5600.000	110.511	359.851	548.399	501.159
5700.000	110.258	361.805	559.438	512.198
5800.000	109.868	363.720	570.446	523.206
5900.000	109.318	365.593	581.407	534.167
6000.000	108.586	367.425	592.304	545.064

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C8H	135	97.096	267.000	C 8 H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	14.635	57.183	-4.087	262.913
200.000	20.760	69.225	-2.314	264.686
298.150	26.282	78.563	0.000	267.000
300.000	26.379	78.728	.048	267.048
400.000	31.205	86.999	2.935	269.935
500.000	35.075	94.396	6.257	273.257
600.000	37.953	101.060	9.917	276.917
700.000	39.926	107.069	13.818	280.818
800.000	41.207	112.490	17.879	284.879
900.000	42.133	117.399	22.047	289.047
1000.000	43.166	121.888	26.309	293.309
1100.000	43.887	126.036	30.662	297.662
1200.000	44.556	129.884	35.084	302.084
1300.000	45.176	133.475	39.571	306.571
1400.000	45.749	136.844	44.118	311.118
1500.000	46.277	140.019	48.720	315.720
1600.000	46.761	143.021	53.372	320.372
1700.000	47.203	145.870	58.071	325.071
1800.000	47.605	148.579	62.811	329.811
1900.000	47.970	151.163	67.590	334.590
2000.000	48.298	153.632	72.404	339.404
2100.000	48.592	155.996	77.249	344.249
2200.000	48.853	158.262	82.121	349.121
2300.000	49.083	160.439	87.018	354.018
2400.000	49.285	162.533	91.937	358.937
2500.000	49.460	164.548	96.875	363.875
2600.000	49.609	166.491	101.828	368.828
2700.000	49.735	168.366	106.796	373.796
2800.000	49.840	170.176	111.775	378.775
2900.000	49.925	171.927	116.763	383.763
3000.000	49.992	173.621	121.759	388.759
3100.000	50.042	175.261	126.761	393.761
3200.000	50.079	176.850	131.767	398.767
3300.000	50.103	178.391	136.776	403.776
3400.000	50.117	179.887	141.787	408.787
3500.000	50.121	181.340	146.799	413.799
3600.000	50.119	182.752	151.811	418.811
3700.000	50.112	184.125	156.823	423.823
3800.000	50.101	185.462	161.833	428.833
3900.000	50.089	186.763	166.843	433.843
4000.000	50.076	188.031	171.851	438.851
4100.000	50.066	189.267	176.858	443.858
4200.000	50.060	190.474	181.865	448.865
4300.000	50.060	191.652	186.870	453.870
4400.000	50.066	192.802	191.877	458.877
4500.000	50.083	193.928	196.884	463.884
4600.000	50.110	195.029	201.894	468.894
4700.000	50.150	196.107	206.906	473.906
4800.000	50.204	197.163	211.924	478.924
4900.000	50.275	198.199	216.948	483.948
5000.000	50.364	199.216	221.980	488.980
5100.000	50.474	200.214	227.021	494.021
5200.000	50.605	201.195	232.075	499.075
5300.000	50.759	202.161	237.143	504.143
5400.000	50.939	203.111	242.228	509.228
5500.000	51.146	204.048	247.332	514.332
5600.000	51.381	204.971	252.458	519.458
5700.000	51.648	205.883	257.609	524.609
5800.000	51.947	206.784	262.789	529.789
5900.000	52.280	207.675	268.000	535.000
6000.000	52.649	208.556	273.246	540.246

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C8H2	136	98.104	225.000	C 8 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	15.505	53.133	-4.401	220.599
200.000	22.370	66.008	-2.505	222.495
298.150	28.535	76.112	0.000	225.000
300.000	28.643	76.291	.053	225.053
400.000	33.997	85.289	3.193	228.193
500.000	38.251	93.353	6.815	231.815
600.000	41.369	100.620	10.805	235.805
700.000	43.462	107.166	15.055	240.055
800.000	44.786	113.062	19.472	244.472
900.000	45.744	118.394	24.000	249.000
1000.000	46.887	123.268	28.627	253.627
1100.000	47.801	127.781	33.362	258.362
1200.000	48.632	131.976	38.184	263.184
1300.000	49.385	135.899	43.086	268.086
1400.000	50.066	139.584	48.059	273.059
1500.000	50.681	143.060	53.097	278.097
1600.000	51.233	146.349	58.193	283.193
1700.000	51.728	149.470	63.342	288.342
1800.000	52.171	152.439	68.537	293.537
1900.000	52.566	155.271	73.774	298.774
2000.000	52.918	157.976	79.049	304.049
2100.000	53.230	160.566	84.356	309.356
2200.000	53.506	163.048	89.693	314.693
2300.000	53.749	165.432	95.056	320.056
2400.000	53.965	167.725	100.442	325.442
2500.000	54.155	169.931	105.849	330.849
2600.000	54.322	172.059	111.273	336.273
2700.000	54.470	174.112	116.712	341.712
2800.000	54.602	176.095	122.166	347.166
2900.000	54.719	178.013	127.632	352.632
3000.000	54.825	179.870	133.110	358.110
3100.000	54.920	181.669	138.597	363.597
3200.000	55.008	183.414	144.093	369.093
3300.000	55.089	185.108	149.598	374.598
3400.000	55.166	186.754	155.111	380.111
3500.000	55.239	188.354	160.631	385.631
3600.000	55.310	189.911	166.159	391.159
3700.000	55.379	191.428	171.693	396.693
3800.000	55.448	192.905	177.235	402.235
3900.000	55.517	194.347	182.783	407.783
4000.000	55.586	195.753	188.338	413.338
4100.000	55.655	197.127	193.900	418.900
4200.000	55.724	198.468	199.469	424.469
4300.000	55.794	199.780	205.045	430.045
4400.000	55.862	201.064	210.628	435.628
4500.000	55.930	202.320	216.217	441.217
4600.000	55.996	203.550	221.814	446.814
4700.000	56.059	204.755	227.416	452.416
4800.000	56.118	205.936	233.025	458.025
4900.000	56.170	207.094	238.640	463.640
5000.000	56.216	208.229	244.259	469.259
5100.000	56.253	209.342	249.883	474.883
5200.000	56.278	210.435	255.509	480.509
5300.000	56.290	211.507	261.138	486.138
5400.000	56.285	212.559	266.767	491.767
5500.000	56.263	213.592	272.394	497.394
5600.000	56.219	214.605	278.018	503.018
5700.000	56.151	215.600	283.637	508.637
5800.000	56.056	216.576	289.248	514.248
5900.000	55.929	217.533	294.847	519.847
6000.000	55.769	218.472	300.433	525.433

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C8H16	137	112.216	-23.462	C 8 H 16

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	40.850	52.313	-8.805	-32.267
200.000	44.226	81.573	-4.565	-28.027
298.150	49.042	100.073	0.000	-23.462
300.000	49.145	100.386	.091	-23.371
400.000	55.438	115.356	5.310	-18.152
500.000	62.808	128.502	11.215	-12.247
600.000	70.829	140.656	17.894	-5.568
700.000	78.947	152.187	25.384	1.922
800.000	86.481	163.231	33.664	10.202
900.000	92.621	173.790	42.634	19.172
1000.000	96.430	183.771	52.110	28.648
1100.000	100.169	193.140	61.944	38.482
1200.000	103.478	202.001	72.130	48.668
1300.000	106.387	210.401	82.626	59.164
1400.000	108.929	218.380	93.395	69.933
1500.000	111.130	225.973	104.401	80.939
1600.000	113.021	233.207	115.611	92.149
1700.000	114.627	240.108	126.995	103.533
1800.000	115.975	246.699	138.528	115.066
1900.000	117.090	253.001	150.183	126.721
2000.000	117.995	259.031	161.939	138.477
2100.000	118.712	264.806	173.775	150.313
2200.000	119.264	270.341	185.675	162.213
2300.000	119.671	275.652	197.623	174.161
2400.000	119.952	280.752	209.605	186.143
2500.000	120.125	285.652	221.610	198.148
2600.000	120.207	290.366	233.627	210.165
2700.000	120.214	294.903	245.649	222.187
2800.000	120.161	299.274	257.668	234.206
2900.000	120.062	303.489	269.680	246.218
3000.000	119.929	307.557	281.680	258.218
3100.000	119.774	311.487	293.665	270.203
3200.000	119.606	315.287	305.634	282.172
3300.000	119.436	318.965	317.586	294.124
3400.000	119.272	322.528	329.521	306.059
3500.000	119.120	325.983	341.441	317.979
3600.000	118.987	329.337	353.346	329.884
3700.000	118.877	332.595	365.239	341.777
3800.000	118.794	335.764	377.122	353.660
3900.000	118.740	338.849	388.999	365.537
4000.000	118.718	341.855	400.871	377.409
4100.000	118.727	344.787	412.743	389.281
4200.000	118.767	347.648	424.618	401.156
4300.000	118.835	350.444	436.498	413.036
4400.000	118.930	353.177	448.386	424.924
4500.000	119.046	355.851	460.284	436.822
4600.000	119.179	358.469	472.195	448.733
4700.000	119.322	361.033	484.120	460.658
4800.000	119.468	363.547	496.060	472.598
4900.000	119.609	366.012	508.014	484.552
5000.000	119.734	368.429	519.981	496.519
5100.000	119.834	370.801	531.960	508.498
5200.000	119.895	373.129	543.947	520.485
5300.000	119.906	375.413	555.937	532.475
5400.000	119.852	377.654	567.926	544.464
5500.000	119.718	379.852	579.905	556.443
5600.000	119.488	382.007	591.866	568.404
5700.000	119.144	384.119	603.799	580.337
5800.000	118.668	386.187	615.691	592.229
5900.000	118.040	388.211	627.527	604.065
6000.000	117.240	390.188	639.293	615.831

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C8H17	138	113.224	-6.862	C 8 H 17

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	43.331	52.799	-9.330	-16.192
200.000	46.762	83.740	-4.847	-11.709
298.150	52.335	103.377	0.000	-6.862
300.000	52.456	103.711	.097	-6.765
400.000	59.794	119.775	5.699	-1.163
500.000	68.141	134.001	12.090	5.228
600.000	76.840	147.194	19.339	12.477
700.000	85.215	159.676	27.447	20.585
800.000	92.570	171.550	36.348	29.486
900.000	98.187	182.798	45.903	39.041
1000.000	101.331	193.331	55.903	49.041
1100.000	105.288	203.179	66.238	59.376
1200.000	108.731	212.491	76.943	70.081
1300.000	111.700	221.315	87.969	81.107
1400.000	114.234	229.688	99.269	92.407
1500.000	116.369	237.644	110.802	103.940
1600.000	118.140	245.213	122.531	115.669
1700.000	119.582	252.420	134.419	127.557
1800.000	120.726	259.289	146.437	139.575
1900.000	121.604	265.841	158.556	151.694
2000.000	122.246	272.095	170.750	163.888
2100.000	122.679	278.071	182.998	176.136
2200.000	122.931	283.785	195.280	188.418
2300.000	123.027	289.252	207.579	200.717
2400.000	122.991	294.487	219.881	213.019
2500.000	122.845	299.506	232.173	225.311
2600.000	122.611	304.319	244.447	237.585
2700.000	122.308	308.941	256.693	249.831
2800.000	121.955	313.383	268.907	262.045
2900.000	121.568	317.656	281.083	274.221
3000.000	121.162	321.771	293.220	286.358
3100.000	120.753	325.737	305.315	298.453
3200.000	120.352	329.564	317.371	310.509
3300.000	119.971	333.262	329.387	322.525
3400.000	119.620	336.838	341.366	334.504
3500.000	119.306	340.301	353.312	346.450
3600.000	119.036	343.658	365.228	358.366
3700.000	118.817	346.916	377.121	370.259
3800.000	118.652	350.082	388.994	382.132
3900.000	118.544	353.163	400.853	393.991
4000.000	118.494	356.164	412.705	405.843
4100.000	118.503	359.089	424.554	417.692
4200.000	118.567	361.946	436.407	429.545
4300.000	118.684	364.737	448.269	441.407
4400.000	118.851	367.467	460.145	453.283
4500.000	119.061	370.140	472.041	465.179
4600.000	119.306	372.760	483.959	477.097
4700.000	119.578	375.329	495.903	489.041
4800.000	119.867	377.849	507.875	501.013
4900.000	120.161	380.324	519.876	513.014
5000.000	120.448	382.754	531.907	525.045
5100.000	120.713	385.142	543.965	537.103
5200.000	120.939	387.488	556.048	549.186
5300.000	121.111	389.794	568.151	561.289
5400.000	121.209	392.059	580.268	573.406
5500.000	121.213	394.283	592.390	585.528
5600.000	121.101	396.466	604.507	597.645
5700.000	120.852	398.608	616.606	609.744
5800.000	120.439	400.706	628.672	621.810
5900.000	119.839	402.760	640.687	633.825
6000.000	119.023	404.768	652.632	645.770

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C8H18	139	114.232	-53.460	C 8 H 18

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	44.537	51.571	-9.465	-62.925
200.000	47.368	83.137	-4.895	-58.355
298.150	52.761	102.970	0.000	-53.460
300.000	52.881	103.307	.098	-53.362
400.000	60.339	119.503	5.746	-47.714
500.000	69.001	133.883	12.206	-41.254
600.000	78.122	147.268	19.562	-33.898
700.000	86.951	159.982	27.821	-25.639
800.000	94.734	172.117	36.917	-16.543
900.000	100.711	183.641	46.707	-6.753
1000.000	104.119	194.454	56.974	3.514
1100.000	108.303	204.579	67.599	14.139
1200.000	111.952	214.163	78.616	25.156
1300.000	115.106	223.251	89.973	36.513
1400.000	117.804	231.883	101.622	48.162
1500.000	120.085	240.091	113.520	60.060
1600.000	121.985	247.903	125.627	72.167
1700.000	123.539	255.347	137.906	84.446
1800.000	124.780	262.445	150.324	96.864
1900.000	125.740	269.218	162.852	109.392
2000.000	126.451	275.687	175.464	122.004
2100.000	126.941	281.869	188.135	134.675
2200.000	127.238	287.782	200.846	147.386
2300.000	127.368	293.441	213.577	160.117
2400.000	127.356	298.862	226.314	172.854
2500.000	127.226	304.059	239.044	185.584
2600.000	126.999	309.045	251.756	198.296
2700.000	126.696	313.832	264.441	210.981
2800.000	126.336	318.433	277.094	223.634
2900.000	125.937	322.860	289.707	236.247
3000.000	125.516	327.122	302.280	248.820
3100.000	125.086	331.231	314.810	261.350
3200.000	124.660	335.195	327.298	273.838
3300.000	124.252	339.025	339.743	286.283
3400.000	123.871	342.729	352.149	298.689
3500.000	123.526	346.314	364.518	311.058
3600.000	123.226	349.790	376.856	323.396
3700.000	122.974	353.163	389.165	335.705
3800.000	122.778	356.439	401.452	347.992
3900.000	122.640	359.627	413.723	360.263
4000.000	122.561	362.730	425.982	372.522
4100.000	122.541	365.756	438.237	384.777
4200.000	122.581	368.710	450.492	397.032
4300.000	122.677	371.595	462.755	409.295
4400.000	122.825	374.417	475.029	421.569
4500.000	123.019	377.179	487.321	433.861
4600.000	123.254	379.886	499.635	446.175
4700.000	123.520	382.539	511.973	458.513
4800.000	123.808	385.143	524.339	470.879
4900.000	124.106	387.699	536.735	483.275
5000.000	124.402	390.209	549.161	495.701
5100.000	124.682	392.675	561.615	508.155
5200.000	124.930	395.099	574.096	520.636
5300.000	125.129	397.480	586.599	533.139
5400.000	125.261	399.821	599.119	545.659
5500.000	125.306	402.120	611.649	558.189
5600.000	125.242	404.377	624.177	570.717
5700.000	125.047	406.592	636.693	583.233
5800.000	124.697	408.764	649.181	595.721
5900.000	124.165	410.892	661.626	608.166
6000.000	123.426	412.973	674.007	620.547

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C9H	140	109.107	291.000	C 9 H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	16.143	58.687	-4.577	286.423
200.000	23.258	72.080	-2.604	288.396
298.150	29.673	82.585	0.000	291.000
300.000	29.786	82.771	.055	291.055
400.000	35.369	92.130	3.321	294.321
500.000	39.806	100.521	7.090	298.090
600.000	43.049	108.083	11.243	302.243
700.000	45.206	114.894	15.664	306.664
800.000	46.537	121.024	20.256	311.256
900.000	47.460	126.561	24.957	315.957
1000.000	48.544	131.613	29.753	320.753
1100.000	49.435	136.282	34.653	325.653
1200.000	50.232	140.618	39.637	330.637
1300.000	50.941	144.667	44.696	335.696
1400.000	51.571	148.466	49.823	340.823
1500.000	52.128	152.043	55.008	346.008
1600.000	52.618	155.424	60.246	351.246
1700.000	53.047	158.627	65.530	356.530
1800.000	53.421	161.670	70.854	361.854
1900.000	53.746	164.567	76.212	367.212
2000.000	54.028	167.331	81.601	372.601
2100.000	54.270	169.973	87.017	378.017
2200.000	54.478	172.503	92.454	383.454
2300.000	54.657	174.928	97.911	388.911
2400.000	54.810	177.258	103.385	394.385
2500.000	54.942	179.498	108.873	399.873
2600.000	55.055	181.655	114.373	405.373
2700.000	55.154	183.735	119.883	410.883
2800.000	55.241	185.742	125.403	416.403
2900.000	55.320	187.682	130.931	421.931
3000.000	55.391	189.559	136.467	427.467
3100.000	55.459	191.376	142.009	433.009
3200.000	55.525	193.138	147.558	438.558
3300.000	55.590	194.848	153.114	444.114
3400.000	55.655	196.508	158.676	449.676
3500.000	55.722	198.122	164.245	455.245
3600.000	55.792	199.693	169.821	460.821
3700.000	55.865	201.223	175.404	466.404
3800.000	55.941	202.714	180.994	471.994
3900.000	56.020	204.168	186.592	477.592
4000.000	56.102	205.587	192.198	483.198
4100.000	56.187	206.973	197.813	488.813
4200.000	56.272	208.328	203.436	494.436
4300.000	56.358	209.654	209.067	500.067
4400.000	56.442	210.950	214.707	505.707
4500.000	56.523	212.219	220.355	511.355
4600.000	56.599	213.463	226.012	517.012
4700.000	56.668	214.681	231.675	522.675
4800.000	56.726	215.874	237.345	528.345
4900.000	56.771	217.044	243.020	534.020
5000.000	56.800	218.192	248.698	539.698
5100.000	56.810	219.316	254.379	545.379
5200.000	56.795	220.420	260.060	551.060
5300.000	56.754	221.501	265.737	556.737
5400.000	56.681	222.561	271.409	562.409
5500.000	56.571	223.600	277.072	568.072
5600.000	56.420	224.618	282.722	573.722
5700.000	56.223	225.615	288.355	579.355
5800.000	55.974	226.591	293.965	584.965
5900.000	55.668	227.546	299.548	590.548
6000.000	55.298	228.478	305.096	596.096

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C9H2	141	110.115	271.000	C 9 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	18.451	55.606	-4.954	266.046
200.000	25.056	70.396	-2.782	268.218
298.150	31.573	81.623	0.000	271.000
300.000	31.690	81.821	.058	271.058
400.000	37.675	91.779	3.534	274.534
500.000	42.570	100.735	7.557	278.557
600.000	46.177	108.835	12.005	283.005
700.000	48.536	116.145	16.750	287.750
800.000	49.928	122.725	21.680	292.680
900.000	50.874	128.662	26.721	297.721
1000.000	52.136	134.080	31.865	302.865
1100.000	53.060	139.093	37.125	308.125
1200.000	53.913	143.747	42.474	313.474
1300.000	54.699	148.094	47.905	318.905
1400.000	55.422	152.175	53.412	324.412
1500.000	56.085	156.021	58.988	329.988
1600.000	56.691	159.660	64.627	335.627
1700.000	57.243	163.114	70.324	341.324
1800.000	57.746	166.400	76.074	347.074
1900.000	58.201	169.535	81.872	352.872
2000.000	58.611	172.531	87.713	358.713
2100.000	58.980	175.400	93.593	364.593
2200.000	59.311	178.151	99.507	370.507
2300.000	59.606	180.794	105.454	376.454
2400.000	59.868	183.337	111.427	382.427
2500.000	60.099	185.785	117.426	388.426
2600.000	60.302	188.147	123.446	394.446
2700.000	60.479	190.426	129.486	400.486
2800.000	60.633	192.628	135.541	406.541
2900.000	60.767	194.758	141.612	412.612
3000.000	60.881	196.820	147.694	418.694
3100.000	60.979	198.818	153.787	424.787
3200.000	61.062	200.756	159.889	430.889
3300.000	61.133	202.636	165.999	436.999
3400.000	61.193	204.462	172.116	443.116
3500.000	61.243	206.236	178.237	449.237
3600.000	61.287	207.962	184.364	455.364
3700.000	61.325	209.642	190.495	461.495
3800.000	61.359	211.278	196.629	467.629
3900.000	61.391	212.872	202.766	473.766
4000.000	61.421	214.427	208.907	479.907
4100.000	61.452	215.944	215.051	486.051
4200.000	61.485	217.425	221.198	492.198
4300.000	61.520	218.872	227.348	498.348
4400.000	61.559	220.287	233.502	504.502
4500.000	61.603	221.671	239.660	510.660
4600.000	61.652	223.025	245.822	516.822
4700.000	61.708	224.352	251.990	522.990
4800.000	61.772	225.652	258.164	529.164
4900.000	61.844	226.926	264.345	535.345
5000.000	61.925	228.176	270.534	541.534
5100.000	62.015	229.403	276.730	547.730
5200.000	62.115	230.609	282.937	553.937
5300.000	62.225	231.793	289.154	560.154
5400.000	62.346	232.957	295.382	566.382
5500.000	62.477	234.102	301.623	572.623
5600.000	62.620	235.229	307.878	578.878
5700.000	62.773	236.339	314.148	585.148
5800.000	62.938	237.432	320.433	591.433
5900.000	63.114	238.509	326.736	597.736
6000.000	63.300	239.572	333.056	604.056

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C9H18	142	126.243	-28.380	C 9 H 18

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	48.307	50.962	-10.262	-38.642
200.000	51.524	85.325	-5.286	-33.666
298.150	56.501	106.756	0.000	-28.380
300.000	56.611	107.117	.105	-28.275
400.000	63.421	124.298	6.094	-22.286
500.000	71.624	139.309	12.836	-15.544
600.000	80.710	153.162	20.448	-7.932
700.000	89.988	166.303	28.985	.605
800.000	98.584	178.893	38.423	10.043
900.000	105.445	190.924	48.644	20.264
1000.000	109.336	202.267	59.413	31.033
1100.000	113.501	212.887	70.560	42.180
1200.000	117.164	222.924	82.097	53.717
1300.000	120.362	232.431	93.977	65.597
1400.000	123.132	241.455	106.155	77.775
1500.000	125.509	250.033	118.590	90.210
1600.000	127.528	258.200	131.245	102.865
1700.000	129.221	265.983	144.085	115.705
1800.000	130.618	273.410	157.079	128.699
1900.000	131.751	280.504	170.200	141.820
2000.000	132.646	287.285	183.421	155.041
2100.000	133.331	293.775	196.722	168.342
2200.000	133.831	299.989	210.081	181.701
2300.000	134.171	305.947	223.483	195.103
2400.000	134.373	311.662	236.911	208.531
2500.000	134.459	317.149	250.353	221.973
2600.000	134.449	322.423	263.800	235.420
2700.000	134.362	327.495	277.241	248.861
2800.000	134.214	332.379	290.670	262.290
2900.000	134.022	337.086	304.082	275.702
3000.000	133.801	341.626	317.473	289.093
3100.000	133.562	346.009	330.842	302.462
3200.000	133.318	350.246	344.186	315.806
3300.000	133.079	354.344	357.505	329.125
3400.000	132.855	358.314	370.802	342.422
3500.000	132.653	362.162	384.077	355.697
3600.000	132.478	365.897	397.333	368.953
3700.000	132.337	369.524	410.574	382.194
3800.000	132.231	373.052	423.802	395.422
3900.000	132.164	376.486	437.021	408.641
4000.000	132.135	379.831	450.236	421.856
4100.000	132.145	383.094	463.450	435.070
4200.000	132.190	386.279	476.666	448.286
4300.000	132.268	389.390	489.889	461.509
4400.000	132.374	392.432	503.121	474.741
4500.000	132.501	395.408	516.364	487.984
4600.000	132.641	398.322	529.621	501.241
4700.000	132.786	401.176	542.893	514.513
4800.000	132.925	403.974	556.178	527.798
4900.000	133.047	406.716	569.477	541.097
5000.000	133.137	409.405	582.787	554.407
5100.000	133.182	412.041	596.103	567.723
5200.000	133.166	414.628	609.421	581.041
5300.000	133.070	417.163	622.733	594.353
5400.000	132.878	419.649	636.032	607.652
5500.000	132.567	422.085	649.305	620.925
5600.000	132.118	424.469	662.541	634.161
5700.000	131.506	426.803	675.723	647.343
5800.000	130.707	429.083	688.836	660.456
5900.000	129.697	431.309	701.858	673.478
6000.000	128.448	433.479	714.767	686.387

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C9H19	143	127.251	-11.782	C 9 H 19

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	50.423	52.400	-10.776	-22.558
200.000	53.943	88.231	-5.587	-17.369
298.150	60.326	110.867	0.000	-11.782
300.000	60.466	111.252	.112	-11.670
400.000	69.041	129.783	6.574	-5.208
500.000	78.757	146.220	13.959	2.177
600.000	88.739	161.464	22.335	10.553
700.000	98.150	175.862	31.687	19.905
800.000	106.193	189.513	41.919	30.137
900.000	112.104	202.386	52.855	41.073
1000.000	115.161	214.384	64.245	52.463
1100.000	119.788	225.582	75.998	64.216
1200.000	123.759	236.180	88.180	76.398
1300.000	127.130	246.223	100.730	88.948
1400.000	129.949	255.751	113.588	101.806
1500.000	132.269	264.798	126.703	114.921
1600.000	134.136	273.357	140.027	128.245
1700.000	135.595	281.574	153.516	141.734
1800.000	136.690	289.357	167.133	155.351
1900.000	137.462	296.770	180.844	169.062
2000.000	137.951	303.834	194.616	182.834
2100.000	138.194	310.572	208.426	196.644
2200.000	138.227	317.002	222.248	210.466
2300.000	138.083	323.144	236.065	224.283
2400.000	137.793	329.015	249.860	238.078
2500.000	137.386	334.632	263.620	251.838
2600.000	136.891	340.011	277.234	265.552
2700.000	136.332	345.167	290.996	279.214
2800.000	135.733	350.114	304.599	292.817
2900.000	135.114	354.866	318.142	306.360
3000.000	134.496	359.437	331.622	319.840
3100.000	133.895	363.837	345.041	333.259
3200.000	133.326	368.079	358.402	346.620
3300.000	132.804	372.173	371.708	359.926
3400.000	132.338	376.121	384.965	373.183
3500.000	131.939	379.961	398.178	386.396
3600.000	131.613	383.673	411.355	399.573
3700.000	131.366	387.275	424.503	412.721
3800.000	131.200	390.776	437.631	425.849
3900.000	131.117	394.183	450.746	438.964
4000.000	131.116	397.503	463.857	452.075
4100.000	131.194	400.741	476.972	465.190
4200.000	131.347	403.904	490.098	478.316
4300.000	131.566	406.997	503.243	491.461
4400.000	131.844	410.025	516.413	504.631
4500.000	132.168	412.991	529.614	517.832
4600.000	132.528	415.900	542.848	531.066
4700.000	132.906	418.754	556.120	544.338
4800.000	133.286	421.557	569.429	557.647
4900.000	133.650	424.309	582.776	570.994
5000.000	133.976	427.012	596.158	584.376
5100.000	134.241	429.668	609.570	597.788
5200.000	134.419	432.276	623.003	611.221
5300.000	134.485	434.838	636.450	624.668
5400.000	134.409	437.351	649.896	638.114
5500.000	134.159	439.815	663.326	651.544
5600.000	133.703	442.229	676.721	664.939
5700.000	133.005	444.590	690.058	678.276
5800.000	132.028	446.895	703.312	691.530
5900.000	130.733	449.141	716.453	704.671
6000.000	129.079	451.325	729.447	717.665

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C9H20	144	128.259	-58.380	C 9 H 20

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	50.117	50.297	-10.758	-69.138
200.000	53.884	86.010	-5.585	-63.965
298.150	60.323	108.635	0.000	-58.380
300.000	60.463	109.020	.112	-58.268
400.000	69.090	127.556	6.576	-51.804
500.000	78.974	144.019	13.972	-44.408
600.000	89.299	159.330	22.386	-35.994
700.000	99.221	173.852	31.819	-26.561
800.000	107.870	187.684	42.188	-16.192
900.000	114.349	200.789	53.320	-5.060
1000.000	117.737	213.044	64.954	6.574
1100.000	122.835	224.511	76.989	18.609
1200.000	127.223	235.392	89.498	31.118
1300.000	130.959	245.726	102.412	44.032
1400.000	134.099	255.550	115.670	57.290
1500.000	136.695	264.893	129.214	70.834
1600.000	138.800	273.785	142.992	84.612
1700.000	140.461	282.252	156.959	98.579
1800.000	141.725	290.318	171.071	112.691
1900.000	142.638	298.007	185.292	126.912
2000.000	143.242	305.340	199.589	141.209
2100.000	143.577	312.337	213.932	155.552
2200.000	143.681	319.020	228.296	169.916
2300.000	143.590	325.405	242.661	184.281
2400.000	143.338	331.512	257.009	198.629
2500.000	142.957	337.356	271.325	212.945
2600.000	142.476	342.954	285.597	227.217
2700.000	141.922	348.320	299.818	241.438
2800.000	141.321	353.471	313.980	255.600
2900.000	140.695	358.419	328.081	269.701
3000.000	140.066	363.179	342.119	283.739
3100.000	139.451	367.761	356.095	297.715
3200.000	138.868	372.179	370.010	311.630
3300.000	138.330	376.444	383.870	325.490
3400.000	137.850	380.566	397.678	339.298
3500.000	137.439	384.556	411.442	353.062
3600.000	137.102	388.423	425.169	366.789
3700.000	136.847	392.176	438.865	380.485
3800.000	136.676	395.823	452.541	394.161
3900.000	136.591	399.372	466.203	407.823
4000.000	136.592	402.830	479.862	421.482
4100.000	136.674	406.203	493.524	435.144
4200.000	136.833	409.499	507.199	448.819
4300.000	137.062	412.721	520.893	462.513
4400.000	137.350	415.875	534.613	476.233
4500.000	137.687	418.966	548.365	489.985
4600.000	138.058	421.996	562.152	503.772
4700.000	138.447	424.969	575.977	517.597
4800.000	138.837	427.888	589.841	531.461
4900.000	139.206	430.754	603.744	545.364
5000.000	139.532	433.570	617.681	559.301
5100.000	139.790	436.336	631.648	573.268
5200.000	139.955	439.052	645.636	587.256
5300.000	139.995	441.719	659.635	601.255
5400.000	139.881	444.335	673.630	615.250
5500.000	139.579	446.899	687.605	629.225
5600.000	139.053	449.410	701.538	643.158
5700.000	138.266	451.864	715.407	657.027
5800.000	137.178	454.260	729.182	670.802
5900.000	135.746	456.593	742.831	684.451
6000.000	133.927	458.860	756.318	697.938

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C10H	145	121.118	324.000	C 10 H 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	18.762	62.357	-5.199	318.801
200.000	26.424	77.782	-2.936	321.064
298.150	33.243	89.629	0.000	324.000
300.000	33.362	89.838	.061	324.061
400.000	39.264	100.271	3.702	327.702
500.000	43.962	109.561	7.874	331.874
600.000	47.432	117.901	12.453	336.453
700.000	49.795	125.403	17.323	341.323
800.000	51.318	132.158	22.384	346.384
900.000	52.411	138.268	27.572	351.572
1000.000	53.630	143.849	32.871	356.871
1100.000	54.598	149.007	38.283	362.283
1200.000	55.470	153.795	43.787	367.787
1300.000	56.255	158.267	49.374	373.374
1400.000	56.958	162.462	55.035	379.035
1500.000	57.586	166.413	60.763	384.763
1600.000	58.143	170.148	66.550	390.550
1700.000	58.637	173.688	72.390	396.390
1800.000	59.072	177.052	78.275	402.275
1900.000	59.454	180.257	84.202	408.202
2000.000	59.788	183.315	90.165	414.165
2100.000	60.077	186.239	96.158	420.158
2200.000	60.328	189.040	102.179	426.179
2300.000	60.543	191.726	108.223	432.223
2400.000	60.728	194.307	114.287	438.287
2500.000	60.886	196.790	120.368	444.368
2600.000	61.021	199.180	126.463	450.463
2700.000	61.135	201.485	132.571	456.571
2800.000	61.233	203.711	138.690	462.690
2900.000	61.316	205.861	144.817	468.817
3000.000	61.389	207.941	150.952	474.952
3100.000	61.453	209.955	157.095	481.095
3200.000	61.510	211.907	163.243	487.243
3300.000	61.562	213.800	169.396	493.396
3400.000	61.612	215.639	175.555	499.555
3500.000	61.660	217.426	181.719	505.719
3600.000	61.709	219.163	187.887	511.887
3700.000	61.759	220.855	194.060	518.060
3800.000	61.811	222.502	200.239	524.239
3900.000	61.865	224.109	206.423	530.423
4000.000	61.923	225.676	212.612	536.612
4100.000	61.983	227.205	218.807	542.807
4200.000	62.047	228.700	225.009	549.009
4300.000	62.114	230.161	231.217	555.217
4400.000	62.184	231.589	237.432	561.432
4500.000	62.255	232.988	243.654	567.654
4600.000	62.326	234.357	249.883	573.883
4700.000	62.398	235.698	256.119	580.119
4800.000	62.467	237.012	262.362	586.362
4900.000	62.533	238.301	268.612	592.612
5000.000	62.593	239.565	274.869	598.869
5100.000	62.646	240.805	281.131	605.131
5200.000	62.689	242.022	287.398	611.398
5300.000	62.720	243.216	293.668	617.668
5400.000	62.735	244.389	299.941	623.941
5500.000	62.732	245.540	306.215	630.215
5600.000	62.708	246.670	312.487	636.487
5700.000	62.658	247.780	318.755	642.755
5800.000	62.580	248.869	325.017	649.017
5900.000	62.469	249.938	331.270	655.270
6000.000	62.322	250.986	337.510	661.510

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C10H2	146	122.126	282.000	C 10 H 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	19.667	58.271	-5.507	276.493
200.000	27.992	74.487	-3.120	278.880
298.150	35.420	87.077	0.000	282.000
300.000	35.550	87.299	.065	282.065
400.000	41.973	98.436	3.952	285.952
500.000	47.058	108.374	8.415	290.415
600.000	50.776	117.302	13.318	295.318
700.000	53.261	125.330	18.529	300.529
800.000	54.818	132.552	23.939	305.939
900.000	55.923	139.074	29.477	311.477
1000.000	57.216	145.028	35.130	317.130
1100.000	58.175	150.527	40.900	322.900
1200.000	59.072	155.628	46.762	328.762
1300.000	59.911	160.389	52.712	334.712
1400.000	60.691	164.858	58.743	340.743
1500.000	61.416	169.070	64.848	346.848
1600.000	62.086	173.056	71.024	353.024
1700.000	62.704	176.838	77.264	359.264
1800.000	63.272	180.439	83.563	365.563
1900.000	63.792	183.874	89.917	371.917
2000.000	64.265	187.158	96.320	378.320
2100.000	64.694	190.304	102.768	384.768
2200.000	65.081	193.323	109.257	391.257
2300.000	65.428	196.224	115.783	397.783
2400.000	65.736	199.015	122.342	404.342
2500.000	66.008	201.704	128.929	410.929
2600.000	66.247	204.298	135.542	417.542
2700.000	66.453	206.802	142.177	424.177
2800.000	66.630	209.222	148.832	430.832
2900.000	66.779	211.563	155.503	437.503
3000.000	66.903	213.829	162.187	444.187
3100.000	67.003	216.024	168.882	450.882
3200.000	67.083	218.153	175.587	457.587
3300.000	67.144	220.218	182.298	464.298
3400.000	67.189	222.223	189.015	471.015
3500.000	67.220	224.171	195.736	477.736
3600.000	67.240	226.065	202.459	484.459
3700.000	67.249	227.908	209.183	491.183
3800.000	67.252	229.701	215.908	497.908
3900.000	67.251	231.448	222.634	504.634
4000.000	67.247	233.151	229.359	511.359
4100.000	67.244	234.811	236.083	518.083
4200.000	67.243	236.432	242.807	524.807
4300.000	67.248	238.014	249.532	531.532
4400.000	67.261	239.560	256.257	538.257
4500.000	67.284	241.072	262.984	544.984
4600.000	67.320	242.551	269.715	551.715
4700.000	67.372	243.999	276.449	558.449
4800.000	67.441	245.418	283.190	565.190
4900.000	67.532	246.810	289.938	571.938
5000.000	67.646	248.175	296.697	578.697
5100.000	67.786	249.516	303.468	585.468
5200.000	67.954	250.834	310.255	592.255
5300.000	68.155	252.131	317.060	599.060
5400.000	68.389	253.407	323.887	605.887
5500.000	68.661	254.664	330.739	612.739
5600.000	68.972	255.904	337.620	619.620
5700.000	69.327	257.128	344.535	626.535
5800.000	69.726	258.337	351.487	633.487
5900.000	70.174	259.532	358.482	640.482
6000.000	70.673	260.716	365.524	647.524

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C+H+O+	147	324.292	-460.000	C 12 H 20 O 10

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	56.184	125.681	-14.372	-474.372
200.000	72.922	169.849	-7.904	-467.904
298.150	87.902	201.794	0.000	-460.000
300.000	88.171	202.347	.162	-459.838
400.000	102.028	229.643	9.684	-450.316
500.000	114.586	253.782	20.525	-439.475
600.000	125.935	275.694	32.560	-427.440
700.000	136.162	295.889	45.674	-414.326
800.000	145.351	314.682	59.758	-400.242
900.000	153.580	332.286	74.712	-385.288
1000.000	160.926	348.855	90.445	-369.555
1100.000	164.736	364.374	106.730	-353.270
1200.000	168.261	378.861	123.382	-336.618
1300.000	171.533	392.459	140.374	-319.626
1400.000	174.584	405.284	157.682	-302.318
1500.000	177.443	417.428	175.284	-284.716
1600.000	180.134	428.966	193.165	-266.835
1700.000	182.682	439.964	211.307	-248.693
1800.000	185.106	450.475	229.697	-230.303
1900.000	187.424	460.546	248.324	-211.676
2000.000	189.651	470.216	267.179	-192.821
2100.000	191.798	479.522	286.252	-173.748
2200.000	193.876	488.492	305.536	-154.464
2300.000	195.890	497.155	325.025	-134.975
2400.000	197.845	505.534	344.712	-115.288
2500.000	199.742	513.649	364.592	-95.408
2600.000	201.580	521.519	384.659	-75.341
2700.000	203.353	529.160	404.906	-55.094
2800.000	205.056	536.587	425.327	-34.673
2900.000	206.678	543.811	445.914	-14.086
3000.000	208.207	550.843	466.659	6.659
3100.000	209.628	557.694	487.552	27.552
3200.000	210.923	564.370	508.581	48.581
3300.000	212.072	570.879	529.732	69.732
3400.000	213.050	577.225	550.989	90.989
3500.000	213.833	583.412	572.335	112.335
3600.000	214.391	589.445	593.748	133.748
3700.000	214.693	595.323	615.205	155.205
3800.000	214.704	601.050	636.677	176.677
3900.000	214.389	606.623	658.135	198.135
4000.000	213.706	612.042	679.543	219.543
4100.000	212.614	617.308	700.862	240.862
4200.000	211.068	622.414	722.051	262.051
4300.000	209.019	627.357	743.059	283.059
4400.000	206.418	632.134	763.836	303.836
4500.000	203.210	636.738	784.323	324.323
4600.000	199.341	641.163	804.456	344.456
4700.000	194.751	645.402	824.167	364.167
4800.000	189.378	649.448	843.380	383.380
4900.000	183.160	653.290	862.014	402.014
5000.000	176.028	656.920	879.982	419.982
5100.000	167.913	660.328	897.187	437.187
5200.000	158.743	663.501	913.529	453.529
5300.000	148.443	666.429	928.898	468.898
5400.000	136.935	669.099	943.177	483.177
5500.000	124.138	671.496	956.242	496.242
5600.000	109.969	673.608	967.959	507.959
5700.000	94.343	675.418	978.187	518.187
5800.000	77.171	676.913	986.776	526.776
5900.000	58.361	678.074	993.567	533.567
6000.000	37.819	678.885	998.391	538.391

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C2H4O	148	44.054	-12.190	C 2 H 4 O 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.249	48.553	-1.806	-13.996
200.000	8.978	54.034	-1.006	-13.196
298.150	11.625	58.089	0.000	-12.190
300.000	11.678	58.162	.022	-12.168
400.000	14.774	61.942	1.343	-10.847
500.000	17.834	65.572	2.975	-9.215
600.000	20.570	69.071	4.899	-7.291
700.000	22.836	72.419	7.073	-5.117
800.000	24.627	75.590	9.450	-2.740
900.000	26.083	78.577	11.987	-.203
1000.000	27.486	81.396	14.665	2.475
1100.000	28.503	84.064	17.465	5.275
1200.000	29.427	86.585	20.362	8.172
1300.000	30.263	88.974	23.347	11.157
1400.000	31.018	91.244	26.412	14.222
1500.000	31.697	93.408	29.548	17.358
1600.000	32.305	95.473	32.749	20.559
1700.000	32.849	97.448	36.007	23.817
1800.000	33.332	99.340	39.317	27.127
1900.000	33.761	101.154	42.672	30.482
2000.000	34.139	102.896	46.067	33.877
2100.000	34.471	104.569	49.498	37.308
2200.000	34.762	106.180	52.960	40.770
2300.000	35.016	107.731	56.449	44.259
2400.000	35.236	109.226	59.962	47.772
2500.000	35.425	110.668	63.495	51.305
2600.000	35.589	112.061	67.046	54.856
2700.000	35.729	113.407	70.612	58.422
2800.000	35.850	114.708	74.192	62.002
2900.000	35.953	115.968	77.782	65.592
3000.000	36.042	117.189	81.382	69.192
3100.000	36.119	118.372	84.990	72.800
3200.000	36.187	119.519	88.605	76.415
3300.000	36.246	120.634	92.227	80.037
3400.000	36.301	121.717	95.854	83.664
3500.000	36.351	122.770	99.487	87.297
3600.000	36.398	123.794	103.124	90.934
3700.000	36.444	124.792	106.767	94.577
3800.000	36.491	125.765	110.413	98.223
3900.000	36.537	126.713	114.065	101.875
4000.000	36.586	127.639	117.721	105.531
4100.000	36.636	128.543	121.382	109.192
4200.000	36.688	129.426	125.048	112.858
4300.000	36.742	130.290	128.719	116.529
4400.000	36.799	131.136	132.396	120.206
4500.000	36.857	131.963	136.079	123.889
4600.000	36.916	132.774	139.768	127.578
4700.000	36.976	133.569	143.462	131.272
4800.000	37.035	134.348	147.163	134.973
4900.000	37.093	135.112	150.869	138.679
5000.000	37.148	135.862	154.582	142.392
5100.000	37.198	136.598	158.299	146.109
5200.000	37.242	137.321	162.021	149.831
5300.000	37.278	138.031	165.747	153.557
5400.000	37.304	138.728	169.476	157.286
5500.000	37.317	139.412	173.207	161.017
5600.000	37.315	140.085	176.939	164.749
5700.000	37.295	140.745	180.670	168.480
5800.000	37.254	141.393	184.397	172.207
5900.000	37.189	142.030	188.120	175.930
6000.000	37.097	142.654	191.834	179.644

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
HNO2-C	149	47.016	-18.340	H 1 N 1 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.503	49.813	-1.830	-20.170
200.000	9.284	55.571	-.989	-19.329
298.150	10.838	59.573	0.000	-18.340
300.000	10.866	59.641	.020	-18.320
400.000	12.233	62.959	1.177	-17.163
500.000	13.384	65.817	2.459	-15.881
600.000	14.324	68.343	3.846	-14.494
700.000	15.075	70.610	5.318	-13.022
800.000	15.666	72.663	6.856	-11.484
900.000	16.141	74.537	8.447	-9.893
1000.000	16.552	76.259	10.082	-8.258
1100.000	16.872	77.852	11.754	-6.586
1200.000	17.163	79.332	13.456	-4.884
1300.000	17.428	80.717	15.185	-3.155
1400.000	17.667	82.017	16.940	-1.400
1500.000	17.882	83.244	18.718	.378
1600.000	18.076	84.404	20.516	2.176
1700.000	18.249	85.505	22.332	3.992
1800.000	18.404	86.552	24.165	5.825
1900.000	18.541	87.551	26.013	7.673
2000.000	18.663	88.506	27.873	9.533
2100.000	18.770	89.419	29.745	11.405
2200.000	18.864	90.294	31.626	13.286
2300.000	18.947	91.135	33.517	15.177
2400.000	19.019	91.942	35.415	17.075
2500.000	19.081	92.720	37.320	18.980
2600.000	19.135	93.470	39.231	20.891
2700.000	19.182	94.193	41.147	22.807
2800.000	19.223	94.891	43.068	24.728
2900.000	19.258	95.566	44.992	26.652
3000.000	19.288	96.220	46.919	28.579
3100.000	19.314	96.852	48.849	30.509
3200.000	19.338	97.466	50.782	32.442
3300.000	19.358	98.061	52.717	34.377
3400.000	19.377	98.640	54.653	36.313
3500.000	19.394	99.202	56.592	38.252
3600.000	19.411	99.748	58.532	40.192
3700.000	19.427	100.280	60.474	42.134
3800.000	19.443	100.798	62.418	44.078
3900.000	19.458	101.304	64.363	46.023
4000.000	19.475	101.797	66.309	47.969
4100.000	19.491	102.278	68.258	49.918
4200.000	19.508	102.747	70.208	51.868
4300.000	19.526	103.207	72.159	53.819
4400.000	19.545	103.656	74.113	55.773
4500.000	19.563	104.095	76.068	57.728
4600.000	19.583	104.526	78.026	59.686
4700.000	19.602	104.947	79.985	61.645
4800.000	19.622	105.360	81.946	63.606
4900.000	19.641	105.765	83.909	65.569
5000.000	19.659	106.162	85.874	67.534
5100.000	19.676	106.551	87.841	69.501
5200.000	19.691	106.933	89.809	71.469
5300.000	19.704	107.308	91.779	73.439
5400.000	19.714	107.677	93.750	75.410
5500.000	19.720	108.039	95.722	77.382
5600.000	19.722	108.394	97.694	79.354
5700.000	19.719	108.743	99.666	81.326
5800.000	19.709	109.086	101.637	83.297
5900.000	19.693	109.423	103.608	85.268
6000.000	19.668	109.753	105.576	87.236

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
HNO2-T	150	47.016	-18.840	H 1 N 1 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.517	49.691	-1.847	-20.687
200.000	9.378	55.486	-1.001	-19.841
298.150	10.974	59.534	0.000	-18.840
300.000	11.002	59.603	.020	-18.820
400.000	12.381	62.963	1.191	-17.649
500.000	13.520	65.852	2.488	-16.352
600.000	14.435	68.401	3.888	-14.952
700.000	15.152	70.683	5.369	-13.471
800.000	15.709	72.744	6.913	-11.927
900.000	16.157	74.621	8.507	-10.333
1000.000	16.554	76.344	10.143	-8.697
1100.000	16.866	77.936	11.814	-7.026
1200.000	17.150	79.416	13.515	-5.325
1300.000	17.408	80.800	15.243	-3.597
1400.000	17.642	82.098	16.996	-1.844
1500.000	17.854	83.323	18.771	-.069
1600.000	18.044	84.481	20.566	1.726
1700.000	18.215	85.580	22.379	3.539
1800.000	18.368	86.626	24.208	5.368
1900.000	18.504	87.623	26.052	7.212
2000.000	18.626	88.575	27.909	9.069
2100.000	18.733	89.486	29.777	10.937
2200.000	18.828	90.360	31.655	12.815
2300.000	18.911	91.199	33.542	14.702
2400.000	18.984	92.006	35.437	16.597
2500.000	19.048	92.782	37.338	18.498
2600.000	19.104	93.530	39.246	20.406
2700.000	19.153	94.252	41.159	22.319
2800.000	19.195	94.949	43.076	24.236
2900.000	19.232	95.623	44.998	26.158
3000.000	19.264	96.276	46.923	28.083
3100.000	19.292	96.908	48.850	30.010
3200.000	19.317	97.521	50.781	31.941
3300.000	19.339	98.116	52.714	33.874
3400.000	19.360	98.693	54.649	35.809
3500.000	19.378	99.255	56.586	37.746
3600.000	19.396	99.801	58.524	39.684
3700.000	19.413	100.333	60.465	41.625
3800.000	19.430	100.851	62.407	43.567
3900.000	19.446	101.356	64.351	45.511
4000.000	19.463	101.848	66.296	47.456
4100.000	19.480	102.329	68.243	49.403
4200.000	19.497	102.798	70.192	51.352
4300.000	19.515	103.258	72.143	53.303
4400.000	19.534	103.706	74.095	55.255
4500.000	19.553	104.146	76.049	57.209
4600.000	19.572	104.575	78.006	59.166
4700.000	19.591	104.997	79.964	61.124
4800.000	19.610	105.409	81.924	63.084
4900.000	19.629	105.814	83.886	65.046
5000.000	19.647	106.211	85.849	67.009
5100.000	19.663	106.600	87.815	68.975
5200.000	19.679	106.982	89.782	70.942
5300.000	19.692	107.357	91.751	72.911
5400.000	19.702	107.725	93.720	74.880
5500.000	19.709	108.086	95.691	76.851
5600.000	19.712	108.442	97.662	78.822
5700.000	19.710	108.791	99.633	80.793
5800.000	19.703	109.133	101.604	82.764
5900.000	19.689	109.470	103.573	84.733
6000.000	19.668	109.801	105.541	86.701

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
HNO3	151	63.016	-32.100	H 1 N 1 O 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.765	53.010	-2.022	-34.122
200.000	10.226	59.141	-1.123	-33.223
298.150	12.643	63.677	0.000	-32.100
300.000	12.686	63.756	.023	-32.077
400.000	14.947	67.722	1.407	-30.693
500.000	16.876	71.271	3.002	-29.098
600.000	18.410	74.490	4.769	-27.331
700.000	19.550	77.418	6.670	-25.430
800.000	20.364	80.085	8.668	-23.432
900.000	20.987	82.521	10.737	-21.363
1000.000	21.621	84.763	12.866	-19.234
1100.000	22.046	86.844	15.050	-17.050
1200.000	22.431	88.780	17.274	-14.826
1300.000	22.779	90.589	19.535	-12.565
1400.000	23.092	92.289	21.829	-10.271
1500.000	23.373	93.892	24.152	-7.948
1600.000	23.625	95.408	26.502	-5.598
1700.000	23.848	96.847	28.876	-3.224
1800.000	24.047	98.216	31.271	-.829
1900.000	24.222	99.521	33.685	1.585
2000.000	24.376	100.768	36.115	4.015
2100.000	24.511	101.960	38.559	6.459
2200.000	24.628	103.103	41.017	8.917
2300.000	24.730	104.200	43.485	11.385
2400.000	24.818	105.255	45.962	13.862
2500.000	24.893	106.269	48.448	16.348
2600.000	24.958	107.247	50.940	18.840
2700.000	25.013	108.190	53.439	21.339
2800.000	25.059	109.101	55.943	23.843
2900.000	25.099	109.981	58.451	26.351
3000.000	25.133	110.832	60.962	28.862
3100.000	25.163	111.657	63.477	31.377
3200.000	25.188	112.456	65.995	33.895
3300.000	25.211	113.231	68.515	36.415
3400.000	25.231	113.984	71.037	38.937
3500.000	25.250	114.716	73.561	41.461
3600.000	25.269	115.428	76.087	43.987
3700.000	25.287	116.120	78.615	46.515
3800.000	25.306	116.795	81.144	49.044
3900.000	25.324	117.452	83.676	51.576
4000.000	25.344	118.094	86.209	54.109
4100.000	25.365	118.720	88.745	56.645
4200.000	25.387	119.331	91.282	59.182
4300.000	25.410	119.929	93.822	61.722
4400.000	25.434	120.514	96.364	64.264
4500.000	25.459	121.085	98.909	66.809
4600.000	25.485	121.645	101.456	69.356
4700.000	25.511	122.194	104.006	71.906
4800.000	25.537	122.731	106.558	74.458
4900.000	25.562	123.258	109.113	77.013
5000.000	25.586	123.774	111.671	79.571
5100.000	25.607	124.281	114.230	82.130
5200.000	25.626	124.779	116.792	84.692
5300.000	25.642	125.267	119.356	87.256
5400.000	25.653	125.746	121.920	89.820
5500.000	25.658	126.217	124.486	92.386
5600.000	25.656	126.680	127.052	94.952
5700.000	25.647	127.133	129.617	97.517
5800.000	25.628	127.579	132.181	100.081
5900.000	25.599	128.017	134.742	102.642
6000.000	25.557	128.447	137.300	105.200

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
NO3	152	62.008	17.000	N 1 C 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.307	50.675	-1.828	15.172
200.000	9.219	56.310	-1.004	15.996
298.150	11.235	60.365	0.000	17.000
300.000	11.272	60.436	.021	17.021
400.000	13.214	63.950	1.247	18.247
500.000	14.868	67.082	2.654	19.654
600.000	16.140	69.912	4.208	21.208
700.000	17.015	72.470	5.868	22.868
800.000	17.557	74.781	7.599	24.599
900.000	17.909	76.870	9.373	26.373
1000.000	18.296	78.775	11.182	28.182
1100.000	18.495	80.529	13.022	30.022
1200.000	18.673	82.146	14.881	31.881
1300.000	18.831	83.647	16.756	33.756
1400.000	18.971	85.047	18.646	35.646
1500.000	19.094	86.360	20.549	37.549
1600.000	19.202	87.596	22.464	39.464
1700.000	19.295	88.763	24.389	41.389
1800.000	19.376	89.869	26.323	43.323
1900.000	19.444	90.918	28.264	45.264
2000.000	19.502	91.917	30.211	47.211
2100.000	19.551	92.870	32.164	49.164
2200.000	19.591	93.780	34.121	51.121
2300.000	19.624	94.652	36.082	53.082
2400.000	19.650	95.487	38.046	55.046
2500.000	19.670	96.290	40.012	57.012
2600.000	19.685	97.062	41.980	58.980
2700.000	19.696	97.805	43.949	60.949
2800.000	19.704	98.521	45.919	62.919
2900.000	19.710	99.213	47.890	64.890
3000.000	19.712	99.881	49.861	66.861
3100.000	19.714	100.528	51.832	68.832
3200.000	19.715	101.153	53.803	70.803
3300.000	19.715	101.760	55.775	72.775
3400.000	19.714	102.349	57.746	74.746
3500.000	19.715	102.920	59.718	76.718
3600.000	19.715	103.476	61.689	78.689
3700.000	19.716	104.016	63.661	80.661
3800.000	19.719	104.541	65.633	82.633
3900.000	19.722	105.054	67.605	84.605
4000.000	19.727	105.553	69.577	86.577
4100.000	19.733	106.040	71.550	88.550
4200.000	19.740	106.516	73.524	90.524
4300.000	19.749	106.981	75.498	92.498
4400.000	19.759	107.435	77.474	94.474
4500.000	19.769	107.879	79.450	96.450
4600.000	19.781	108.314	81.428	98.428
4700.000	19.793	108.739	83.406	100.406
4800.000	19.805	109.156	85.386	102.386
4900.000	19.817	109.564	87.367	104.367
5000.000	19.828	109.965	89.350	106.350
5100.000	19.838	110.358	91.333	108.333
5200.000	19.847	110.743	93.317	110.317
5300.000	19.853	111.121	95.302	112.302
5400.000	19.857	111.492	97.288	114.288
5500.000	19.857	111.856	99.273	116.273
5600.000	19.853	112.214	101.259	118.259
5700.000	19.844	112.566	103.244	120.244
5800.000	19.829	112.911	105.228	122.228
5900.000	19.808	113.249	107.210	124.210
6000.000	19.778	113.582	109.189	126.189

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N2O3	153	76.016	19.800	N 2 O 3

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	10.468	59.954	-2.619	17.181
200.000	13.340	68.130	-1.423	18.377
298.150	15.559	73.886	0.000	19.800
300.000	15.597	73.984	.029	19.829
400.000	17.366	78.724	1.680	21.480
500.000	18.754	82.754	3.489	23.289
600.000	19.850	86.274	5.421	25.221
700.000	20.721	89.402	7.452	27.252
800.000	21.417	92.216	9.560	29.360
900.000	21.965	94.772	11.730	31.530
1000.000	22.375	97.108	13.948	33.748
1100.000	22.668	99.255	16.201	36.001
1200.000	22.931	101.239	18.481	38.281
1300.000	23.166	103.084	20.786	40.586
1400.000	23.375	104.808	23.113	42.913
1500.000	23.559	106.427	25.460	45.260
1600.000	23.722	107.953	27.824	47.624
1700.000	23.864	109.396	30.204	50.004
1800.000	23.987	110.763	32.597	52.397
1900.000	24.094	112.063	35.001	54.801
2000.000	24.185	113.301	37.415	57.215
2100.000	24.262	114.483	39.837	59.637
2200.000	24.327	115.613	42.267	62.067
2300.000	24.381	116.696	44.702	64.502
2400.000	24.425	117.735	47.143	66.943
2500.000	24.461	118.733	49.587	69.387
2600.000	24.489	119.692	52.035	71.835
2700.000	24.511	120.617	54.485	74.285
2800.000	24.528	121.509	56.937	76.737
2900.000	24.541	122.370	59.390	79.190
3000.000	24.551	123.202	61.845	81.645
3100.000	24.557	124.007	64.300	84.100
3200.000	24.562	124.787	66.756	86.556
3300.000	24.566	125.543	69.213	89.013
3400.000	24.570	126.276	71.669	91.469
3500.000	24.573	126.988	74.127	93.927
3600.000	24.577	127.681	76.584	96.384
3700.000	24.581	128.354	79.042	98.842
3800.000	24.587	129.010	81.500	101.300
3900.000	24.594	129.649	83.959	103.759
4000.000	24.602	130.271	86.419	106.219
4100.000	24.612	130.879	88.880	108.680
4200.000	24.624	131.472	91.342	111.142
4300.000	24.637	132.052	93.805	113.605
4400.000	24.651	132.618	96.269	116.069
4500.000	24.667	133.172	98.735	118.535
4600.000	24.684	133.715	101.202	121.002
4700.000	24.701	134.246	103.672	123.472
4800.000	24.718	134.766	106.143	125.943
4900.000	24.736	135.276	108.615	128.415
5000.000	24.752	135.776	111.090	130.890
5100.000	24.767	136.266	113.566	133.366
5200.000	24.780	136.747	116.043	135.843
5300.000	24.789	137.219	118.522	138.322
5400.000	24.795	137.683	121.001	140.801
5500.000	24.797	138.138	123.480	143.280
5600.000	24.792	138.584	125.960	145.760
5700.000	24.781	139.023	128.439	148.239
5800.000	24.762	139.454	130.916	150.716
5900.000	24.734	139.877	133.391	153.191
6000.000	24.696	140.292	135.863	155.663

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N2O4	154	92.016	2.170	N 2 O 4

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	11.293	57.117	-2.955	-.785
200.000	15.021	66.113	-1.635	.535
298.150	18.220	72.721	0.000	2.170
300.000	18.276	72.836	.034	2.204
400.000	21.017	78.481	2.003	4.173
500.000	23.234	83.419	4.219	6.389
600.000	24.952	87.814	6.633	8.803
700.000	26.229	91.761	9.195	11.365
800.000	27.157	95.328	11.867	14.037
900.000	27.861	98.568	14.619	16.789
1000.000	28.498	101.537	17.437	19.607
1100.000	28.895	104.272	20.307	22.477
1200.000	29.252	106.801	23.214	25.384
1300.000	29.570	109.156	26.156	28.326
1400.000	29.852	111.358	29.127	31.297
1500.000	30.101	113.426	32.125	34.295
1600.000	30.320	115.376	35.146	37.316
1700.000	30.512	117.220	38.188	40.358
1800.000	30.677	118.968	41.248	43.418
1900.000	30.820	120.631	44.323	46.493
2000.000	30.942	122.215	47.411	49.581
2100.000	31.044	123.727	50.511	52.681
2200.000	31.130	125.173	53.619	55.789
2300.000	31.202	126.559	56.736	58.906
2400.000	31.259	127.888	59.859	62.029
2500.000	31.306	129.165	62.988	65.158
2600.000	31.342	130.394	66.120	68.290
2700.000	31.370	131.577	69.256	71.426
2800.000	31.392	132.718	72.394	74.564
2900.000	31.407	133.820	75.534	77.704
3000.000	31.418	134.885	78.675	80.845
3100.000	31.426	135.916	81.818	83.988
3200.000	31.432	136.913	84.961	87.131
3300.000	31.436	137.881	88.104	90.274
3400.000	31.439	138.819	91.248	93.418
3500.000	31.443	139.730	94.392	96.562
3600.000	31.447	140.616	97.536	99.706
3700.000	31.453	141.478	100.681	102.851
3800.000	31.460	142.317	103.827	105.997
3900.000	31.469	143.134	106.973	109.143
4000.000	31.480	143.931	110.121	112.291
4100.000	31.493	144.709	113.269	115.439
4200.000	31.509	145.468	116.419	118.589
4300.000	31.527	146.209	119.571	121.741
4400.000	31.547	146.934	122.725	124.895
4500.000	31.568	147.644	125.881	128.051
4600.000	31.591	148.338	129.039	131.209
4700.000	31.614	149.017	132.199	134.369
4800.000	31.638	149.683	135.361	137.531
4900.000	31.662	150.336	138.526	140.696
5000.000	31.684	150.975	141.694	143.864
5100.000	31.704	151.603	144.863	147.033
5200.000	31.721	152.219	148.034	150.204
5300.000	31.734	152.823	151.207	153.377
5400.000	31.741	153.417	154.381	156.551
5500.000	31.742	153.999	157.555	159.725
5600.000	31.735	154.571	160.729	162.899
5700.000	31.718	155.132	163.902	166.072
5800.000	31.691	155.684	167.073	169.243
5900.000	31.650	156.225	170.240	172.410
6000.000	31.595	156.757	173.402	175.572

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N2O5	155	108.016	2.700	N 2 O 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	11.240	64.754	-3.390	-.690
200.000	17.328	74.471	-1.953	.747
298.150	22.299	82.349	0.000	2.700
300.000	22.383	82.488	.041	2.741
400.000	26.404	89.502	2.489	5.189
500.000	29.427	95.737	5.288	7.988
600.000	31.533	101.301	8.344	11.044
700.000	32.843	106.270	11.569	14.269
800.000	33.520	110.706	14.891	17.591
900.000	33.766	114.671	18.258	20.958
1000.000	33.828	118.232	21.638	24.338
1100.000	34.090	121.469	25.034	27.734
1200.000	34.324	124.445	28.455	31.155
1300.000	34.530	127.201	31.898	34.598
1400.000	34.712	129.767	35.361	38.061
1500.000	34.871	132.167	38.840	41.540
1600.000	35.009	134.422	42.334	45.034
1700.000	35.128	136.548	45.841	48.541
1800.000	35.229	138.559	49.359	52.059
1900.000	35.315	140.466	52.886	55.586
2000.000	35.386	142.280	56.422	59.122
2100.000	35.445	144.008	59.963	62.663
2200.000	35.492	145.658	63.510	66.210
2300.000	35.529	147.236	67.061	69.761
2400.000	35.558	148.749	70.616	73.316
2500.000	35.579	150.201	74.173	76.873
2600.000	35.593	151.597	77.731	80.431
2700.000	35.603	152.940	81.291	83.991
2800.000	35.608	154.235	84.852	87.552
2900.000	35.610	155.485	88.413	91.113
3000.000	35.609	156.692	91.974	94.674
3100.000	35.607	157.859	95.534	98.234
3200.000	35.603	158.990	99.095	101.795
3300.000	35.599	160.085	102.655	105.355
3400.000	35.595	161.148	106.215	108.915
3500.000	35.592	162.180	109.774	112.474
3600.000	35.590	163.182	113.333	116.033
3700.000	35.590	164.158	116.892	119.592
3800.000	35.591	165.107	120.451	123.151
3900.000	35.594	166.031	124.010	126.710
4000.000	35.599	166.932	127.570	130.270
4100.000	35.605	167.811	131.130	133.830
4200.000	35.614	168.670	134.691	137.391
4300.000	35.625	169.508	138.253	140.953
4400.000	35.638	170.327	141.816	144.516
4500.000	35.652	171.128	145.381	148.081
4600.000	35.668	171.912	148.947	151.647
4700.000	35.684	172.679	152.514	155.214
4800.000	35.701	173.431	156.084	158.784
4900.000	35.717	174.167	159.655	162.355
5000.000	35.733	174.889	163.227	165.927
5100.000	35.748	175.596	166.801	169.501
5200.000	35.760	176.291	170.377	173.077
5300.000	35.770	176.972	173.953	176.653
5400.000	35.775	177.641	177.530	180.230
5500.000	35.776	178.297	181.108	183.808
5600.000	35.771	178.941	184.685	187.385
5700.000	35.759	179.575	188.262	190.962
5800.000	35.738	180.196	191.837	194.537
5900.000	35.709	180.807	195.409	198.109
6000.000	35.669	181.407	198.978	201.678

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C5*	156	60.055	0.000	C 5

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	3.719	.660	-1.247	-1.247
200.000	6.125	3.878	-.769	-.769
298.150	9.670	6.960	0.000	0.000
300.000	9.740	7.020	.018	.018
400.000	13.687	10.363	1.190	1.190
500.000	17.331	13.819	2.745	2.745
600.000	20.280	17.252	4.632	4.632
700.000	22.384	20.547	6.773	6.773
800.000	23.733	23.631	9.084	9.084
900.000	24.661	26.482	11.505	11.505
1000.000	25.742	29.131	14.021	14.021
1100.000	26.365	31.615	16.627	16.627
1200.000	26.921	33.933	19.292	19.292
1300.000	27.415	36.108	22.009	22.009
1400.000	27.853	38.156	24.773	24.773
1500.000	28.238	40.091	27.578	27.578
1600.000	28.576	41.924	30.419	30.419
1700.000	28.871	43.666	33.291	33.291
1800.000	29.126	45.323	36.192	36.192
1900.000	29.346	46.904	39.116	39.116
2000.000	29.535	48.415	42.060	42.060
2100.000	29.696	49.860	45.022	45.022
2200.000	29.832	51.244	47.998	47.998
2300.000	29.947	52.573	50.987	50.987
2400.000	30.044	53.850	53.987	53.987
2500.000	30.126	55.078	56.996	56.996
2600.000	30.195	56.261	60.012	60.012
2700.000	30.255	57.401	63.035	63.035
2800.000	30.306	58.503	66.063	66.063
2900.000	30.352	59.567	69.096	69.096
3000.000	30.395	60.597	72.133	72.133
3100.000	30.436	61.594	75.175	75.175
3200.000	30.477	62.561	78.220	78.220
3300.000	30.520	63.499	81.270	81.270
3400.000	30.565	64.411	84.324	84.324
3500.000	30.615	65.298	87.383	87.383
3600.000	30.669	66.161	90.447	90.447
3700.000	30.729	67.002	93.517	93.517
3800.000	30.795	67.823	96.593	96.593
3900.000	30.868	68.624	99.676	99.676
4000.000	30.948	69.406	102.767	102.767
4100.000	31.035	70.171	105.866	105.866
4200.000	31.128	70.920	108.974	108.974
4300.000	31.229	71.654	112.092	112.092
4400.000	31.335	72.373	115.220	115.220
4500.000	31.447	73.078	118.359	118.359
4600.000	31.564	73.771	121.510	121.510
4700.000	31.684	74.451	124.672	124.672
4800.000	31.807	75.119	127.847	127.847
4900.000	31.931	75.776	131.034	131.034
5000.000	32.055	76.423	134.233	134.233
5100.000	32.177	77.059	137.445	137.445
5200.000	32.294	77.685	140.668	140.668
5300.000	32.406	78.301	143.903	143.903
5400.000	32.510	78.908	147.149	147.149
5500.000	32.603	79.505	150.405	150.405
5600.000	32.682	80.093	153.669	153.669
5700.000	32.746	80.672	156.941	156.941
5800.000	32.792	81.242	160.218	160.218
5900.000	32.815	81.803	163.498	163.498
6000.000	32.812	82.354	166.780	166.780

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
C6*	157	72.066	0.000	C 6

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.465	.794	-1.496	-1.496
200.000	7.350	4.655	-.923	-.923
298.150	11.603	8.354	0.000	0.000
300.000	11.687	8.426	.022	.022
400.000	16.423	12.437	1.427	1.427
500.000	20.796	16.584	3.294	3.294
600.000	24.335	20.703	5.559	5.559
700.000	26.859	24.657	8.127	8.127
800.000	28.478	28.358	10.900	10.900
900.000	29.591	31.778	13.805	13.805
1000.000	30.890	34.958	16.824	16.824
1100.000	31.637	37.938	19.951	19.951
1200.000	32.304	40.720	23.149	23.149
1300.000	32.897	43.329	26.409	26.409
1400.000	33.422	45.787	29.726	29.726
1500.000	33.885	48.109	33.092	33.092
1600.000	34.291	50.309	36.501	36.501
1700.000	34.644	52.399	39.948	39.948
1800.000	34.951	54.388	43.428	43.428
1900.000	35.216	56.285	46.937	46.937
2000.000	35.442	58.097	50.470	50.470
2100.000	35.635	59.831	54.024	54.024
2200.000	35.799	61.493	57.596	57.596
2300.000	35.938	63.087	61.183	61.183
2400.000	36.054	64.619	64.783	64.783
2500.000	36.152	66.093	68.394	68.394
2600.000	36.236	67.513	72.013	72.013
2700.000	36.307	68.882	75.640	75.640
2800.000	36.369	70.203	79.274	79.274
2900.000	36.424	71.480	82.914	82.914
3000.000	36.475	72.716	86.559	86.559
3100.000	36.524	73.913	90.209	90.209
3200.000	36.574	75.073	93.864	93.864
3300.000	36.625	76.199	97.524	97.524
3400.000	36.679	77.294	101.189	101.189
3500.000	36.738	78.358	104.860	104.860
3600.000	36.803	79.394	108.537	108.537
3700.000	36.875	80.403	112.220	112.220
3800.000	36.954	81.387	115.912	115.912
3900.000	37.041	82.348	119.611	119.611
4000.000	37.137	83.287	123.320	123.320
4100.000	37.241	84.206	127.039	127.039
4200.000	37.353	85.104	130.769	130.769
4300.000	37.473	85.985	134.510	134.510
4400.000	37.601	86.847	138.264	138.264
4500.000	37.735	87.694	142.030	142.030
4600.000	37.875	88.525	145.811	145.811
4700.000	38.019	89.341	149.605	149.605
4800.000	38.167	90.143	153.415	153.415
4900.000	38.315	90.931	157.239	157.239
5000.000	38.464	91.707	161.078	161.078
5100.000	38.610	92.470	164.932	164.932
5200.000	38.752	93.221	168.800	168.800
5300.000	38.887	93.961	172.682	172.682
5400.000	39.012	94.689	176.577	176.577
5500.000	39.124	95.406	180.484	180.484
5600.000	39.221	96.111	184.401	184.401
5700.000	39.299	96.807	188.327	188.327
5800.000	39.355	97.490	192.260	192.260
5900.000	39.384	98.164	196.197	196.197
6000.000	39.384	98.825	200.136	200.136

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
HCOOH	158	46.037	-94.000	C 1 H 2 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.910	49.091	-2.057	-96.057
200.000	10.416	55.341	-1.141	-95.141
298.150	12.809	59.950	0.000	-94.000
300.000	12.852	60.030	.024	-93.976
400.000	15.056	64.037	1.422	-92.578
500.000	16.922	67.603	3.023	-90.977
600.000	18.402	70.825	4.793	-89.207
700.000	19.510	73.750	6.691	-87.309
800.000	20.315	76.410	8.685	-85.315
900.000	20.944	78.840	10.749	-83.251
1000.000	21.585	81.079	12.874	-81.126
1100.000	22.073	83.159	15.057	-78.943
1200.000	22.543	85.100	17.288	-76.712
1300.000	22.995	86.923	19.565	-74.435
1400.000	23.428	88.643	21.886	-72.114
1500.000	23.841	90.273	24.250	-69.750
1600.000	24.233	91.825	26.654	-67.346
1700.000	24.605	93.305	29.096	-64.904
1800.000	24.956	94.721	31.574	-62.426
1900.000	25.286	96.080	34.086	-59.914
2000.000	25.594	97.385	36.631	-57.369
2100.000	25.880	98.640	39.204	-54.796
2200.000	26.144	99.850	41.806	-52.194
2300.000	26.388	101.018	44.433	-49.567
2400.000	26.609	102.146	47.083	-46.917
2500.000	26.810	103.236	49.754	-44.246
2600.000	26.990	104.291	52.444	-41.556
2700.000	27.150	105.313	55.151	-38.849
2800.000	27.291	106.303	57.873	-36.127
2900.000	27.412	107.263	60.609	-33.391
3000.000	27.516	108.194	63.355	-30.645
3100.000	27.603	109.098	66.111	-27.889
3200.000	27.673	109.975	68.875	-25.125
3300.000	27.729	110.827	71.645	-22.355
3400.000	27.770	111.656	74.420	-19.580
3500.000	27.799	112.461	77.199	-16.801
3600.000	27.817	113.245	79.980	-14.020
3700.000	27.825	114.007	82.762	-11.238
3800.000	27.825	114.749	85.545	-8.455
3900.000	27.818	115.472	88.327	-5.673
4000.000	27.807	116.176	91.108	-2.892
4100.000	27.793	116.862	93.888	-.112
4200.000	27.778	117.532	96.667	2.667
4300.000	27.764	118.186	99.444	5.444
4400.000	27.754	118.824	102.220	8.220
4500.000	27.749	119.447	104.995	10.995
4600.000	27.752	120.057	107.770	13.770
4700.000	27.766	120.654	110.545	16.545
4800.000	27.792	121.239	113.323	19.323
4900.000	27.834	121.812	116.104	22.104
5000.000	27.895	122.375	118.891	24.891
5100.000	27.976	122.928	121.684	27.684
5200.000	28.082	123.473	124.487	30.487
5300.000	28.215	124.009	127.301	33.301
5400.000	28.378	124.538	130.131	36.131
5500.000	28.575	125.060	132.978	38.978
5600.000	28.808	125.577	135.847	41.847
5700.000	29.082	126.089	138.741	44.741
5800.000	29.399	126.598	141.665	47.665
5900.000	29.764	127.103	144.622	50.622
6000.000	30.180	127.607	147.619	53.619

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
CH4COO	159	60.054	-110.900	C 2 H 4 O 2

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	10.464	55.480	-2.750	-113.650
200.000	13.883	63.761	-1.536	-112.436
298.150	17.419	69.961	0.000	-110.900
300.000	17.485	70.071	.032	-110.868
400.000	20.951	75.581	1.956	-108.944
500.000	24.060	80.599	4.210	-106.690
600.000	26.686	85.225	6.752	-104.148
700.000	28.799	89.504	9.530	-101.370
800.000	30.466	93.463	12.497	-98.403
900.000	31.847	97.133	15.614	-95.286
1000.000	33.201	100.557	18.865	-92.035
1100.000	34.326	103.775	22.243	-88.657
1200.000	35.324	106.805	25.726	-85.174
1300.000	36.207	109.669	29.304	-81.596
1400.000	36.984	112.381	32.964	-77.936
1500.000	37.665	114.956	36.697	-74.203
1600.000	38.257	117.406	40.494	-70.406
1700.000	38.771	119.742	44.346	-66.554
1800.000	39.214	121.970	48.246	-62.654
1900.000	39.594	124.101	52.187	-58.713
2000.000	39.918	126.140	56.163	-54.737
2100.000	40.193	128.095	60.169	-50.731
2200.000	40.425	129.970	64.200	-46.700
2300.000	40.622	131.772	68.253	-42.647
2400.000	40.788	133.504	72.323	-38.577
2500.000	40.928	135.172	76.409	-34.491
2600.000	41.049	136.780	80.508	-30.392
2700.000	41.153	138.331	84.618	-26.282
2800.000	41.245	139.829	88.738	-22.162
2900.000	41.330	141.278	92.867	-18.033
3000.000	41.410	142.681	97.004	-13.896
3100.000	41.487	144.040	101.149	-9.751
3200.000	41.566	145.358	105.302	-5.598
3300.000	41.646	146.638	109.462	-1.438
3400.000	41.731	147.883	113.631	2.731
3500.000	41.821	149.094	117.809	6.909
3600.000	41.918	150.273	121.996	11.096
3700.000	42.021	151.423	126.193	15.293
3800.000	42.130	152.545	130.400	19.500
3900.000	42.246	153.641	134.619	23.719
4000.000	42.368	154.712	138.849	27.949
4100.000	42.493	155.760	143.092	32.192
4200.000	42.621	156.785	147.348	36.448
4300.000	42.750	157.790	151.617	40.717
4400.000	42.877	158.774	155.898	44.998
4500.000	42.999	159.739	160.192	49.292
4600.000	43.113	160.685	164.498	53.598
4700.000	43.216	161.614	168.814	57.914
4800.000	43.303	162.525	173.140	62.240
4900.000	43.370	163.418	177.474	66.574
5000.000	43.412	164.295	181.814	70.914
5100.000	43.424	165.155	186.156	75.256
5200.000	43.399	165.998	190.497	79.597
5300.000	43.333	166.824	194.834	83.934
5400.000	43.218	167.633	199.162	88.262
5500.000	43.048	168.424	203.476	92.576
5600.000	42.815	169.198	207.770	96.870
5700.000	42.512	169.953	212.037	101.137
5800.000	42.130	170.689	216.269	105.369
5900.000	41.660	171.406	220.460	109.560
6000.000	41.095	172.101	224.598	113.698

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
HE	160	4.003	0.000	HE 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.196	24.917	-.951	-.951
200.000	4.877	28.068	-.492	-.492
298.150	5.099	30.067	0.000	0.000
300.000	5.101	30.099	.009	.009
400.000	5.085	31.568	.520	.520
500.000	4.988	32.693	1.024	1.024
600.000	4.916	33.595	1.518	1.518
700.000	4.916	34.352	2.009	2.009
800.000	4.979	35.012	2.504	2.504
900.000	5.040	35.602	3.005	3.005
1000.000	4.977	36.132	3.508	3.508
1100.000	4.976	36.606	4.005	4.005
1200.000	4.975	37.039	4.503	4.503
1300.000	4.974	37.437	5.000	5.000
1400.000	4.973	37.805	5.498	5.498
1500.000	4.972	38.149	5.995	5.995
1600.000	4.971	38.469	6.492	6.492
1700.000	4.971	38.771	6.989	6.989
1800.000	4.970	39.055	7.486	7.486
1900.000	4.970	39.324	7.983	7.983
2000.000	4.970	39.579	8.480	8.480
2100.000	4.970	39.821	8.977	8.977
2200.000	4.970	40.052	9.474	9.474
2300.000	4.969	40.273	9.971	9.971
2400.000	4.969	40.485	10.468	10.468
2500.000	4.969	40.687	10.965	10.965
2600.000	4.969	40.882	11.462	11.462
2700.000	4.969	41.070	11.959	11.959
2800.000	4.969	41.251	12.456	12.456
2900.000	4.969	41.425	12.953	12.953
3000.000	4.969	41.593	13.450	13.450
3100.000	4.969	41.756	13.947	13.947
3200.000	4.969	41.914	14.443	14.443
3300.000	4.969	42.067	14.940	14.940
3400.000	4.969	42.216	15.437	15.437
3500.000	4.969	42.360	15.934	15.934
3600.000	4.969	42.499	16.431	16.431
3700.000	4.969	42.636	16.928	16.928
3800.000	4.969	42.768	17.425	17.425
3900.000	4.969	42.897	17.922	17.922
4000.000	4.969	43.023	18.419	18.419
4100.000	4.969	43.146	18.916	18.916
4200.000	4.969	43.265	19.413	19.413
4300.000	4.969	43.382	19.909	19.909
4400.000	4.969	43.497	20.406	20.406
4500.000	4.968	43.608	20.903	20.903
4600.000	4.968	43.717	21.400	21.400
4700.000	4.968	43.824	21.897	21.897
4800.000	4.968	43.929	22.394	22.394
4900.000	4.968	44.031	22.890	22.890
5000.000	4.968	44.132	23.387	23.387
5100.000	4.968	44.230	23.884	23.884
5200.000	4.968	44.327	24.381	24.381
5300.000	4.969	44.421	24.878	24.878
5400.000	4.969	44.514	25.375	25.375
5500.000	4.969	44.605	25.871	25.871
5600.000	4.970	44.695	26.368	26.368
5700.000	4.970	44.783	26.865	26.865
5800.000	4.971	44.869	27.362	27.362
5900.000	4.971	44.954	27.859	27.859
6000.000	4.972	45.038	28.357	28.357

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
E-	161	.001	0.000	E- 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	2.519	.912	-.776	-.776
200.000	4.055	3.185	-.439	-.439
298.150	4.789	4.961	0.000	0.000
300.000	4.798	4.991	.009	.009
400.000	5.054	6.415	.504	.504
500.000	5.061	7.546	1.011	1.011
600.000	4.990	8.463	1.514	1.514
700.000	4.943	9.228	2.010	2.010
800.000	4.957	9.888	2.505	2.505
900.000	4.998	10.474	3.003	3.003
1000.000	4.967	11.001	3.502	3.502
1100.000	4.968	11.474	3.999	3.999
1200.000	4.968	11.906	4.496	4.496
1300.000	4.968	12.304	4.992	4.992
1400.000	4.968	12.672	5.489	5.489
1500.000	4.968	13.015	5.986	5.986
1600.000	4.968	13.336	6.483	6.483
1700.000	4.968	13.637	6.980	6.980
1800.000	4.968	13.921	7.476	7.476
1900.000	4.968	14.189	7.973	7.973
2000.000	4.968	14.444	8.470	8.470
2100.000	4.968	14.687	8.967	8.967
2200.000	4.968	14.918	9.464	9.464
2300.000	4.968	15.139	9.960	9.960
2400.000	4.968	15.350	10.457	10.457
2500.000	4.968	15.553	10.954	10.954
2600.000	4.968	15.748	11.451	11.451
2700.000	4.968	15.935	11.948	11.948
2800.000	4.968	16.116	12.445	12.445
2900.000	4.968	16.290	12.941	12.941
3000.000	4.968	16.459	13.438	13.438
3100.000	4.968	16.622	13.935	13.935
3200.000	4.968	16.779	14.432	14.432
3300.000	4.968	16.932	14.929	14.929
3400.000	4.968	17.081	15.425	15.425
3500.000	4.968	17.225	15.922	15.922
3600.000	4.968	17.364	16.419	16.419
3700.000	4.968	17.501	16.916	16.916
3800.000	4.968	17.633	17.413	17.413
3900.000	4.968	17.762	17.909	17.909
4000.000	4.968	17.888	18.406	18.406
4100.000	4.968	18.010	18.903	18.903
4200.000	4.968	18.130	19.400	19.400
4300.000	4.968	18.247	19.897	19.897
4400.000	4.968	18.361	20.393	20.393
4500.000	4.968	18.473	20.890	20.890
4600.000	4.968	18.582	21.387	21.387
4700.000	4.968	18.689	21.884	21.884
4800.000	4.968	18.794	22.381	22.381
4900.000	4.968	18.896	22.877	22.877
5000.000	4.968	18.996	23.374	23.374
5100.000	4.968	19.095	23.871	23.871
5200.000	4.969	19.191	24.368	24.368
5300.000	4.969	19.286	24.865	24.865
5400.000	4.969	19.379	25.362	25.362
5500.000	4.969	19.470	25.859	25.859
5600.000	4.969	19.559	26.355	26.355
5700.000	4.969	19.648	26.852	26.852
5800.000	4.970	19.734	27.349	27.349
5900.000	4.970	19.819	27.846	27.846
6000.000	4.970	19.902	28.343	28.343

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
H+	162	1.007	367.186	H 1 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.476	20.707	-.967	366.219
200.000	4.937	23.975	-.493	366.693
298.150	5.072	25.978	0.000	367.186
300.000	5.073	26.010	.009	367.195
400.000	5.045	27.468	.516	367.702
500.000	4.970	28.586	1.017	368.203
600.000	4.920	29.487	1.511	368.697
700.000	4.928	30.245	2.003	369.189
800.000	4.982	30.906	2.498	369.684
900.000	5.028	31.496	2.999	370.185
1000.000	4.969	32.024	3.500	370.686
1100.000	4.968	32.498	3.997	371.183
1200.000	4.968	32.930	4.494	371.680
1300.000	4.967	33.328	4.991	372.177
1400.000	4.967	33.696	5.487	372.673
1500.000	4.967	34.039	5.984	373.170
1600.000	4.967	34.359	6.481	373.667
1700.000	4.967	34.660	6.977	374.163
1800.000	4.967	34.944	7.474	374.660
1900.000	4.967	35.213	7.971	375.157
2000.000	4.967	35.467	8.467	375.653
2100.000	4.968	35.710	8.964	376.150
2200.000	4.968	35.941	9.461	376.647
2300.000	4.968	36.162	9.958	377.144
2400.000	4.968	36.373	10.455	377.641
2500.000	4.969	36.576	10.951	378.137
2600.000	4.969	36.771	11.448	378.634
2700.000	4.969	36.958	11.945	379.131
2800.000	4.969	37.139	12.442	379.628
2900.000	4.969	37.313	12.939	380.125
3000.000	4.969	37.482	13.436	380.622
3100.000	4.969	37.645	13.933	381.119
3200.000	4.969	37.803	14.430	381.616
3300.000	4.969	37.956	14.927	382.113
3400.000	4.969	38.104	15.424	382.610
3500.000	4.969	38.248	15.920	383.106
3600.000	4.969	38.388	16.417	383.603
3700.000	4.968	38.524	16.914	384.100
3800.000	4.968	38.657	17.411	384.597
3900.000	4.968	38.786	17.908	385.094
4000.000	4.967	38.911	18.404	385.590
4100.000	4.967	39.034	18.901	386.087
4200.000	4.967	39.154	19.398	386.584
4300.000	4.966	39.271	19.895	387.081
4400.000	4.966	39.385	20.391	387.577
4500.000	4.966	39.496	20.888	388.074
4600.000	4.966	39.605	21.384	388.570
4700.000	4.966	39.712	21.881	389.067
4800.000	4.966	39.817	22.378	389.564
4900.000	4.966	39.919	22.874	390.060
5000.000	4.966	40.020	23.371	390.557
5100.000	4.967	40.118	23.868	391.054
5200.000	4.968	40.214	24.364	391.550
5300.000	4.968	40.309	24.861	392.047
5400.000	4.970	40.402	25.358	392.544
5500.000	4.971	40.493	25.855	393.041
5600.000	4.972	40.583	26.352	393.538
5700.000	4.974	40.671	26.849	394.035
5800.000	4.976	40.757	27.347	394.533
5900.000	4.979	40.842	27.845	395.031
6000.000	4.982	40.926	28.343	395.529

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
H-	163	1.009	33.200	H 1 E- 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.476	20.709	-.967	32.233
200.000	4.937	23.977	-.493	32.707
298.150	5.073	25.980	0.000	33.200
300.000	5.074	26.012	.009	33.209
400.000	5.046	27.471	.516	33.716
500.000	4.970	28.588	1.017	34.217
600.000	4.920	29.489	1.511	34.711
700.000	4.928	30.247	2.003	35.203
800.000	4.982	30.909	2.498	35.698
900.000	5.028	31.499	2.999	36.199
1000.000	4.969	32.027	3.500	36.700
1100.000	4.968	32.500	3.997	37.197
1200.000	4.968	32.932	4.494	37.694
1300.000	4.967	33.330	4.991	38.191
1400.000	4.967	33.698	5.487	38.687
1500.000	4.967	34.041	5.984	39.184
1600.000	4.967	34.361	6.481	39.681
1700.000	4.968	34.663	6.977	40.177
1800.000	4.968	34.947	7.474	40.674
1900.000	4.968	35.215	7.971	41.171
2000.000	4.968	35.470	8.468	41.668
2100.000	4.968	35.712	8.965	42.165
2200.000	4.969	35.944	9.461	42.661
2300.000	4.969	36.164	9.958	43.158
2400.000	4.969	36.376	10.455	43.655
2500.000	4.969	36.579	10.952	44.152
2600.000	4.970	36.774	11.449	44.649
2700.000	4.970	36.961	11.946	45.146
2800.000	4.970	37.142	12.443	45.643
2900.000	4.970	37.316	12.940	46.140
3000.000	4.970	37.485	13.437	46.637
3100.000	4.970	37.648	13.934	47.134
3200.000	4.970	37.806	14.431	47.631
3300.000	4.969	37.958	14.928	48.128
3400.000	4.969	38.107	15.425	48.625
3500.000	4.969	38.251	15.922	49.122
3600.000	4.969	38.391	16.419	49.619
3700.000	4.968	38.527	16.915	50.115
3800.000	4.968	38.659	17.412	50.612
3900.000	4.968	38.789	17.909	51.109
4000.000	4.967	38.914	18.406	51.606
4100.000	4.967	39.037	18.903	52.103
4200.000	4.967	39.157	19.399	52.599
4300.000	4.966	39.274	19.896	53.096
4400.000	4.966	39.388	20.392	53.592
4500.000	4.966	39.499	20.889	54.089
4600.000	4.966	39.608	21.386	54.586
4700.000	4.966	39.715	21.882	55.082
4800.000	4.966	39.820	22.379	55.579
4900.000	4.966	39.922	22.875	56.075
5000.000	4.966	40.022	23.372	56.572
5100.000	4.967	40.121	23.869	57.069
5200.000	4.968	40.217	24.365	57.565
5300.000	4.969	40.312	24.862	58.062
5400.000	4.970	40.405	25.359	58.559
5500.000	4.971	40.496	25.856	59.056
5600.000	4.973	40.586	26.353	59.553
5700.000	4.975	40.674	26.851	60.051
5800.000	4.978	40.760	27.348	60.548
5900.000	4.981	40.845	27.846	61.046
6000.000	4.984	40.929	28.345	61.545

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
O-	164	16.001	24.300	O 1 E- 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.628	32.220	-1.001	23.299
200.000	5.114	35.604	-.510	23.790
298.150	5.233	37.676	0.000	24.300
300.000	5.233	37.709	.010	24.310
400.000	5.168	39.208	.531	24.831
500.000	5.053	40.349	1.042	25.342
600.000	4.973	41.263	1.542	25.842
700.000	4.964	42.027	2.039	26.339
800.000	5.013	42.693	2.537	26.837
900.000	5.058	43.286	3.041	27.341
1000.000	4.989	43.818	3.545	27.845
1100.000	4.986	44.293	4.044	28.344
1200.000	4.984	44.727	4.542	28.842
1300.000	4.982	45.126	5.041	29.341
1400.000	4.980	45.495	5.539	29.839
1500.000	4.978	45.838	6.037	30.337
1600.000	4.977	46.159	6.534	30.834
1700.000	4.976	46.461	7.032	31.332
1800.000	4.975	46.745	7.530	31.830
1900.000	4.974	47.014	8.027	32.327
2000.000	4.973	47.270	8.524	32.824
2100.000	4.973	47.512	9.022	33.322
2200.000	4.972	47.744	9.519	33.819
2300.000	4.972	47.965	10.016	34.316
2400.000	4.971	48.176	10.513	34.813
2500.000	4.971	48.379	11.010	35.310
2600.000	4.971	48.574	11.507	35.807
2700.000	4.971	48.762	12.005	36.305
2800.000	4.971	48.942	12.502	36.802
2900.000	4.971	49.117	12.999	37.299
3000.000	4.971	49.285	13.496	37.796
3100.000	4.971	49.448	13.993	38.293
3200.000	4.971	49.606	14.490	38.790
3300.000	4.971	49.759	14.987	39.287
3400.000	4.971	49.907	15.484	39.784
3500.000	4.971	50.052	15.981	40.281
3600.000	4.971	50.191	16.478	40.778
3700.000	4.970	50.328	16.975	41.275
3800.000	4.970	50.460	17.472	41.772
3900.000	4.970	50.589	17.969	42.269
4000.000	4.970	50.715	18.466	42.766
4100.000	4.970	50.838	18.963	43.263
4200.000	4.970	50.958	19.460	43.760
4300.000	4.970	51.075	19.957	44.257
4400.000	4.970	51.189	20.454	44.754
4500.000	4.970	51.301	20.951	45.251
4600.000	4.970	51.410	21.448	45.748
4700.000	4.969	51.517	21.945	46.245
4800.000	4.969	51.621	22.442	46.742
4900.000	4.969	51.724	22.939	47.239
5000.000	4.969	51.824	23.436	47.736
5100.000	4.969	51.923	23.933	48.233
5200.000	4.969	52.019	24.430	48.730
5300.000	4.969	52.114	24.927	49.227
5400.000	4.969	52.207	25.423	49.723
5500.000	4.969	52.298	25.920	50.220
5600.000	4.969	52.387	26.417	50.717
5700.000	4.969	52.475	26.914	51.214
5800.000	4.969	52.562	27.411	51.711
5900.000	4.970	52.647	27.908	52.208
6000.000	4.970	52.730	28.405	52.705

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
OH+	165	17.007	314.800	H 1 O 1 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.235	36.246	-1.352	313.448
200.000	6.902	40.807	-.690	314.110
298.150	7.102	43.610	0.000	314.800
300.000	7.104	43.655	.013	314.813
400.000	7.083	45.699	.723	315.523
500.000	7.013	47.272	1.428	316.228
600.000	7.006	48.548	2.128	316.928
700.000	7.107	49.634	2.833	317.633
800.000	7.297	50.595	3.553	318.353
900.000	7.493	51.466	4.293	319.093
1000.000	7.545	52.261	5.046	319.846
1100.000	7.685	52.986	5.808	320.608
1200.000	7.815	53.661	6.583	321.383
1300.000	7.936	54.291	7.371	322.171
1400.000	8.047	54.883	8.170	322.970
1500.000	8.150	55.442	8.980	323.780
1600.000	8.245	55.971	9.800	324.600
1700.000	8.333	56.474	10.629	325.429
1800.000	8.414	56.952	11.466	326.266
1900.000	8.488	57.409	12.311	327.111
2000.000	8.558	57.847	13.164	327.964
2100.000	8.622	58.266	14.023	328.823
2200.000	8.681	58.668	14.888	329.688
2300.000	8.737	59.055	15.759	330.559
2400.000	8.788	59.428	16.635	331.435
2500.000	8.837	59.788	17.516	332.316
2600.000	8.882	60.135	18.402	333.202
2700.000	8.925	60.471	19.293	334.093
2800.000	8.966	60.797	20.187	334.987
2900.000	9.004	61.112	21.086	335.886
3000.000	9.042	61.418	21.988	336.788
3100.000	9.078	61.715	22.894	337.694
3200.000	9.113	62.004	23.804	338.604
3300.000	9.148	62.285	24.717	339.517
3400.000	9.182	62.558	25.633	340.433
3500.000	9.216	62.825	26.553	341.353
3600.000	9.250	63.085	27.476	342.276
3700.000	9.284	63.339	28.403	343.203
3800.000	9.319	63.587	29.333	344.133
3900.000	9.353	63.830	30.267	345.067
4000.000	9.389	64.067	31.204	346.004
4100.000	9.425	64.299	32.145	346.945
4200.000	9.462	64.527	33.089	347.889
4300.000	9.500	64.750	34.037	348.837
4400.000	9.539	64.969	34.989	349.789
4500.000	9.578	65.183	35.945	350.745
4600.000	9.618	65.394	36.905	351.705
4700.000	9.660	65.602	37.869	352.669
4800.000	9.702	65.805	38.837	353.637
4900.000	9.744	66.006	39.809	354.609
5000.000	9.788	66.203	40.785	355.585
5100.000	9.832	66.398	41.766	356.566
5200.000	9.876	66.589	42.752	357.552
5300.000	9.920	66.777	43.742	358.542
5400.000	9.965	66.963	44.736	359.536
5500.000	10.009	67.146	45.735	360.535
5600.000	10.053	67.327	46.738	361.538
5700.000	10.097	67.506	47.745	362.545
5800.000	10.140	67.682	48.757	363.557
5900.000	10.181	67.855	49.773	364.573
6000.000	10.222	68.027	50.793	365.593

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
OH-	166	17.009	-34.400	H 1 O 1 E- 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.242	33.789	-1.350	-35.750
200.000	6.892	38.348	-.689	-35.089
298.150	7.089	41.145	0.000	-34.400
300.000	7.091	41.191	.013	-34.387
400.000	7.066	43.230	.722	-33.678
500.000	6.982	44.798	1.424	-32.976
600.000	6.945	46.067	2.120	-32.280
700.000	7.002	47.140	2.817	-31.583
800.000	7.138	48.083	3.523	-30.877
900.000	7.280	48.933	4.244	-30.156
1000.000	7.294	49.702	4.975	-29.425
1100.000	7.416	50.403	5.710	-28.690
1200.000	7.530	51.054	6.458	-27.942
1300.000	7.639	51.661	7.216	-27.184
1400.000	7.741	52.231	7.985	-26.415
1500.000	7.838	52.768	8.764	-25.636
1600.000	7.929	53.277	9.553	-24.847
1700.000	8.014	53.760	10.350	-24.050
1800.000	8.095	54.220	11.155	-23.245
1900.000	8.170	54.660	11.969	-22.431
2000.000	8.241	55.081	12.789	-21.611
2100.000	8.308	55.485	13.617	-20.783
2200.000	8.371	55.873	14.451	-19.949
2300.000	8.429	56.246	15.291	-19.109
2400.000	8.484	56.606	16.136	-18.264
2500.000	8.536	56.953	16.987	-17.413
2600.000	8.584	57.289	17.843	-16.557
2700.000	8.629	57.614	18.704	-15.696
2800.000	8.672	57.928	19.569	-14.831
2900.000	8.711	58.234	20.438	-13.962
3000.000	8.748	58.530	21.311	-13.089
3100.000	8.783	58.817	22.188	-12.212
3200.000	8.816	59.096	23.068	-11.332
3300.000	8.846	59.368	23.951	-10.449
3400.000	8.875	59.632	24.837	-9.563
3500.000	8.902	59.890	25.726	-8.674
3600.000	8.928	60.141	26.618	-7.782
3700.000	8.952	60.386	27.512	-6.888
3800.000	8.975	60.625	28.408	-5.992
3900.000	8.997	60.859	29.307	-5.093
4000.000	9.018	61.087	30.207	-4.193
4100.000	9.038	61.310	31.110	-3.290
4200.000	9.057	61.528	32.015	-2.385
4300.000	9.075	61.741	32.921	-1.479
4400.000	9.093	61.950	33.830	-.570
4500.000	9.110	62.154	34.740	.340
4600.000	9.127	62.355	35.652	1.252
4700.000	9.143	62.551	36.565	2.165
4800.000	9.160	62.744	37.480	3.080
4900.000	9.176	62.933	38.397	3.997
5000.000	9.192	63.119	39.316	4.916
5100.000	9.208	63.301	40.236	5.836
5200.000	9.224	63.480	41.157	6.757
5300.000	9.239	63.656	42.080	7.680
5400.000	9.255	63.828	43.005	8.605
5500.000	9.271	63.998	43.931	9.531
5600.000	9.287	64.166	44.859	10.459
5700.000	9.304	64.330	45.789	11.389
5800.000	9.320	64.492	46.720	12.320
5900.000	9.337	64.651	47.653	13.253
6000.000	9.353	64.809	48.587	14.187

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
H3O+	167	19.023	138.900	H 3 O 1 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.105	36.142	-1.845	137.055
200.000	9.634	41.984	-.988	137.912
298.150	10.270	45.992	0.000	138.900
300.000	10.274	46.057	.019	138.919
400.000	10.034	48.991	1.038	139.938
500.000	9.661	51.187	2.021	140.921
600.000	9.629	52.938	2.982	141.882
700.000	10.146	54.454	3.966	142.866
800.000	11.152	55.870	5.028	143.928
900.000	12.320	57.252	6.202	145.102
1000.000	13.053	58.595	7.477	146.377
1100.000	13.531	59.862	8.807	147.707
1200.000	13.978	61.058	10.183	149.083
1300.000	14.396	62.194	11.601	150.501
1400.000	14.785	63.275	13.061	151.961
1500.000	15.147	64.308	14.558	153.458
1600.000	15.484	65.296	16.089	154.989
1700.000	15.797	66.244	17.654	156.554
1800.000	16.087	67.156	19.248	158.148
1900.000	16.356	68.033	20.870	159.770
2000.000	16.604	68.878	22.518	161.418
2100.000	16.833	69.694	24.190	163.090
2200.000	17.044	70.482	25.884	164.784
2300.000	17.239	71.244	27.599	166.499
2400.000	17.418	71.981	29.332	168.232
2500.000	17.582	72.696	31.082	169.982
2600.000	17.732	73.388	32.848	171.748
2700.000	17.870	74.060	34.628	173.528
2800.000	17.996	74.712	36.421	175.321
2900.000	18.111	75.346	38.227	177.127
3000.000	18.216	75.962	40.043	178.943
3100.000	18.312	76.561	41.870	180.770
3200.000	18.399	77.143	43.705	182.605
3300.000	18.479	77.711	45.549	184.449
3400.000	18.552	78.264	47.401	186.301
3500.000	18.619	78.802	49.259	188.159
3600.000	18.680	79.328	51.124	190.024
3700.000	18.736	79.840	52.995	191.895
3800.000	18.787	80.340	54.871	193.771
3900.000	18.834	80.829	56.752	195.652
4000.000	18.878	81.307	58.638	197.538
4100.000	18.919	81.773	60.528	199.428
4200.000	18.958	82.230	62.422	201.322
4300.000	18.994	82.676	64.319	203.219
4400.000	19.028	83.113	66.221	205.121
4500.000	19.060	83.541	68.125	207.025
4600.000	19.092	83.960	70.033	208.933
4700.000	19.122	84.371	71.943	210.843
4800.000	19.151	84.774	73.857	212.757
4900.000	19.179	85.169	75.773	214.673
5000.000	19.207	85.557	77.693	216.593
5100.000	19.234	85.938	79.615	218.515
5200.000	19.260	86.311	81.539	220.439
5300.000	19.286	86.679	83.467	222.367
5400.000	19.311	87.039	85.397	224.297
5500.000	19.336	87.394	87.329	226.229
5600.000	19.360	87.742	89.264	228.164
5700.000	19.382	88.085	91.201	230.101
5800.000	19.404	88.423	93.140	232.040
5900.000	19.424	88.755	95.082	233.982
6000.000	19.443	89.081	97.025	235.925

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
NO+	168	30.007	236.660	N 1 C 1 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.222	39.957	-1.308	235.312
200.000	6.878	44.505	-.688	235.972
298.150	7.091	47.299	0.000	236.660
300.000	7.093	47.344	.013	236.673
400.000	7.103	49.389	.724	237.384
500.000	7.080	50.971	1.433	238.093
600.000	7.127	52.264	2.142	238.802
700.000	7.283	53.373	2.862	239.522
800.000	7.521	54.361	3.602	240.262
900.000	7.746	55.260	4.366	241.026
1000.000	7.799	56.082	5.145	241.805
1100.000	7.921	56.831	5.931	242.591
1200.000	8.031	57.525	6.729	243.389
1300.000	8.132	58.172	7.537	244.197
1400.000	8.223	58.778	8.355	245.015
1500.000	8.306	59.348	9.181	245.841
1600.000	8.380	59.886	10.016	246.676
1700.000	8.447	60.397	10.857	247.517
1800.000	8.506	60.881	11.705	248.365
1900.000	8.560	61.342	12.558	249.218
2000.000	8.607	61.783	13.417	250.077
2100.000	8.649	62.204	14.279	250.939
2200.000	8.686	62.607	15.146	251.806
2300.000	8.719	62.994	16.017	252.677
2400.000	8.748	63.365	16.890	253.550
2500.000	8.773	63.723	17.766	254.426
2600.000	8.796	64.068	18.644	255.304
2700.000	8.815	64.400	19.525	256.185
2800.000	8.832	64.721	20.407	257.067
2900.000	8.848	65.031	21.291	257.951
3000.000	8.861	65.331	22.177	258.837
3100.000	8.873	65.622	23.064	259.724
3200.000	8.884	65.904	23.951	260.611
3300.000	8.894	66.177	24.840	261.500
3400.000	8.904	66.443	25.730	262.390
3500.000	8.913	66.701	26.621	263.281
3600.000	8.921	66.952	27.513	264.173
3700.000	8.930	67.197	28.405	265.065
3800.000	8.938	67.435	29.299	265.959
3900.000	8.947	67.668	30.193	266.853
4000.000	8.955	67.894	31.088	267.748
4100.000	8.964	68.115	31.984	268.644
4200.000	8.974	68.331	32.881	269.541
4300.000	8.983	68.543	33.779	270.439
4400.000	8.993	68.749	34.678	271.338
4500.000	9.003	68.952	35.577	272.237
4600.000	9.013	69.150	36.478	273.138
4700.000	9.024	69.343	37.380	274.040
4800.000	9.034	69.534	38.283	274.943
4900.000	9.045	69.720	39.187	275.847
5000.000	9.055	69.903	40.092	276.752
5100.000	9.065	70.082	40.998	277.658
5200.000	9.074	70.258	41.905	278.565
5300.000	9.082	70.431	42.812	279.472
5400.000	9.089	70.601	43.721	280.381
5500.000	9.095	70.768	44.630	281.290
5600.000	9.100	70.932	45.540	282.200
5700.000	9.103	71.093	46.450	283.110
5800.000	9.103	71.251	47.361	284.021
5900.000	9.101	71.407	48.271	284.931
6000.000	9.096	71.560	49.181	285.841

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
NO2-	169	46.009	-85.850	N 1 O 2 E- 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	7.288	47.536	-1.638	-87.488
200.000	8.292	52.902	-.858	-86.708
298.150	9.187	56.381	0.000	-85.850
300.000	9.203	56.439	.017	-85.833
400.000	10.035	59.202	.980	-84.870
500.000	10.789	61.524	2.021	-83.829
600.000	11.460	63.552	3.135	-82.715
700.000	12.028	65.363	4.310	-81.540
800.000	12.467	66.999	5.536	-80.314
900.000	12.738	68.485	6.798	-79.052
1000.000	12.792	69.832	8.076	-77.774
1100.000	12.928	71.058	9.362	-76.488
1200.000	13.051	72.188	10.662	-75.188
1300.000	13.161	73.237	11.972	-73.878
1400.000	13.258	74.216	13.293	-72.557
1500.000	13.343	75.134	14.623	-71.227
1600.000	13.419	75.997	15.962	-69.888
1700.000	13.485	76.813	17.307	-68.543
1800.000	13.541	77.585	18.658	-67.192
1900.000	13.590	78.319	20.015	-65.835
2000.000	13.632	79.017	21.376	-64.474
2100.000	13.667	79.683	22.741	-63.109
2200.000	13.696	80.319	24.109	-61.741
2300.000	13.720	80.929	25.480	-60.370
2400.000	13.740	81.513	26.853	-58.997
2500.000	13.755	82.074	28.228	-57.622
2600.000	13.768	82.614	29.604	-56.246
2700.000	13.777	83.134	30.981	-54.869
2800.000	13.784	83.635	32.359	-53.491
2900.000	13.788	84.119	33.738	-52.112
3000.000	13.791	84.586	35.117	-50.733
3100.000	13.793	85.039	36.496	-49.354
3200.000	13.795	85.476	37.876	-47.974
3300.000	13.795	85.901	39.255	-46.595
3400.000	13.796	86.313	40.635	-45.215
3500.000	13.796	86.713	42.014	-43.836
3600.000	13.797	87.101	43.394	-42.456
3700.000	13.798	87.479	44.774	-41.076
3800.000	13.800	87.847	46.154	-39.696
3900.000	13.802	88.206	47.534	-38.316
4000.000	13.805	88.555	48.914	-36.936
4100.000	13.810	88.896	50.295	-35.555
4200.000	13.814	89.229	51.676	-34.174
4300.000	13.820	89.554	53.058	-32.792
4400.000	13.826	89.872	54.440	-31.410
4500.000	13.834	90.183	55.823	-30.027
4600.000	13.841	90.487	57.207	-28.643
4700.000	13.849	90.785	58.591	-27.259
4800.000	13.857	91.076	59.977	-25.873
4900.000	13.866	91.362	61.363	-24.487
5000.000	13.874	91.642	62.750	-23.100
5100.000	13.881	91.917	64.138	-21.712
5200.000	13.888	92.187	65.526	-20.324
5300.000	13.893	92.451	66.915	-18.935
5400.000	13.897	92.711	68.305	-17.545
5500.000	13.899	92.966	69.694	-16.156
5600.000	13.898	93.217	71.084	-14.766
5700.000	13.894	93.463	72.474	-13.376
5800.000	13.887	93.704	73.863	-11.987
5900.000	13.876	93.941	75.251	-10.599
6000.000	13.860	94.175	76.638	-9.212

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
O2-	170	32.001	-11.390	O 2 E- 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.048	42.618	-1.337	-12.727
200.000	6.797	47.059	-.692	-12.082
298.150	7.266	49.866	0.000	-11.390
300.000	7.274	49.912	.013	-11.377
400.000	7.592	52.051	.758	-10.632
500.000	7.834	53.772	1.529	-9.861
600.000	8.051	55.219	2.324	-9.066
700.000	8.263	56.476	3.139	-8.251
800.000	8.459	57.593	3.976	-7.414
900.000	8.601	58.598	4.830	-6.560
1000.000	8.617	59.507	5.692	-5.698
1100.000	8.675	60.331	6.556	-4.834
1200.000	8.728	61.088	7.427	-3.963
1300.000	8.776	61.789	8.302	-3.088
1400.000	8.819	62.440	9.182	-2.208
1500.000	8.859	63.050	10.066	-1.324
1600.000	8.894	63.623	10.953	-.437
1700.000	8.926	64.163	11.844	.454
1800.000	8.955	64.674	12.738	1.348
1900.000	8.981	65.159	13.635	2.245
2000.000	9.004	65.620	14.534	3.144
2100.000	9.025	66.060	15.436	4.046
2200.000	9.043	66.481	16.339	4.949
2300.000	9.060	66.883	17.245	5.855
2400.000	9.075	67.269	18.151	6.761
2500.000	9.089	67.640	19.059	7.669
2600.000	9.101	67.996	19.969	8.579
2700.000	9.112	68.340	20.880	9.490
2800.000	9.122	68.672	21.791	10.401
2900.000	9.132	68.992	22.704	11.314
3000.000	9.141	69.302	23.618	12.228
3100.000	9.150	69.602	24.532	13.142
3200.000	9.159	69.892	25.448	14.058
3300.000	9.167	70.174	26.364	14.974
3400.000	9.175	70.448	27.281	15.891
3500.000	9.184	70.714	28.199	16.809
3600.000	9.193	70.973	29.118	17.728
3700.000	9.202	71.225	30.038	18.648
3800.000	9.211	71.470	30.958	19.568
3900.000	9.221	71.710	31.880	20.490
4000.000	9.231	71.943	32.802	21.412
4100.000	9.241	72.171	33.726	22.336
4200.000	9.253	72.394	34.651	23.261
4300.000	9.264	72.612	35.577	24.187
4400.000	9.276	72.825	36.504	25.114
4500.000	9.289	73.034	37.432	26.042
4600.000	9.303	73.238	38.361	26.971
4700.000	9.316	73.438	39.292	27.902
4800.000	9.330	73.635	40.225	28.835
4900.000	9.345	73.827	41.158	29.768
5000.000	9.359	74.016	42.094	30.704
5100.000	9.374	74.202	43.030	31.640
5200.000	9.389	74.384	43.968	32.578
5300.000	9.404	74.563	44.908	33.518
5400.000	9.419	74.739	45.849	34.459
5500.000	9.434	74.912	46.792	35.402
5600.000	9.448	75.082	47.736	36.346
5700.000	9.462	75.249	48.681	37.291
5800.000	9.475	75.414	49.628	38.238
5900.000	9.487	75.576	50.576	39.186
6000.000	9.498	75.735	51.526	40.136

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
H2+	171	2.015	359.627	H 2 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	5.189	24.515	-1.232	358.395
200.000	6.321	28.505	-.650	358.977
298.150	6.852	31.142	0.000	359.627
300.000	6.859	31.186	.013	359.640
400.000	7.043	33.190	.710	360.337
500.000	7.060	34.765	1.416	361.043
600.000	7.038	36.050	2.121	361.748
700.000	7.054	37.136	2.825	362.452
800.000	7.126	38.082	3.533	363.160
900.000	7.219	38.926	4.250	363.877
1000.000	7.241	39.689	4.975	364.602
1100.000	7.346	40.384	5.704	365.331
1200.000	7.448	41.028	6.444	366.071
1300.000	7.548	41.628	7.194	366.821
1400.000	7.645	42.191	7.953	367.580
1500.000	7.739	42.722	8.722	368.349
1600.000	7.831	43.224	9.501	369.128
1700.000	7.920	43.701	10.289	369.916
1800.000	8.007	44.157	11.085	370.712
1900.000	8.091	44.592	11.890	371.517
2000.000	8.173	45.009	12.703	372.330
2100.000	8.252	45.410	13.524	373.151
2200.000	8.329	45.795	14.353	373.980
2300.000	8.403	46.167	15.190	374.817
2400.000	8.475	46.526	16.034	375.661
2500.000	8.545	46.874	16.885	376.512
2600.000	8.612	47.210	17.743	377.370
2700.000	8.677	47.536	18.607	378.234
2800.000	8.740	47.853	19.478	379.105
2900.000	8.801	48.161	20.355	379.982
3000.000	8.860	48.460	21.238	380.865
3100.000	8.917	48.752	22.127	381.754
3200.000	8.972	49.036	23.022	382.649
3300.000	9.025	49.313	23.921	383.548
3400.000	9.077	49.583	24.827	384.454
3500.000	9.126	49.847	25.737	385.364
3600.000	9.175	50.104	26.652	386.279
3700.000	9.221	50.356	27.572	387.199
3800.000	9.266	50.603	28.496	388.123
3900.000	9.310	50.844	29.425	389.052
4000.000	9.353	51.081	30.358	389.985
4100.000	9.394	51.312	31.295	390.922
4200.000	9.435	51.539	32.237	391.864
4300.000	9.475	51.761	33.182	392.809
4400.000	9.513	51.979	34.132	393.759
4500.000	9.551	52.194	35.085	394.712
4600.000	9.589	52.404	36.042	395.669
4700.000	9.626	52.611	37.003	396.630
4800.000	9.663	52.814	37.967	397.594
4900.000	9.700	53.013	38.935	398.562
5000.000	9.736	53.210	39.907	399.534
5100.000	9.773	53.403	40.883	400.510
5200.000	9.810	53.593	41.862	401.489
5300.000	9.847	53.780	42.845	402.472
5400.000	9.885	53.965	43.831	403.458
5500.000	9.923	54.146	44.821	404.448
5600.000	9.962	54.325	45.816	405.443
5700.000	10.002	54.502	46.814	406.441
5800.000	10.044	54.677	47.816	407.443
5900.000	10.086	54.849	48.823	408.450
6000.000	10.130	55.018	49.834	409.461

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
H2O+	172	18.015	231.748	H 2 O 1 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.728	36.745	-1.527	230.221
200.000	7.821	41.793	-.793	230.955
298.150	8.257	45.010	0.000	231.748
300.000	8.262	45.063	.015	231.763
400.000	8.387	47.461	.849	232.597
500.000	8.440	49.338	1.690	233.438
600.000	8.576	50.887	2.540	234.288
700.000	8.858	52.228	3.411	235.159
800.000	9.261	53.437	4.316	236.064
900.000	9.668	54.552	5.263	237.011
1000.000	9.871	55.584	6.243	237.991
1100.000	10.181	56.539	7.245	238.993
1200.000	10.471	57.438	8.278	240.026
1300.000	10.743	58.287	9.339	241.087
1400.000	10.996	59.092	10.426	242.174
1500.000	11.233	59.859	11.538	243.286
1600.000	11.455	60.591	12.672	244.420
1700.000	11.661	61.292	13.828	245.576
1800.000	11.853	61.964	15.004	246.752
1900.000	12.031	62.610	16.198	247.946
2000.000	12.197	63.231	17.410	249.158
2100.000	12.351	63.830	18.637	250.385
2200.000	12.494	64.408	19.880	251.628
2300.000	12.627	64.966	21.136	252.884
2400.000	12.750	65.506	22.405	254.153
2500.000	12.863	66.029	23.686	255.434
2600.000	12.968	66.535	24.977	256.725
2700.000	13.065	67.027	26.279	258.027
2800.000	13.155	67.504	27.590	259.338
2900.000	13.238	67.967	28.910	260.658
3000.000	13.315	68.417	30.238	261.986
3100.000	13.387	68.855	31.573	263.321
3200.000	13.453	69.281	32.915	264.663
3300.000	13.514	69.696	34.263	266.011
3400.000	13.571	70.100	35.617	267.365
3500.000	13.625	70.494	36.977	268.725
3600.000	13.674	70.879	38.342	270.090
3700.000	13.721	71.254	39.712	271.460
3800.000	13.765	71.620	41.086	272.834
3900.000	13.806	71.979	42.465	274.213
4000.000	13.846	72.329	43.847	275.595
4100.000	13.883	72.671	45.234	276.982
4200.000	13.919	73.006	46.624	278.372
4300.000	13.954	73.334	48.018	279.766
4400.000	13.987	73.655	49.415	281.163
4500.000	14.020	73.970	50.815	282.563
4600.000	14.052	74.278	52.219	283.967
4700.000	14.083	74.581	53.625	285.373
4800.000	14.113	74.878	55.035	286.783
4900.000	14.143	75.169	56.448	288.196
5000.000	14.173	75.455	57.864	289.612
5100.000	14.202	75.736	59.283	291.031
5200.000	14.231	76.012	60.704	292.452
5300.000	14.259	76.283	62.129	293.877
5400.000	14.287	76.550	63.556	295.304
5500.000	14.315	76.812	64.986	296.734
5600.000	14.342	77.070	66.419	298.167
5700.000	14.369	77.325	67.855	299.603
5800.000	14.394	77.575	69.293	301.041
5900.000	14.419	77.821	70.733	302.481
6000.000	14.443	78.064	72.176	303.924

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N+	173	14.007	446.772	N 1 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.196	32.755	-.951	445.821
200.000	4.877	35.906	-.492	446.280
298.150	5.099	37.905	0.000	446.772
300.000	5.101	37.937	.009	446.781
400.000	5.085	39.406	.520	447.292
500.000	4.988	40.531	1.024	447.796
600.000	4.917	41.433	1.518	448.290
700.000	4.917	42.190	2.009	448.781
800.000	4.980	42.850	2.504	449.276
900.000	5.042	43.441	3.006	449.778
1000.000	4.979	43.971	3.508	450.280
1100.000	4.980	44.445	4.006	450.778
1200.000	4.980	44.879	4.504	451.276
1300.000	4.979	45.277	5.002	451.774
1400.000	4.978	45.646	5.500	452.272
1500.000	4.976	45.989	5.998	452.770
1600.000	4.974	46.311	6.495	453.267
1700.000	4.972	46.612	6.992	453.764
1800.000	4.970	46.896	7.490	454.262
1900.000	4.968	47.165	7.986	454.758
2000.000	4.967	47.420	8.483	455.255
2100.000	4.967	47.662	8.980	455.752
2200.000	4.967	47.893	9.477	456.249
2300.000	4.968	48.114	9.973	456.745
2400.000	4.970	48.325	10.470	457.242
2500.000	4.974	48.528	10.968	457.740
2600.000	4.978	48.723	11.465	458.237
2700.000	4.984	48.911	11.963	458.735
2800.000	4.992	49.093	12.462	459.234
2900.000	5.001	49.268	12.962	459.734
3000.000	5.011	49.438	13.462	460.234
3100.000	5.024	49.602	13.964	460.736
3200.000	5.038	49.762	14.467	461.239
3300.000	5.053	49.917	14.972	461.744
3400.000	5.071	50.068	15.478	462.250
3500.000	5.090	50.216	15.986	462.758
3600.000	5.112	50.359	16.496	463.268
3700.000	5.135	50.500	17.008	463.780
3800.000	5.160	50.637	17.523	464.295
3900.000	5.187	50.771	18.040	464.812
4000.000	5.216	50.903	18.561	465.333
4100.000	5.247	51.032	19.084	465.856
4200.000	5.280	51.159	19.610	466.382
4300.000	5.315	51.284	20.140	466.912
4400.000	5.351	51.406	20.673	467.445
4500.000	5.389	51.527	21.210	467.982
4600.000	5.429	51.646	21.751	468.523
4700.000	5.470	51.763	22.296	469.068
4800.000	5.513	51.879	22.845	469.617
4900.000	5.558	51.993	23.399	470.171
5000.000	5.604	52.106	23.957	470.729
5100.000	5.651	52.217	24.519	471.291
5200.000	5.700	52.327	25.087	471.859
5300.000	5.749	52.436	25.659	472.431
5400.000	5.799	52.544	26.237	473.009
5500.000	5.851	52.651	26.819	473.591
5600.000	5.902	52.757	27.407	474.179
5700.000	5.955	52.862	28.000	474.772
5800.000	6.008	52.966	28.598	475.370
5900.000	6.061	53.069	29.201	475.973
6000.000	6.114	53.171	29.810	476.582

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
NO2+	174	46.007	261.493	N 1 O 2 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.832	48.699	-1.597	259.896
200.000	8.134	53.863	-.845	260.648
298.150	9.025	57.285	0.000	261.493
300.000	9.040	57.343	.017	261.510
400.000	9.720	60.040	.956	262.449
500.000	10.295	62.272	1.957	263.450
600.000	10.839	64.197	3.014	264.507
700.000	11.375	65.909	4.125	265.618
800.000	11.880	67.461	5.288	266.781
900.000	12.281	68.885	6.497	267.990
1000.000	12.458	70.191	7.737	269.230
1100.000	12.635	71.387	8.992	270.485
1200.000	12.793	72.493	10.263	271.756
1300.000	12.934	73.523	11.550	273.043
1400.000	13.060	74.486	12.850	274.343
1500.000	13.171	75.391	14.161	275.654
1600.000	13.268	76.244	15.483	276.976
1700.000	13.353	77.051	16.814	278.307
1800.000	13.426	77.816	18.153	279.646
1900.000	13.489	78.544	19.499	280.992
2000.000	13.543	79.237	20.851	282.344
2100.000	13.588	79.899	22.208	283.701
2200.000	13.626	80.532	23.568	285.061
2300.000	13.657	81.139	24.933	286.426
2400.000	13.683	81.720	26.300	287.793
2500.000	13.703	82.279	27.669	289.162
2600.000	13.718	82.817	29.040	290.533
2700.000	13.730	83.335	30.412	291.905
2800.000	13.739	83.834	31.786	293.279
2900.000	13.745	84.317	33.160	294.653
3000.000	13.750	84.783	34.535	296.028
3100.000	13.752	85.234	35.910	297.403
3200.000	13.754	85.670	37.285	298.778
3300.000	13.755	86.094	38.661	300.154
3400.000	13.756	86.504	40.036	301.529
3500.000	13.757	86.903	41.412	302.905
3600.000	13.758	87.291	42.788	304.281
3700.000	13.760	87.668	44.164	305.657
3800.000	13.762	88.035	45.540	307.033
3900.000	13.765	88.392	46.916	308.409
4000.000	13.770	88.741	48.293	309.786
4100.000	13.775	89.081	49.670	311.163
4200.000	13.782	89.413	51.048	312.541
4300.000	13.789	89.737	52.427	313.920
4400.000	13.798	90.054	53.806	315.299
4500.000	13.808	90.364	55.186	316.679
4600.000	13.818	90.668	56.567	318.060
4700.000	13.828	90.965	57.950	319.443
4800.000	13.839	91.256	59.333	320.826
4900.000	13.850	91.542	60.718	322.211
5000.000	13.861	91.822	62.103	323.596
5100.000	13.871	92.097	63.490	324.983
5200.000	13.880	92.366	64.877	326.370
5300.000	13.887	92.630	66.266	327.759
5400.000	13.892	92.890	67.655	329.148
5500.000	13.895	93.145	69.044	330.537
5600.000	13.894	93.395	70.434	331.927
5700.000	13.889	93.641	71.823	333.316
5800.000	13.880	93.883	73.211	334.704
5900.000	13.866	94.120	74.599	336.092
6000.000	13.846	94.353	75.984	337.477

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N2+	175	28.015	357.552	N 2 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	5.875	38.476	-1.331	356.221
200.000	6.827	42.887	-.689	356.863
298.150	7.147	45.686	0.000	357.552
300.000	7.150	45.732	.013	357.565
400.000	7.164	47.795	.730	358.282
500.000	7.105	49.387	1.444	358.996
600.000	7.118	50.681	2.154	359.706
700.000	7.265	51.788	2.872	360.424
800.000	7.519	52.774	3.610	361.162
900.000	7.767	53.675	4.375	361.927
1000.000	7.808	54.498	5.157	362.709
1100.000	7.930	55.248	5.944	363.496
1200.000	8.041	55.943	6.743	364.295
1300.000	8.143	56.591	7.552	365.104
1400.000	8.234	57.197	8.371	365.923
1500.000	8.317	57.768	9.198	366.750
1600.000	8.391	58.308	10.034	367.586
1700.000	8.458	58.818	10.876	368.428
1800.000	8.518	59.304	11.725	369.277
1900.000	8.571	59.765	12.580	370.132
2000.000	8.618	60.206	13.439	370.991
2100.000	8.660	60.628	14.303	371.855
2200.000	8.697	61.032	15.171	372.723
2300.000	8.730	61.419	16.043	373.595
2400.000	8.759	61.791	16.917	374.469
2500.000	8.784	62.149	17.794	375.346
2600.000	8.806	62.494	18.674	376.226
2700.000	8.826	62.827	19.555	377.107
2800.000	8.843	63.148	20.439	377.991
2900.000	8.858	63.459	21.324	378.876
3000.000	8.871	63.759	22.210	379.762
3100.000	8.883	64.050	23.098	380.650
3200.000	8.894	64.333	23.987	381.539
3300.000	8.904	64.606	24.877	382.429
3400.000	8.914	64.872	25.768	383.320
3500.000	8.923	65.131	26.660	384.212
3600.000	8.932	65.383	27.552	385.104
3700.000	8.940	65.627	28.446	385.998
3800.000	8.949	65.866	29.341	386.893
3900.000	8.959	66.099	30.236	387.788
4000.000	8.968	66.325	31.132	388.684
4100.000	8.978	66.547	32.030	389.582
4200.000	8.988	66.763	32.928	390.480
4300.000	8.998	66.975	33.827	391.379
4400.000	9.009	67.182	34.727	392.279
4500.000	9.021	67.385	35.629	393.181
4600.000	9.033	67.583	36.532	394.084
4700.000	9.045	67.777	37.435	394.987
4800.000	9.057	67.968	38.341	395.893
4900.000	9.070	68.155	39.247	396.799
5000.000	9.082	68.338	40.155	397.707
5100.000	9.094	68.518	41.063	398.615
5200.000	9.107	68.695	41.973	399.525
5300.000	9.118	68.868	42.885	400.437
5400.000	9.129	69.039	43.797	401.349
5500.000	9.138	69.207	44.710	402.262
5600.000	9.147	69.371	45.625	403.177
5700.000	9.154	69.533	46.540	404.092
5800.000	9.159	69.693	47.455	405.007
5900.000	9.161	69.849	48.371	405.923
6000.000	9.162	70.003	49.288	406.840

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
N2O+	176	44.015	316.994	N 2 O 1 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	6.425	44.131	-1.570	315.424
200.000	7.992	49.088	-.846	316.148
298.150	9.194	52.511	0.000	316.994
300.000	9.214	52.569	.017	317.011
400.000	10.177	55.357	.988	317.982
500.000	10.947	57.714	2.046	319.040
600.000	11.576	59.767	3.173	320.167
700.000	12.096	61.592	4.358	321.352
800.000	12.526	63.236	5.589	322.583
900.000	12.866	64.732	6.860	323.854
1000.000	13.101	66.101	8.159	325.153
1100.000	13.307	67.359	9.480	326.474
1200.000	13.493	68.525	10.820	327.814
1300.000	13.659	69.612	12.178	329.172
1400.000	13.808	70.630	13.551	330.545
1500.000	13.939	71.587	14.939	331.933
1600.000	14.056	72.490	16.338	333.332
1700.000	14.158	73.346	17.749	334.743
1800.000	14.248	74.158	19.170	336.164
1900.000	14.325	74.930	20.598	337.592
2000.000	14.392	75.667	22.034	339.028
2100.000	14.449	76.370	23.476	340.470
2200.000	14.498	77.044	24.924	341.918
2300.000	14.539	77.689	26.376	343.370
2400.000	14.572	78.308	27.831	344.825
2500.000	14.600	78.904	29.290	346.284
2600.000	14.623	79.477	30.751	347.745
2700.000	14.641	80.029	32.214	349.208
2800.000	14.655	80.562	33.679	350.673
2900.000	14.666	81.076	35.145	352.139
3000.000	14.675	81.574	36.612	353.606
3100.000	14.681	82.055	38.080	355.074
3200.000	14.686	82.521	39.549	356.543
3300.000	14.690	82.973	41.017	358.011
3400.000	14.694	83.412	42.487	359.481
3500.000	14.697	83.838	43.956	360.950
3600.000	14.700	84.252	45.426	362.420
3700.000	14.704	84.655	46.896	363.890
3800.000	14.708	85.047	48.367	365.361
3900.000	14.713	85.429	49.838	366.832
4000.000	14.719	85.802	51.309	368.303
4100.000	14.726	86.165	52.782	369.776
4200.000	14.735	86.520	54.255	371.249
4300.000	14.744	86.867	55.729	372.723
4400.000	14.754	87.206	57.204	374.198
4500.000	14.765	87.538	58.680	375.674
4600.000	14.777	87.862	60.157	377.151
4700.000	14.789	88.180	61.635	378.629
4800.000	14.801	88.492	63.114	380.108
4900.000	14.814	88.797	64.595	381.589
5000.000	14.826	89.096	66.077	383.071
5100.000	14.838	89.390	67.560	384.554
5200.000	14.848	89.678	69.045	386.039
5300.000	14.857	89.961	70.530	387.524
5400.000	14.864	90.239	72.016	389.010
5500.000	14.868	90.512	73.503	390.497
5600.000	14.868	90.780	74.990	391.984
5700.000	14.865	91.043	76.476	393.470
5800.000	14.856	91.301	77.962	394.956
5900.000	14.843	91.555	79.447	396.441
6000.000	14.823	91.805	80.931	397.925

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
O+	177	15.999	371.927	O 1 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.671	32.160	-1.035	370.892
200.000	5.308	35.630	-.530	371.397
298.150	5.436	37.785	0.000	371.927
300.000	5.436	37.819	.010	371.937
400.000	5.312	39.370	.549	372.476
500.000	5.124	40.535	1.070	372.997
600.000	4.993	41.456	1.575	373.502
700.000	4.967	42.222	2.073	374.000
800.000	5.030	42.889	2.572	374.499
900.000	5.095	43.486	3.079	375.006
1000.000	5.005	44.020	3.586	375.513
1100.000	4.999	44.497	4.086	376.013
1200.000	4.993	44.932	4.586	376.513
1300.000	4.988	45.331	5.085	377.012
1400.000	4.983	45.701	5.583	377.510
1500.000	4.980	46.044	6.081	378.008
1600.000	4.977	46.366	6.579	378.506
1700.000	4.975	46.667	7.077	379.004
1800.000	4.974	46.952	7.574	379.501
1900.000	4.973	47.221	8.072	379.999
2000.000	4.973	47.476	8.569	380.496
2100.000	4.974	47.718	9.066	380.993
2200.000	4.976	47.950	9.564	381.491
2300.000	4.978	48.171	10.061	381.988
2400.000	4.980	48.383	10.559	382.486
2500.000	4.984	48.586	11.057	382.984
2600.000	4.987	48.782	11.556	383.483
2700.000	4.992	48.970	12.055	383.982
2800.000	4.997	49.152	12.554	384.481
2900.000	5.002	49.327	13.054	384.981
3000.000	5.008	49.497	13.555	385.482
3100.000	5.014	49.661	14.056	385.983
3200.000	5.021	49.820	14.558	386.485
3300.000	5.028	49.975	15.060	386.987
3400.000	5.036	50.125	15.563	387.490
3500.000	5.044	50.271	16.067	387.994
3600.000	5.052	50.414	16.572	388.499
3700.000	5.061	50.552	17.078	389.005
3800.000	5.070	50.687	17.584	389.511
3900.000	5.080	50.819	18.092	390.019
4000.000	5.090	50.948	18.600	390.527
4100.000	5.100	51.074	19.110	391.037
4200.000	5.111	51.197	19.620	391.547
4300.000	5.122	51.317	20.132	392.059
4400.000	5.133	51.435	20.645	392.572
4500.000	5.145	51.550	21.159	393.086
4600.000	5.156	51.664	21.674	393.601
4700.000	5.168	51.775	22.190	394.117
4800.000	5.181	51.883	22.707	394.634
4900.000	5.194	51.991	23.226	395.153
5000.000	5.207	52.095	23.746	395.673
5100.000	5.220	52.199	24.267	396.194
5200.000	5.233	52.300	24.790	396.717
5300.000	5.247	52.400	25.314	397.241
5400.000	5.261	52.498	25.839	397.766
5500.000	5.275	52.595	26.366	398.293
5600.000	5.289	52.690	26.894	398.821
5700.000	5.304	52.784	27.424	399.351
5800.000	5.319	52.876	27.955	399.882
5900.000	5.334	52.967	28.488	400.415
6000.000	5.349	53.057	29.022	400.949

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
O2+	178	31.999	288.162	O 2 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	5.871	41.715	-1.334	286.828
200.000	6.825	46.118	-.693	287.469
298.150	7.230	48.929	0.000	288.162
300.000	7.235	48.976	.013	288.175
400.000	7.375	51.080	.745	288.907
500.000	7.443	52.733	1.486	289.648
600.000	7.561	54.099	2.235	290.397
700.000	7.777	55.279	3.001	291.163
800.000	8.060	56.336	3.793	291.955
900.000	8.305	57.300	4.612	292.774
1000.000	8.332	58.180	5.447	293.609
1100.000	8.417	58.978	6.284	294.446
1200.000	8.499	59.714	7.130	295.292
1300.000	8.578	60.397	7.984	296.146
1400.000	8.655	61.036	8.846	297.008
1500.000	8.728	61.635	9.715	297.877
1600.000	8.799	62.201	10.591	298.753
1700.000	8.867	62.736	11.475	299.637
1800.000	8.933	63.245	12.365	300.527
1900.000	8.996	63.730	13.261	301.423
2000.000	9.058	64.193	14.164	302.326
2100.000	9.117	64.636	15.073	303.235
2200.000	9.173	65.062	15.987	304.149
2300.000	9.228	65.471	16.907	305.069
2400.000	9.281	65.865	17.833	305.995
2500.000	9.332	66.244	18.763	306.925
2600.000	9.382	66.611	19.699	307.861
2700.000	9.430	66.966	20.640	308.802
2800.000	9.476	67.310	21.585	309.747
2900.000	9.520	67.643	22.535	310.697
3000.000	9.563	67.967	23.489	311.651
3100.000	9.604	68.281	24.447	312.609
3200.000	9.644	68.587	25.410	313.572
3300.000	9.683	68.884	26.376	314.538
3400.000	9.721	69.174	27.346	315.508
3500.000	9.757	69.456	28.320	316.482
3600.000	9.791	69.731	29.298	317.460
3700.000	9.825	70.000	30.278	318.440
3800.000	9.858	70.262	31.263	319.425
3900.000	9.889	70.519	32.250	320.412
4000.000	9.919	70.770	33.240	321.402
4100.000	9.949	71.015	34.234	322.396
4200.000	9.977	71.255	35.230	323.392
4300.000	10.004	71.490	36.229	324.391
4400.000	10.029	71.720	37.231	325.393
4500.000	10.054	71.946	38.235	326.397
4600.000	10.078	72.167	39.242	327.404
4700.000	10.101	72.384	40.250	328.412
4800.000	10.123	72.597	41.262	329.424
4900.000	10.143	72.806	42.275	330.437
5000.000	10.163	73.011	43.290	331.452
5100.000	10.181	73.213	44.307	332.469
5200.000	10.198	73.411	45.326	333.488
5300.000	10.214	73.605	46.347	334.509
5400.000	10.229	73.796	47.369	335.531
5500.000	10.243	73.984	48.393	336.555
5600.000	10.256	74.169	49.418	337.580
5700.000	10.267	74.350	50.444	338.606
5800.000	10.277	74.529	51.471	339.633
5900.000	10.285	74.705	52.499	340.661
6000.000	10.292	74.878	53.528	341.690

TABLE 2. - CONTINUED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
O3-	179	48.001	-35.059	O 3 E- 1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	8.046	47.214	-1.791	-36.850
200.000	9.084	53.126	-.932	-35.991
298.150	9.887	56.906	0.000	-35.059
300.000	9.901	56.969	.018	-35.041
400.000	10.596	59.914	1.044	-34.015
500.000	11.234	62.348	2.136	-32.923
600.000	11.841	64.450	3.290	-31.769
700.000	12.408	66.319	4.503	-30.556
800.000	12.890	68.008	5.768	-29.291
900.000	13.208	69.547	7.075	-27.984
1000.000	13.243	70.944	8.401	-26.658
1100.000	13.346	72.211	9.730	-25.329
1200.000	13.440	73.376	11.069	-23.990
1300.000	13.525	74.455	12.418	-22.641
1400.000	13.603	75.461	13.774	-21.285
1500.000	13.674	76.401	15.138	-19.921
1600.000	13.739	77.286	16.509	-18.550
1700.000	13.797	78.121	17.886	-17.173
1800.000	13.850	78.911	19.268	-15.791
1900.000	13.897	79.661	20.655	-14.404
2000.000	13.941	80.375	22.047	-13.012
2100.000	13.979	81.056	23.443	-11.616
2200.000	14.014	81.707	24.843	-10.216
2300.000	14.046	82.331	26.246	-8.813
2400.000	14.074	82.929	27.652	-7.407
2500.000	14.100	83.504	29.061	-5.998
2600.000	14.123	84.058	30.472	-4.587
2700.000	14.144	84.591	31.885	-3.174
2800.000	14.164	85.106	33.301	-1.758
2900.000	14.182	85.603	34.718	-.341
3000.000	14.198	86.084	36.137	1.078
3100.000	14.214	86.550	37.558	2.499
3200.000	14.229	87.002	38.980	3.921
3300.000	14.243	87.440	40.404	5.345
3400.000	14.257	87.865	41.829	6.770
3500.000	14.271	88.279	43.255	8.196
3600.000	14.284	88.681	44.683	9.624
3700.000	14.298	89.073	46.112	11.053
3800.000	14.312	89.454	47.542	12.483
3900.000	14.326	89.826	48.974	13.915
4000.000	14.341	90.189	50.408	15.349
4100.000	14.355	90.543	51.843	16.784
4200.000	14.371	90.889	53.279	18.220
4300.000	14.386	91.228	54.717	19.658
4400.000	14.402	91.559	56.156	21.097
4500.000	14.419	91.882	57.597	22.538
4600.000	14.436	92.200	59.040	23.981
4700.000	14.453	92.510	60.484	25.425
4800.000	14.471	92.815	61.931	26.872
4900.000	14.489	93.113	63.379	28.320
5000.000	14.507	93.406	64.828	29.769
5100.000	14.524	93.693	66.280	31.221
5200.000	14.542	93.976	67.733	32.674
5300.000	14.559	94.253	69.188	34.129
5400.000	14.576	94.525	70.645	35.586
5500.000	14.592	94.793	72.103	37.044
5600.000	14.606	95.056	73.563	38.504
5700.000	14.620	95.314	75.025	39.966
5800.000	14.632	95.569	76.487	41.428
5900.000	14.643	95.819	77.951	42.892
6000.000	14.651	96.065	79.416	44.357

TABLE 2. - CONCLUDED.

SPECIES SYMBOL	SPECIES NUMBER	MOLECULAR WEIGHT	HEAT OF FORMATION	ATOMIC COMPOSITION
A+	180	39.943	361.471	A 1 E--1

TEMPERATURE, DEG.K	HEAT CAPACITY, CAL/MOLE-DEG.K	ENTROPY, CAL/MOLE-DEG.K	ENTHALPY, KCAL/MOLE	ABSOLUTE ENTHALPY
100.000	4.196	31.775	-.951	360.520
200.000	4.877	34.926	-.492	360.979
298.150	5.099	36.925	0.000	361.471
300.000	5.101	36.957	.009	361.480
400.000	5.085	38.426	.520	361.991
500.000	4.988	39.551	1.024	362.495
600.000	4.916	40.453	1.518	362.989
700.000	4.916	41.210	2.009	363.480
800.000	4.979	41.870	2.504	363.975
900.000	5.040	42.460	3.005	364.476
1000.000	4.977	42.990	3.508	364.979
1100.000	4.976	43.464	4.005	365.476
1200.000	4.975	43.897	4.503	365.974
1300.000	4.974	44.295	5.000	366.471
1400.000	4.973	44.664	5.498	366.969
1500.000	4.972	45.007	5.995	367.466
1600.000	4.971	45.327	6.492	367.963
1700.000	4.971	45.629	6.989	368.460
1800.000	4.970	45.913	7.486	368.957
1900.000	4.970	46.182	7.983	369.454
2000.000	4.970	46.437	8.480	369.951
2100.000	4.970	46.679	8.977	370.448
2200.000	4.970	46.910	9.474	370.945
2300.000	4.969	47.131	9.971	371.442
2400.000	4.969	47.343	10.468	371.939
2500.000	4.969	47.545	10.965	372.436
2600.000	4.969	47.740	11.462	372.933
2700.000	4.969	47.928	11.959	373.430
2800.000	4.969	48.109	12.456	373.927
2900.000	4.969	48.283	12.953	374.424
3000.000	4.969	48.451	13.450	374.921
3100.000	4.969	48.614	13.947	375.418
3200.000	4.969	48.772	14.443	375.914
3300.000	4.969	48.925	14.940	376.411
3400.000	4.969	49.073	15.437	376.908
3500.000	4.969	49.217	15.934	377.405
3600.000	4.969	49.358	16.431	377.902
3700.000	4.969	49.494	16.928	378.399
3800.000	4.969	49.626	17.425	378.896
3900.000	4.969	49.755	17.922	379.393
4000.000	4.969	49.881	18.419	379.890
4100.000	4.969	50.004	18.916	380.387
4200.000	4.969	50.123	19.413	380.884
4300.000	4.969	50.240	19.909	381.380
4400.000	4.969	50.355	20.406	381.877
4500.000	4.968	50.466	20.903	382.374
4600.000	4.968	50.575	21.400	382.871
4700.000	4.968	50.682	21.897	383.368
4800.000	4.968	50.787	22.394	383.865
4900.000	4.968	50.889	22.890	384.361
5000.000	4.968	50.990	23.387	384.858
5100.000	4.968	51.088	23.884	385.355
5200.000	4.968	51.185	24.381	385.852
5300.000	4.969	51.279	24.878	386.349
5400.000	4.969	51.372	25.375	386.846
5500.000	4.969	51.463	25.871	387.342
5600.000	4.970	51.553	26.368	387.839
5700.000	4.970	51.641	26.865	388.336
5800.000	4.971	51.727	27.362	388.833
5900.000	4.971	51.812	27.859	389.330
6000.000	4.972	51.896	28.357	389.828

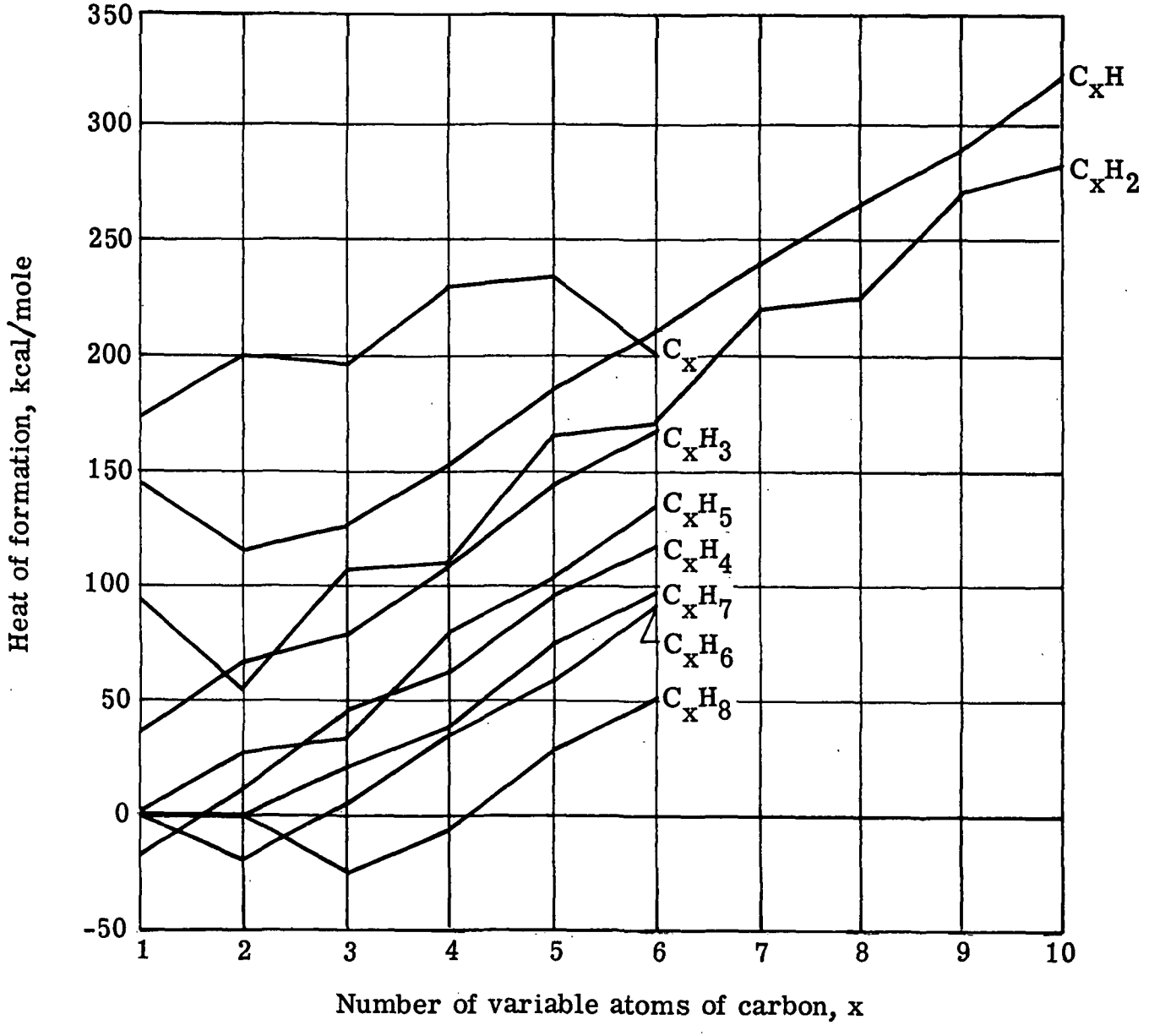

Figure 1.- Heat of formation of C_xH_y with x the plot variable.

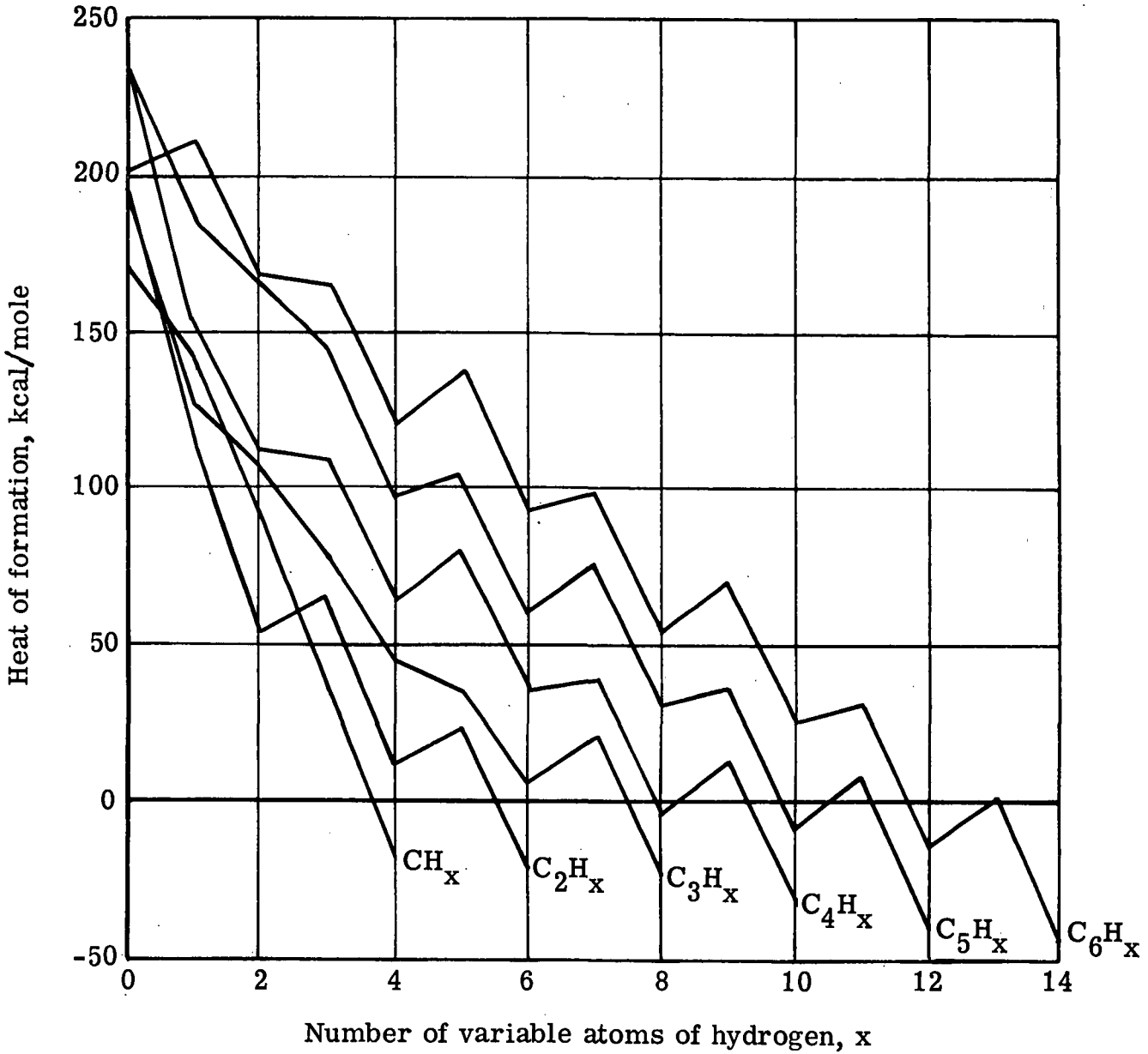

Figure 2.- Heat of formation for C_xH_y with y the plot variable.

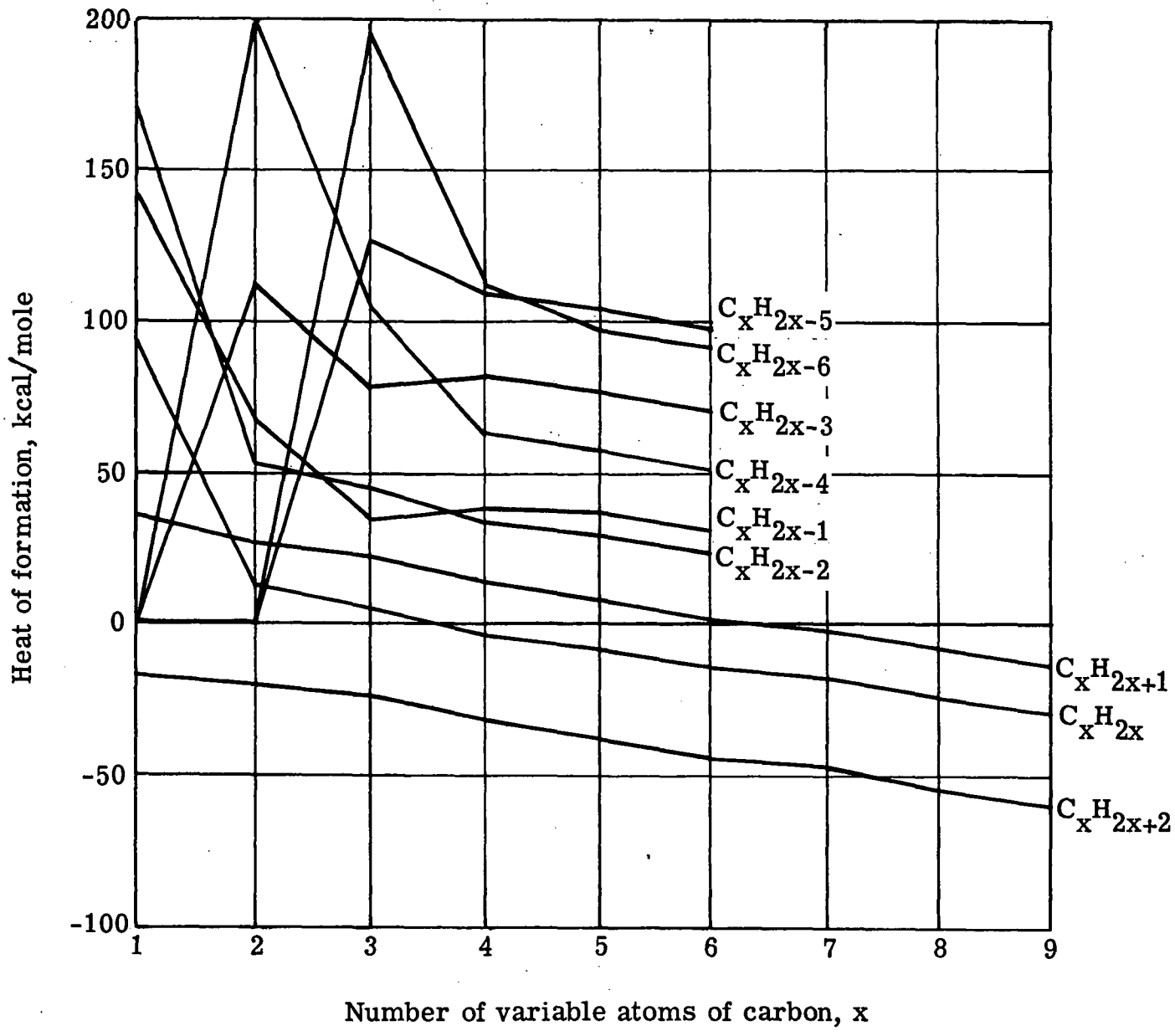

Figure 3.- Heat of formation for C_xH_y with x the plot variable.

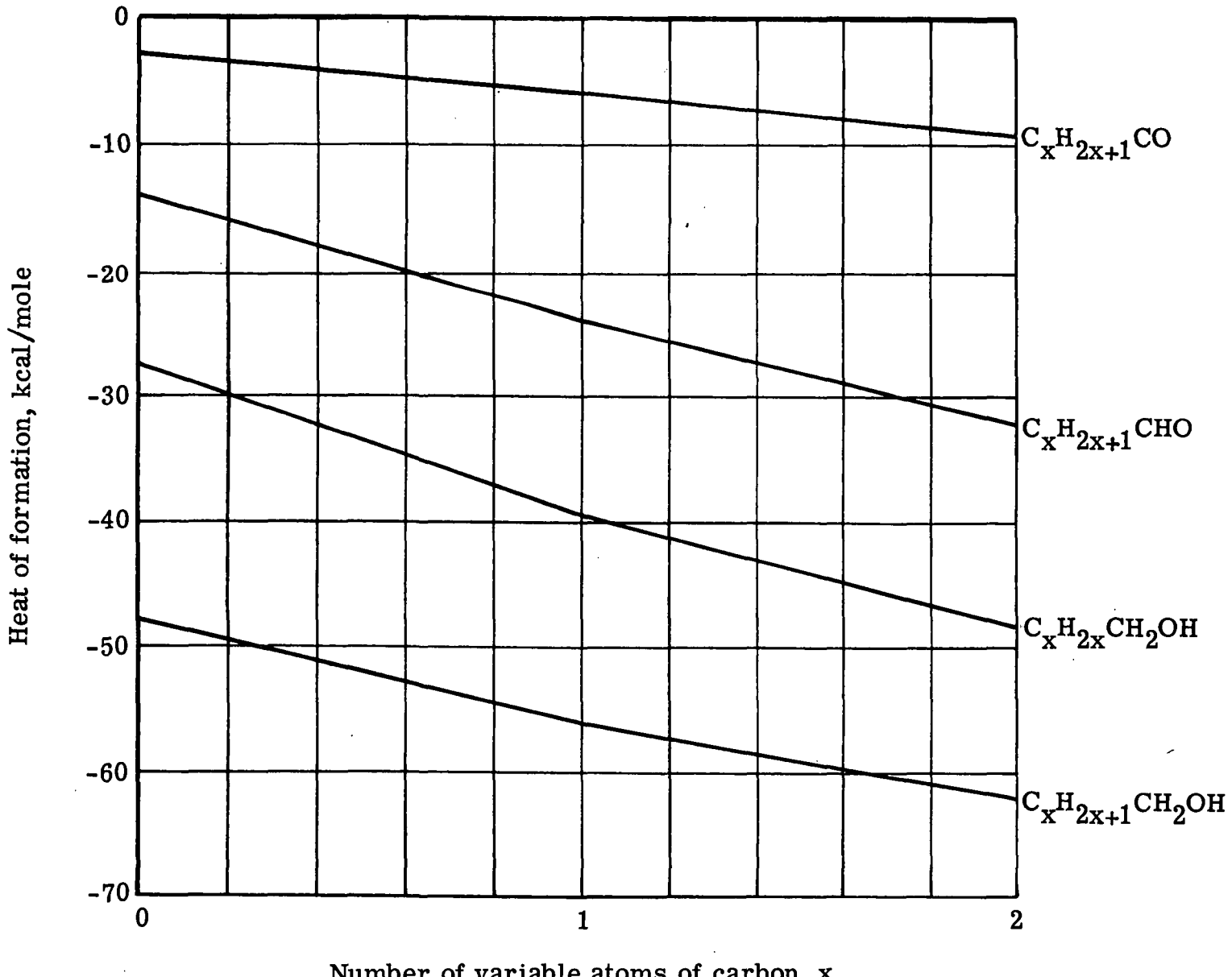

Figure 4.- Heat of formation of C_xH_yO with x the plot variable.

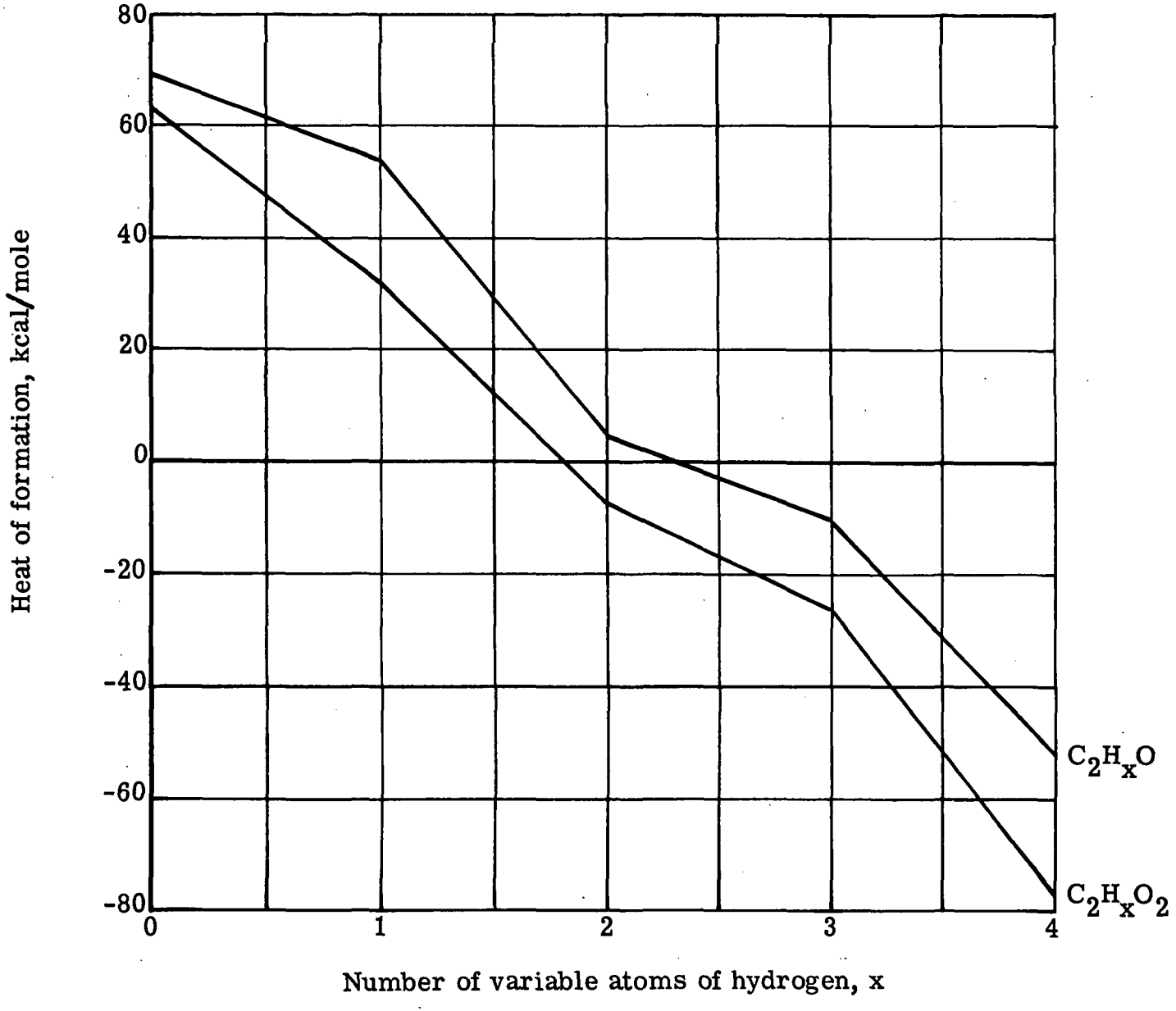

Figure 5.- Heat of formation of C_2H_xO and of $C_2H_xO_2$ with x the plot variable.

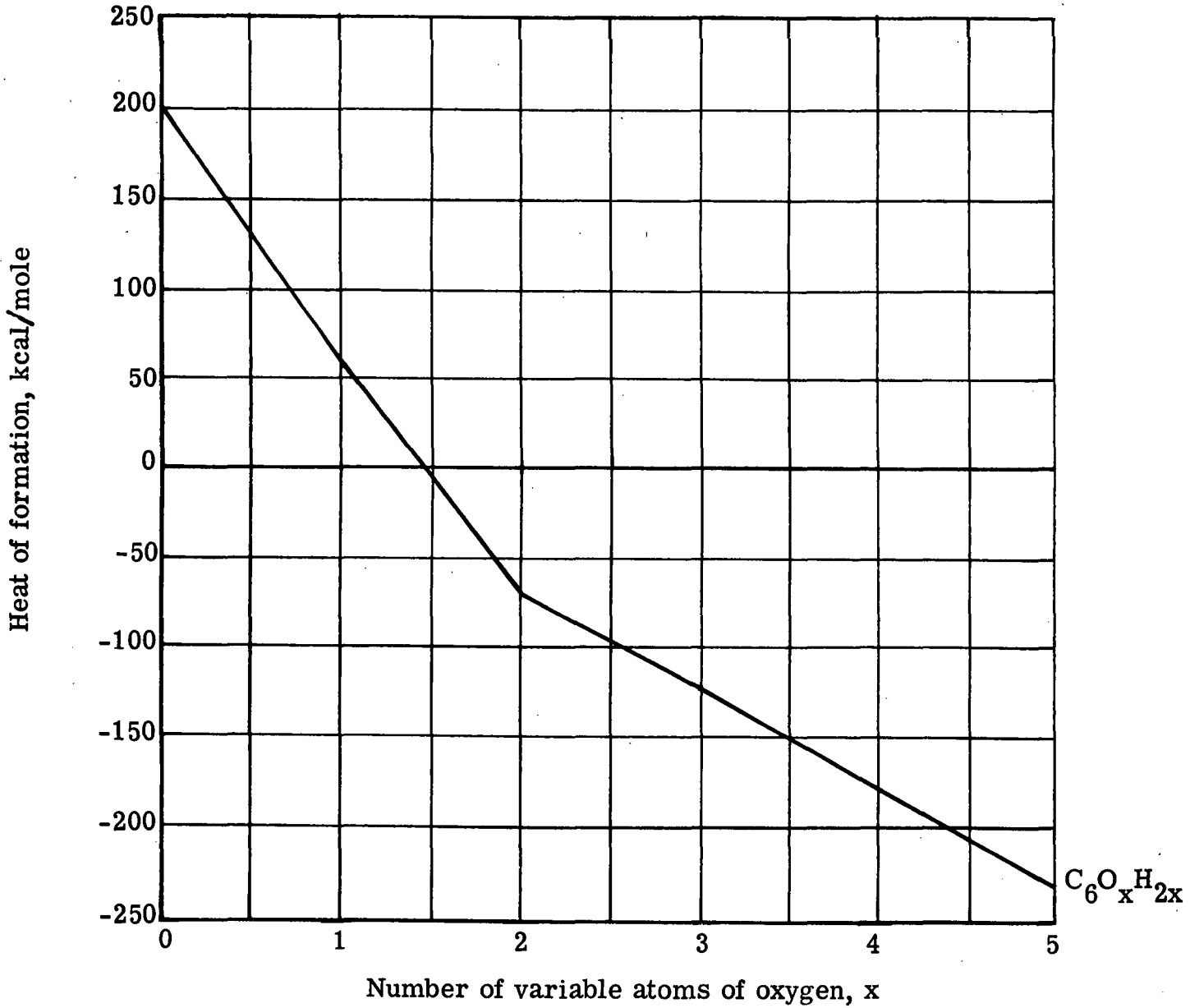

Figure 6.- Heat of formation of $C_6O_xH_{2x}$ with x the plot variable.

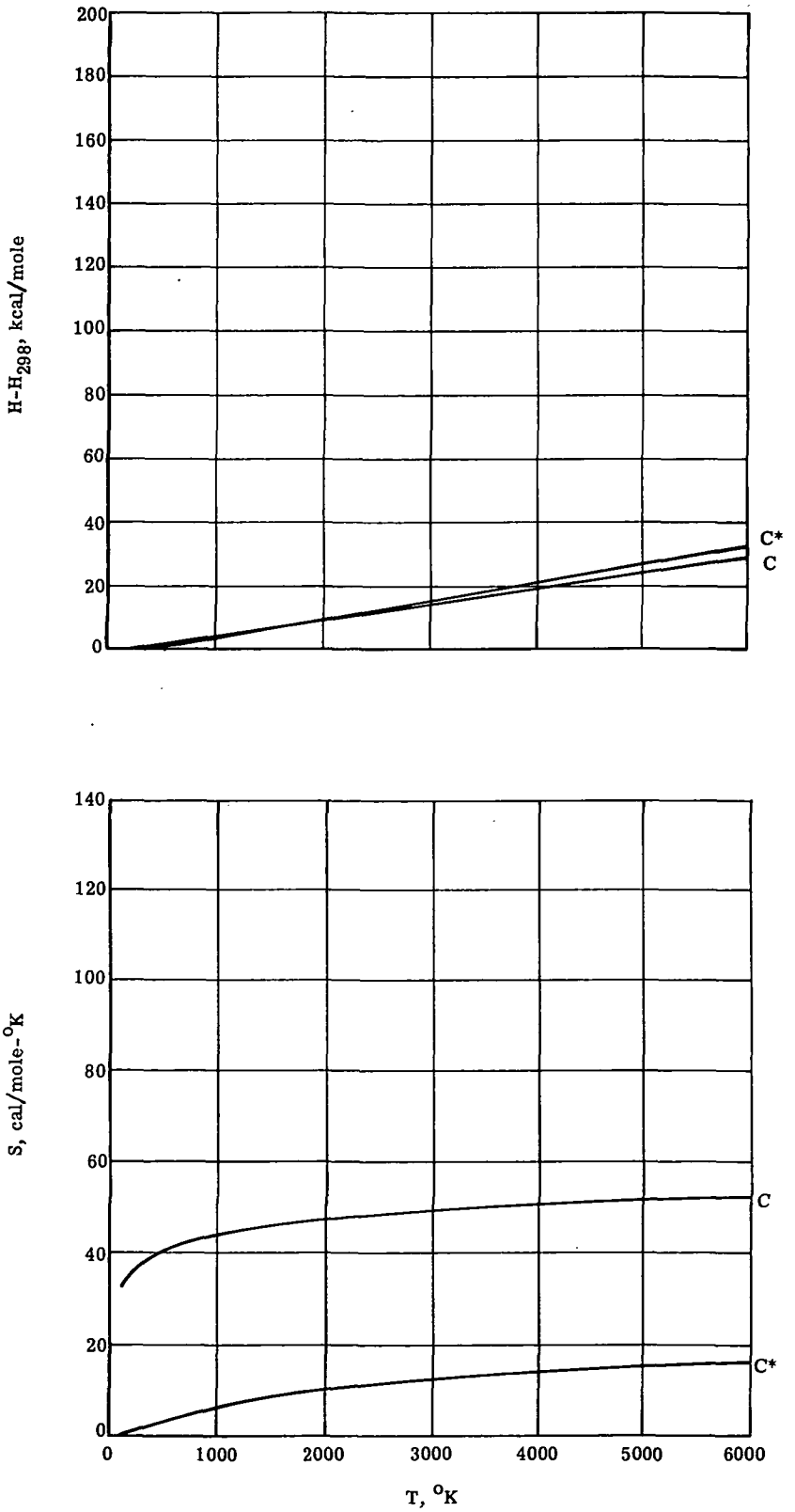

Figure 7.- Comparison of C* and C.

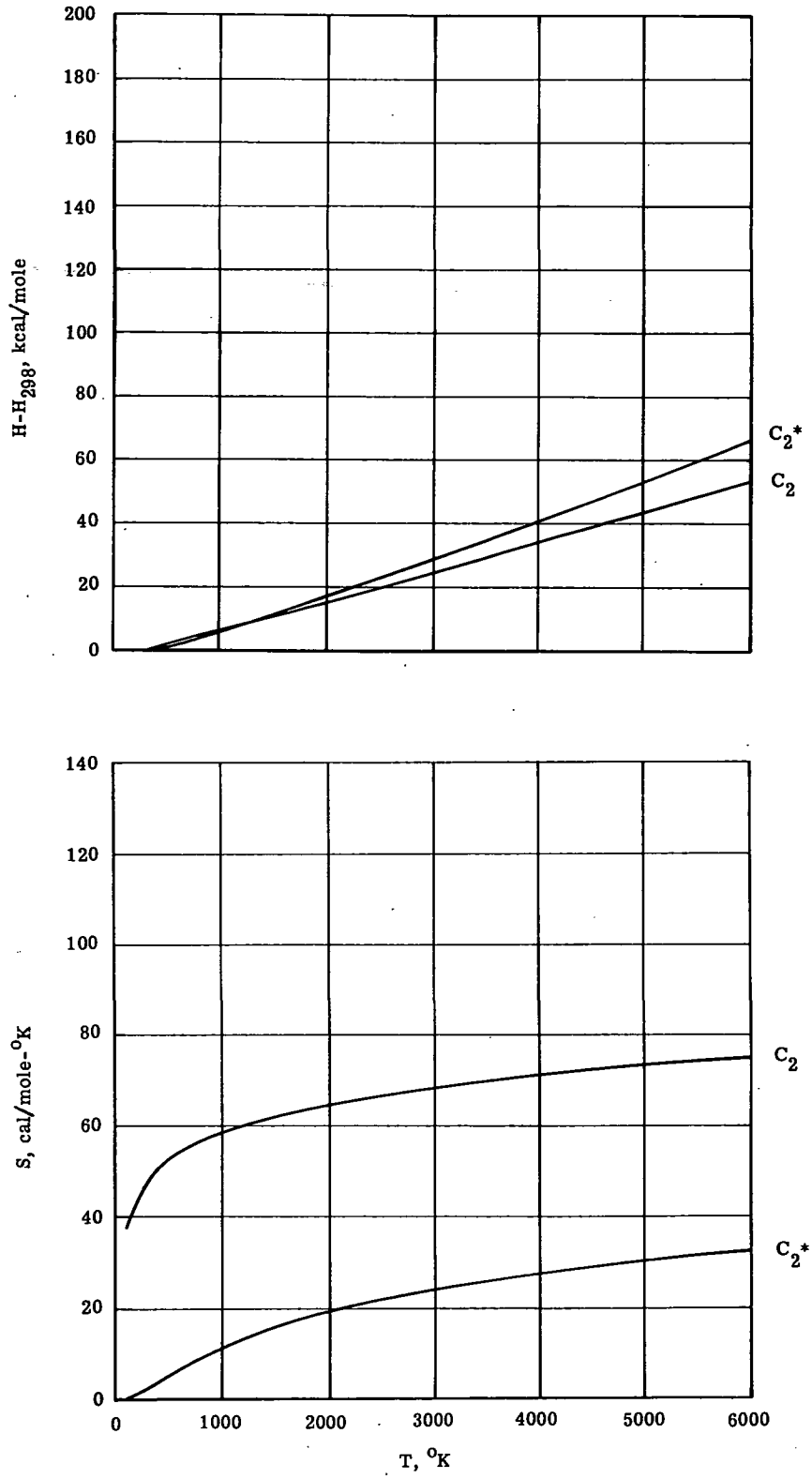

Figure 8.- Comparison of C_2^* and C_2.

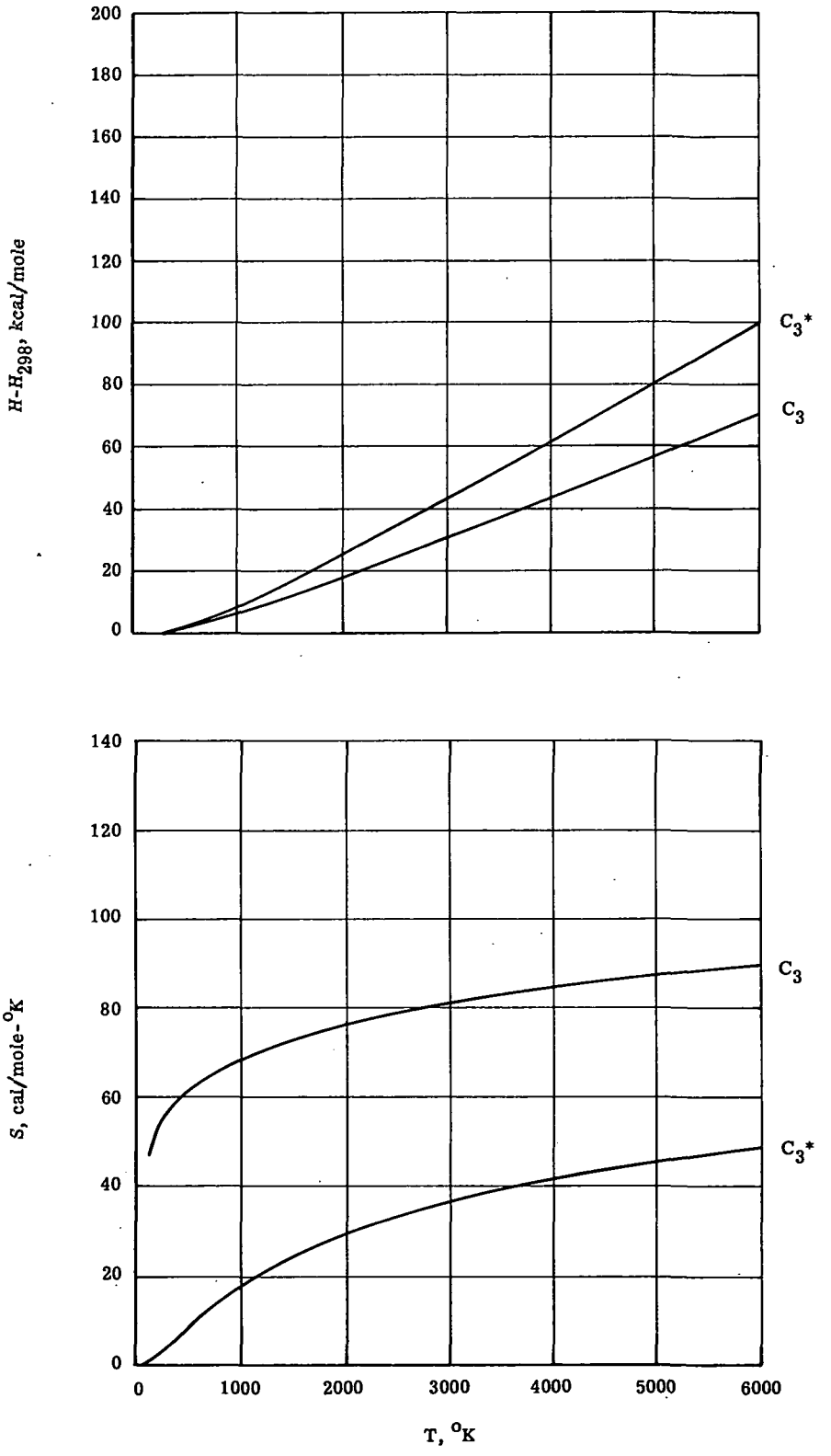

Figure 9.- Comparison of C_3^* and C_3.

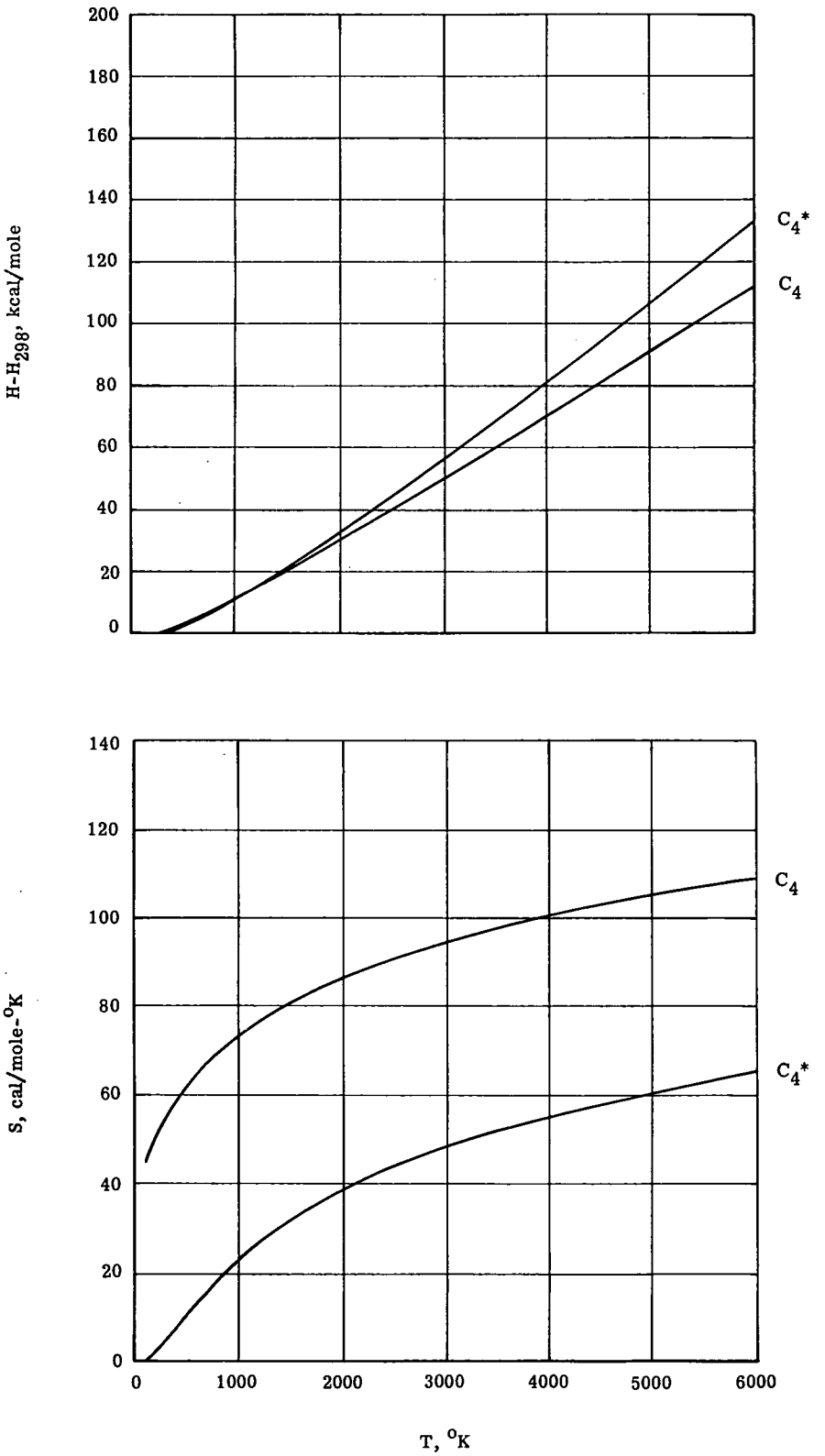

Figure 10.- Comparison of C_4^* and C_4.

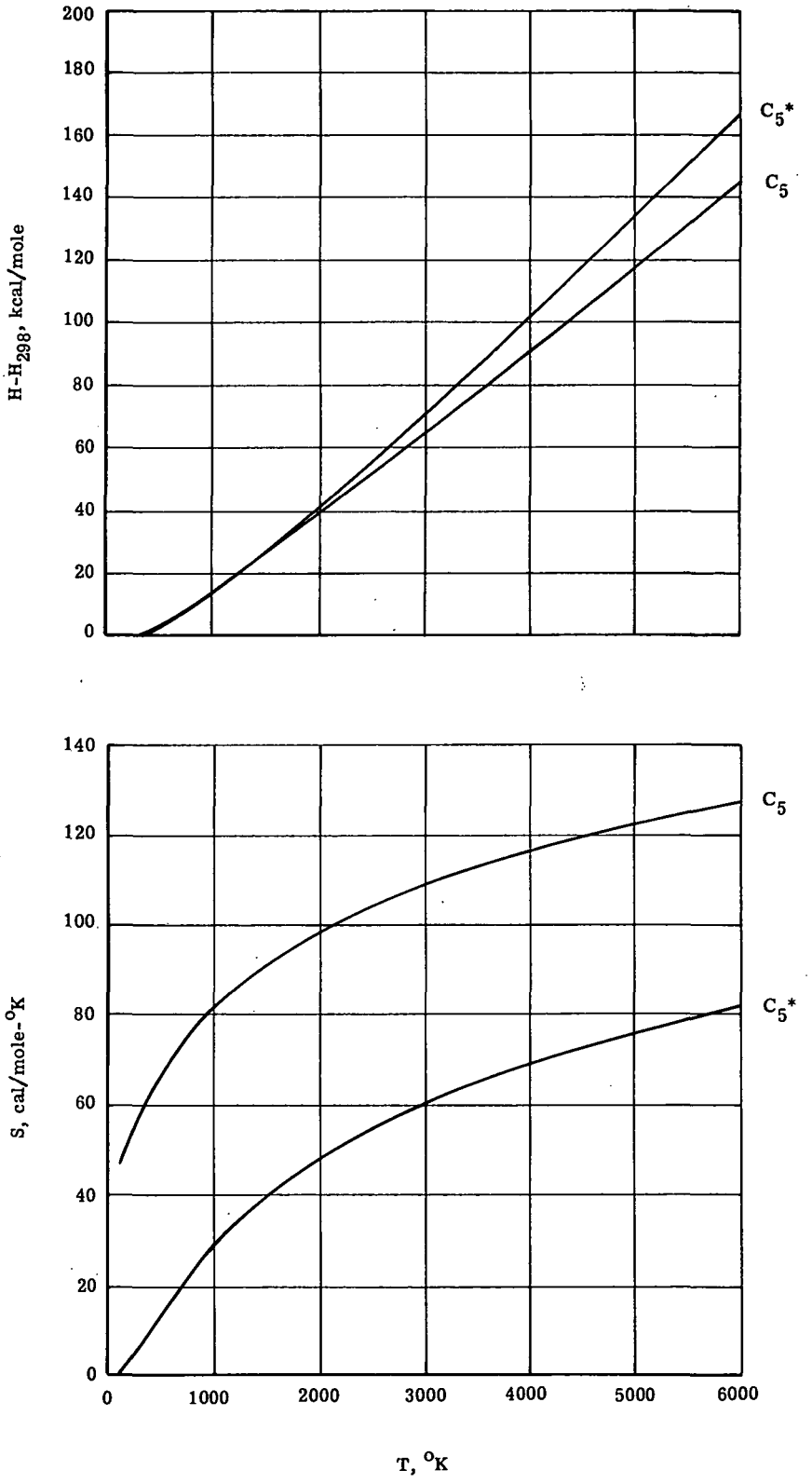

Figure 11.- Comparison of C_5^* and C_5.

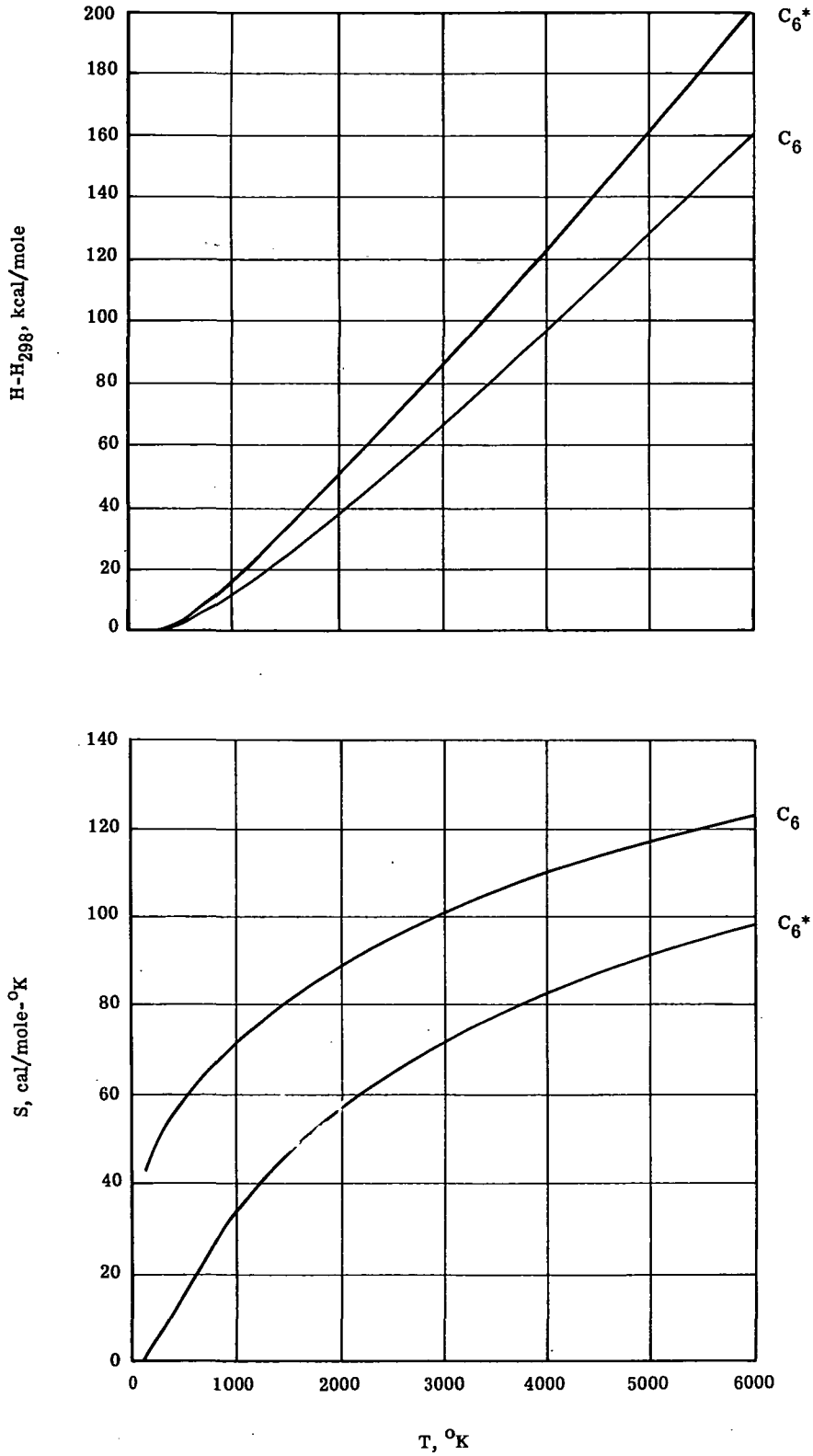

Figure 12.- Comparison of C_6^* and C_6.

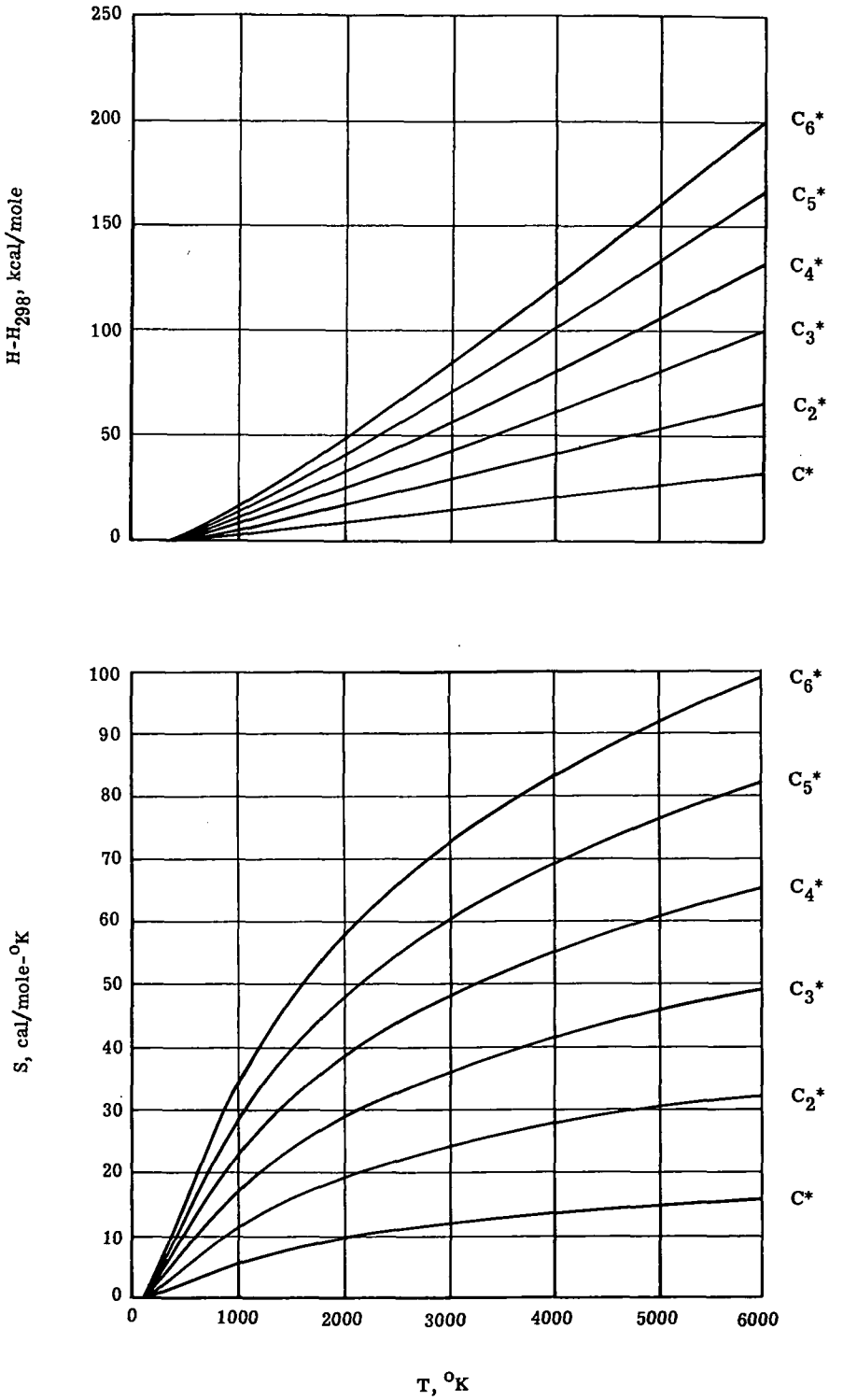

Figure 13.- Comparison for the family C_x^* ($C^* - C_6^*$).

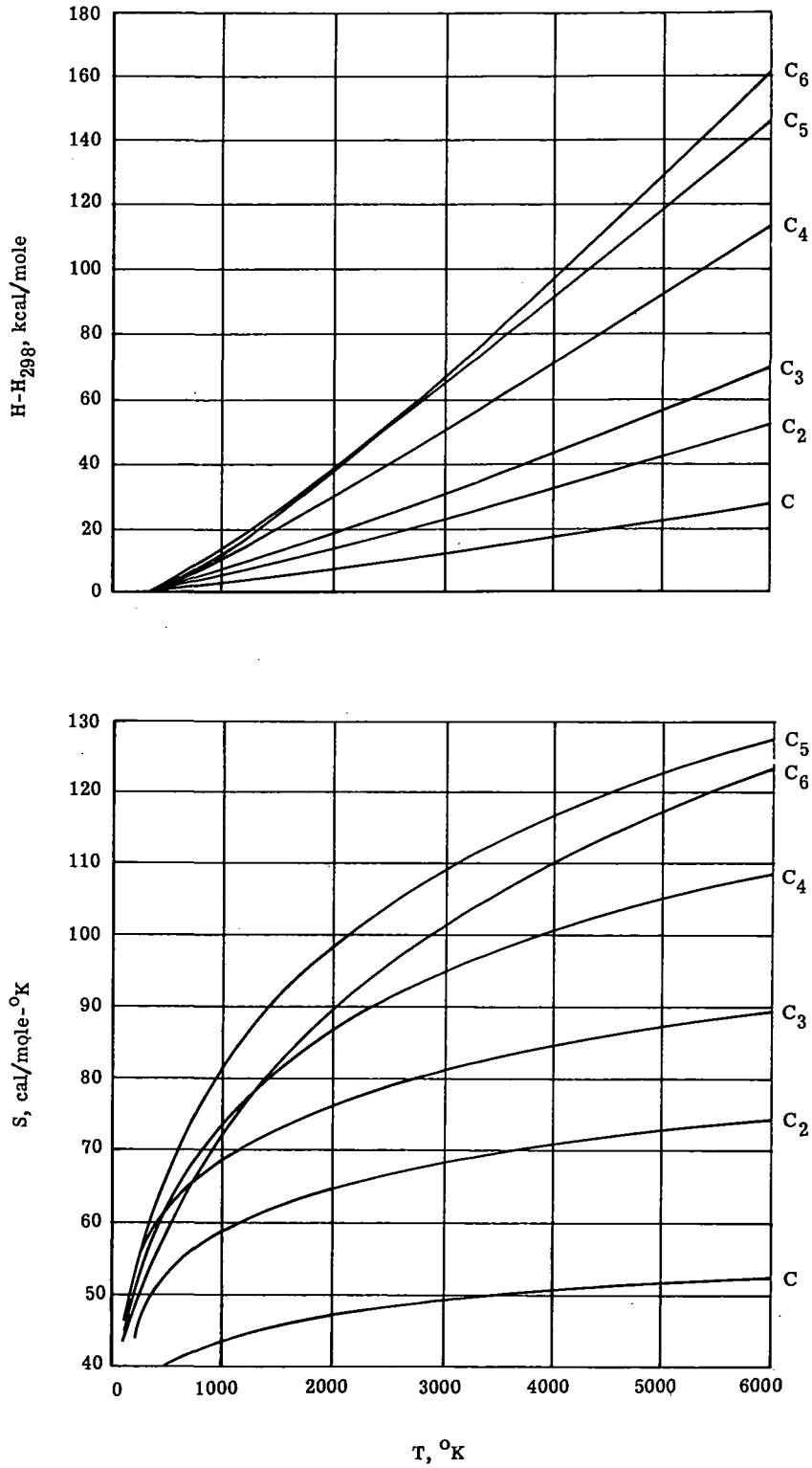

Figure 14.- Comparison for the family $C_x(C - C_6)$.

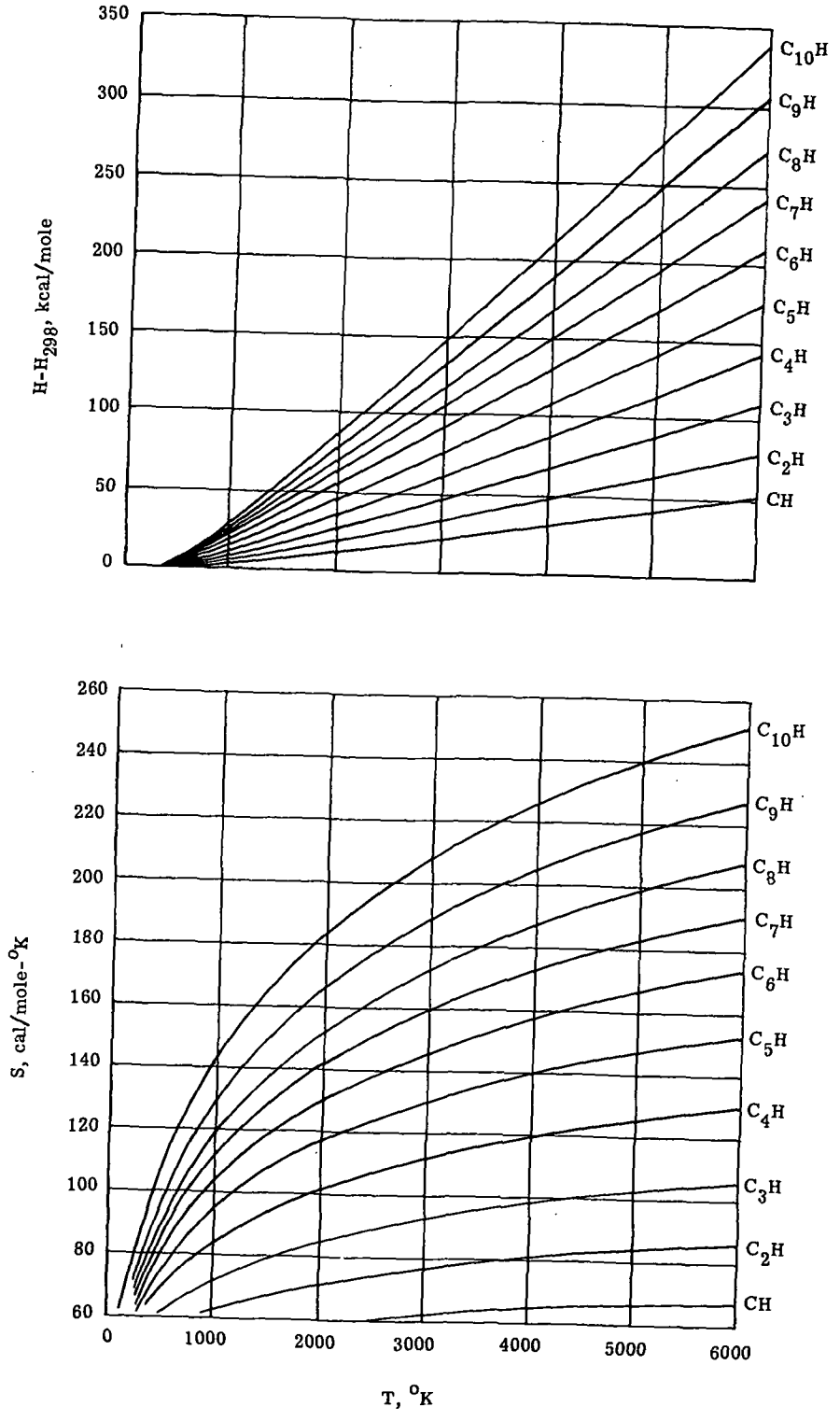

Figure 15.- Comparison for the family C_xH (CH - C_{10} H).

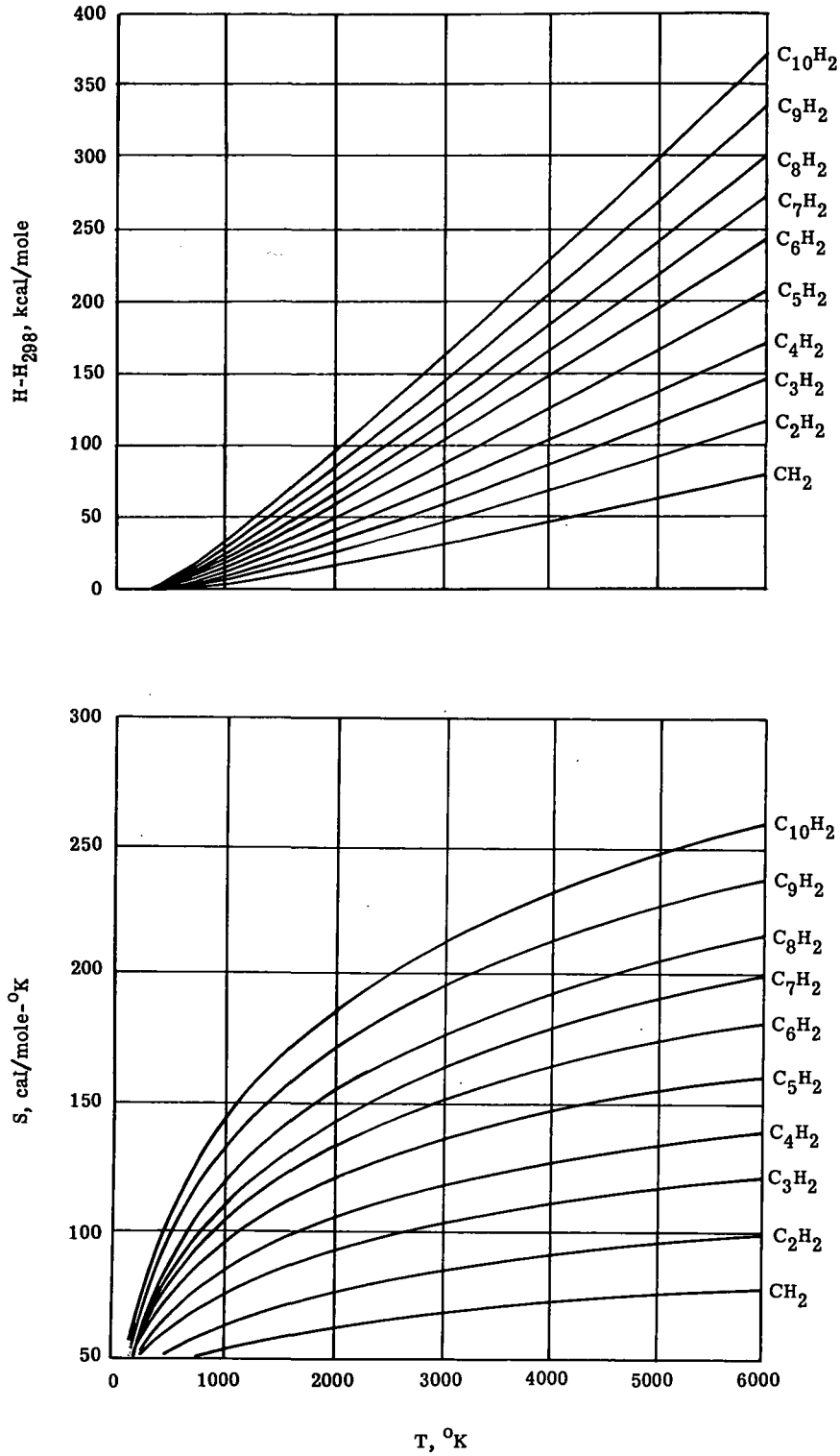

Figure 16.- Comparison for the family C_xH_2 (CH_2 - $C_{10}H_2$).

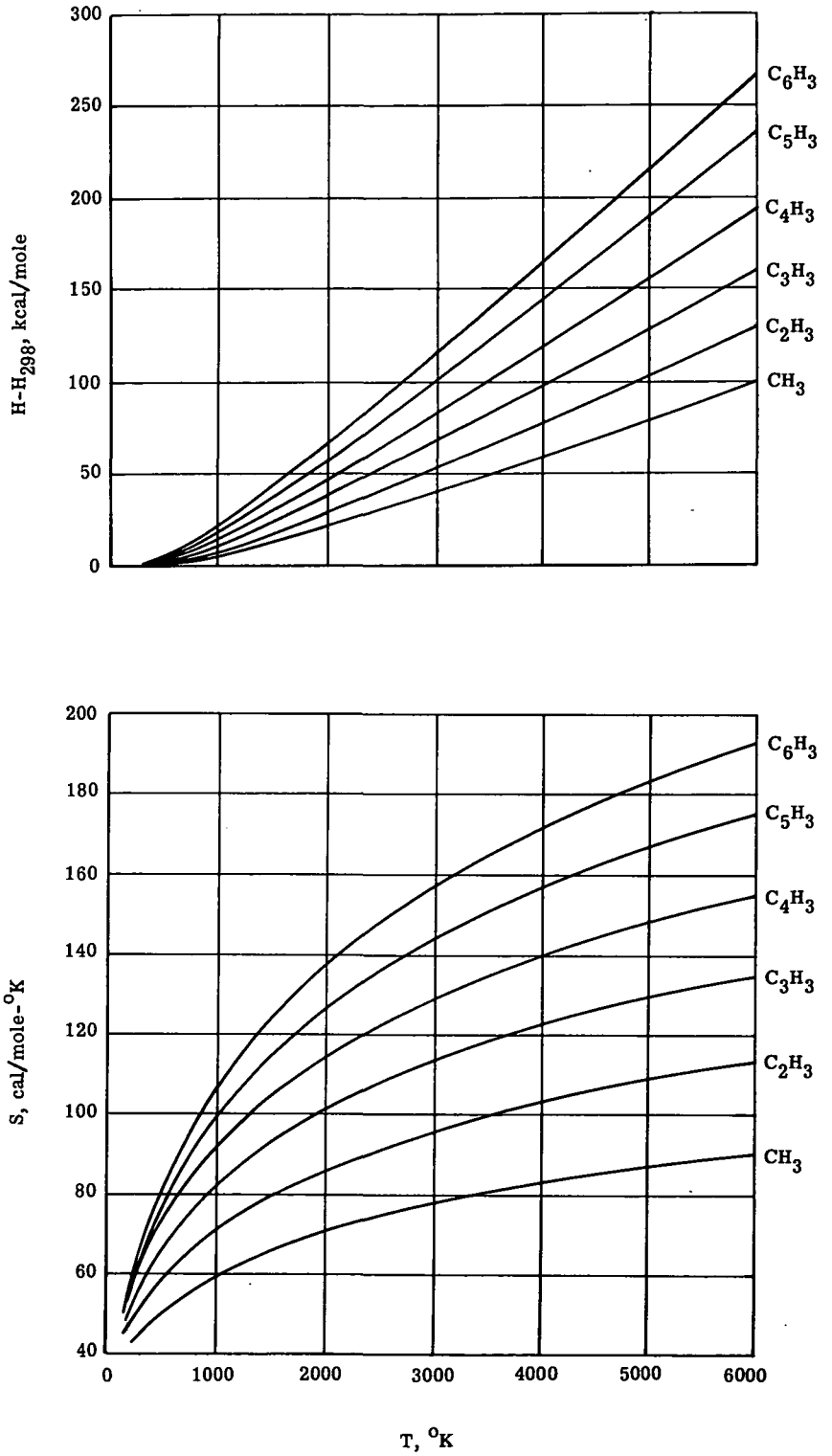

Figure 17.- Comparison for the family C_xH_3 (CH_3 - C_6H_3).

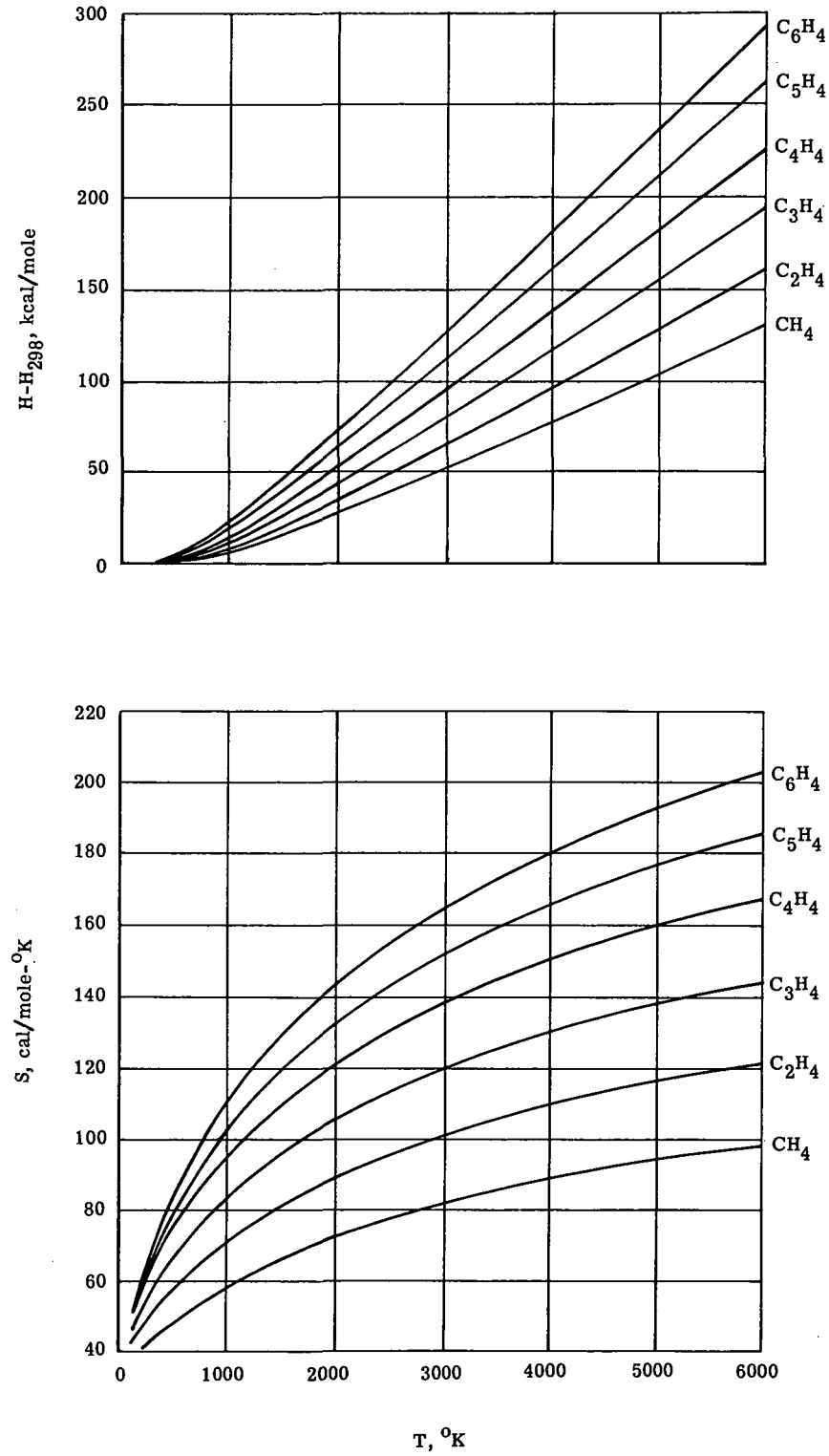

Figure 18.- Comparison for the family C_xH_4 (CH_4 - C_6H_4).

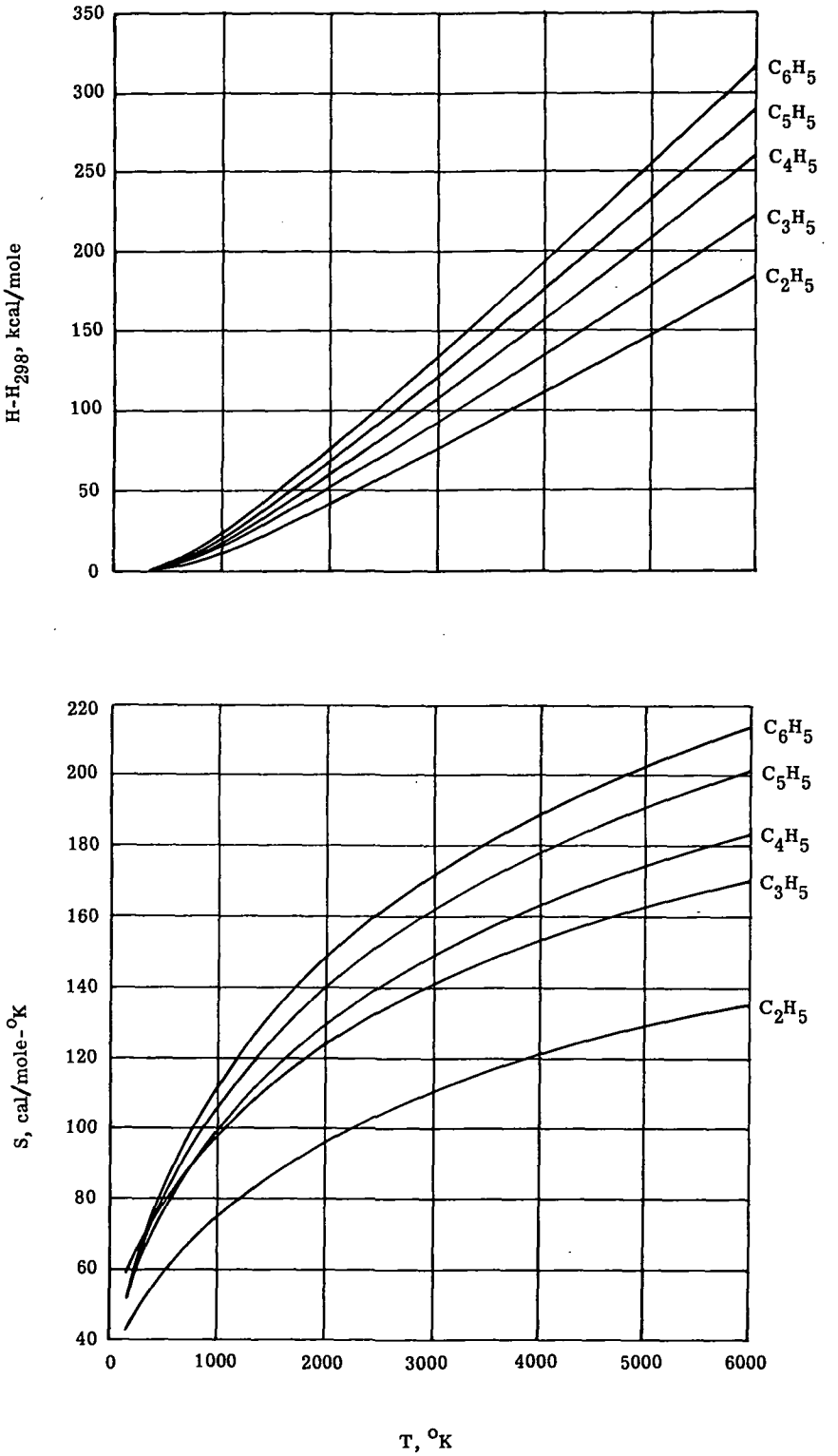

Figure 19.- Comparison for the family C_xH_5 (C_2H_5 - C_6H_5).

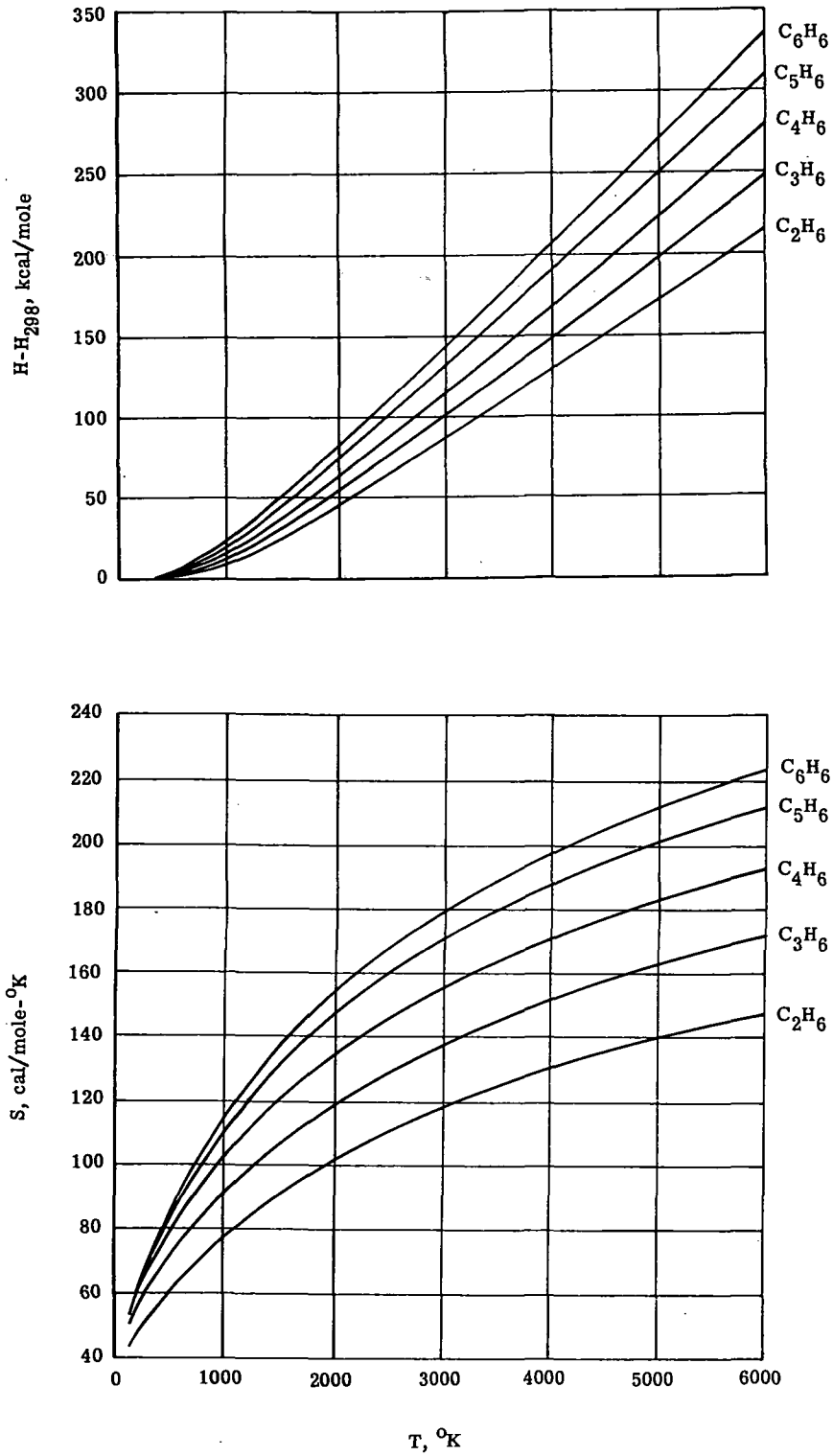

Figure 20.- Comparison for the family C_xH_6 (C_2H_6 - C_6H_6).

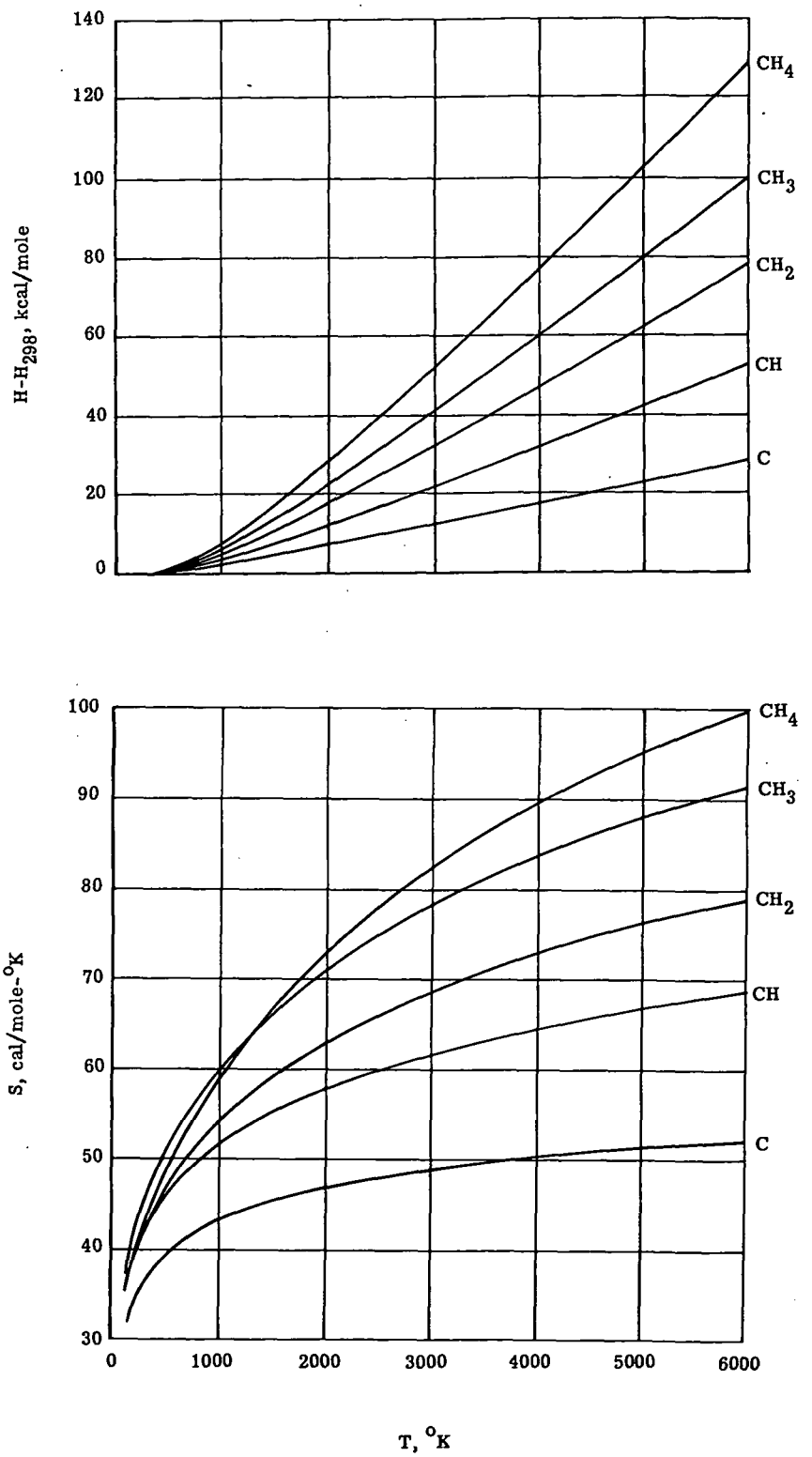

Figure 21.- Comparison for the family CH_x (C - CH_4).

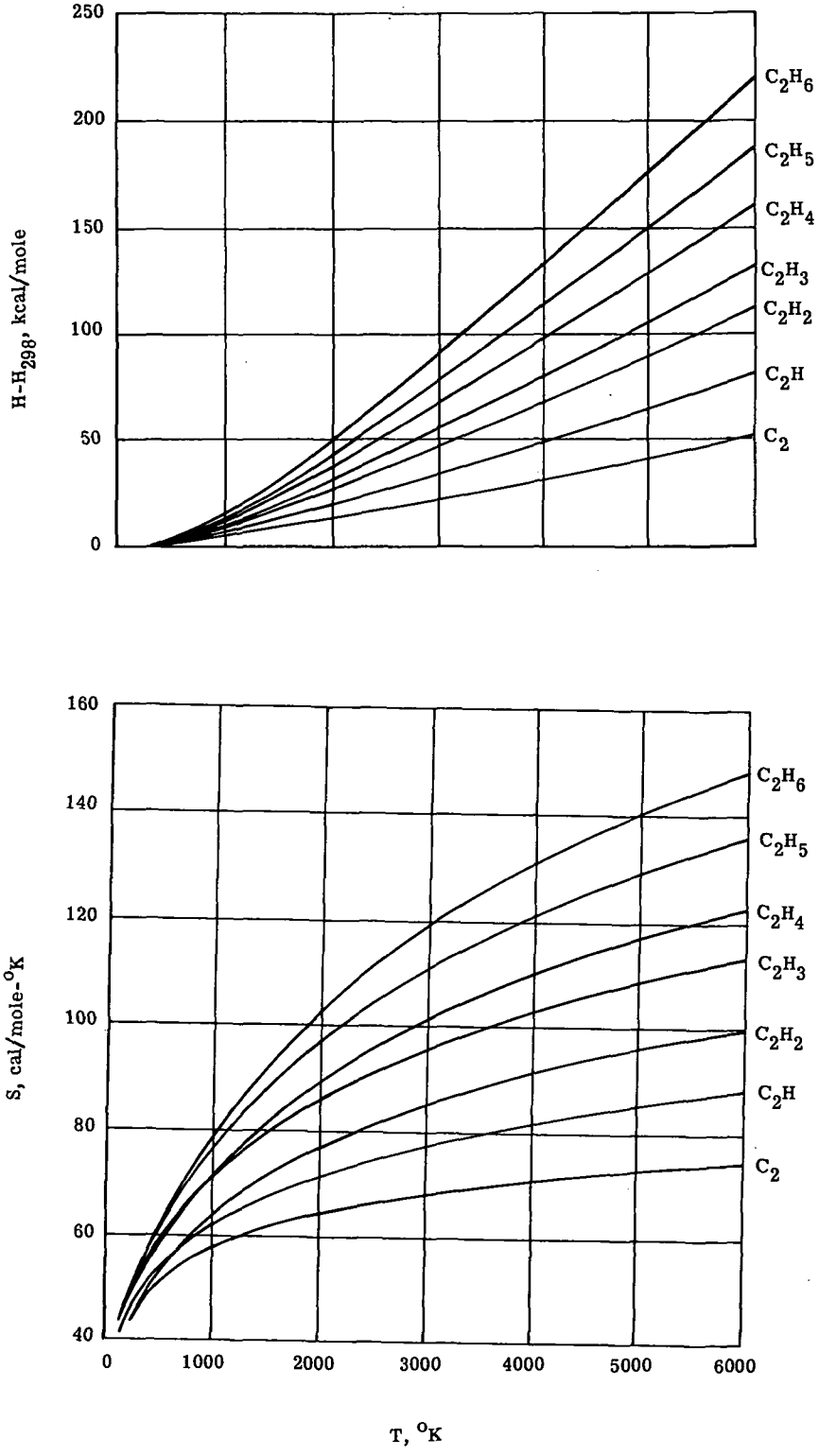

Figure 22.- Comparison for the family C_2H_x (C_2 - C_2H_6).

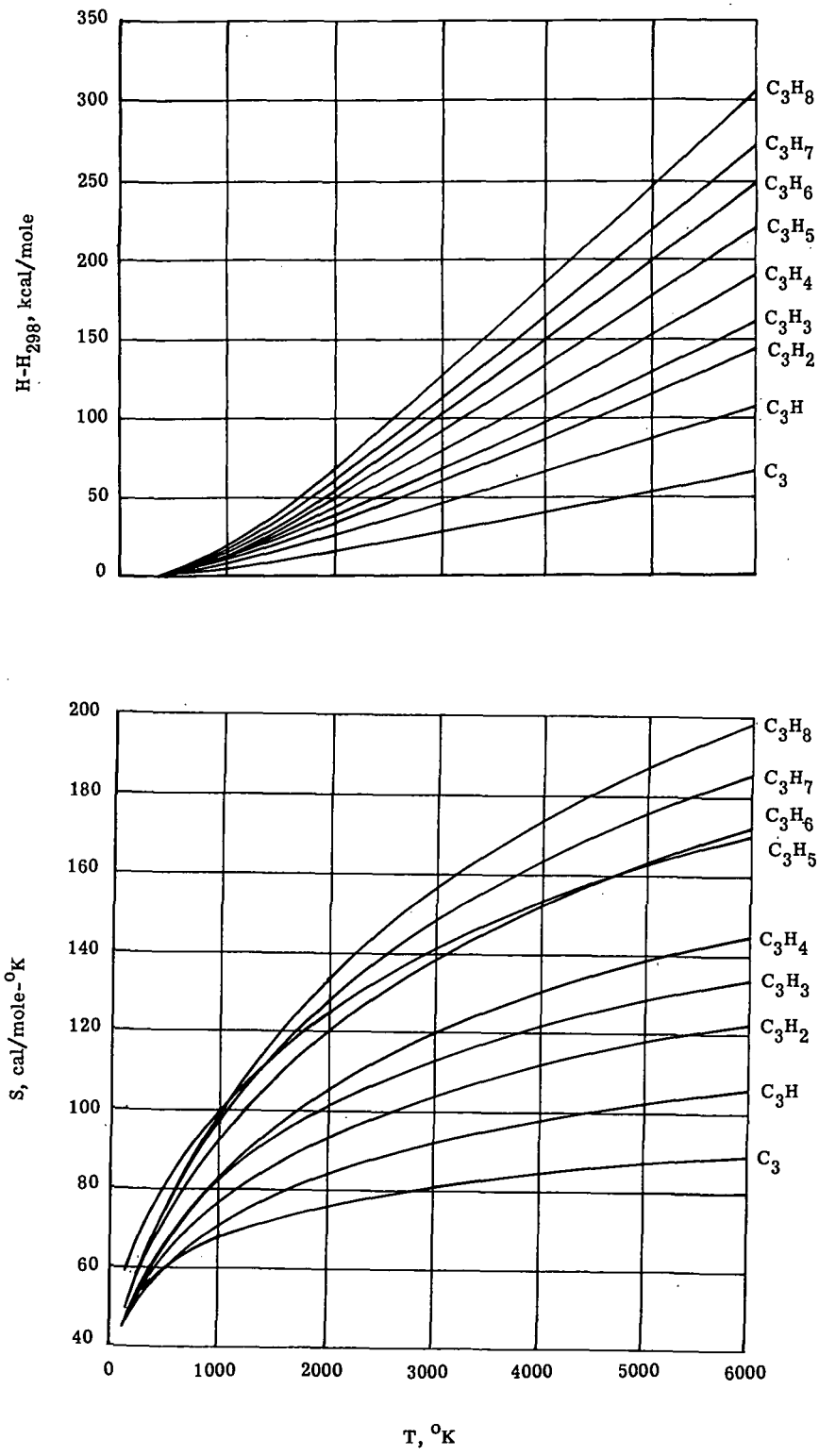

Figure 23.- Comparison for the family C_3H_x (C_3 - C_3H_8).

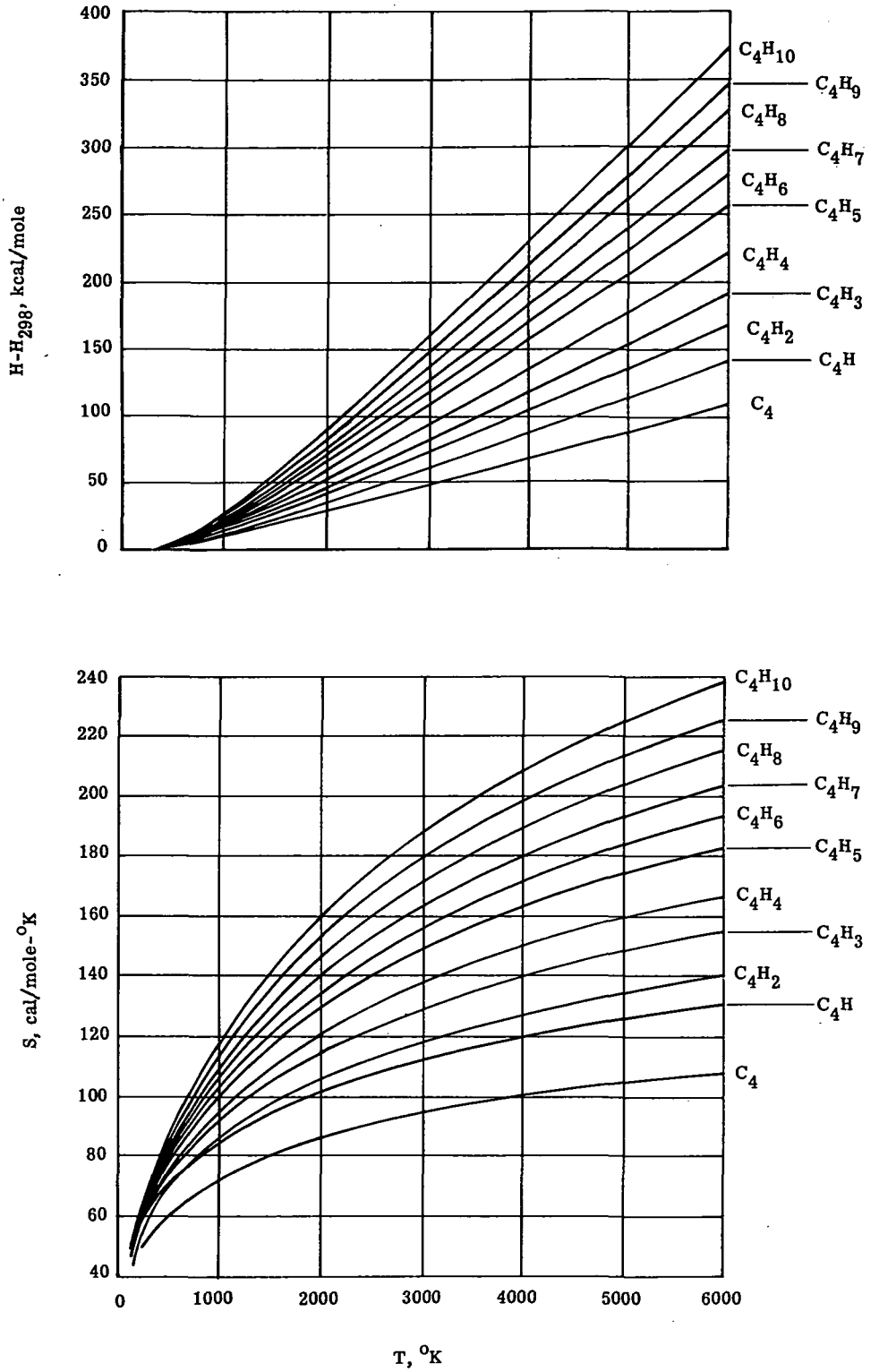

Figure 24.- Comparison for the family C_4H_x (C_4 - C_4H_{10}).

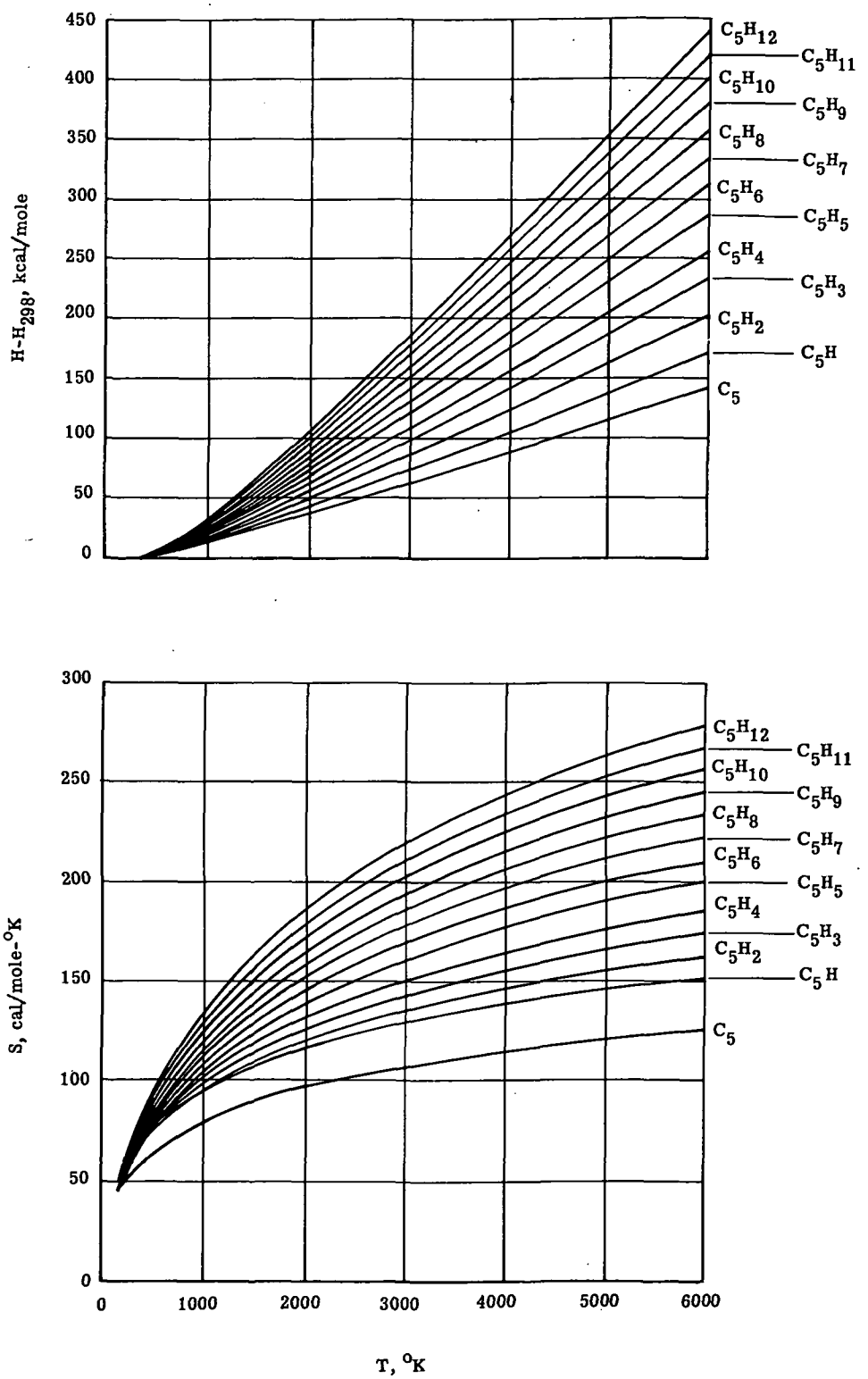

Figure 25.- Comparison for the family C_5H_x (C_5 - C_5H_{12}).

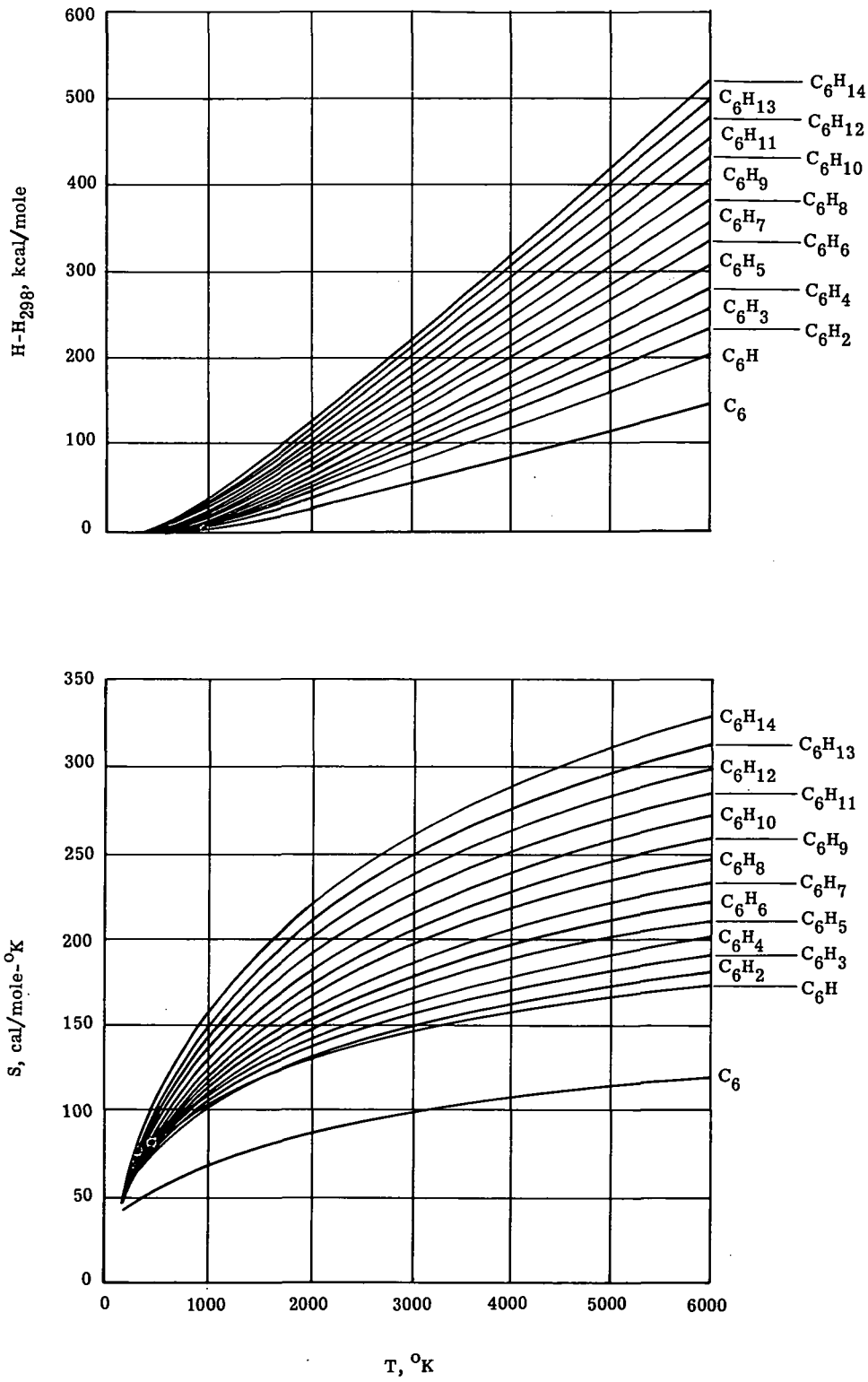

Figure 26.- Comparison for the family C_6H_x (C_6 - C_6H_{14}).

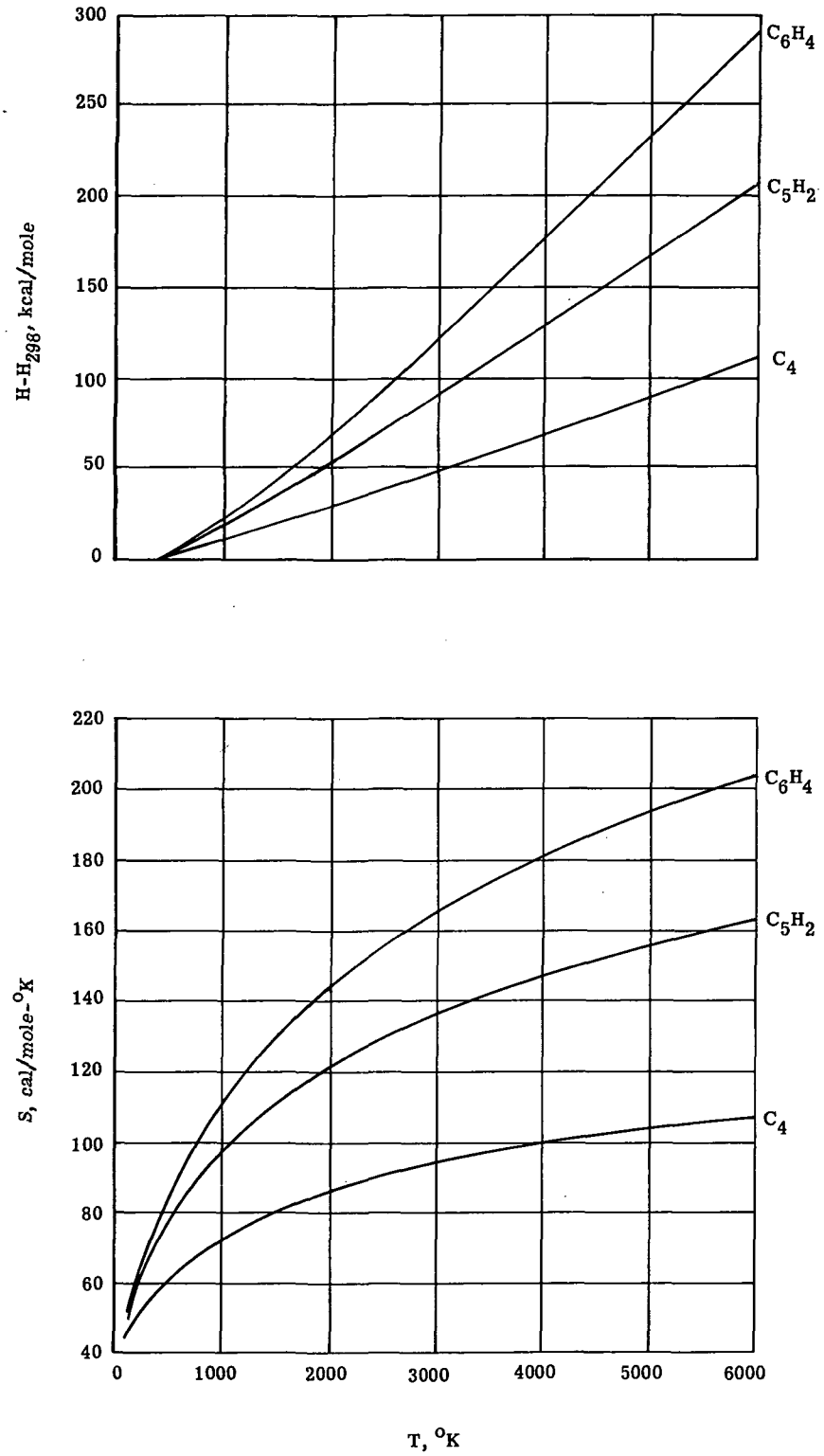

Figure 27.- Comparison for the family C_xH_{2x-8} (C_4 - C_6H_4).

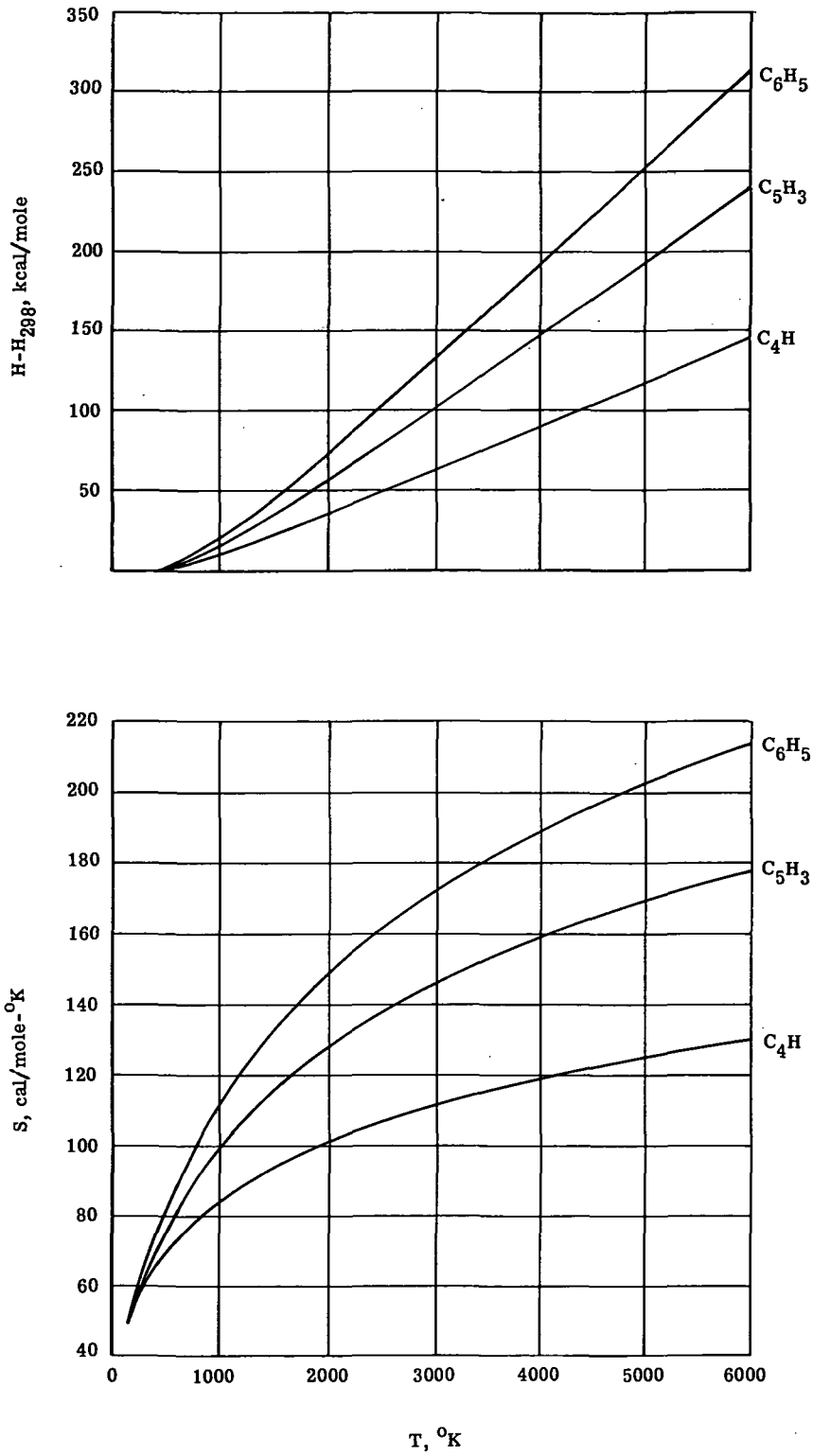

Figure 28.- Comparison for the family C_xH_{2x-7} (C_4H - C_6H_5).

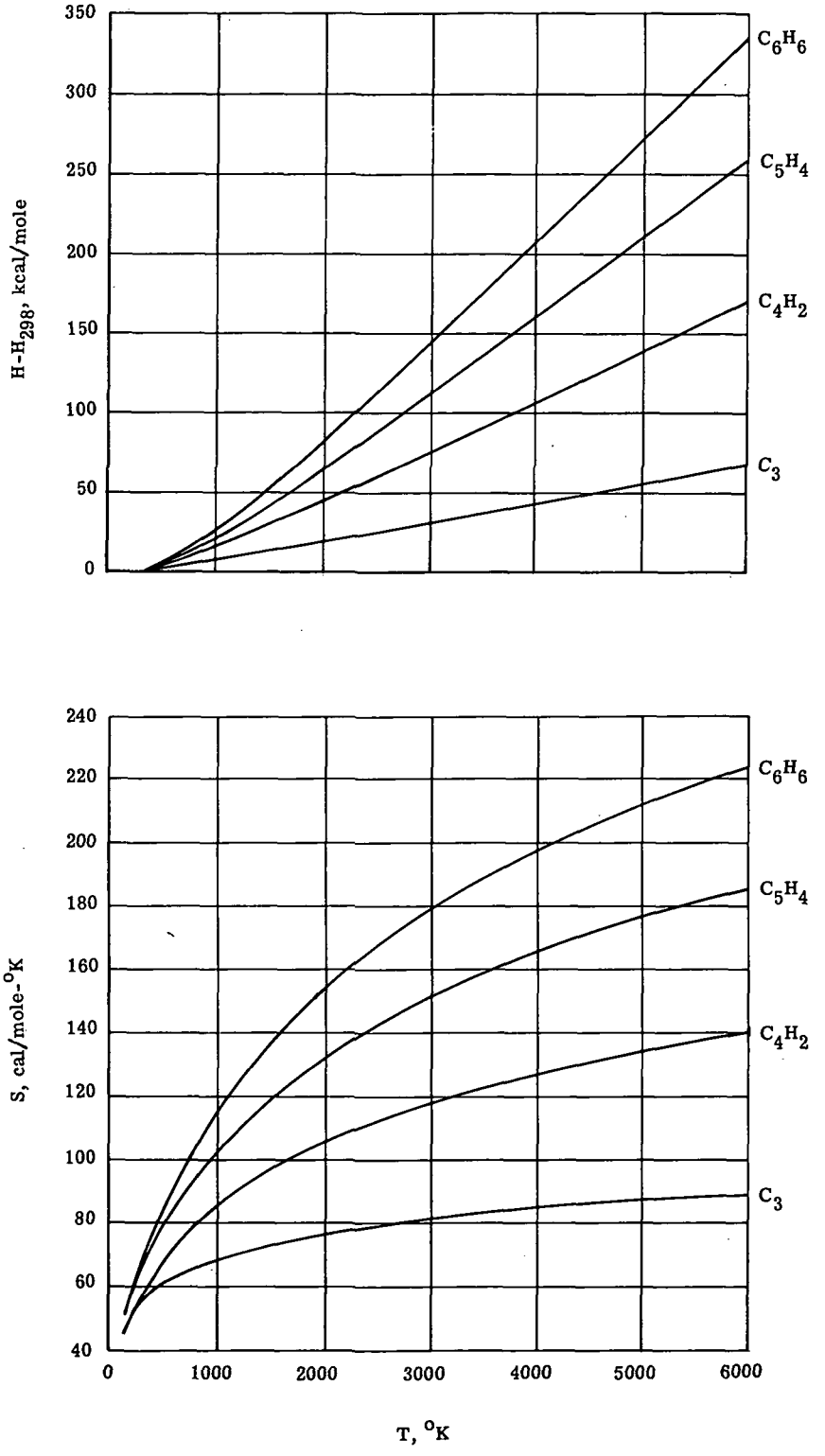

Figure 29.- Comparison for the family C_xH_{2x-6} (C_3 - C_6H_6).

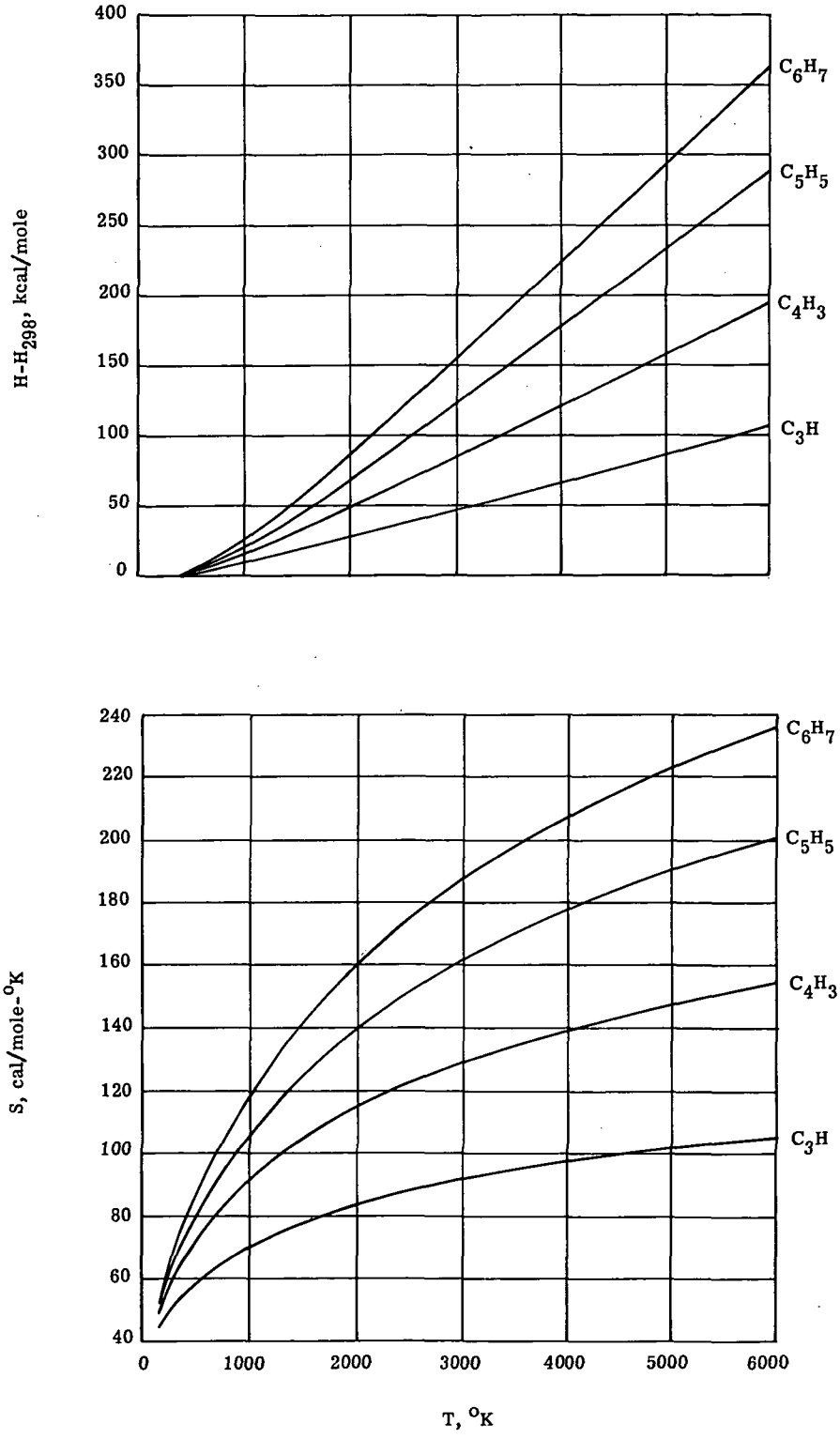

Figure 30.- Comparison for the family C_xH_{2x-5} (C_3H - C_6H_7).

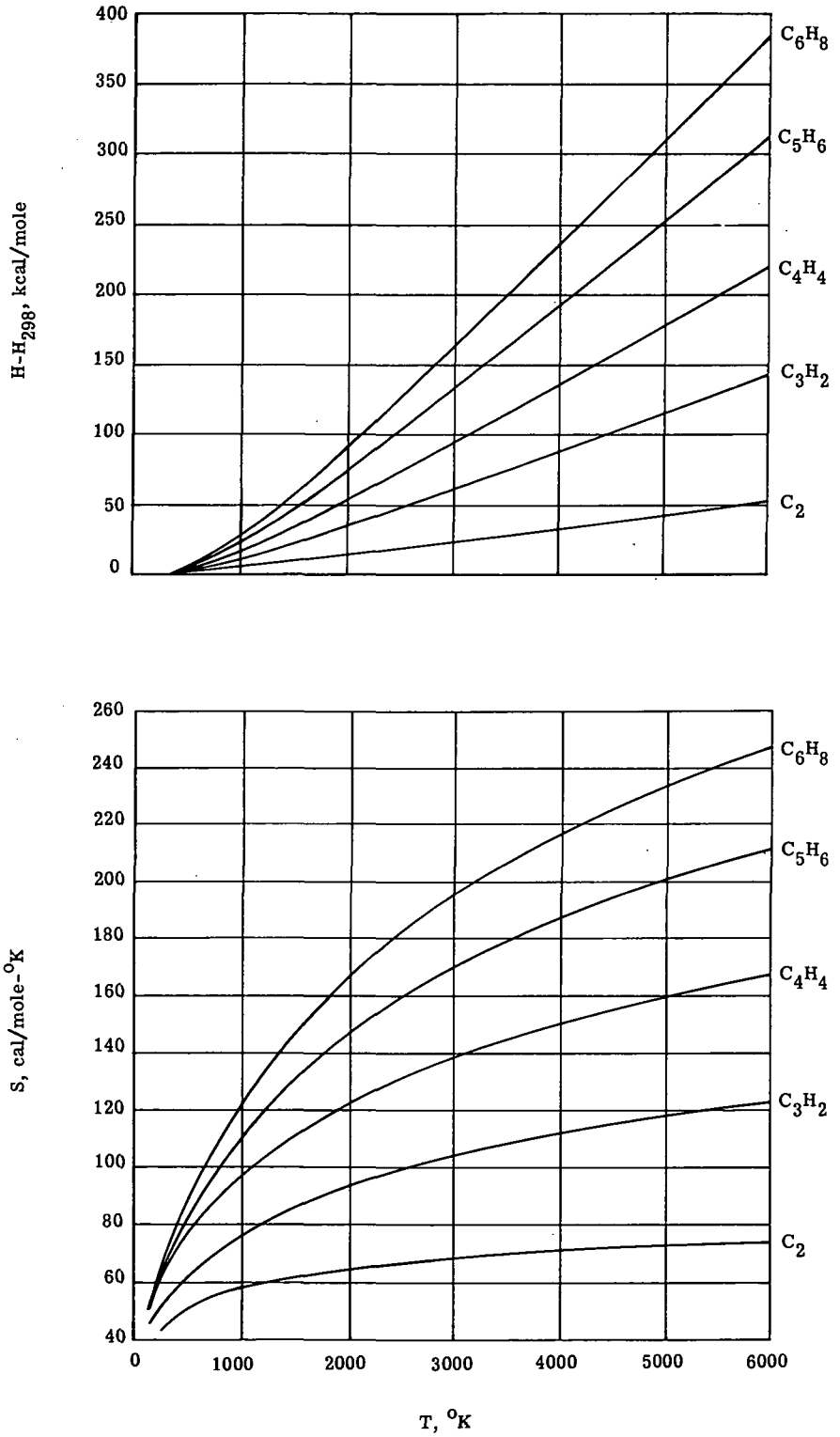

Figure 31.- Comparison for the family C_xH_{2x-4} (C_2 - C_6H_8).

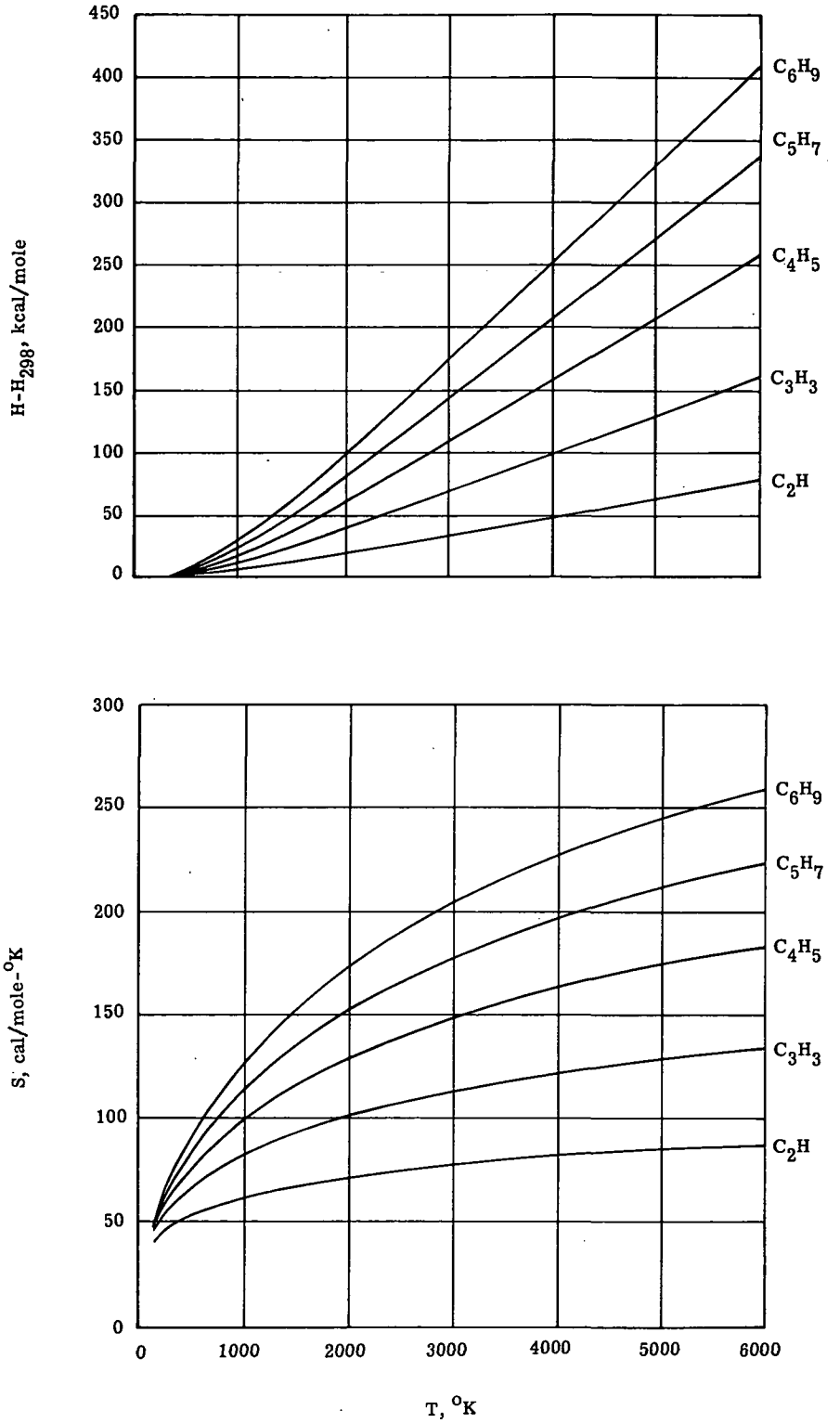

Figure 32.- Comparison for the family C_xH_{2x-3} (C_2H - C_6H_9).

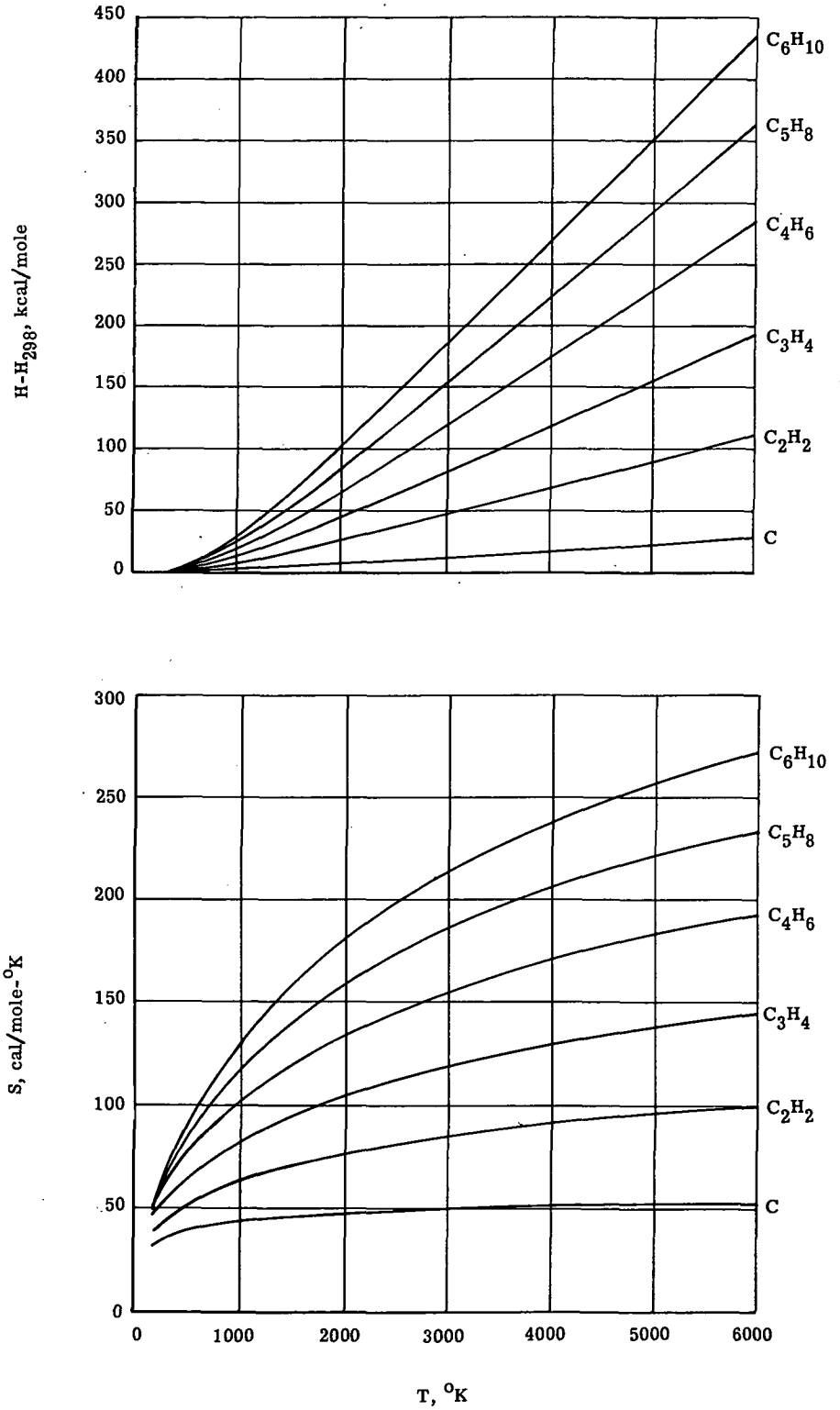

Figure 33.- Comparison for the family C_xH_{2x-2} (C - C_6H_{10}).

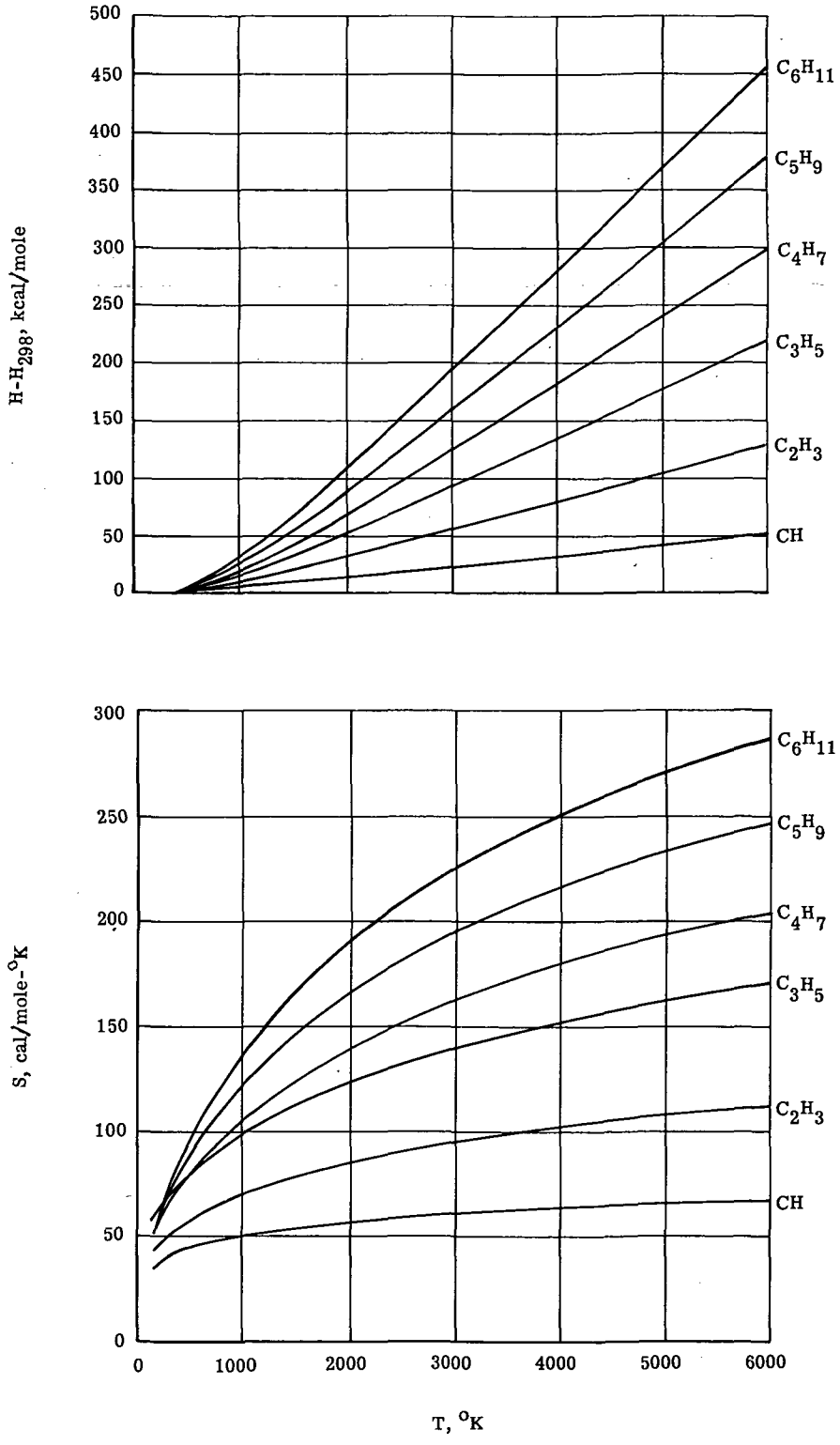

Figure 34.- Comparison for the family C_xH_{2x-1} (CH - C_6H_{11}).

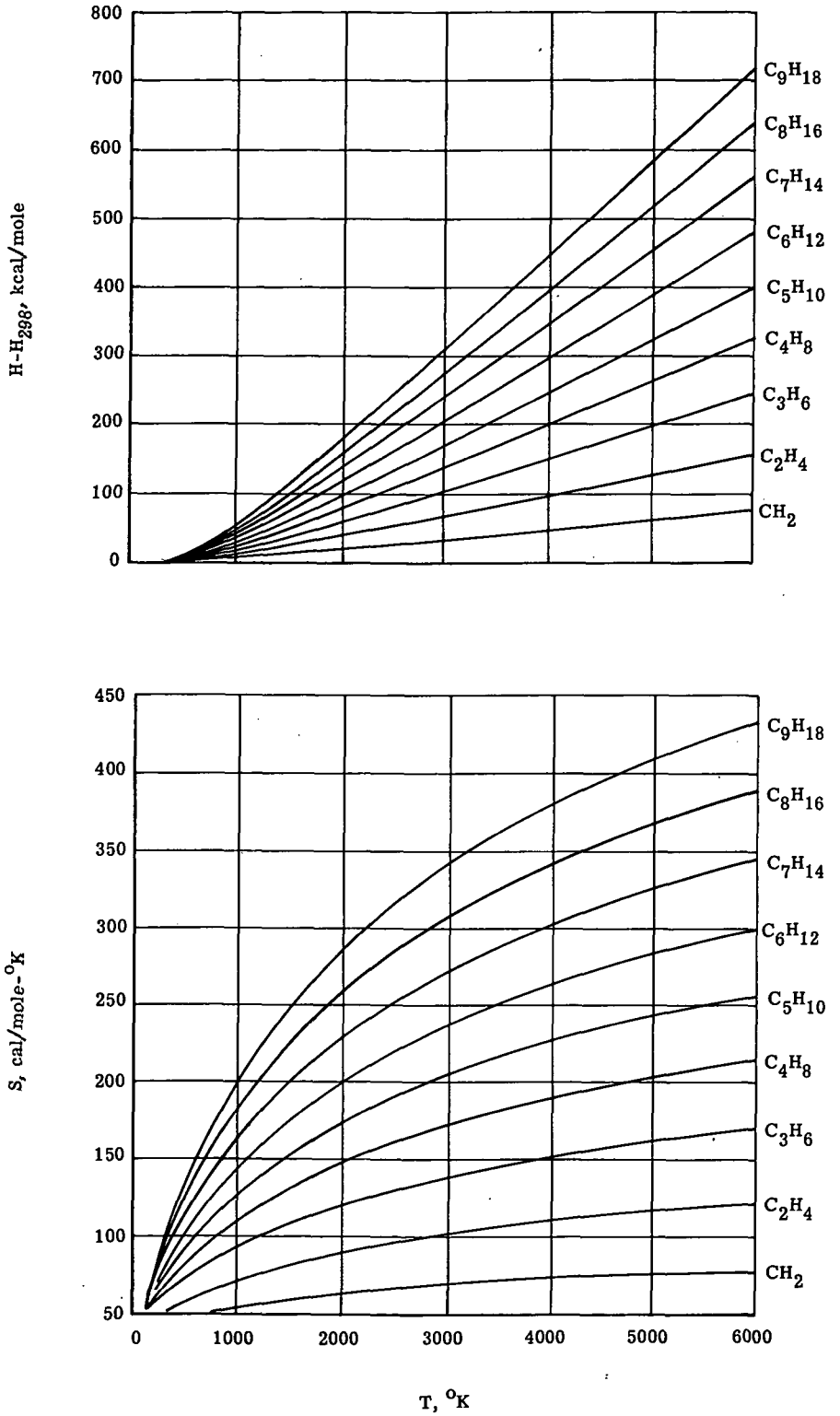

Figure 35.- Comparison for the family C_xH_{2x} (CH_2 - C_9H_{18}).

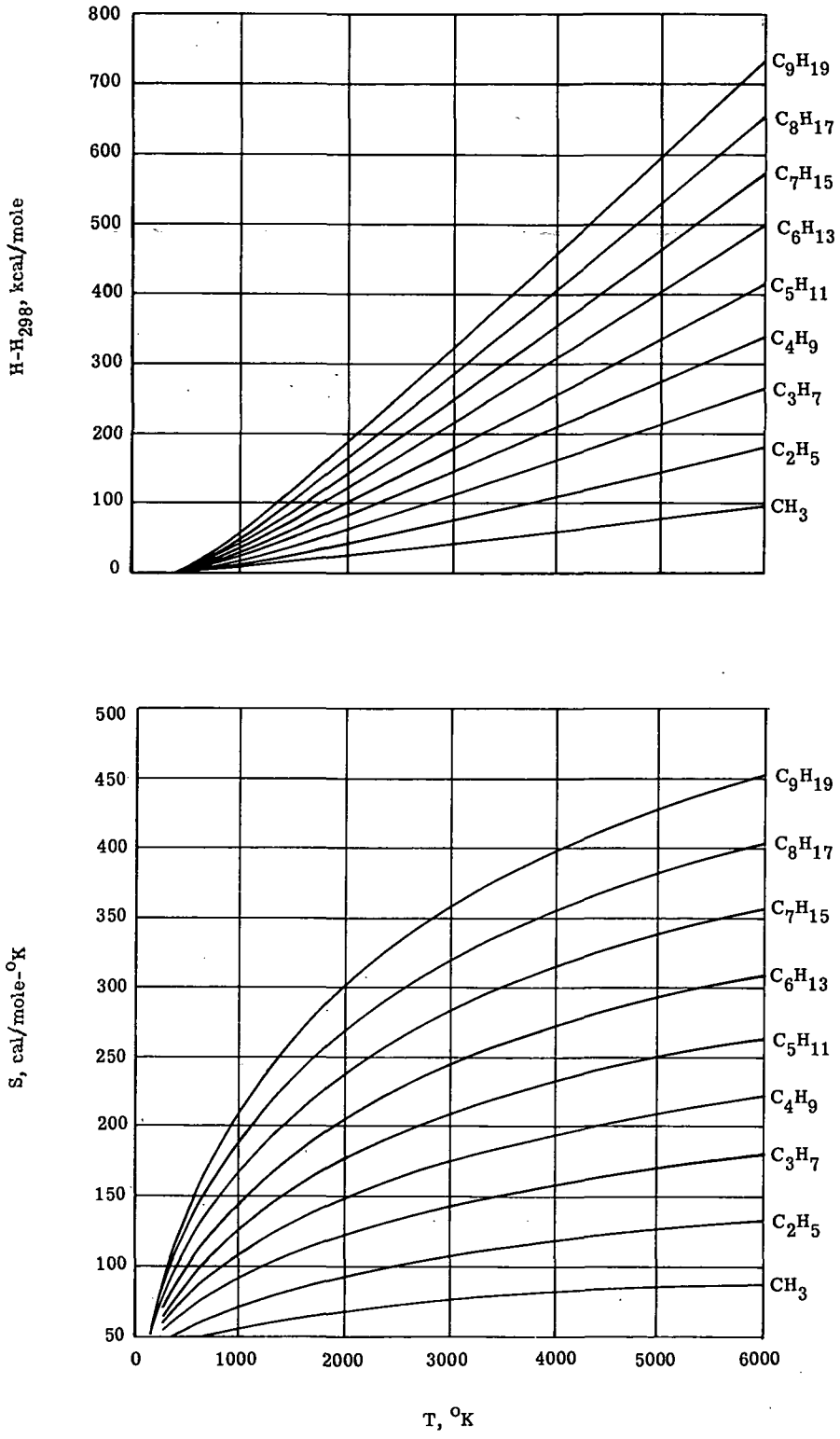

Figure 36.- Comparison for the family C_xH_{2x+1} (CH_3 - C_9H_{19}).

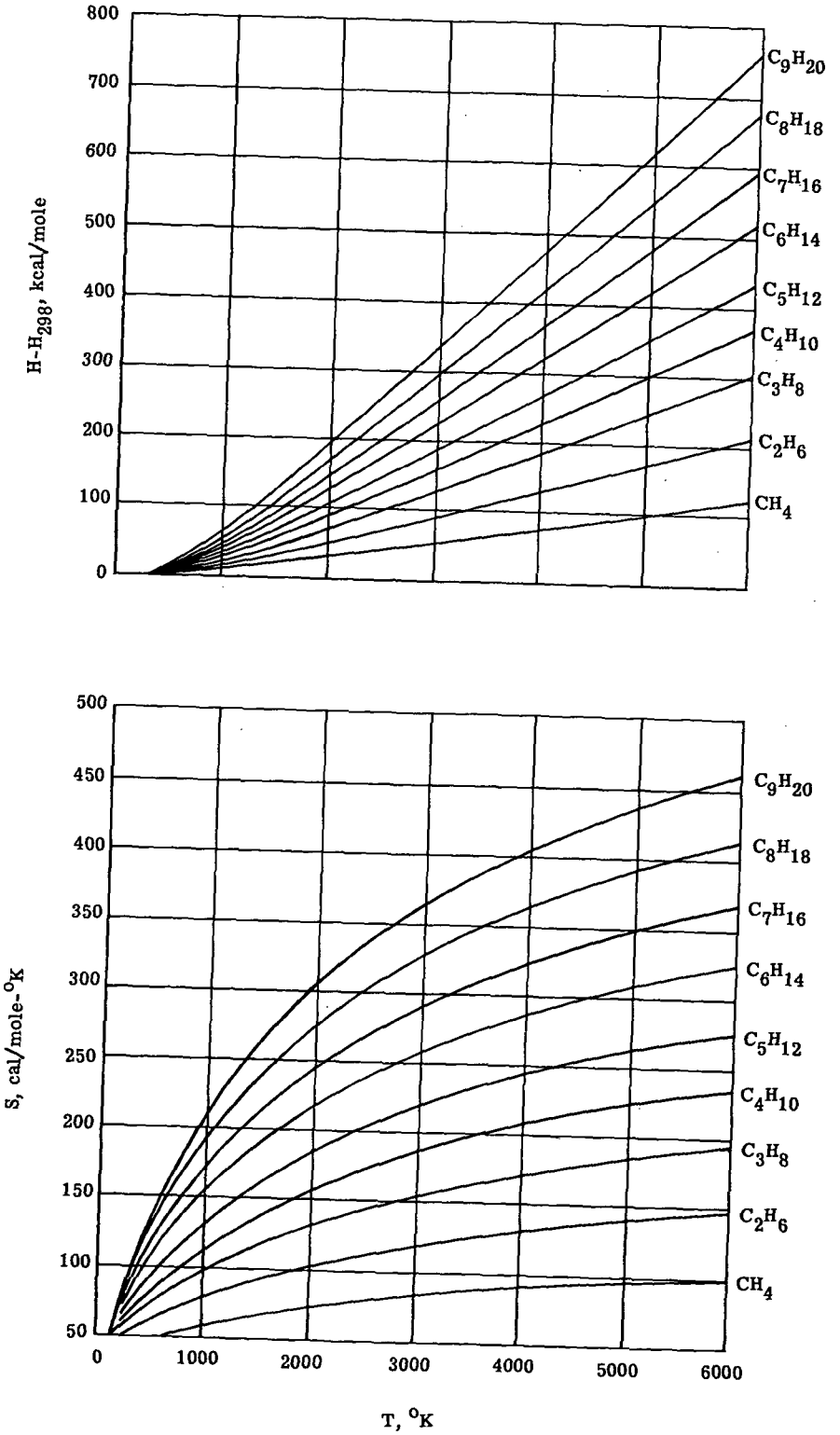

Figure 37.- Comparison for the family C_xH_{2x+2} (CH_4 - C_9H_{20}).

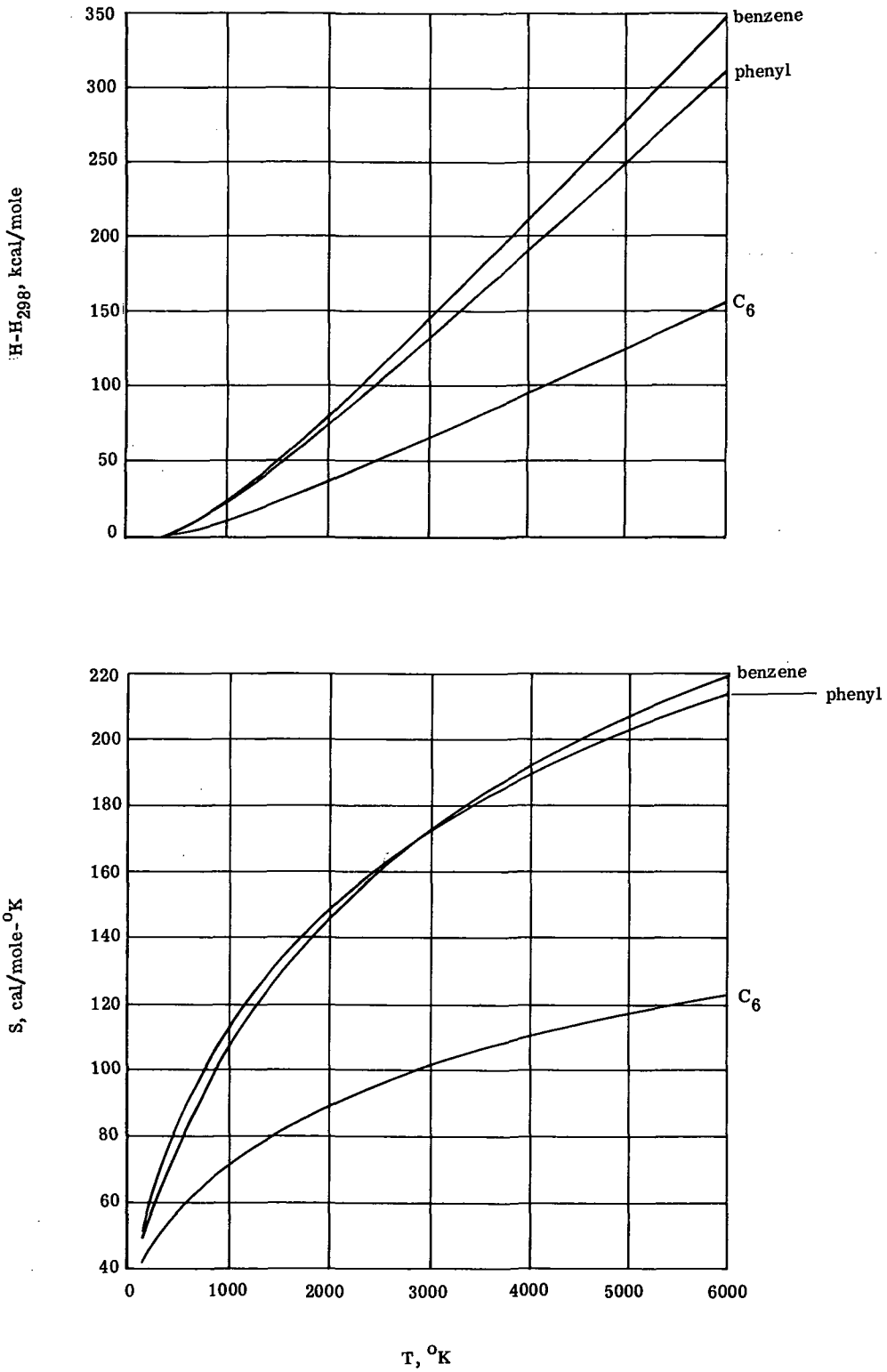

Figure 38.- Comparison for the family C_6-phenyl-benzene.

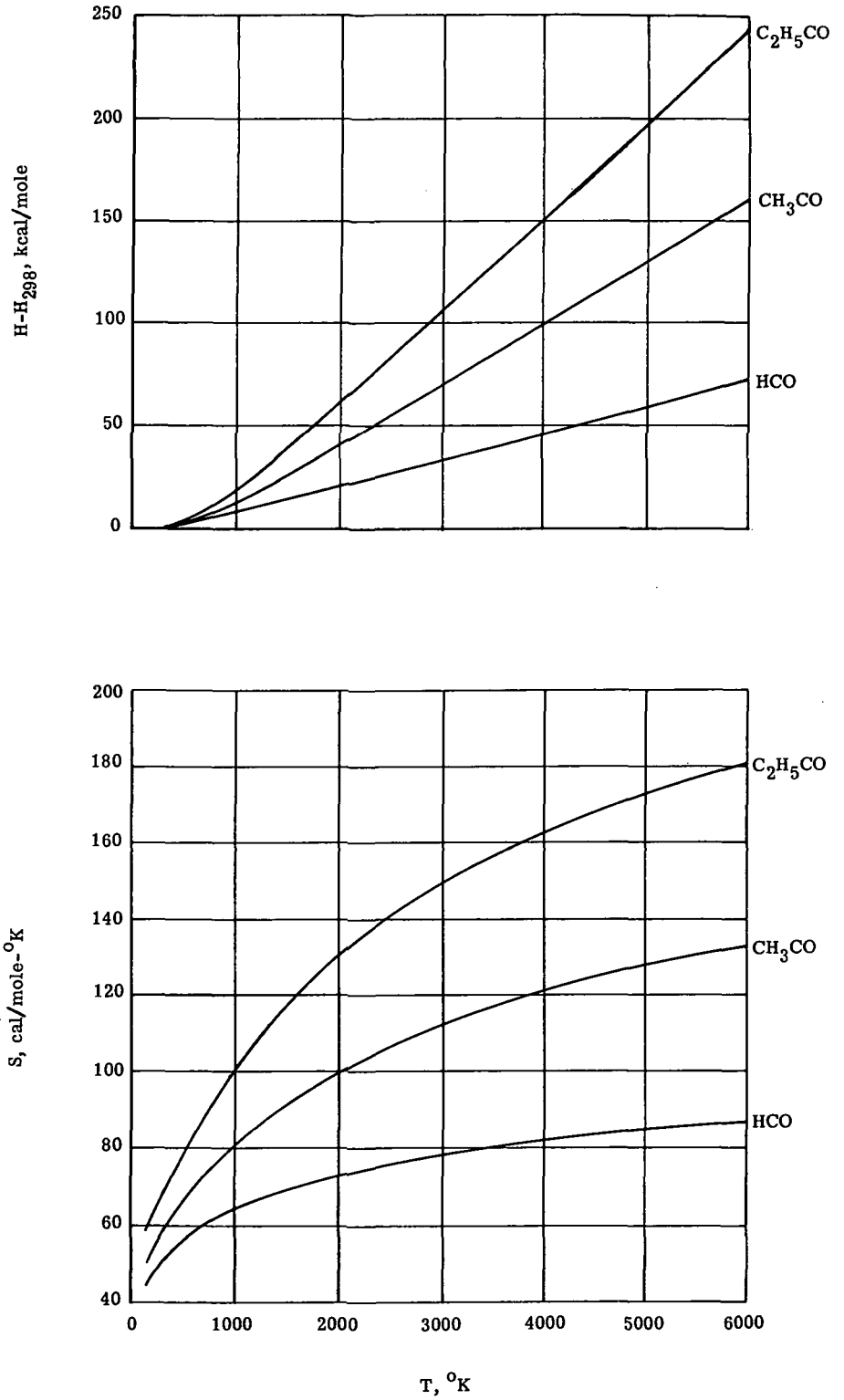

Figure 39.- Comparison for the family $C_xH_{2x-1}O$ (HCO - C_2H_5CO).

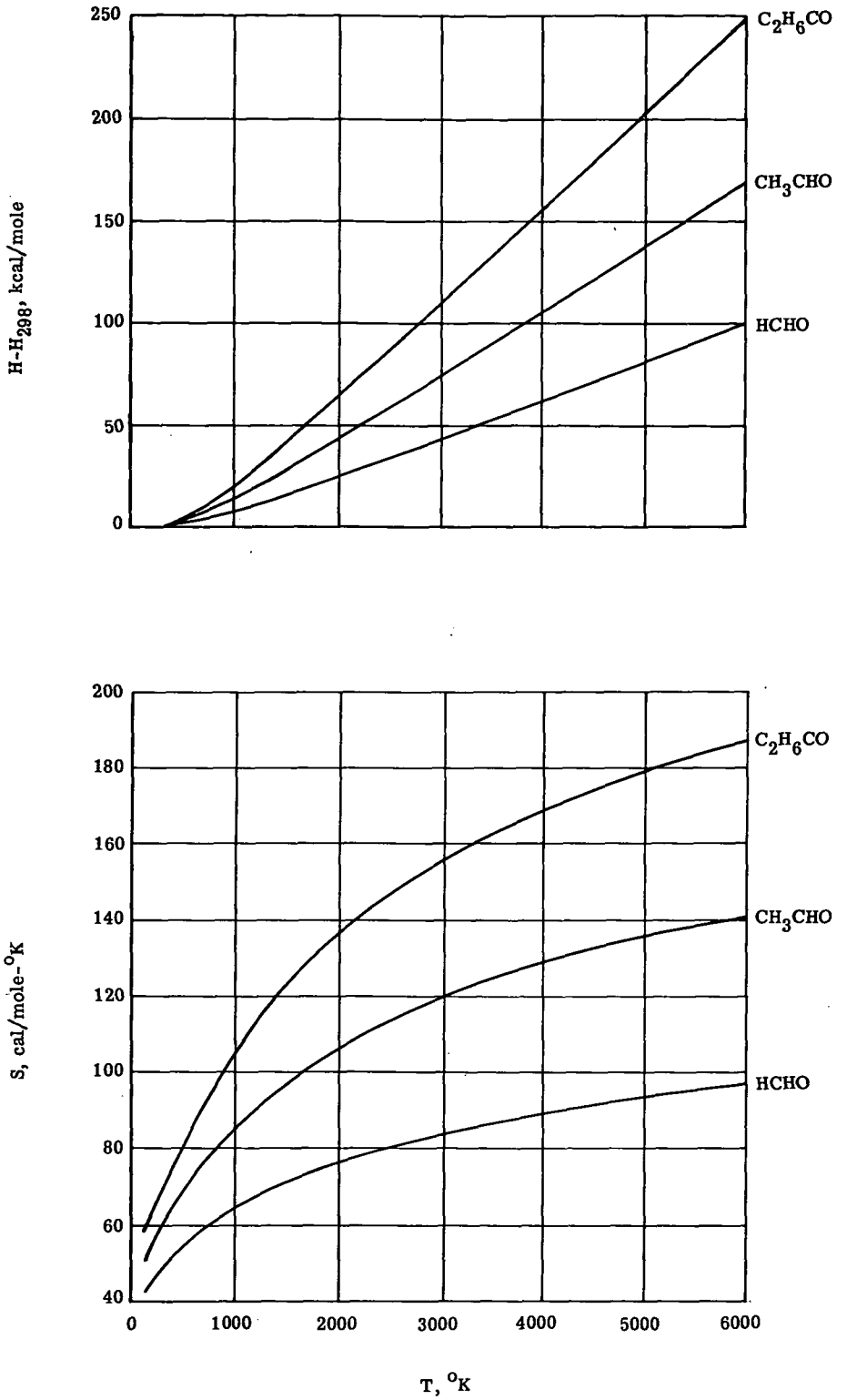

Figure 40.- Comparison for the family $C_xH_{2x}O$ (HCHO - C_2H_5CHO).

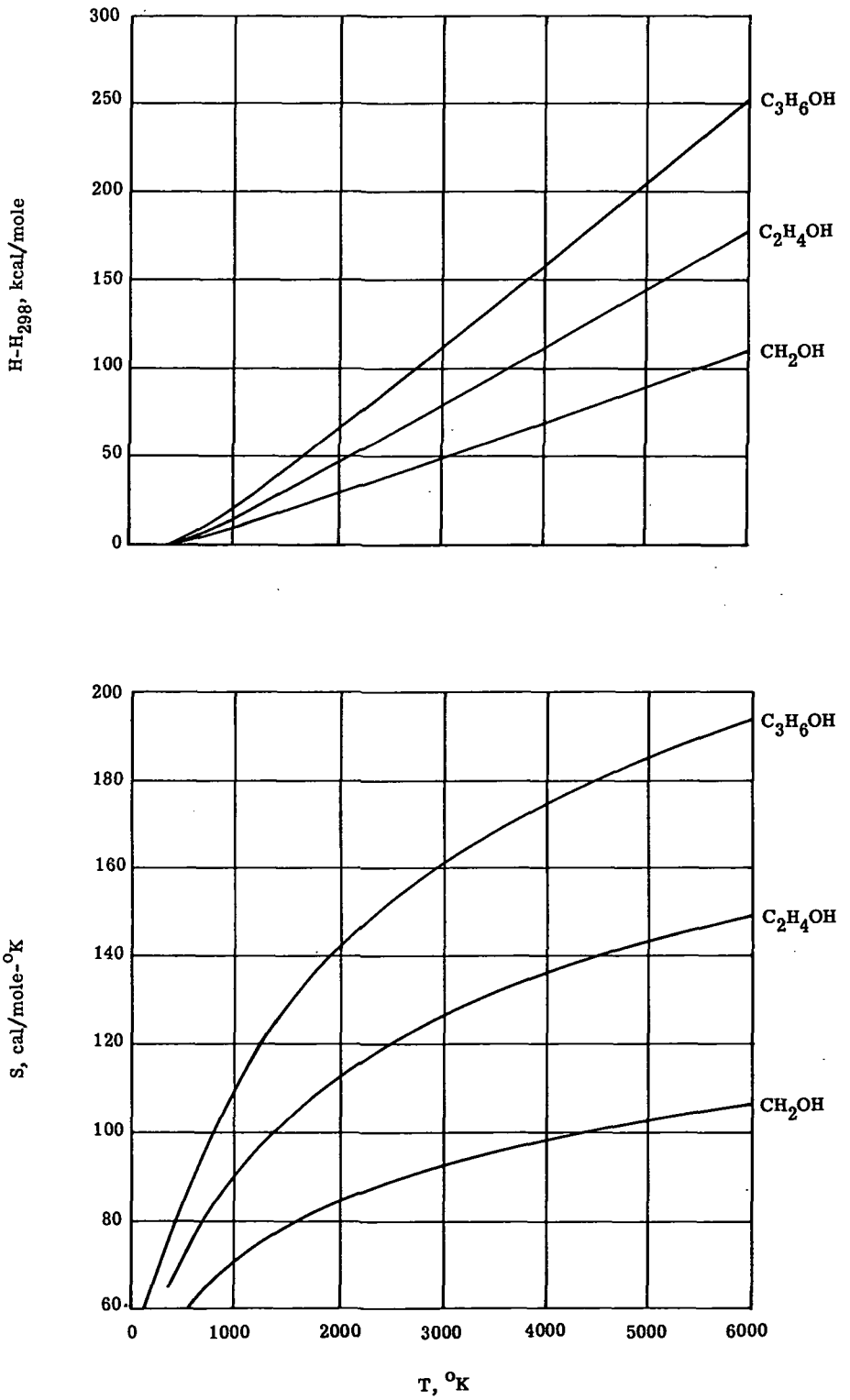

Figure 41.- Comparison for the family $C_xH_{2x+1}O$ (CH_2OH - C_3H_6OH).

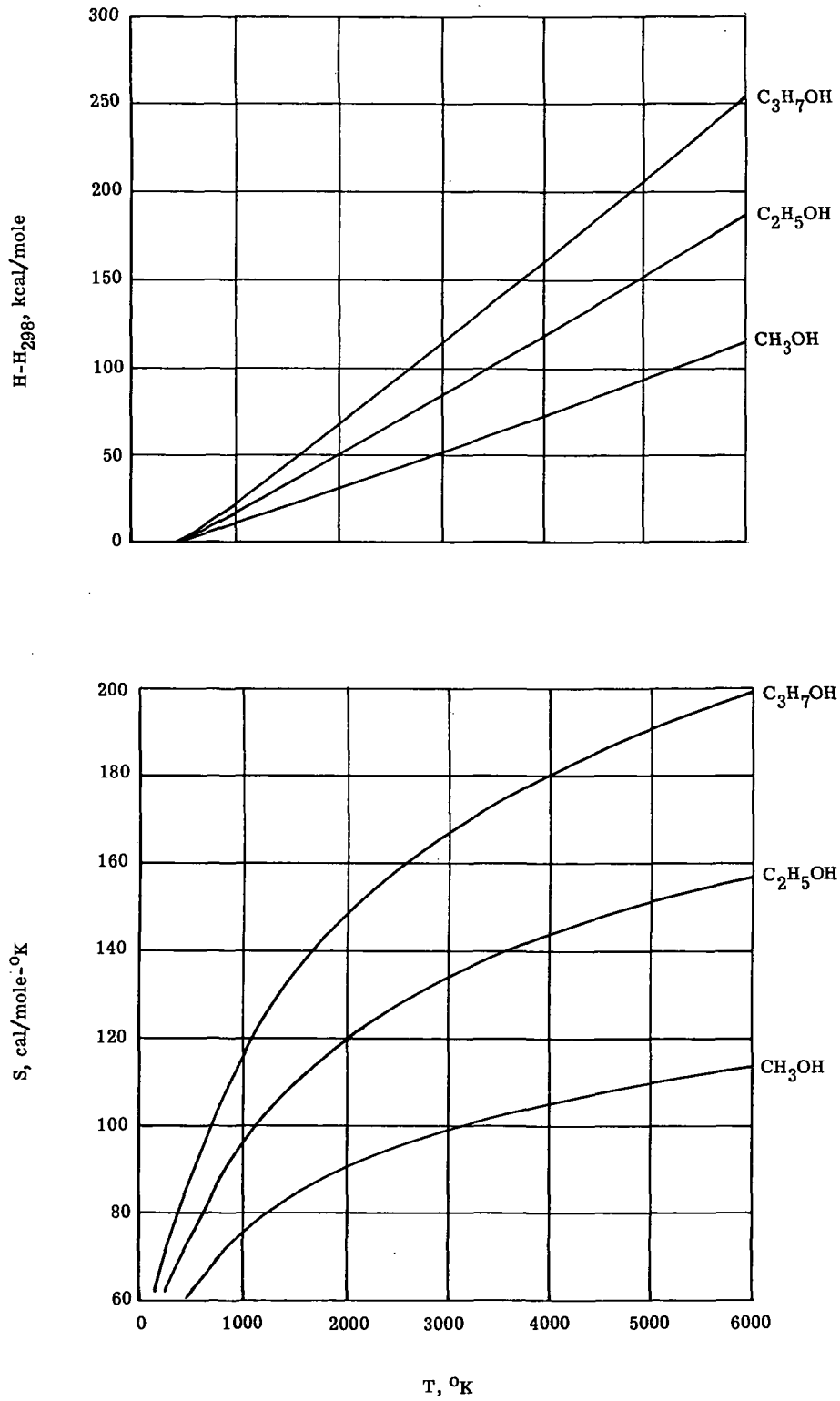

Figure 42.- Comparison for the family $C_xH_{2x+2}O(CH_3OH - C_3H_7OH)$.

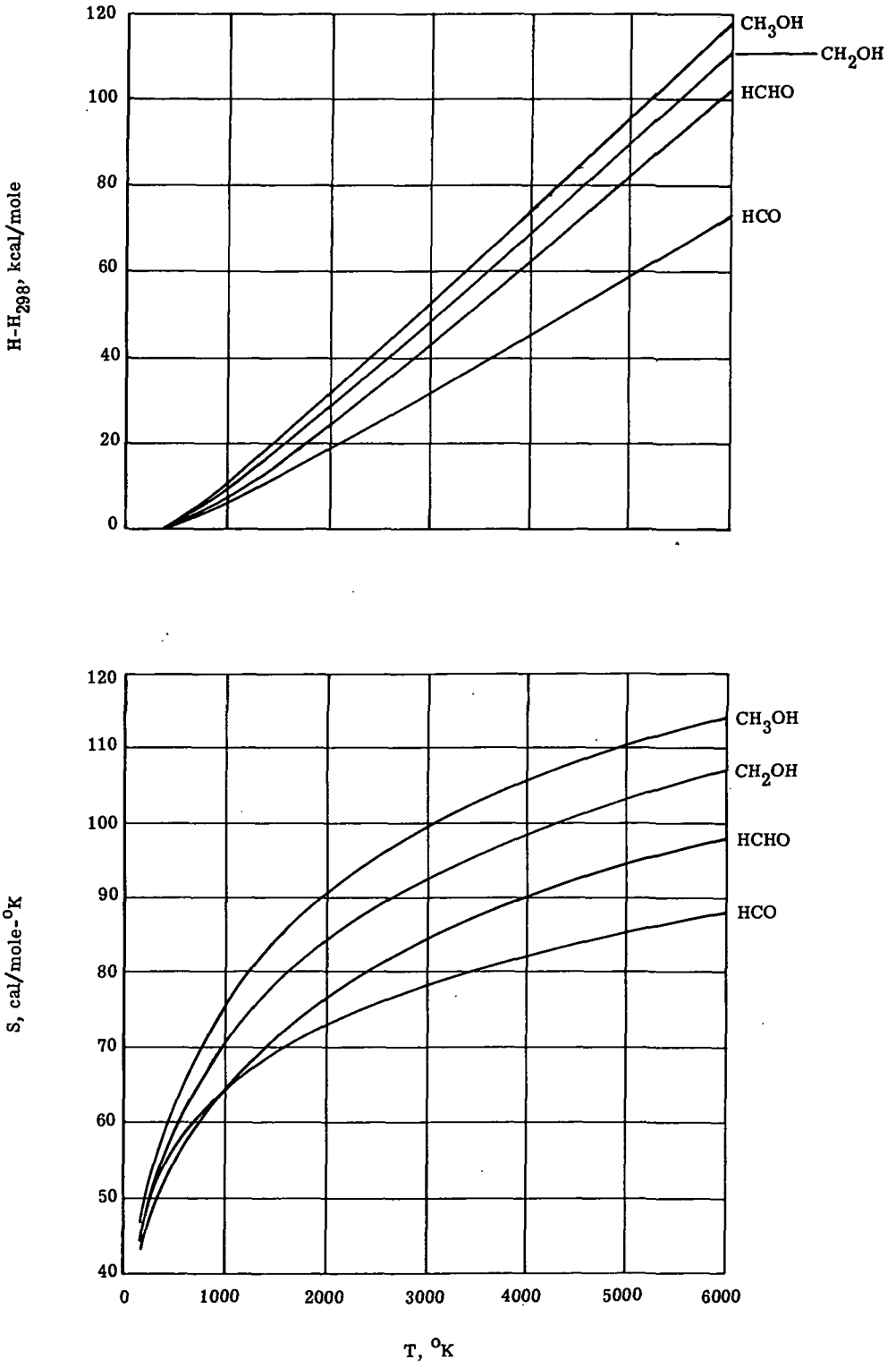

Figure 43.- Comparison for the family CH_xO (HCO - CH_3OH).

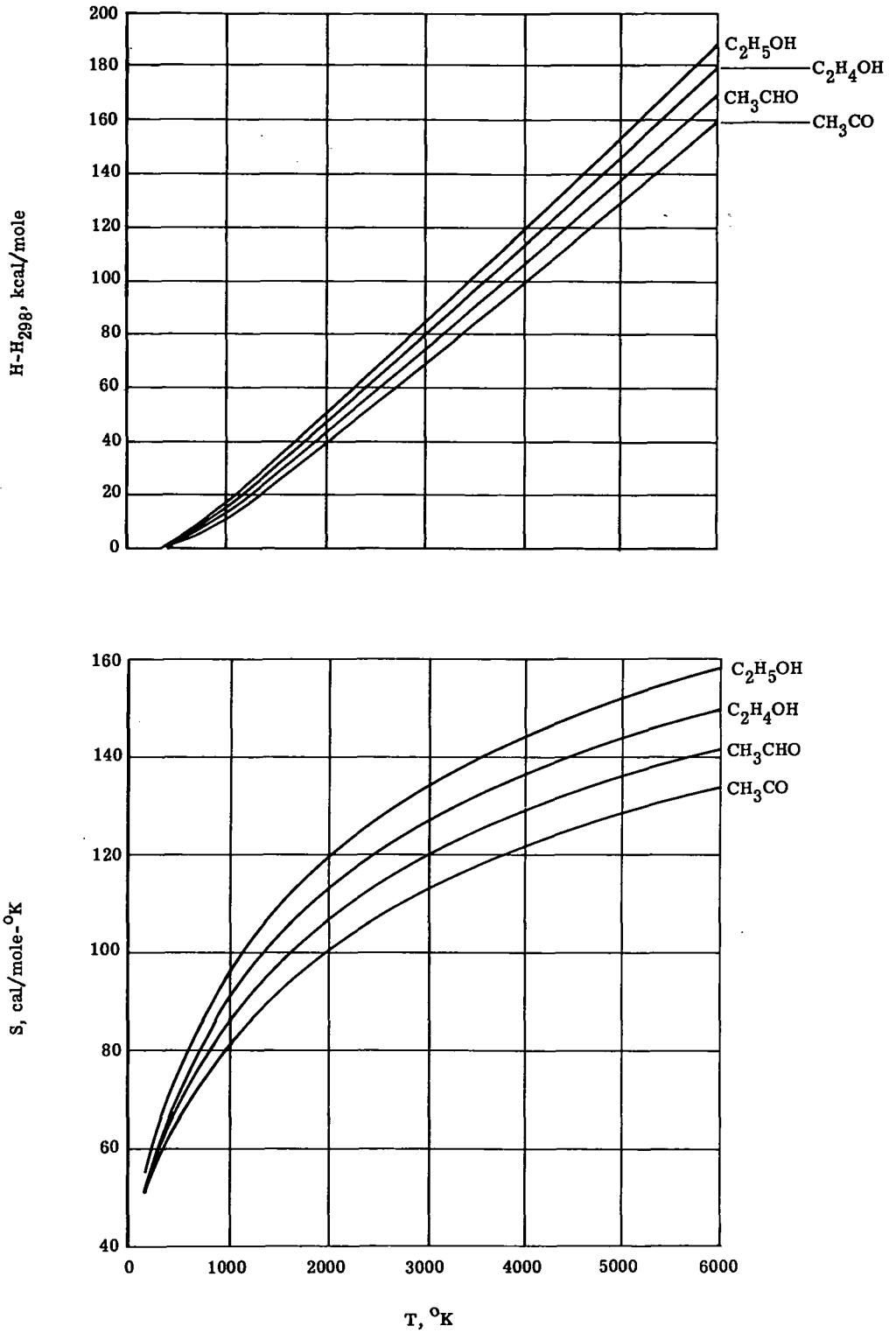

Figure 44.- Comparison for the family C_2H_xO (CH_3CO - C_2H_5OH).

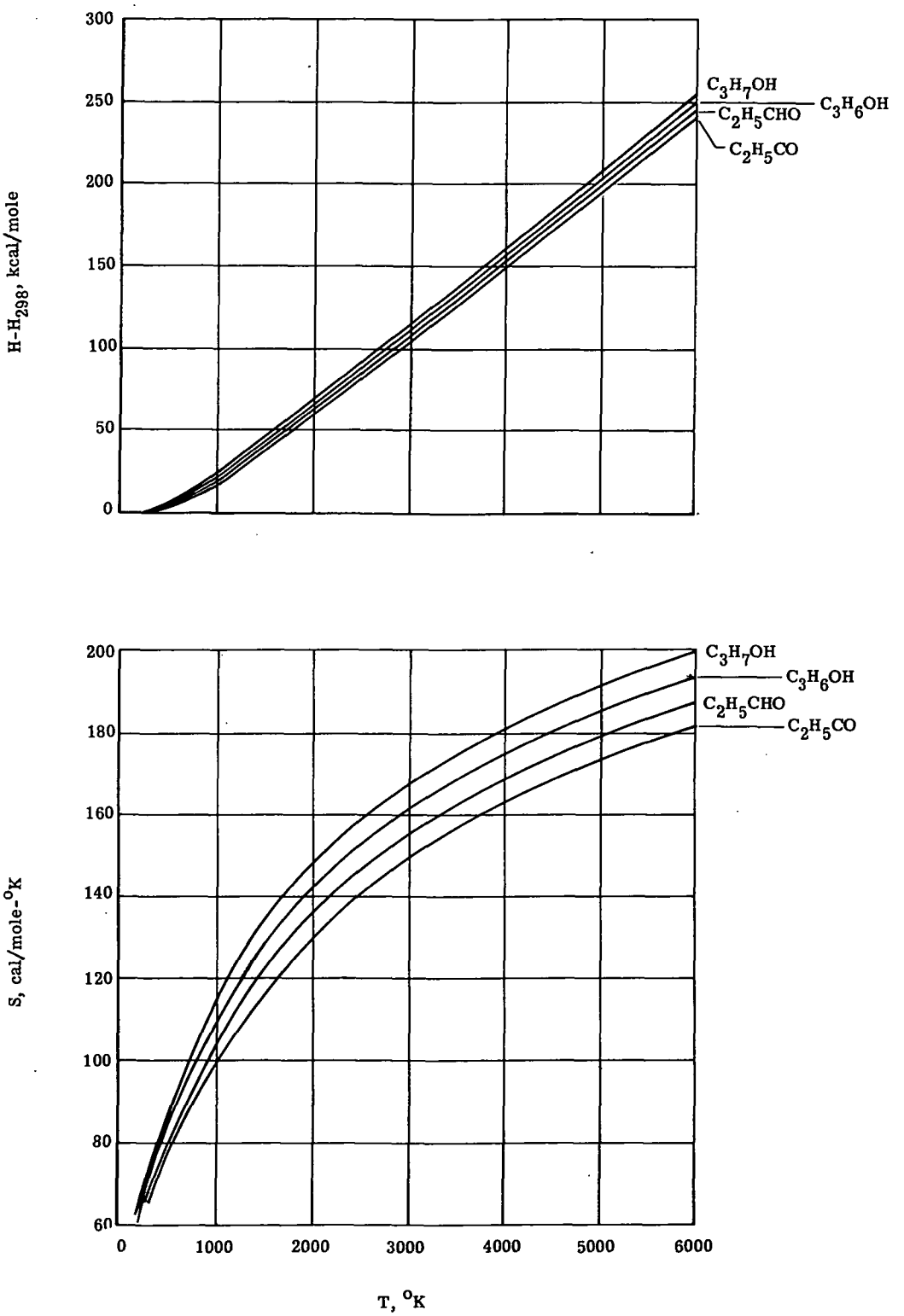

Figure 45.- Comparison for the family C_3H_xO (C_2H_5CO - C_3H_7OH).

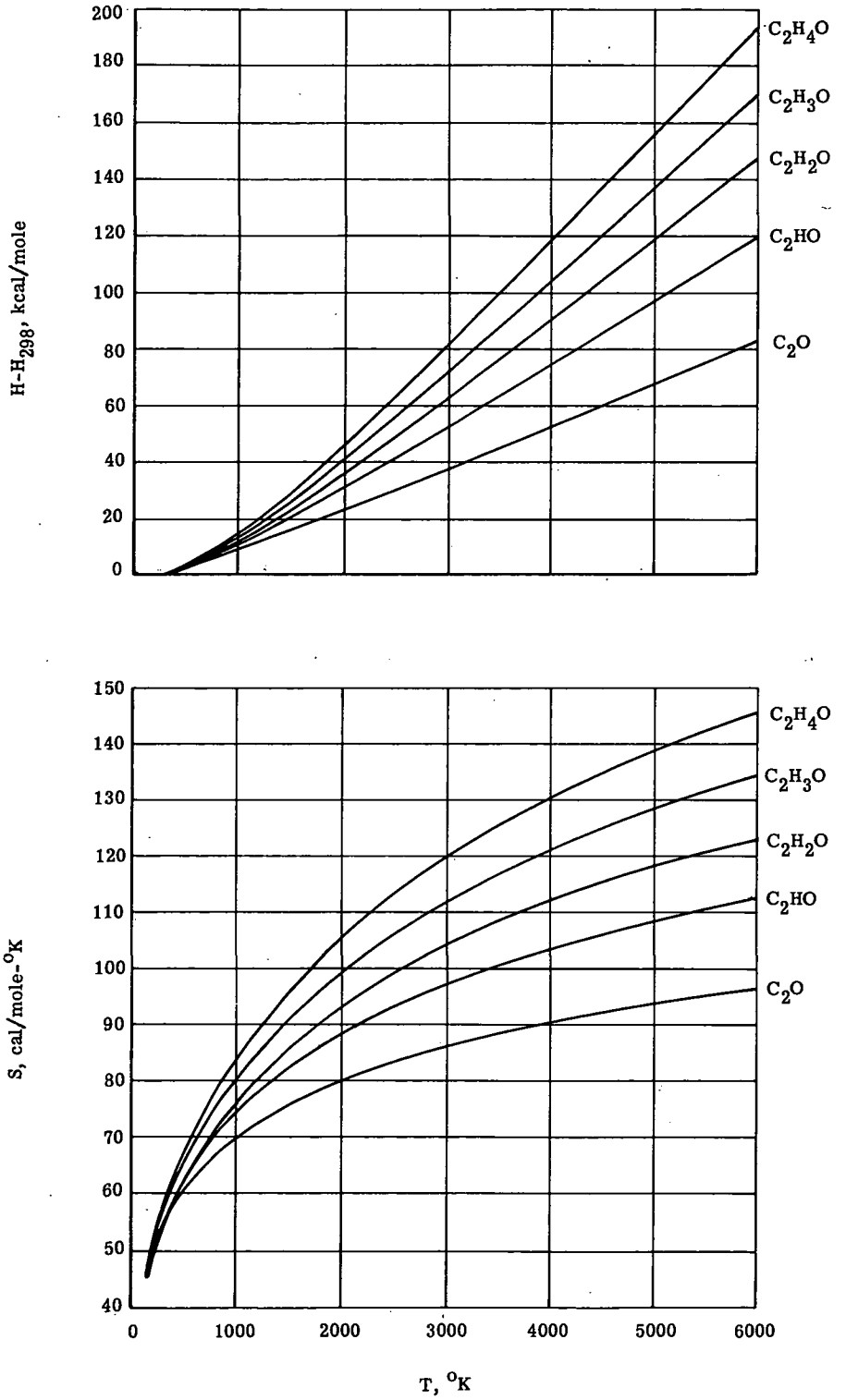

Figure 46.- Comparison for the family C_2H_xO (C_2O - C_2H_4O).

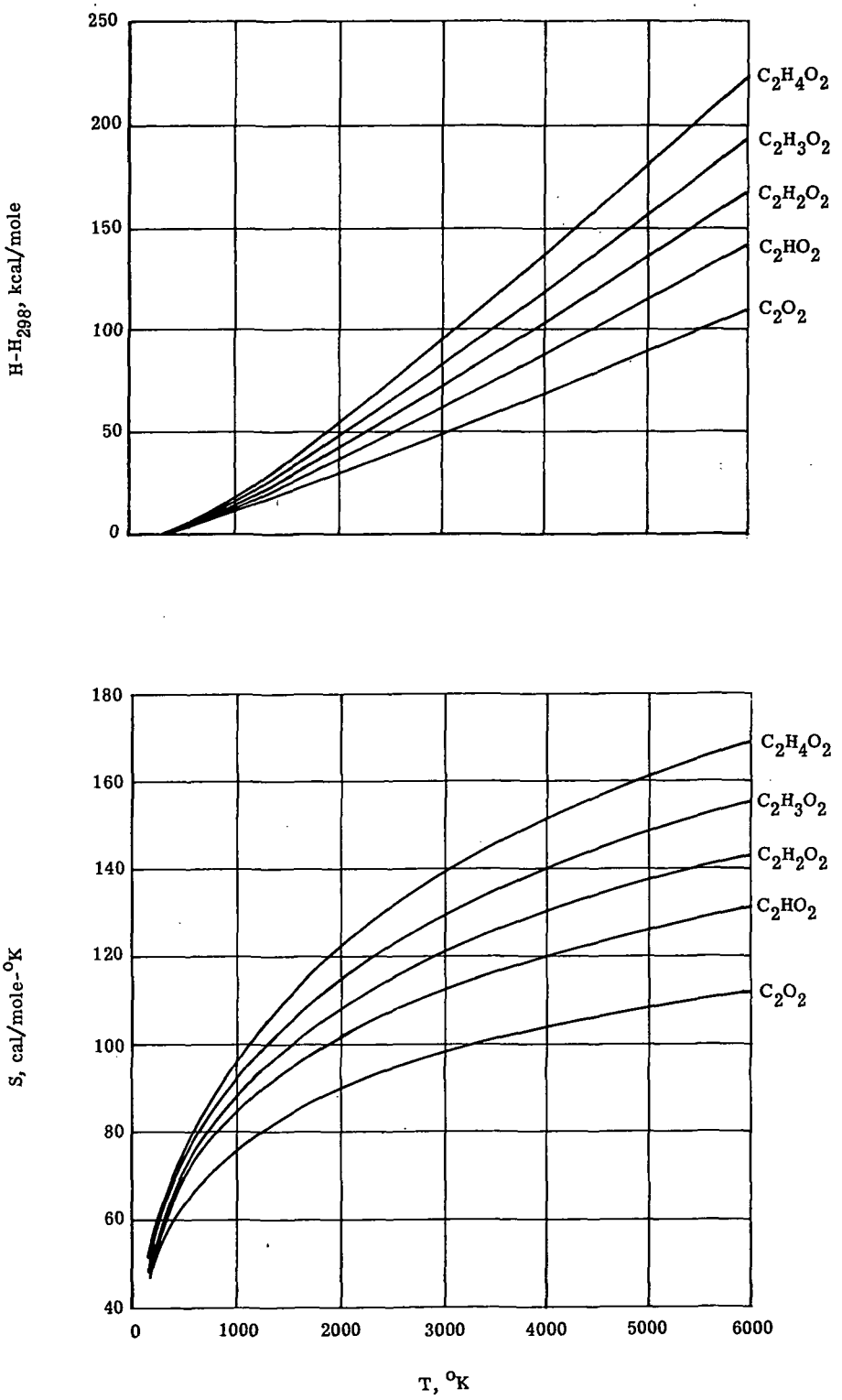

Figure 47.- Comparison for the family $C_2H_xO_2$ (C_2O_2 - $C_2H_4O_2$).

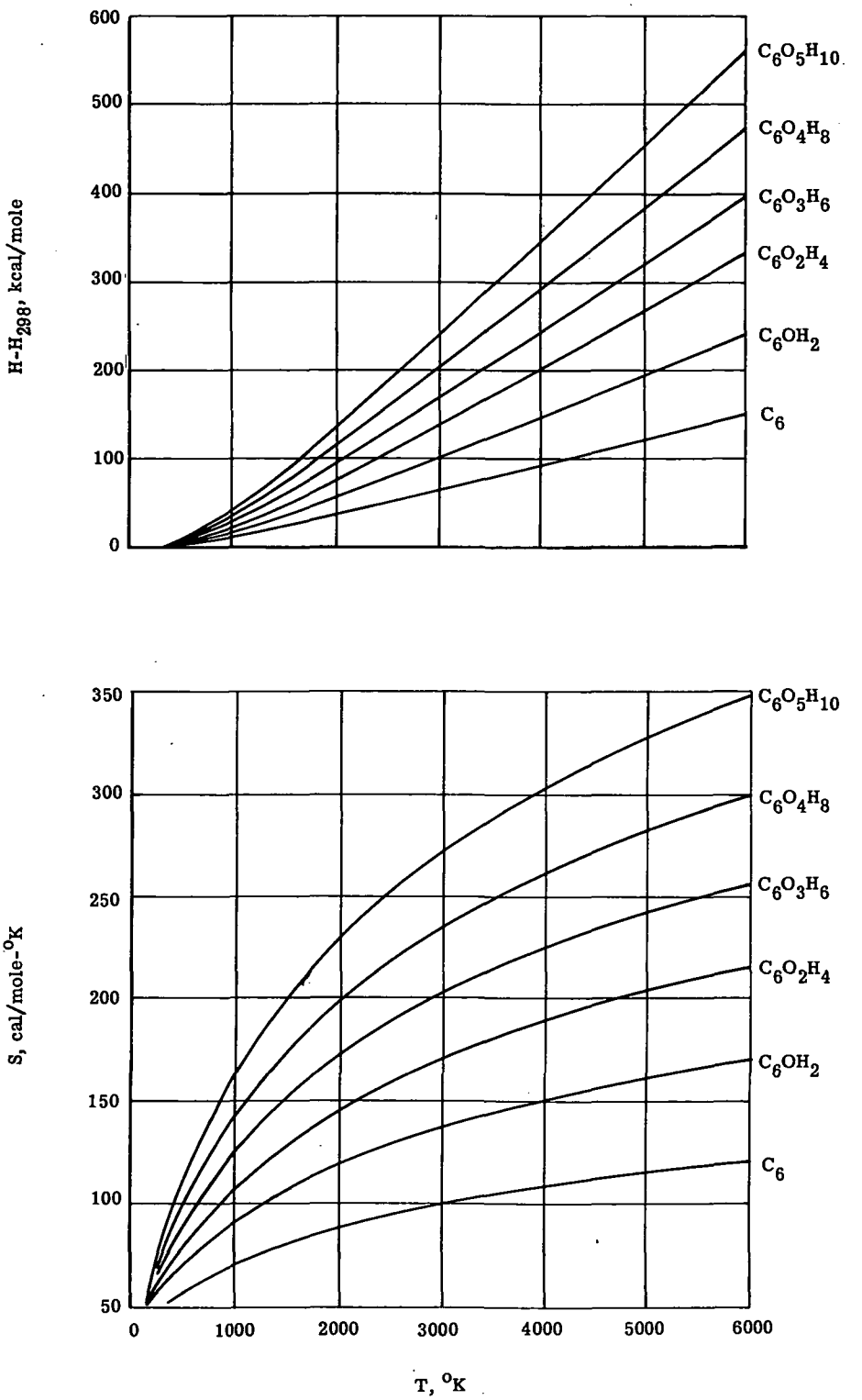

Figure 48.- Comparison for the family $C_6O_xH_{2x}$ (C_6 - $C_6O_5H_{10}$).

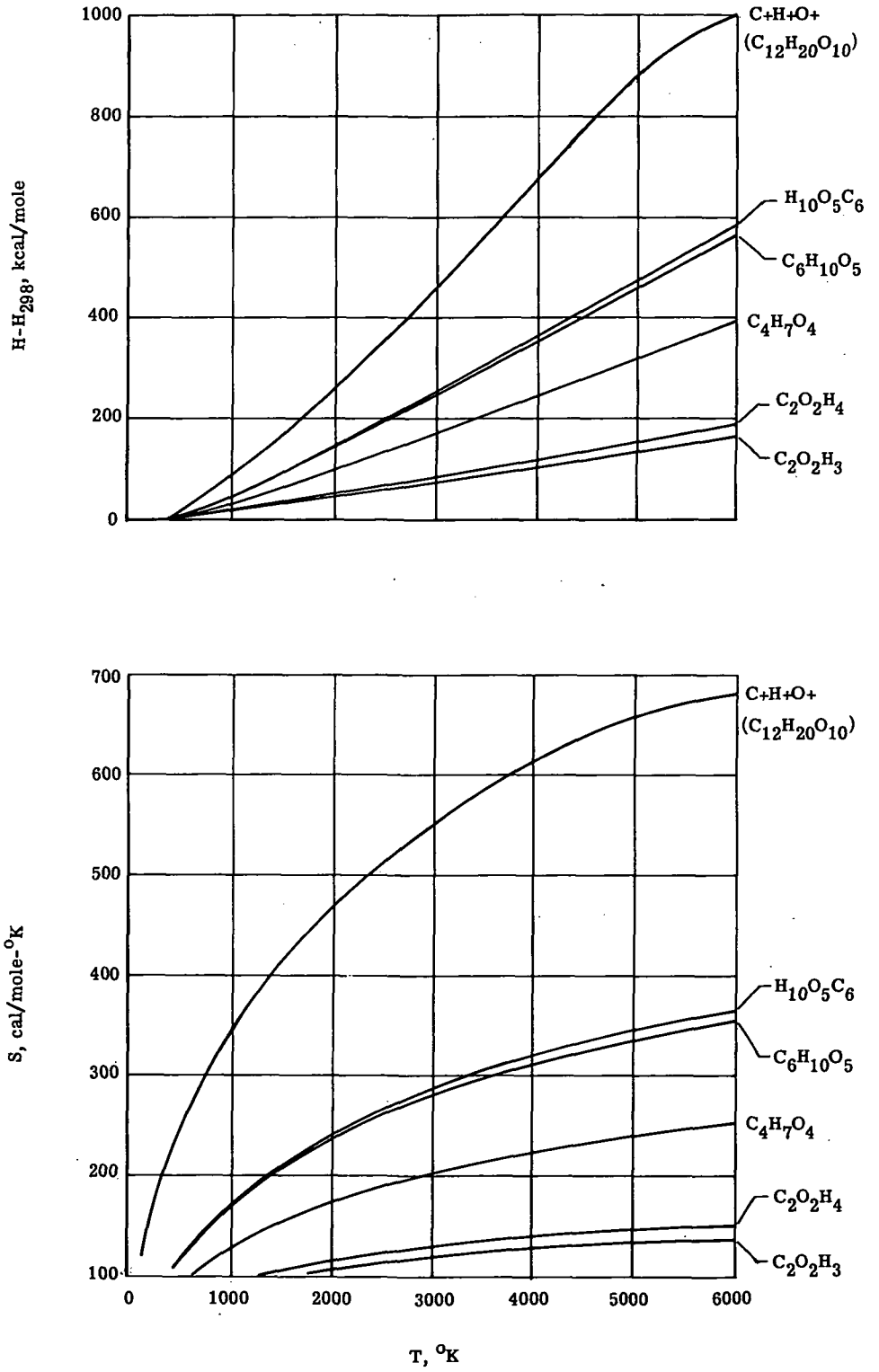

Figure 49.- Comparison among $C_2O_2H_3$, $C_2O_2H_4$, $C_4H_7O_4$, $C_6H_{10}O_5$, $H_{10}O_5C_6$, and $C_{12}H_{20}O_{10}$ (labeled C+H+O+).
Note: $C_{12}H_{20}O_{10}$ is constrained to make $H_{6000}-H_{298} < 1000$ Kcal/mole.

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