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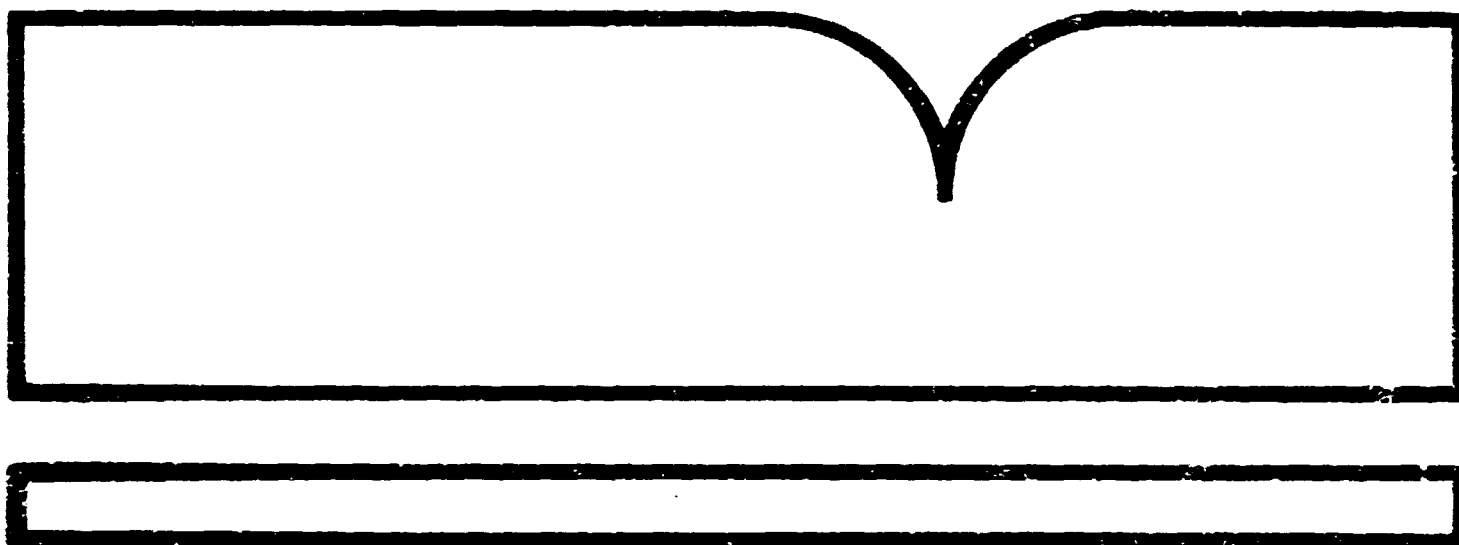
Experimental Thermal Conductivity, Thermal Diffusivity, and Specific  
Heat Values for Mixtures of Nitrogen, Oxygen, and Argon

(U.S.) National Inst. of Standards and Technology (CSTL)  
Gaithersburg, MD

Prepared for:

Wright Research and Development Center, Wright-Patterson AFB, OH

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11. ABSTRACT (A 200-WORD OR LESS FACTUAL SUMMARY OF MOST SIGNIFICANT INFORMATION. IF DOCUMENT INCLUDES A SIGNIFICANT BIBLIOGRAPHY OR LITERATURE SURVEY, MENTION IT HERE.)  <p style="margin-left: 40px;">We report new experimental measurements of thermal conductivity and thermal diffusivity obtained with a transient hot-wire apparatus for three mixtures of nitrogen, oxygen, and argon. Values of the specific heat, <math>C_p</math>, are calculated from these measured values and the density calculated with an equation of state. The measurements were made at temperatures between 65 and 303 K with pressures between 0.1 and 70 MPa. The data cover the vapor, liquid, and supercritical gas phases for the three mixtures. The total reported points are 1066 for the air mixture (78.11% nitrogen - 20.97% oxygen - 0.92% argon), 1058 for the 50% nitrogen - 50% oxygen mixture, and 864 for the 25% nitrogen - 75% oxygen mixture. Empirical thermal conductivity correlations are provided for the three mixtures.</p>											
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***NISTIR 3961***

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R.A. Perkins  
M.T. Cieszkiewicz

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Thermophysics Division  
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National Institute of Standards and Technology  
Boulder, Colorado 80303-3328

Final Report  
March 1991

\*This work was carried out as part of the Technology Maturation Plan of the National Aero-Space Plane Program. An ASCII version of this data set can be obtained on a floppy disk by contacting R.A. Perkins at the above address.



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U.S. DEPARTMENT OF COMMERCE, Robert A. Mosbacher, Secretary  
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, John W. Lyons, Director

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Experimental thermal conductivity, thermal diffusivity, and  
specific heat values for mixtures of nitrogen, oxygen, and argon

R.A. Perkins and M.T. Cieszkiewicz

We report new experimental measurements of thermal conductivity and thermal diffusivity obtained with a transient hot-wire apparatus for three mixtures of nitrogen, oxygen, and argon. Values of the specific heat,  $C_p$ , are calculated from these measured values and the density calculated with an equation of state. The measurements were made at temperatures between 65 and 303 K with pressures between 0.1 and 70 MPa. The data cover the vapor, liquid, and supercritical gas phases for the three mixtures. The total reported points are 1066 for the air mixture (78.11% nitrogen - 20.97% oxygen - 0.92% argon), 1058 for the 50% nitrogen - 50% oxygen mixture, and 864 for the 25% nitrogen - 75% oxygen mixture. Empirical thermal conductivity correlations are provided for the three mixtures.

Key words: air; argon; correlation; mixtures; nitrogen; oxygen; specific heat; thermal conductivity; thermal diffusivity; transient hot-wire.

## 1. Introduction.

This report is the archival record of the results of our transient hot-wire measurements on mixtures of nitrogen, oxygen, and argon. These tables contain experimental values for the thermal conductivity, thermal diffusivity, and specific heat of three fluid mixtures. These three mixtures were gravimetrically prepared and are designated as air (78.11% nitrogen - 20.97% oxygen - 0.92% argon), 50% nitrogen - 50% oxygen, and 25% nitrogen - 75% oxygen. Data are reported in the vapor, liquid, and supercritical gas phases for all three mixtures.

The transient hot-wire instrument used in this study is described in [1]. The system has been used previously to study the thermal conductivity surfaces

of oxygen [2], hydrogen [3,4], methane [3,5], ethane [3,6], methane-ethane mixtures [7,8], propane [3,9], argon [10,11,12], and nitrogen [10,13]. The temperature range of the instrument is 65 to 330 K, and the pressure range is 0.1 to 70 MPa. The apparatus has been improved considerably in the past few years, so that the thermal diffusivity can be obtained at the same time as the thermal conductivity. The specific heat,  $C_p$ , can be computed from the measured values of the thermal conductivity and the thermal diffusivity provided that the fluid density is known. A detailed description of the measurement of the thermal diffusivity, including an analysis of the various errors, is given in [14].

The transient hot-wire measurements are conducted along isotherms. The isotherm temperature increment is between 20 to 30 K to give a change of several percent in thermal conductivity between adjacent isotherms. Measurements are made at a number of pressures along each isotherm. The pressure increment is selected to give a density increment of 0.5 to 1.0 mol/L. Finally, replicated measurements are made at each fixed cell temperature and pressure with four different applied powers as a consistency check.

The data tables for the three mixtures are arranged with the vapor phase points first, the liquid phase points second, and the supercritical gas points last. The tables are arranged with increasing nominal isotherm temperatures. Within each isotherm listing, the data are sorted in order of increasing density. The nominal isotherm temperatures are the averages of all the experimental temperatures rounded to the nearest degree. Recorded in the tables are the run and the point numbers; the pressure, temperature, and density of the fluid to which the thermal conductivity is assigned; the applied power per unit length of the wire; the experimental thermal conductivity and its  $2\sigma$  uncertainty value (STAT); the cell temperature to which the thermal diffusivity and the heat capacity must be referred; the experimental thermal diffusivity and its  $2\sigma$  uncertainty value (DSTAT); and the derived specific heat,  $C_p$ . STAT and DSTAT are the uncertainties of the slope and intercept, at the  $2\sigma$  level, as determined in the data reduction program [1,14]. STAT and DSTAT are direct measures of the precision of the thermal conductivity and the thermal diffusivity, respectively. A STAT of 0.001, for example, corresponds to a precision of 0.1% in thermal conductivity. Empirical thermal conductivity correlations are provided for each mixture. Deviations of the thermal conductivity data from these empirical fits are plotted as a function of fluid density for each mixture.

## 2. Results for the Air Mixture.

A total of 1066 points is given in table 1. The density reported in the table has been calculated using the DDMIX extended corresponding states correlation [15]. This mixture was gravimetrically prepared from nitrogen, oxygen, and argon with purities of better than 99.999%. The mixture has an actual composition of 78.11% nitrogen, 20.97% oxygen, and 0.92% argon. This composition was selected to be representative of dry, carbon dioxide-free air.

Empirical surface fit for the air mixture.

```

FUNCTION TCAIR(RHO,T)
  IMPLICIT DOUBLE PRECISION(A-H,O-Z)
  EMPIRICAL SURFACE FIT FOR THE AIR MIXTURE
  C
  C DILUTE GAS = A1+A2*T+A3*T**2
  C EXCESS FUNCTION = B1*DEN+B2*DEN**2+B3*DEN**3+B4*DEN**4
  C TEMPERATURE (K), DENSITY (MOL/L), THERMAL CONDUCTIVITY (W/M-K)
  DIMENSION A(3),B(4)
  DATA A/-.714772D-3,-.104437D-3,-.460307D-7/
  DATA B/.100081D-2,.362519D-4,.964442D-6,.523525D-7/
  TCO=A(1)+A(2)*T+A(3)*T**2.
  EXCESS=B(1)*RHO+B(2)*RHO**2.+B(3)*RHO**3.+B(4)*RHO**4.
  TCAIR=TCO+EXCESS+CRITAIR(RHO,T)
  RETURN
END

FUNCTION CRITAIR(RHO,TEMP)
  IMPLICIT DOUBLE PRECISION(A-H,O-Z)
  C
  C CRITICAL = EXP(-X**2) - CENTERED ON CRITICAL DENSITY
  C CRITICAL PARAMETERS ARE MOLE FRACTION AVERAGE OF PURE COMPONENTS
  C TEMPERATURE (K), DENSITY (MOL/L), THERMAL CONDUCTIVITY (W/M-K)
  DIMENSION C(5)
  DATA C/.892201D-1,-.131.0,.439672D-2,-.150578D-4,-.18321/
  TC=132.51D0
  RHOC=11.83D0
  T=TEMP
  DEN=RHO
  IF(T.LT.TC) T=TC+(TC-T)
  AMPL=C(1)/(T+C(2))+C(3)+C(4)*T
  IF (AMPL.LT.0.0) AMPL=0.0D0
  X1=C(5)*(DEN-RHOC)
  CRITAIR=AMPL*DEXP(-(X1**2))
  IF (CRITAIR.LT.0.000) CRITAIR=0.000
  RETURN
END

```



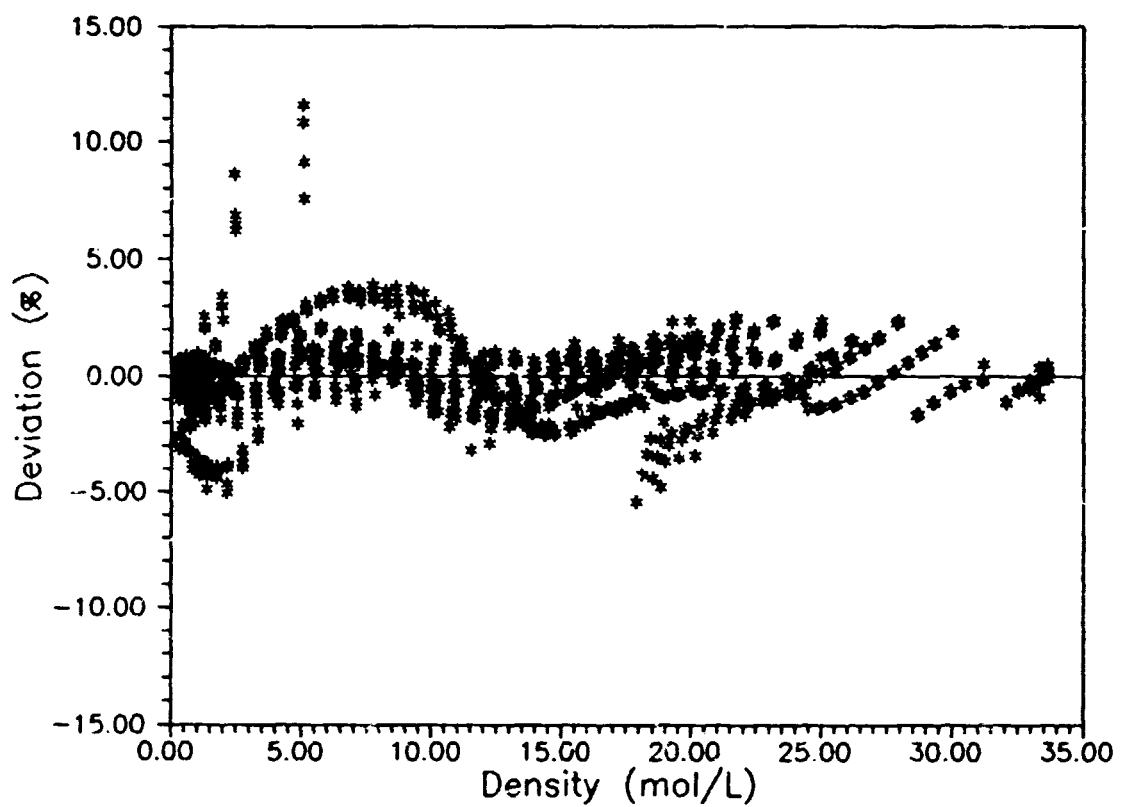


Figure 1. Deviations between the empirical thermal conductivity surface fit and the data for the air mixture.

Table 1. The thermal conductivity, thermal diffusivity, and specific heat of the air mixture

Nominal Temperature 92. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
2005	0.150	92.207	0.2031	0.02765	0.00880 0.003	89.622	0.153E-05 0.030	26.9
2006	0.150	92.006	0.2036	0.02547	0.00878 0.003	89.622	0.153E-05 0.034	26.9
2007	0.150	91.814	0.2041	0.02339	0.00877 0.003	89.624	0.156E-05 0.038	26.4
2008	0.150	91.633	0.2046	0.02140	0.00876 0.004	89.625	0.163E-05 0.043	25.2
2001	0.209	92.096	0.2890	0.02761	0.00886 0.002	89.625	0.104E-05 0.021	27.9
2002	0.209	91.906	0.2897	0.02544	0.00882 0.002	89.624	0.103E-05 0.022	27.9
2003	0.209	91.712	0.2904	0.02336	0.00884 0.002	89.625	0.105E-05 0.026	27.7
2004	0.209	91.362	0.2918	0.01948	0.00881 0.003	89.626	0.104E-05 0.033	27.7

Nominal Temperature 102. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
3013	0.234	102.513	0.2882	0.03201	0.00983 0.002	99.872	0.120E-05 0.028	26.9
3014	0.234	102.306	0.2889	0.02950	0.00980 0.003	99.872	0.118E-05 0.031	27.3
3015	0.234	102.109	0.2896	0.02709	0.00979 0.003	99.874	0.118E-05 0.034	27.1
3016	0.234	101.917	0.2902	0.02479	0.00978 0.004	99.875	0.118E-05 0.040	27.1
3009	0.379	102.505	0.4809	0.03457	0.01004 0.002	99.860	0.689E-06 0.017	28.3
3010	0.379	102.305	0.4821	0.03197	0.01003 0.003	99.864	0.686E-06 0.027	28.4
3012	0.379	102.116	0.4832	0.02946	0.01001 0.003	99.865	0.687E-06 0.030	28.3
3012	0.379	101.931	0.4843	0.02706	0.01000 0.003	99.865	0.690E-06 0.033	28.2
3005	0.533	102.347	0.7058	0.03453	0.01019 0.003	99.860	0.373E-06 0.033	35.5
3006	0.533	102.159	0.7076	0.03192	0.01014 0.004	99.861	0.358E-06 0.037	36.6
3001	0.534	102.155	0.7077	0.03192	0.00993 0.004	99.858	0.292E-06 0.035	42.7
3007	0.533	101.981	0.7094	0.02942	0.01012 0.004	99.862	0.358E-06 0.041	36.5
3002	0.534	101.982	0.7094	0.02943	0.01011 0.003	99.861	0.356E-06 0.026	36.6
3008	0.533	101.803	0.7112	0.02703	0.01009 0.005	99.862	0.347E-06 0.017	37.4
3003	0.534	101.809	0.7112	0.02703	0.01006 0.003	99.861	0.347E-06 0.028	37.2
3004	0.534	101.641	0.7128	0.02475	0.01000 0.005	99.862	0.330E-06 0.053	38.7

Nominal Temperature 112. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
4021	0.226	112.944	0.2490	0.03928	0.01077 0.003	109.879	0.158E-05 0.032	26.0
4022	0.226	112.500	0.2500	0.03348	0.01074 0.003	109.881	0.161E-05 0.040	25.5
4023	0.226	112.087	0.2511	0.02816	0.01069 0.004	109.881	0.156E-05 0.050	26.1
4024	0.226	111.721	0.2520	0.02331	0.01069 0.003	109.882	0.169E-05 0.034	24.1
4017	0.395	112.722	0.4483	0.03922	0.01095 0.003	109.883	0.861E-06 0.031	26.6
4018	0.395	112.309	0.4503	0.03344	0.01091 0.003	109.884	0.856E-06 0.037	26.6
4019	0.395	111.933	0.4521	0.02813	0.01090 0.004	109.884	0.887E-06 0.048	25.7
4020	0.395	111.582	0.4538	0.02329	0.01085 0.006	109.885	0.860E-06 0.065	26.3
4013	0.539	112.551	0.6278	0.03917	0.01116 0.001	109.888	0.562E-06 0.014	29.6
4014	0.539	112.191	0.6304	0.03341	0.01111 0.002	109.888	0.619E-06 0.020	26.6
4015	0.539	111.832	0.6330	0.02811	0.01109 0.002	109.891	0.636E-06 0.025	25.9
4016	0.539	111.500	0.6355	0.02328	0.01104 0.003	109.890	0.615E-06 0.032	26.6
4009	0.658	112.821	0.7814	0.04539	0.01138 0.001	109.883	0.422E-06 0.013	32.0
4010	0.658	112.416	0.7853	0.03915	0.01136 0.002	109.883	0.418E-06 0.017	32.2
4011	0.658	112.044	0.7889	0.03337	0.01132 0.002	109.883	0.407E-06 0.019	33.0
4012	0.658	111.702	0.7922	0.02808	0.01129 0.002	109.885	0.403E-06 0.023	33.2
4005	0.819	112.693	1.0066	0.04535	0.01175 0.002	109.874	0.323E-06 0.018	33.6
4006	0.819	112.308	1.0118	0.03911	0.01171 0.002	109.875	0.315E-06 0.022	34.3
4007	0.819	111.946	1.0168	0.03334	0.01166 0.003	109.873	0.304E-06 0.026	35.3
4001	0.987	112.526	1.2622	0.04531	0.01223 0.002	109.881	0.262E-06 0.022	34.7
4002	0.987	112.163	1.2692	0.03908	0.01215 0.003	109.883	0.249E-06 0.024	36.1

4003	0.987	111.828	1.2758	0.03333	0.01212	0.003	109.882	0.247E-06	0.027	36.2
4004	0.987	111.523	1.2819	0.02805	0.01209	0.004	109.883	0.245E-06	0.035	36.4

Nominal Temperature 122. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)	
5029	0.305	123.067	0.3091	0.04384	0.01175	0.003	0.139E-05	0.030	25.8
5030	0.3	122.615	0.3104	0.03739	0.01175	0.003	0.142E-05	0.038	25.4
5031	0.305	122.207	0.3115	0.03146	0.01171	0.004	0.145E-05	0.049	24.8
5032	0.305	121.829	0.3126	0.02606	0.01168	0.006	0.148E-05	0.064	24.1
5025	0.537	122.821	0.5613	0.04379	0.01201	0.003	0.757E-06	0.030	26.5
5026	0.537	122.409	0.5636	0.03735	0.01197	0.003	0.754E-06	0.037	26.5
5027	0.537	122.027	0.5657	0.03143	0.01195	0.004	0.764E-06	0.047	26.1
5028	0.537	121.683	0.5677	0.02604	0.01190	0.006	0.782E-06	0.061	25.3
5021	0.742	122.647	0.7986	0.04376	0.01224	0.001	0.495E-06	0.015	28.7
5022	0.742	122.246	0.8018	0.03731	0.01224	0.002	0.524E-06	0.018	27.2
5023	0.742	121.903	0.8050	0.03141	0.01223	0.002	0.532E-06	0.024	26.8
5024	0.742	121.582	0.8078	0.02602	0.01217	0.003	0.536E-06	0.031	26.4
5017	0.942	122.475	1.0459	0.04371	0.01257	0.002	0.342E-06	0.016	32.5
5018	0.942	122.109	1.0505	0.03730	0.01259	0.002	0.351E-06	0.018	31.8
5019	0.942	121.774	1.0547	0.03139	0.01256	0.002	0.350E-06	0.023	31.9
5020	0.942	121.468	1.0585	0.02601	0.01253	0.003	0.349E-06	0.030	31.9
5013	1.131	122.323	1.2972	0.04367	0.01287	0.002	0.251E-06	0.016	36.4
5014	1.131	121.981	1.3030	0.03726	0.01296	0.002	0.269E-06	0.018	34.6
5015	1.131	121.665	1.3084	0.03136	0.01292	0.002	0.265E-06	0.022	34.8
5016	1.131	121.377	1.3134	0.02599	0.01290	0.003	0.267E-06	0.030	34.6
5009	1.398	122.119	1.6877	0.04362	0.01364	0.002	0.190E-06	0.016	39.9
5010	1.398	121.807	1.6958	0.03722	0.01350	0.002	0.175E-06	0.020	42.4
5011	1.398	121.514	1.7034	0.03134	0.01357	0.002	0.184E-06	0.022	40.9
5012	1.398	121.253	1.7103	0.02598	0.01357	0.003	0.187E-06	0.030	40.1
5005	1.566	122.368	1.9494	0.05053	0.01432	0.003	0.173E-06	0.026	40.2
5006	1.566	122.036	1.9503	0.04362	0.01424	0.003	0.164E-06	0.026	42.1
5007	1.566	121.734	1.9705	0.03721	0.01421	0.003	0.161E-06	0.025	42.5
5008	1.566	121.451	1.9801	0.03133	0.01411	0.004	0.153E-06	0.033	44.2
5001	1.833	122.093	2.4431	0.05046	0.01578	0.004	0.140E-06	0.038	45.8
5002	1.833	121.803	2.4581	0.04356	0.01542	0.004	0.116E-06	0.033	52.8
5003	1.833	121.536	2.4721	0.03718	0.01550	0.004	0.123E-06	0.031	50.2
5004	1.833	121.297	2.4850	0.03131	0.01543	0.004	0.122E-06	0.039	50.0

Nominal Temperature 131. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)	
6041	0.322	131.734	0.3031	0.03457	0.01262	0.002	0.156E-05	0.023	25.6
6042	0.322	131.534	0.3036	0.03153	0.01261	0.002	0.158E-05	0.027	25.4
6043	0.322	131.345	0.3041	0.02864	0.01260	0.003	0.159E-05	0.030	25.1
6044	0.322	131.167	0.3045	0.02589	0.01254	0.003	0.156E-05	0.035	25.4
6037	0.535	131.560	0.5146	0.03456	0.01285	0.002	0.828E-06	0.022	28.8
6038	0.535	131.373	0.5155	0.03152	0.01280	0.002	0.809E-06	0.025	29.3
6039	0.535	131.199	0.5163	0.02843	0.01279	0.003	0.822E-06	0.027	28.8
6040	0.535	131.031	0.5171	0.02538	0.01277	0.003	0.811E-06	0.033	29.1
6033	0.810	131.417	0.8036	0.03451	0.01311	0.002	0.537E-06	0.021	28.6
6034	0.810	131.246	0.8049	0.03148	0.01309	0.002	0.540E-06	0.023	28.4
6035	0.810	131.083	0.8062	0.02860	0.01305	0.003	0.534E-06	0.026	28.6
6036	0.810	130.931	0.8074	0.02586	0.01308	0.003	0.577E-06	0.031	26.6
6029	1.040	131.297	1.0604	0.03448	0.01342	0.003	0.388E-06	0.029	30.6
6030	1.040	131.138	1.0622	0.03147	0.01340	0.003	0.388E-06	0.035	30.5
6031	1.040	130.984	1.0639	0.02858	0.01343	0.004	0.400E-06	0.040	29.8
6032	1.040	130.835	1.0656	0.02584	0.01338	0.004	0.397E-06	0.045	29.8
6025	1.297	131.178	1.3679	0.03446	0.01378	0.002	0.281E-06	0.020	33.4
6026	1.297	131.024	1.3703	0.03144	0.01381	0.002	0.285E-06	0.022	33.2
6027	1.297	130.877	1.3727	0.02856	0.01381	0.002	0.291E-06	0.024	32.5
6028	1.297	130.739	1.3749	0.02582	0.01381	0.003	0.292E-06	0.029	32.3
6021	1.596	131.044	1.7554	0.03443	0.01446	0.002	0.212E-06	0.019	36.5

6022	1.596	130.896	1.7588	0.03142	0.01442	0.002	129.405	0.202E-06	0.021	38.2
6023	1.596	130.770	1.7617	0.02855	0.01443	0.003	129.403	0.216E-06	0.024	35.7
6024	1.596	130.642	1.7647	0.02581	0.01440	0.003	129.406	0.210E-06	0.028	36.7
6017	1.877	130.922	2.1607	0.03442	0.01512	0.002	129.401	0.163E-06	0.020	40.6
6018	1.877	130.794	2.1649	0.03141	0.01501	0.003	129.404	0.156E-06	0.023	41.7
6019	1.877	130.659	2.1694	0.02854	0.01513	0.003	129.404	0.159E-06	0.025	41.7
6020	1.877	130.537	2.1734	0.02580	0.01511	0.003	129.404	0.158E-06	0.030	41.8
6013	2.232	130.757	2.7456	0.03440	0.01635	0.002	129.403	0.123E-06	0.022	47.0
6014	2.232	130.645	2.7513	0.03140	0.01635	0.003	129.404	0.125E-06	0.024	45.7
6015	2.232	130.530	2.7573	0.02853	0.01642	0.003	129.406	0.127E-06	0.028	45.5
6016	2.232	130.432	2.7624	0.02580	0.01632	0.003	129.404	0.129E-06	0.031	44.4
6009	2.536	130.613	3.3431	0.03438	0.01798	0.004	129.398	0.907E-07	0.038	59.4
6010	2.536	130.506	3.3516	0.03138	0.01797	0.005	129.401	0.891E-07	0.042	60.1
6011	2.536	130.412	3.3591	0.02852	0.01793	0.006	129.401	0.901E-07	0.048	59.5
6012	2.536	130.310	3.3674	0.02579	0.01789	0.006	129.403	0.877E-07	0.054	60.8
6005	2.843	130.409	4.1067	0.03435	0.02075	0.006	129.395	0.691E-07	0.048	78.7
6006	2.843	130.320	4.1186	0.03136	0.02063	0.006	129.396	0.664E-07	0.049	80.9
6007	2.843	130.238	4.1298	0.02850	0.02054	0.007	129.398	0.640E-07	0.053	83.0
6008	2.843	130.151	4.1417	0.02577	0.02032	0.007	129.398	0.605E-07	0.059	85.8
6001	3.112	130.154	5.0598	0.03431	0.02646	0.013	129.399	0.505E-07	0.100	128.1
6002	3.112	130.102	5.0736	0.03133	0.02626	0.011	129.402	0.482E-07	0.083	132.7
6003	3.112	130.048	5.0878	0.02847	0.02584	0.009	129.405	0.466E-07	0.072	133.3
6004	3.112	129.982	5.1058	0.02574	0.02545	0.010	129.404	0.402E-07	0.076	149.1

Nominal Temperature 70. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT		Cell Temperature K	Thermal Diffusivity m**2/s DSTAT		Specific Heat J/(mol.K)
15017	8.120	70.342	32.0464	0.28084	0.16085	0.001	69.977	0.864E-07	0.009	60.7
15018	8.141	70.234	32.0611	0.25320	0.16103	0.001	69.977	0.857E-07	0.011	61.3
15019	8.157	70.140	32.0736	0.22693	0.16111	0.001	69.977	0.888E-07	0.012	59.2
15020	8.173	70.041	32.0868	0.20216	0.16136	0.002	69.977	0.882E-07	0.015	59.8
15013	18.977	70.415	32.5212	0.31026	0.16796	0.001	69.977	0.949E-07	0.008	58.0
15014	18.990	70.306	32.5335	0.28085	0.16822	0.001	69.977	0.962E-07	0.010	57.3
15015	19.002	70.202	32.5452	0.25318	0.16838	0.001	69.977	0.974E-07	0.011	56.7
15016	19.011	70.107	32.5558	0.22693	0.16850	0.002	69.977	0.973E-07	0.013	56.6
15009	29.571	70.356	32.9415	0.30585	0.16981	0.001	69.977	0.835E-07	0.008	65.0
15010	29.583	70.238	32.9531	0.28144	0.17472	0.001	69.978	0.825E-07	0.010	69.5
15011	29.595	70.141	32.9626	0.25317	0.17414	0.001	69.978	0.798E-07	0.012	71.3
15012	29.600	70.051	32.9712	0.22695	0.17445	0.002	69.978	0.811E-07	0.014	70.4
15005	39.965	70.302	33.3106	0.30693	0.18002	0.001	69.977	0.103E-06	0.009	57.9
15006	39.969	70.197	33.3195	0.27781	0.18019	0.001	69.977	0.102E-06	0.011	58.5
15007	39.971	70.101	33.3276	0.25028	0.17993	0.001	69.977	0.100E-06	0.012	59.1
15008	39.973	70.010	33.3353	0.22438	0.18023	0.002	69.978	0.105E-06	0.015	56.9
15001	50.383	70.337	33.6370	0.33769	0.18490	0.001	69.977	0.105E-06	0.006	53.0
15002	50.378	70.231	33.6447	0.30705	0.18513	0.001	69.977	0.106E-06	0.010	57.5
15003	50.376	70.140	33.6514	0.27788	0.18505	0.001	69.977	0.111E-06	0.011	55.1
15004	50.369	70.042	33.6585	0.25052	0.18489	0.001	69.977	0.107E-06	0.013	56.7

Nominal Temperature 92. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m**2/s DSTAT	Specific Heat J/(mol.K)
7017	5.474	92.386	28.6389	0.43107	0.12270 0.000	90.363	0.684E-07 0.003	60.9
7018	5.485	92.177	28.6746	0.38886	0.12309 0.000	90.364	0.689E-07 0.004	60.7
7019	5.496	91.983	28.7077	0.34841	0.12341 0.001	90.367	0.702E-07 0.005	59.8
7020	5.506	91.798	28.7393	0.31033	0.12375 0.001	90.368	0.708E-07 0.005	59.5
7013	11.529	92.294	29.2508	0.43068	0.12977 0.000	90.372	0.750E-07 0.003	58.4
7014	11.537	92.092	29.2813	0.38853	0.13009 0.000	90.375	0.741E-07 0.004	59.3
7015	11.544	91.909	29.3088	0.34816	0.13041 0.001	90.375	0.762E-07 0.005	57.8
7016	11.550	91.729	29.3357	0.31014	0.13069 0.001	90.376	0.756E-07 0.005	58.3
7009	19.210	92.191	29.9027	0.43043	0.13752 0.000	90.376	0.800E-07 0.004	57.6
7010	19.212	92.004	29.9272	0.38816	0.13786 0.001	90.380	0.811E-07 0.004	57.0
7011	19.214	91.827	29.9506	0.34785	0.13814 0.001	90.381	0.816E-07 0.005	56.8
7012	19.216	91.659	29.9726	0.30990	0.13840 0.001	90.382	0.830E-07 0.006	56.0

7005	26.923	92.065	30.4656	0.42961	0.14449	0.000	90.354	0.797E-07	0.004	60.3
7006	26.930	91.885	30.4874	0.38766	0.14472	0.001	90.358	0.801E-07	0.005	60.2
7007	26.938	91.717	30.5079	0.34747	0.14498	0.001	90.357	0.809E-07	0.008	59.7
7008	26.946	91.554	30.5276	0.30959	0.14521	0.001	90.360	0.794E-07	0.010	60.9
7001	38.116	91.895	31.1637	0.42874	0.15343	0.000	90.280	0.923E-07	0.004	54.9
7002	38.115	91.723	31.1819	0.38630	0.15363	0.001	90.280	0.916E-07	0.005	55.4
7003	38.114	91.562	31.1987	0.34674	0.15381	0.001	90.282	0.929E-07	0.006	54.7
7004	38.117	91.409	31.2157	0.30867	0.15405	0.001	90.281	0.932E-07	0.007	54.6

Nominal Temperature 112. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
8041	2.698	111.992	24.2761	0.35975	0.08739 0.001	109.718	0.619E-07 0.008	54.7
8042	2.703	111.691	24.3529	0.31588	0.08787 0.001	109.717	0.600E-07 0.010	56.3
8043	2.708	111.420	24.4219	0.27490	0.08817 0.001	109.718	0.577E-07 0.011	58.8
8044	2.713	111.157	24.4881	0.23671	0.08831 0.002	109.718	0.522E-07 0.013	65.2
8037	4.901	112.125	24.8267	0.40649	0.09096 0.001	109.718	0.530E-07 0.007	65.0
8038	4.901	111.843	24.8888	0.35965	0.09146 0.001	109.718	0.545E-07 0.008	63.6
8039	4.901	111.580	24.9464	0.31575	0.09195 0.001	109.720	0.558E-07 0.009	62.5
8040	4.902	111.330	25.0011	0.27481	0.09231 0.001	109.721	0.562E-07 0.011	62.3
8033	7.650	112.037	25.4404	0.40576	0.09593 0.001	109.733	0.571E-07 0.007	62.7
8034	7.654	111.766	25.4939	0.35906	0.09639 0.001	109.735	0.582E-07 0.008	61.9
8035	7.659	111.511	25.5440	0.31522	0.09677 0.001	109.737	0.588E-07 0.010	61.6
8036	7.662	111.277	25.5898	0.27436	0.09716 0.001	109.738	0.599E-07 0.012	60.7
8029	10.985	112.045	26.0365	0.40577	0.10119 0.001	109.721	0.601E-07 0.005	62.1
8030	10.990	111.775	26.0842	0.35902	0.10158 0.001	109.725	0.607E-07 0.006	61.7
8031	10.996	111.514	26.1304	0.31516	0.10195 0.001	109.728	0.615E-07 0.007	61.2
8032	11.000	111.276	26.1722	0.27433	0.10220 0.001	109.729	0.614E-07 0.009	61.5
8025	14.290	111.943	26.5564	0.40542	0.10591 0.000	109.717	0.631E-07 0.004	61.2
8026	14.298	111.680	26.5993	0.35872	0.10629 0.001	109.718	0.639E-07 0.006	60.7
8027	14.304	111.436	26.6389	0.31493	0.10663 0.001	109.720	0.644E-07 0.006	60.5
8028	14.310	111.203	26.6765	0.27414	0.10691 0.001	109.722	0.641E-07 0.006	60.9
8021	18.861	112.117	27.1271	0.45488	0.11149 0.000	109.719	0.680E-07 0.003	59.1
8022	18.868	111.845	27.1672	0.40528	0.11191 0.000	109.722	0.685E-07 0.004	58.9
8023	18.874	111.597	27.2036	0.35855	0.11220 0.001	109.724	0.695E-07 0.005	58.3
8024	18.881	111.361	27.2385	0.31483	0.11253 0.001	109.722	0.693E-07 0.006	58.6
8017	24.002	112.014	27.7167	0.45455	0.11756 0.000	109.725	0.741E-07 0.003	56.6
8018	24.009	111.753	27.7519	0.40503	0.11790 0.000	109.727	0.733E-07 0.004	57.4
8019	24.015	111.516	27.7838	0.35839	0.11821 0.001	109.728	0.745E-07 0.005	56.7
8020	24.022	111.291	27.8142	0.31470	0.11852 0.001	109.728	0.749E-07 0.006	56.5
8013	29.507	111.918	28.2634	0.45431	0.12350 0.000	109.729	0.777E-07 0.004	56.2
8014	29.517	111.667	28.2949	0.40481	0.12378 0.000	109.733	0.772E-07 0.004	56.7
8015	29.524	111.439	28.3234	0.35821	0.12407 0.001	109.733	0.783E-07 0.005	56.1
8016	29.531	111.225	28.3502	0.31459	0.12437 0.001	109.734	0.787E-07 0.006	56.0
8009	35.909	111.831	28.8181	0.45395	0.12977 0.001	109.734	0.829E-07 0.005	54.9
8010	35.915	111.600	28.8450	0.40461	0.13003 0.001	109.738	0.841E-07 0.006	54.2
8011	35.925	111.375	28.8713	0.35809	0.13036 0.001	109.739	0.837E-07 0.005	54.6
8012	35.933	111.170	28.8951	0.31447	0.13061 0.001	109.741	0.839E-07 0.006	54.7
8005	42.869	111.978	29.3252	0.50602	0.13579 0.001	109.735	0.862E-07 0.005	54.7
8006	42.880	111.739	29.3514	0.45380	0.13609 0.001	109.738	0.864E-07 0.006	54.7
8007	42.891	111.512	29.3763	0.40437	0.13634 0.001	109.738	0.863E-07 0.007	54.9
8008	42.899	111.302	29.3991	0.35786	0.13656 0.001	109.739	0.864E-07 0.008	55.0
8001	53.106	112.101	29.9867	0.56025	0.14400 0.001	109.749	0.913E-07 0.005	54.2
8002	53.109	111.864	30.0101	0.50556	0.14421 0.001	109.749	0.919E-07 0.005	54.0
8003	53.119	111.642	30.0318	0.45329	0.14447 0.001	109.749	0.929E-07 0.006	53.5
8004	53.117	111.428	30.0531	0.40403	0.14471 0.001	109.749	0.931E-07 0.007	53.4

Nominal Temperature 132. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m*2/s DSTAT	Specific Heat J/(mol.K)
9069	3.975	130.700	17.9097	0.17308	0.05776 0.002	129.273	0.224E-07 0.014	140.9
9070	3.976	130.432	18.1229	0.14033	0.05817 0.002	129.273	0.233E-07 0.012	134.5
9071	3.978	130.197	18.2986	0.11105	0.05860 0.002	129.276	0.250E-07 0.015	125.4

9072	3.978	129.989	18.4456	0.08523	0.05900	0.003	129.277	0.265E-07	0.024	118.7
9065	4.314	130.699	18.5274	0.17304	0.05918	0.001	129.264	0.261E-07	0.010	118.1
9066	4.314	130.430	18.6910	0.14032	0.05962	0.002	129.268	0.272E-07	0.012	113.1
9067	4.314	130.186	18.6330	0.11105	0.06007	0.002	129.272	0.285E-07	0.017	108.5
9061	4.666	130.983	18.9539	0.20918	0.06004	0.001	129.265	0.276E-07	0.009	109.6
9068	4.314	129.975	18.9531	0.08524	0.06062	0.003	129.272	0.315E-07	0.025	99.1
9062	4.668	130.685	19.0140	0.17296	0.06060	0.001	129.266	0.291E-07	0.009	104.5
9063	4.670	130.418	19.1519	0.14021	0.06103	0.002	129.267	0.301E-07	0.013	101.3
9064	4.670	130.184	19.2687	0.11097	0.06142	0.002	129.268	0.326E-07	0.018	94.0
9057	5.293	130.946	19.5435	0.20916	0.06240	0.001	129.263	0.313E-07	0.008	96.2
9058	5.295	130.651	19.6708	0.17289	0.06293	0.001	129.264	0.324E-07	0.010	93.8
9059	5.296	130.386	19.7808	0.14016	0.06334	0.002	129.264	0.339E-07	0.014	90.0
9060	5.297	130.149	19.8778	0.11092	0.06347	0.002	129.265	0.338E-07	0.018	90.2
9053	6.194	131.215	20.1510	0.24878	0.06466	0.001	129.256	0.337E-07	0.007	89.1
9054	6.186	130.901	20.2619	0.20903	0.06533	0.001	129.257	0.357E-07	0.008	95.1
9055	6.189	130.616	20.3622	0.17278	0.06581	0.001	129.260	0.367E-07	0.010	83.1
9056	6.191	130.362	20.4501	0.14010	0.06619	0.002	129.257	0.383E-07	0.013	80.4
9049	7.280	131.158	20.8383	0.24876	0.06790	0.001	129.252	0.389E-07	0.007	78.4
9050	7.283	130.852	20.9304	0.20899	0.06846	0.001	129.255	0.408E-07	0.008	75.5
9051	7.286	130.575	21.0134	0.17276	0.06889	0.001	129.256	0.420E-07	0.011	73.9
9052	7.288	130.328	21.0857	0.14008	0.06928	0.002	129.255	0.431E-07	0.015	72.4
9045	8.963	131.429	21.5557	0.29201	0.07179	0.001	129.260	0.452E-07	0.006	69.1
9046	8.964	131.105	21.6370	0.24870	0.07225	0.001	129.262	0.462E-07	0.007	68.2
9047	8.970	130.808	21.7131	0.20898	0.07265	0.001	129.261	0.478E-07	0.009	66.2
9048	8.971	130.543	21.7790	0.17278	0.07305	0.002	129.263	0.495E-07	0.012	64.4
9041	10.528	131.700	22.0823	0.33898	0.07479	0.001	129.259	0.483E-07	0.006	65.9
9042	10.531	131.357	22.1598	0.29194	0.07529	0.001	129.261	0.498E-07	0.006	64.4
9044	10.534	131.045	22.2301	0.24864	0.07568	0.001	129.262	0.512E-07	0.007	63.0
9044	10.536	130.761	22.2939	0.20892	0.07603	0.001	129.263	0.526E-07	0.010	61.6
9037	12.576	131.591	22.7462	0.33583	0.07893	0.001	129.255	0.526E-07	0.006	62.5
9038	12.578	131.265	22.8114	0.29179	0.07935	0.001	129.259	0.541E-07	0.007	61.1
9039	12.580	130.971	22.8701	0.24856	0.07970	0.001	129.258	0.556E-07	0.008	59.7
9040	12.582	130.698	22.9244	0.20888	0.08001	0.001	129.260	0.571E-07	0.010	58.3
9033	14.236	131.834	23.1408	0.38896	0.08147	0.001	129.258	0.502E-07	0.005	66.5
9034	14.236	131.496	23.2033	0.33864	0.08194	0.001	129.260	0.512E-07	0.006	65.6
9035	14.237	131.178	23.2620	0.29160	0.08230	0.001	129.262	0.515E-07	0.007	65.6
9036	14.238	130.874	23.3144	0.24842	0.08267	0.001	129.263	0.523E-07	0.008	65.0
9029	16.132	131.740	23.7769	0.38895	0.08597	0.001	129.261	0.556E-07	0.005	62.2
9030	16.137	131.413	23.8323	0.33861	0.08643	0.001	129.263	0.567E-07	0.006	61.4
9031	16.138	131.112	23.8829	0.29161	0.08679	0.001	129.264	0.574E-07	0.007	60.9
9032	16.142	130.832	23.9302	0.24842	0.08712	0.001	129.265	0.578E-07	0.009	60.8
9025	19.849	131.776	24.3409	0.38896	0.09025	0.001	129.258	0.595E-07	0.003	60.1
9026	19.851	131.445	24.3919	0.33869	0.09065	0.001	129.261	0.601E-07	0.004	59.8
9027	19.852	131.139	24.4389	0.29171	0.09096	0.001	129.262	0.607E-07	0.005	59.4
9028	19.853	130.864	24.4813	0.24851	0.09132	0.001	129.263	0.621E-07	0.006	58.3
9021	23.357	131.702	24.9469	0.38850	0.09509	0.001	129.275	0.684E-07	0.006	54.2
9022	23.361	131.390	24.9855	0.33832	0.09543	0.001	129.276	0.697E-07	0.007	53.5
9023	23.363	131.094	25.0276	0.29137	0.09584	0.001	129.278	0.714E-07	0.008	52.5
9024	23.365	130.830	25.0651	0.24824	0.09612	0.001	129.280	0.744E-07	0.007	50.5
9017	27.383	131.919	25.4961	0.44208	0.09976	0.001	129.282	0.696E-07	0.005	55.0
9018	27.386	131.598	25.5384	0.38823	0.10025	0.001	129.284	0.720E-07	0.006	53.5
9019	27.389	131.299	25.5779	0.33802	0.10060	0.001	129.287	0.737E-07	0.007	52.5
9020	27.391	131.013	25.6154	0.29117	0.10088	0.001	129.285	0.743E-07	0.009	52.2
9013	31.472	131.794	26.0321	0.44179	0.10473	0.001	129.273	0.721E-07	0.005	55.2
9014	31.474	131.486	26.0700	0.38804	0.10508	0.001	129.276	0.732E-07	0.006	54.6
9015	31.475	131.192	26.1060	0.33782	0.10538	0.001	129.276	0.734E-07	0.007	54.6
9016	31.475	130.927	26.1384	0.29099	0.10568	0.001	129.278	0.741E-07	0.009	54.2
9009	36.767	131.669	26.6375	0.44147	0.11047	0.001	129.270	0.754E-07	0.005	54.9
9010	36.769	131.373	26.6713	0.38776	0.11085	0.001	129.272	0.759E-07	0.006	54.8
9011	36.770	131.097	26.7028	0.33758	0.11106	0.001	129.272	0.756E-07	0.005	55.1
9012	36.772	130.842	26.7320	0.29079	0.11134	0.001	129.273	0.767E-07	0.010	54.4
9005	41.941	131.577	27.1566	0.44142	0.11567	0.001	129.270	0.788E-07	0.006	54.4
9006	41.948	131.291	27.1878	0.38769	0.11606	0.001	129.272	0.794E-07	0.007	54.2
9007	41.952	131.032	27.2159	0.33756	0.11630	0.001	129.272	0.803E-07	0.008	53.8
9008	41.957	130.782	27.2431	0.29084	0.11660	0.001	129.272	0.811E-07	0.010	53.4
9001	50.578	131.745	27.8801	0.49809	0.12357	0.000	129.271	0.912E-07	0.003	49.5
9002	50.582	131.459	27.9086	0.44100	0.12386	0.001	129.269	0.926E-07	0.006	48.9
9003	50.582	131.194	27.9347	0.38741	0.12414	0.001	129.269	0.940E-07	0.007	48.3
9004	50.585	130.941	27.9599	0.33740	0.12443	0.001	129.270	0.951E-07	0.009	47.9

Nominal Temperature 142. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s STAT	Specific Heat J/(mol.K)
1185	0.476	143.405	0.4136	0.05297	0.01356 0.003	140.274	0.107E-05 0.038	28.7
1186	0.476	143.181	0.4144	0.04902	0.01375 0.003	140.276	0.124E-05 0.031	25.6
1187	0.476	142.960	0.4151	0.04520	0.01372 0.003	140.276	0.123E-05 0.035	25.6
1188	0.476	142.745	0.4158	0.04155	0.01368 0.003	140.277	0.120E-05 0.039	26.2
1181	0.948	143.075	0.8568	0.05291	0.01421 0.002	140.274	0.576E-06 0.026	27.0
1182	0.948	142.873	0.8583	0.04896	0.01419 0.003	140.274	0.570E-06 0.029	27.2
1184	0.948	142.672	0.8598	0.04516	0.01416 0.003	140.275	0.566E-06 0.033	27.3
1184	0.948	142.486	0.8612	0.04152	0.01416 0.004	140.276	0.575E-06 0.038	26.9
1177	1.388	142.834	1.3356	0.05286	0.01472 0.003	140.270	0.355E-06 0.027	29.5
1178	1.388	142.646	1.3380	0.04892	0.01471 0.003	140.272	0.351E-06 0.029	29.7
1179	1.388	142.470	1.3103	0.04512	0.01471 0.003	140.272	0.360E-06 0.032	29.1
1180	1.388	142.293	1.3125	0.04148	0.01472 0.004	140.273	0.366E-06 0.037	28.7
1173	1.803	142.634	1.7684	0.05282	0.01535 0.003	140.271	0.252E-06 0.025	31.9
1174	1.803	142.463	1.7718	0.04890	0.01534 0.003	140.273	0.253E-06 0.029	31.7
1175	1.803	142.293	1.7752	0.04510	0.01536 0.003	140.273	0.258E-06 0.032	31.2
1176	1.803	142.133	1.7783	0.04147	0.01535 0.004	140.275	0.261E-06 0.036	30.9
1169	2.226	142.448	2.2885	0.05278	0.01617 0.003	140.272	0.186E-06 0.027	35.3
1170	2.226	142.288	2.2932	0.04886	0.01618 0.003	140.273	0.183E-06 0.029	35.0
1171	2.226	142.135	2.2977	0.04507	0.01619 0.003	140.274	0.194E-06 0.033	34.0
1172	2.226	141.992	2.3020	0.04144	0.01618 0.004	140.274	0.195E-06 0.037	33.6
1165	2.543	142.303	2.7175	0.05277	0.01692 0.003	140.273	0.154E-06 0.028	37.8
1166	2.543	142.155	2.7233	0.04883	0.01694 0.003	140.274	0.156E-06 0.030	37.4
1167	2.543	142.010	2.7291	0.04505	0.01693 0.004	140.274	0.157E-06 0.034	37.1
1168	2.543	141.876	2.7344	0.04142	0.01692 0.004	140.275	0.158E-06 0.038	36.8
1161	2.869	142.000	3.2144	0.04881	0.01791 0.003	140.289	0.113E-06 0.031	46.8
1162	2.869	141.869	3.2214	0.04503	0.01790 0.004	140.292	0.113E-06 0.035	46.6
1163	2.869	141.745	3.2281	0.04141	0.01785 0.004	140.291	0.112E-06 0.040	47.2
1164	2.869	141.625	3.2346	0.03794	0.01787 0.005	140.291	0.112E-06 0.045	47.0
1157	3.128	141.840	3.6501	0.04874	0.01883 0.003	140.265	0.991E-07 0.023	50.1
1158	3.128	141.717	3.6585	0.04497	0.01880 0.003	140.266	0.975E-07 0.026	50.8
1159	3.128	141.601	3.6666	0.04134	0.01882 0.003	140.267	0.990E-07 0.027	50.1
1160	3.128	141.490	3.6745	0.03789	0.01882 0.004	140.268	0.100E-06 0.031	49.6
1153	3.445	141.427	4.2745	0.04132	0.02019 0.003	140.248	0.770E-07 0.030	60.5
1154	3.445	141.350	4.2821	0.03787	0.02025 0.003	140.249	0.774E-07 0.024	60.5
1155	3.445	141.268	4.2902	0.03457	0.02024 0.004	140.250	0.790E-07 0.037	59.2
1156	3.445	141.179	4.2990	0.03141	0.02021 0.005	140.249	0.799E-07 0.043	58.4
1149	3.628	141.346	4.6681	0.04129	0.02115 0.004	140.242	0.661E-07 0.031	68.6
1150	3.628	141.257	4.6788	0.03784	0.02121 0.004	140.246	0.679E-07 0.033	67.0
1151	3.628	141.175	4.6888	0.03454	0.02122 0.005	140.246	0.698E-07 0.038	65.3
1152	3.628	141.083	4.7061	0.03139	0.02121 0.005	140.248	0.701E-07 0.045	64.9
1145	3.839	141.257	5.1747	0.04129	0.02260 0.004	140.241	0.567E-07 0.031	79.0
1146	3.839	141.170	5.1883	0.03784	0.02260 0.004	140.244	0.567E-07 0.034	78.9
1147	3.839	141.096	5.1998	0.03454	0.02261 0.005	140.243	0.604E-07 0.042	74.2
1148	3.839	141.022	5.2116	0.03139	0.02266 0.006	140.246	0.613E-07 0.046	73.3
1141	4.034	141.164	5.7140	0.04128	0.02417 0.004	140.239	0.485E-07 0.034	91.6
1142	4.034	141.085	5.7300	0.03783	0.02421 0.005	140.241	0.502E-07 0.036	88.7
1143	4.034	141.010	5.74.3	0.03453	0.02426 0.005	140.244	0.506E-07 0.044	88.4
1144	4.034	140.944	5.7590	0.03139	0.02428 0.006	140.244	0.528E-07 0.048	84.7
1137	4.185	141.085	6.1892	0.04127	0.02570 0.004	140.236	0.423E-07 0.033	105.5
1138	4.185	141.017	6.2065	0.03783	0.02575 0.005	140.239	0.430E-07 0.037	104.0
1139	4.185	140.946	6.2247	0.03453	0.02577 0.005	140.240	0.447E-07 0.042	100.3
1140	4.185	140.883	6.2408	0.03138	0.02584 0.006	140.240	0.458E-07 0.050	97.7
1133	4.347	141.016	6.7730	0.04125	0.02769 0.005	140.240	0.380E-07 0.036	119.1
1134	4.347	140.962	6.7906	0.03781	0.02777 0.005	140.246	0.400E-07 0.043	113.9
1135	4.347	140.881	6.8176	0.03452	0.02779 0.006	140.246	0.398E-07 0.047	113.8
1136	4.347	140.821	6.8376	0.03138	0.02786 0.007	140.245	0.414E-07 0.052	110.2
1129	4.452	140.954	7.2066	0.04125	0.02920 0.005	140.236	0.328E-07 0.038	139.3
1130	4.452	140.884	7.2339	0.03780	0.02926 0.006	140.238	0.328E-07 0.044	135.2
1131	4.452	140.836	7.2532	0.03451	0.02938 0.006	140.238	0.345E-07 0.048	132.7
1132	4.452	140.770	7.2799	0.03137	0.02939 0.007	140.237	0.354E-07 0.055	129.4
1125	4.574	140.946	7.7401	0.04483	0.03122 0.005	140.236	0.292E-07 0.036	157.8
1126	4.574	140.899	7.7631	0.04124	0.03127 0.005	140.241	0.304E-07 0.040	152.0
1127	4.574	140.850	7.7867	0.03779	0.03128 0.006	140.241	0.310E-07 0.044	149.9

1128	4.574	140.791	7.8161	0.03451	0.03139	0.007	140.240	0.322E-07	0.053	145.1
1129	4.671	140.883	8.2440	0.04482	0.03338	0.005	140.233	0.204E-07	0.039	229.4
1122	4.671	140.818	8.2815	0.04123	0.03318	0.006	140.235	0.205E-07	0.043	224.5
1123	4.671	140.759	8.5165	0.03779	0.03323	0.007	140.238	0.203E-07	0.045	230.4
1124	4.671	140.711	8.3448	0.03450	0.03302	0.007	140.241	0.198E-07	0.052	232.5
1117	4.749	140.888	8.6499	0.04857	0.03468	0.005	140.236	0.167E-07	0.037	244.4
1118	4.749	140.830	8.6880	0.04483	0.03472	0.006	140.236	0.182E-07	0.041	249.0
1119	4.749	140.784	8.7185	0.04123	0.03477	0.006	140.237	0.164E-07	0.045	243.8
1120	4.749	140.726	8.7573	0.03779	0.03479	0.007	140.238	0.193E-07	0.049	243.6
1113	4.854	140.890	9.2410	0.05247	0.03692	0.005	140.240	0.181E-07	0.035	261.3
1114	4.854	140.854	9.2682	0.04857	0.03701	0.005	140.242	0.186E-07	0.037	259.1
1115	4.854	140.792	9.3158	0.04482	0.03705	0.006	140.240	0.182E-07	0.042	262.7
1116	4.854	140.759	9.3415	0.04123	0.03705	0.006	140.240	0.185E-07	0.045	259.7
1109	4.931	140.869	9.7090	0.05243	0.03862	0.005	140.229	0.204E-07	0.037	235.7
1110	4.931	140.813	9.7554	0.04855	0.03864	0.005	140.232	0.197E-07	0.037	239.9
1111	4.931	140.777	9.7860	0.04480	0.03860	0.006	140.234	0.209E-07	0.041	229.9
1112	4.931	140.737	9.8206	0.04122	0.03876	0.007	140.235	0.209E-07	0.048	228.3
1105	5.004	140.846	10.1685	0.05242	0.04012	0.005	140.232	0.194E-07	0.035	246.7
1106	5.004	140.795	10.2151	0.04854	0.04009	0.006	140.233	0.194E-07	0.040	244.5
1107	5.004	140.743	10.2622	0.04480	0.04012	0.006	140.231	0.199E-07	0.039	238.9
1108	5.004	140.688	10.3128	0.04121	0.04028	0.006	140.234	0.202E-07	0.045	233.2
1101	5.089	140.875	10.6574	0.05646	0.04163	0.006	140.234	0.202E-07	0.045	233.5
1102	5.089	140.820	10.7097	0.05242	0.04169	0.007	140.237	0.202E-07	0.049	233.0
1103	5.089	140.779	10.7489	0.04853	0.04172	0.008	140.237	0.204E-07	0.055	228.0
1104	5.089	140.734	10.7921	0.04479	0.04173	0.008	140.237	0.202E-07	0.058	231.9
1097	5.167	140.823	11.1775	0.05645	0.04280	0.006	140.236	0.149E-07	0.041	303.2
1098	5.167	140.790	11.2103	0.05242	0.04282	0.007	140.237	0.152E-07	0.046	296.0
1099	5.167	140.735	11.2650	0.04853	0.04285	0.008	140.237	0.149E-07	0.051	299.5
1100	5.167	140.707	11.2929	0.04479	0.04287	0.009	140.239	0.149E-07	0.058	300.9
1093	5.259	140.822	11.7126	0.05645	0.04383	0.004	140.242	0.158E-07	0.031	277.1
1094	5.259	140.780	11.7552	0.05242	0.04380	0.005	140.245	0.159E-07	0.034	271.6
1095	5.259	140.735	11.7960	0.04853	0.04388	0.005	140.244	0.165E-07	0.037	262.6
1096	5.259	140.705	11.8305	0.04479	0.04396	0.008	140.247	0.167E-07	0.052	258.8
1089	5.308	140.920	11.8878	0.06497	0.04436	0.005	140.236	0.192E-07	0.034	225.8
1090	5.308	140.824	11.9837	0.05646	0.04432	0.005	140.237	0.196E-07	0.037	218.1
1085	5.353	140.999	12.0518	0.07412	0.04482	0.006	140.230	0.188E-07	0.040	228.3
1091	5.308	140.749	12.0591	0.04853	0.04448	0.009	140.238	0.210E-07	0.060	204.5
1092	5.308	140.682	12.1268	0.04121	0.04446	0.011	140.238	0.230E-07	0.077	185.7
1086	5.353	140.913	12.1369	0.06498	0.04477	0.006	140.235	0.189E-07	0.043	223.6
1087	5.353	140.815	12.2345	0.05645	0.04484	0.007	140.235	0.202E-07	0.052	210.1
1088	5.353	140.727	12.3227	0.04852	0.04494	0.009	140.236	0.214E-07	0.065	196.6
1081	5.531	140.981	12.9602	0.07409	0.04604	0.005	140.241	0.167E-07	0.035	236.8
1082	5.531	140.884	13.0536	0.06497	0.04606	0.006	140.243	0.166E-07	0.040	235.1
1083	5.531	140.799	13.1353	0.05644	0.04619	0.007	140.244	0.172E-07	0.050	227.8
1084	5.531	140.710	13.2208	0.04852	0.04626	0.009	140.244	0.176E-07	0.060	221.7
1077	5.659	141.068	13.4482	0.08384	0.04664	0.004	140.241	0.173E-07	0.030	217.3
1078	5.659	140.973	13.5345	0.07412	0.04679	0.005	140.243	0.178E-07	0.035	210.5
1079	5.659	140.872	13.6270	0.06497	0.04686	0.006	140.245	0.179E-07	0.041	209.1
1080	5.660	140.793	13.7029	0.05645	0.04698	0.007	140.246	0.182E-07	0.052	205.1
1073	5.725	141.048	13.7368	0.08385	0.04705	0.004	140.226	0.171E-07	0.030	214.7
1074	5.725	140.951	13.8227	0.07412	0.04721	0.005	140.228	0.181E-07	0.035	203.2
1075	5.726	140.867	13.9002	0.06498	0.04715	0.005	140.232	0.175E-07	0.032	208.6
1076	5.728	140.770	13.9911	0.05646	0.04743	0.006	140.235	0.187E-07	0.040	196.0
1069	5.854	141.036	14.2263	0.08387	0.04777	0.003	140.223	0.191E-07	0.022	185.8
1070	5.854	140.940	14.3066	0.07412	0.04786	0.004	140.226	0.193E-07	0.025	184.0
1071	5.854	140.848	14.3818	0.06499	0.04795	0.004	140.224	0.197E-07	0.030	179.8
1072	5.854	140.779	14.4392	0.05646	0.04812	0.005	140.223	0.199E-07	0.037	177.9
1065	5.998	141.243	14.5355	0.10511	0.04819	0.004	140.235	0.189E-07	0.025	181.6
1066	5.998	141.140	14.6181	0.09417	0.04832	0.004	140.236	0.189E-07	0.028	181.4
1067	5.998	140.986	14.7376	0.07888	0.04845	0.005	140.236	0.189E-07	0.037	180.8
1068	5.999	140.889	14.8153	0.06945	0.04869	0.006	140.237	0.192E-07	0.044	178.8
1061	6.276	141.248	15.3132	0.10510	0.04952	0.003	140.240	0.218E-07	0.024	150.6
1062	6.277	141.144	15.3851	0.09415	0.04954	0.004	140.240	0.216E-07	0.027	151.0
1063	6.277	140.988	15.4923	0.07887	0.04991	0.005	140.240	0.224E-07	0.036	146.5
1064	6.277	140.915	15.5417	0.06944	0.05003	0.006	140.242	0.262E-07	0.045	125.8
1057	6.535	141.724	15.6077	0.15503	0.05026	0.003	140.239	0.238E-07	0.019	133.9
1058	6.535	141.411	15.8003	0.12267	0.05050	0.003	140.240	0.240E-07	0.020	132.7
1059	6.536	141.141	15.9655	0.09415	0.05081	0.004	140.240	0.247E-07	0.030	128.9
1060	6.537	140.900	16.1124	0.06943	0.05126	0.006	140.242	0.268E-07	0.048	119.7



1053	6.820	141.710	16.1816	0.15502	0.05142	0.002	140.240	0.257E-07	0.017	121.0
1054	6.822	141.404	16.3520	0.12269	0.05178	0.003	140.241	0.262E-07	0.020	118.8
1055	6.822	141.132	16.4995	0.09416	0.05218	0.004	140.242	0.275E-07	0.030	113.8
1056	6.822	140.895	16.6255	0.06945	0.05257	0.006	140.243	0.292E-07	0.045	107.9
1049	7.186	141.682	16.7994	0.15502	0.05282	0.002	140.235	0.273E-07	0.015	111.6
1050	7.187	141.333	16.9352	0.12269	0.05322	0.003	140.236	0.281E-07	0.020	108.8
1051	7.187	141.106	17.0666	0.09417	0.05361	0.004	140.237	0.291E-07	0.031	105.6
1052	7.188	140.886	17.1716	0.06944	0.05388	0.005	140.237	0.302E-07	0.048	101.9
1045	7.603	141.737	17.2993	0.16903	0.05421	0.002	140.232	0.292E-07	0.013	102.8
1046	7.605	141.476	17.4334	0.13515	0.05462	0.002	140.235	0.301E-07	0.018	100.3
1047	7.605	141.202	17.5495	0.10510	0.05491	0.004	140.236	0.312E-07	0.027	97.0
1048	7.606	140.956	17.6530	0.07887	0.05543	0.005	140.236	0.326E-07	0.041	93.8
1041	8.208	142.084	17.8428	0.20666	0.05592	0.001	140.224	0.309E-07	0.007	96.1
1042	8.210	141.739	17.9741	0.16898	0.05629	0.001	140.226	0.311E-07	0.008	95.7
1043	8.210	141.436	18.0864	0.13510	0.05673	0.001	140.227	0.320E-07	0.011	93.9
1044	8.211	141.166	18.1859	0.10507	0.05694	0.002	140.228	0.321E-07	0.016	93.5
1037	9.262	142.384	18.6433	0.24823	0.05872	0.001	140.221	0.343E-07	0.006	86.2
1038	9.263	142.020	18.7585	0.20664	0.05911	0.001	140.223	0.350E-07	0.007	84.8
1039	9.264	141.693	18.8606	0.16891	0.05952	0.001	140.226	0.358E-07	0.009	83.5
1040	9.264	141.395	18.9529	0.13506	0.05987	0.002	140.231	0.364E-07	0.012	82.5
1034	10.479	142.767	19.3360	0.30316	0.06147	0.001	140.218	0.370E-07	0.005	80.0
1033	10.475	142.374	19.4403	0.25694	0.06190	0.001	140.217	0.378E-07	0.005	78.8
1035	10.481	142.014	19.5403	0.21455	0.06231	0.001	140.216	0.384E-07	0.007	78.1
1036	10.481	141.690	19.6270	0.17609	0.06273	0.001	140.217	0.395E-07	0.010	76.4
1029	12.491	143.050	20.2818	0.35324	0.06580	0.001	140.224	0.418E-07	0.004	72.3
1030	12.495	142.644	20.3753	0.30307	0.06622	0.001	140.224	0.426E-07	0.005	71.4
1031	12.497	142.272	20.4601	0.25685	0.06667	0.001	140.225	0.441E-07	0.006	69.4
1032	12.499	141.929	20.5376	0.21450	0.06713	0.001	140.227	0.445E-07	0.008	69.1
1025	14.519	143.081	21.0646	0.37431	0.06781	0.001	140.218	0.456E-07	0.004	68.0
1026	14.522	142.672	21.1469	0.32252	0.07025	0.001	140.219	0.464E-07	0.005	67.2
1027	14.525	142.310	21.2197	0.27473	0.07063	0.001	140.221	0.475E-07	0.006	66.1
1028	14.529	141.971	21.2881	0.23091	0.07108	0.001	140.221	0.484E-07	0.007	65.4
1021	17.181	142.927	21.9181	0.37418	0.07472	0.001	140.219	0.503E-07	0.007	64.1
1022	17.181	142.547	21.9848	0.32237	0.07512	0.001	140.220	0.514E-07	0.008	63.0
1023	17.182	142.194	22.0467	0.27466	0.07542	0.001	140.220	0.513E-07	0.010	63.4
1024	17.182	141.880	22.1016	0.23086	0.07588	0.002	140.219	0.532E-07	0.013	61.6
1017	20.721	143.094	22.7661	0.40664	0.08010	0.001	140.203	0.552E-07	0.004	60.6
1018	20.722	142.701	22.8271	0.35253	0.08047	0.001	140.207	0.557E-07	0.005	60.4
1019	20.724	142.343	22.8831	0.30253	0.08086	0.001	140.206	0.566E-07	0.006	59.8
1020	20.725	142.016	22.9340	0.25638	0.08113	0.001	140.206	0.570E-07	0.008	59.5
1013	25.222	142.923	23.6824	0.49630	0.08649	0.001	140.206	0.622E-07	0.005	56.5
1014	25.221	142.561	23.7323	0.35227	0.08690	0.001	140.208	0.639E-07	0.005	55.3
1015	25.223	142.227	23.7788	0.30228	0.08718	0.001	140.209	0.648E-07	0.007	54.7
1016	25.224	141.911	23.8220	0.25620	0.08750	0.001	140.209	0.654E-07	0.008	54.5
1009	30.470	142.907	24.5278	0.42862	0.09309	0.000	140.207	0.683E-07	0.004	54.2
1010	30.472	142.559	24.5714	0.37322	0.09344	0.001	140.209	0.698E-07	0.005	53.3
1011	30.471	142.227	24.6125	0.32163	0.09372	0.001	140.209	0.702E-07	0.007	53.1
1012	30.469	141.929	24.6495	0.27406	0.09402	0.001	140.209	0.716E-07	0.008	52.3
1005	36.313	142.740	25.3262	0.42844	0.09993	0.001	140.203	0.735E-07	0.005	53.1
1006	36.319	142.413	25.3642	0.37305	0.10019	0.001	140.205	0.739E-07	0.006	53.0
1007	36.318	142.110	25.3985	0.32147	0.10049	0.001	140.206	0.752E-07	0.007	52.2
1008	36.329	141.824	25.4324	0.27397	0.10080	0.001	140.205	0.757E-07	0.009	52.0
1001	43.376	142.895	26.1005	0.48711	0.10705	0.001	140.178	0.798E-07	0.004	51.4
1002	43.381	142.565	26.1354	0.41792	0.10734	0.001	140.178	0.807E-07	0.005	51.0
1003	43.380	142.255	26.1677	0.37272	0.10768	0.001	140.179	0.823E-07	0.006	50.2
1004	43.383	141.972	26.1975	0.32120	0.10792	0.001	140.178	0.836E-07	0.007	49.5

Normal Temperature 172. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m²/s DSTAT	Specific Heat J/(mol.K)
10133	0.780	173.255	0.5583	0.06615	0.01658 0.001	170.020	0.103E-05 0.016	27.6
10134	0.780	172.797	0.5599	0.05649	0.01657 0.002	170.018	0.105E-05 0.019	27.1
10135	0.780	172.369	0.5615	0.04760	0.01655 0.004	170.018	0.106E-05 0.040	26.9
10136	0.780	171.979	0.5629	0.03949	0.01651 0.005	170.020	0.105E-05 0.052	27.1
10129	1.312	173.021	0.9618	0.06611	0.01700 0.001	170.028	0.600E-06 0.016	28.0
10130	1.312	172.593	0.9646	0.05646	0.01696 0.002	170.029	0.603E-06 0.020	27.8

10131	1.312	172.205	0.9672	0.04758	0.01695	0.002	170.030	0.606E-06	0.026	27.6
10132	1.312	171.850	0.9696	0.03947	0.01699	0.003	170.030	0.612E-06	0.033	27.2
10125	1.913	172.787	1.4411	0.06607	0.01754	0.002	170.025	0.384E-06	0.015	29.8
10126	1.913	172.393	1.4454	0.05643	0.01751	0.002	170.026	0.386E-06	0.020	29.6
10127	1.913	172.036	1.4492	0.04756	0.01750	0.002	170.025	0.392E-06	0.024	29.2
10128	1.913	171.702	1.4529	0.03946	0.01743	0.003	170.027	0.392E-06	0.032	29.0
10121	2.592	172.964	2.0093	0.07545	0.01827	0.001	170.017	0.273E-06	0.012	31.0
10122	2.592	172.575	2.0157	0.06605	0.01830	0.002	170.020	0.275E-06	0.016	31.0
10123	2.592	172.212	2.0218	0.05642	0.01827	0.002	170.020	0.277E-06	0.019	30.7
10124	2.592	171.878	2.0274	0.04755	0.01826	0.002	170.021	0.280E-06	0.024	30.3
10117	3.451	172.656	2.7916	0.07636	0.01938	0.001	170.026	0.173E-06	0.014	37.4
10118	3.451	172.309	2.8007	0.06600	0.01940	0.002	170.028	0.176E-06	0.015	36.8
10119	3.451	171.991	2.8092	0.05638	0.01941	0.002	170.025	0.180E-06	0.019	36.2
10120	3.451	171.685	2.8173	0.04753	0.01937	0.003	170.025	0.176E-06	0.026	36.7
10113	4.080	172.810	3.3963	0.08752	0.02043	0.001	170.016	0.141E-06	0.012	39.7
10114	4.080	172.460	3.4086	0.07637	0.02044	0.002	170.021	0.142E-06	0.014	39.5
10115	4.080	172.136	3.4201	0.06598	0.02036	0.003	170.022	0.137E-06	0.025	40.6
10116	4.080	171.835	3.4308	0.05637	0.02041	0.002	170.022	0.142E-06	0.021	39.5
10109	4.833	172.585	4.1863	0.08743	0.02190	0.001	170.025	0.122E-06	0.013	40.4
10110	4.833	172.264	4.2019	0.07632	0.02177	0.002	170.029	0.116E-06	0.016	42.2
10111	4.833	171.968	4.2164	0.06594	0.02180	0.002	170.029	0.118E-06	0.019	41.3
10112	4.833	171.694	4.2300	0.05632	0.02177	0.003	170.029	0.119E-06	0.023	41.2
10105	5.482	172.296	4.9233	0.08734	0.02305	0.001	170.025	0.932E-07	0.012	47.3
10106	5.482	172.016	4.9410	0.07625	0.02308	0.002	170.027	0.946E-07	0.015	46.8
10107	5.482	171.753	4.9579	0.06589	0.02310	0.002	170.026	0.960E-07	0.019	46.1
10108	5.482	171.512	4.9735	0.05629	0.02307	0.003	170.027	0.962E-07	0.026	45.9
10101	6.146	172.101	5.7239	0.08733	0.02465	0.002	170.025	0.781E-07	0.013	52.5
10102	6.145	171.849	5.7436	0.07723	0.02471	0.002	170.025	0.795E-07	0.016	51.8
10103	6.145	171.602	5.7639	0.06588	0.02475	0.002	170.025	0.806E-07	0.019	51.3
10104	6.145	171.377	5.7827	0.05628	0.02475	0.003	170.027	0.804E-07	0.025	51.4
10097	6.716	171.939	6.4506	0.08731	0.02616	0.002	170.025	0.669E-07	0.013	58.2
10098	6.716	171.703	6.4741	0.07620	0.02622	0.002	170.027	0.688E-07	0.017	56.9
10099	6.716	171.478	6.4967	0.06584	0.02620	0.002	170.026	0.675E-07	0.020	57.8
10100	6.716	171.278	6.5171	0.05626	0.02625	0.003	170.025	0.693E-07	0.025	56.5
10093	7.197	171.848	7.0839	0.08729	0.02764	0.002	170.017	0.707E-07	0.014	53.5
10094	7.197	171.627	7.1096	0.07618	0.02765	0.002	170.021	0.712E-07	0.018	53.2
10095	7.197	171.420	7.1339	0.06584	0.02762	0.002	170.020	0.727E-07	0.020	51.9
10096	7.197	171.226	7.1569	0.05625	0.02766	0.003	170.022	0.757E-07	0.027	50.0
10089	7.706	171.720	7.7779	0.08727	0.02915	0.002	170.014	0.618E-07	0.015	59.3
10090	7.706	171.514	7.8057	0.07619	0.02918	0.002	170.015	0.625E-07	0.018	58.7
10091	7.706	171.316	7.8325	0.06584	0.02914	0.003	170.018	0.632E-07	0.022	57.7
10092	7.706	171.136	7.8572	0.05625	0.02928	0.003	170.018	0.674E-07	0.028	54.6
10085	8.339	171.597	8.6511	0.08725	0.03116	0.002	170.015	0.571E-07	0.016	62.0
10086	8.339	171.403	8.6814	0.07616	0.03118	0.002	170.018	0.570E-07	0.019	62.1
10087	8.339	171.224	8.7098	0.06582	0.03121	0.003	170.020	0.579E-07	0.022	61.2
10088	8.339	171.054	8.7367	0.05624	0.03124	0.004	170.020	0.595E-07	0.030	59.6
10081	8.856	171.502	9.3631	0.08723	0.03282	0.002	170.018	0.530E-07	0.016	65.3
10082	8.856	171.321	9.3944	0.07615	0.03281	0.002	170.020	0.537E-07	0.020	64.2
10083	8.856	171.143	9.4254	0.06582	0.03290	0.003	170.021	0.545E-07	0.023	63.5
10084	8.856	170.992	9.4519	0.05624	0.03293	0.004	170.021	0.567E-07	0.030	61.2
10077	9.404	171.608	10.0681	0.09905	0.03452	0.002	170.016	0.508E-07	0.013	66.5
10078	9.404	171.423	10.1025	0.08723	0.03453	0.002	170.021	0.505E-07	0.016	66.8
10079	9.404	171.255	10.1338	0.07612	0.03453	0.002	170.022	0.516E-07	0.019	65.3
10080	9.404	171.092	10.1645	0.06579	0.03465	0.003	170.023	0.535E-07	0.025	63.4
10073	10.017	171.707	10.8251	0.11164	0.03631	0.002	170.020	0.488E-07	0.012	67.5
10074	10.017	171.528	10.8601	0.09905	0.03643	0.002	170.021	0.500E-07	0.014	66.2
10075	10.017	171.345	10.8964	0.08721	0.03646	0.002	170.023	0.496E-07	0.017	66.7
10076	10.017	171.180	10.9292	0.07611	0.03643	0.003	170.022	0.496E-07	0.021	66.5
10069	10.625	171.713	11.5510	0.11825	0.03811	0.002	170.020	0.474E-07	0.012	68.3
10070	10.625	171.448	11.6050	0.09904	0.03823	0.002	170.024	0.466E-07	0.015	66.8
10071	10.625	171.199	11.6561	0.08156	0.03823	0.002	170.025	0.490E-07	0.019	66.1
10072	10.625	170.982	11.7011	0.06579	0.03834	0.004	170.025	0.522E-07	0.028	62.2
10065	11.299	172.100	12.2233	0.15396	0.03977	0.002	170.021	0.435E-07	0.014	72.6
10066	11.299	171.806	12.2835	0.13194	0.03993	0.002	170.023	0.439E-07	0.016	72.2
10067	11.299	171.628	12.3205	0.11817	0.03975	0.002	170.023	0.432E-07	0.019	72.6
10068	11.299	171.376	12.3729	0.09899	0.04006	0.002	170.024	0.462E-07	0.017	68.7
10061	12.135	171.997	13.0928	0.15389	0.04193	0.002	170.025	0.434E-07	0.014	71.2
10062	12.135	171.718	13.1503	0.13191	0.04213	0.002	170.027	0.443E-07	0.017	70.3
10063	12.135	171.549	13.1853	0.11814	0.04218	0.002	170.027	0.442E-07	0.020	70.5

10064	12.135	171.306	13.2360	0.09897	0.04234	0.003	170.029	0.457E-07	0.027	68.5
10057	12.954	171.905	13.9579	0.15386	0.04410	0.001	170.025	0.442E-07	0.010	69.5
10058	12.954	171.636	13.9128	0.13183	0.04426	0.001	170.027	0.446E-07	0.012	69.2
10059	12.954	171.470	13.9408	0.11809	0.04433	0.002	170.028	0.450E-07	0.013	68.8
10060	12.954	171.246	13.9930	0.09893	0.04437	0.003	170.028	0.455E-07	0.024	67.9
10053	13.853	172.295	14.5122	0.19436	0.04583	0.001	170.023	0.437E-07	0.010	68.9
10054	13.853	171.825	14.6053	0.15386	0.04620	0.002	170.024	0.454E-07	0.015	67.1
10055	13.853	171.416	14.6869	0.11808	0.04638	0.003	170.024	0.461E-07	0.021	66.3
10056	13.853	171.056	14.7591	0.08710	0.04658	0.004	170.024	0.470E-07	0.035	65.4
10049	14.921	172.704	15.2034	0.23963	0.04798	0.001	170.024	0.450E-07	0.009	66.5
10050	14.921	172.202	15.2991	0.19439	0.04830	0.001	170.025	0.462E-07	0.011	65.3
10051	14.921	171.752	15.3851	0.15384	0.04859	0.001	170.024	0.472E-07	0.010	64.3
10052	14.921	171.361	15.4600	0.11810	0.04880	0.003	170.024	0.487E-07	0.021	62.7
10045	16.181	172.582	16.0174	0.23964	0.05060	0.001	170.024	0.468E-07	0.009	64.0
10046	16.181	172.105	16.1037	0.19432	0.05089	0.001	170.025	0.477E-07	0.011	63.2
10047	16.181	171.682	16.1806	0.15381	0.05110	0.002	170.025	0.494E-07	0.016	61.3
10048	16.181	171.304	16.2500	0.11807	0.05131	0.003	170.026	0.507E-07	0.024	60.0
11041	17.439	172.464	16.7238	0.23964	0.05300	0.001	170.018	0.475E-07	0.009	63.3
10042	17.440	172.003	16.8036	0.19427	0.05329	0.001	170.018	0.480E-07	0.012	63.1
10043	17.440	171.590	16.8749	0.15378	0.05350	0.002	170.019	0.484E-07	0.017	62.8
10044	17.440	171.232	16.9370	0.11805	0.05374	0.003	170.020	0.497E-07	0.024	61.4
10037	19.329	172.828	17.5450	0.28954	0.05608	0.001	170.023	0.494E-07	0.007	61.2
10038	19.330	172.344	17.6231	0.23950	0.05645	0.001	170.025	0.508E-07	0.010	60.1
10039	19.332	171.903	17.6945	0.19422	0.05665	0.002	170.024	0.507E-07	0.013	60.3
10040	19.332	171.514	17.7574	0.15374	0.05687	0.002	170.025	0.512E-07	0.018	60.0
10033	21.218	172.704	18.3116	0.28941	0.05898	0.001	170.018	0.509E-07	0.005	59.8
10034	21.220	172.246	18.3810	0.23940	0.05946	0.001	170.024	0.531E-07	0.006	58.0
10036	21.220	171.830	18.4438	0.19416	0.05973	0.001	170.025	0.538E-07	0.009	57.6
10036	21.221	171.456	18.5004	0.15371	0.05992	0.001	170.026	0.540E-07	0.011	57.5
10029	23.827	173.052	19.1343	0.34428	0.06228	0.001	170.025	0.516E-07	0.011	59.3
10030	23.828	172.574	19.2008	0.28946	0.06317	0.001	170.025	0.567E-07	0.006	56.0
10031	23.827	172.135	19.2620	0.23943	0.06351	0.001	170.027	0.579E-07	0.008	54.5
10032	23.830	171.743	19.3170	0.19417	0.06373	0.001	170.026	0.589E-07	0.010	53.9
10025	26.846	172.888	20.0019	0.34413	0.06663	0.001	170.019	0.562E-07	0.005	56.2
10026	26.847	172.433	20.0605	0.28935	0.06703	0.001	170.022	0.575E-07	0.008	55.5
10027	26.847	172.022	20.1133	0.23936	0.06756	0.001	170.023	0.597E-07	0.008	54.1
10028	26.848	171.642	20.1624	0.19416	0.06788	0.001	170.023	0.606E-07	0.010	53.6
10021	30.172	172.837	20.7940	0.34390	0.07115	0.001	170.013	0.639E-07	0.004	51.3
10022	30.174	172.397	20.8470	0.28924	0.07153	0.001	170.014	0.660E-07	0.006	50.1
10023	30.175	171.995	20.8954	0.23923	0.07185	0.001	170.016	0.684E-07	0.008	48.6
10024	30.175	171.629	20.9392	0.19407	0.07218	0.001	170.019	0.721E-07	0.011	46.4
10017	34.473	173.122	21.6213	0.40332	0.07602	0.001	170.011	0.660E-07	0.004	51.4
10018	34.473	172.662	21.6722	0.34379	0.07669	0.001	170.017	0.688E-07	0.005	50.1
11019	34.473	172.247	21.7181	0.28906	0.07695	0.001	170.016	0.708E-07	0.006	48.8
10020	34.473	171.862	21.7606	0.23911	0.07715	0.001	170.016	0.715E-07	0.008	48.5
10013	39.098	172.949	22.4245	0.40303	0.08140	0.001	170.015	0.708E-07	0.005	50.1
10014	39.100	172.517	22.4693	0.34354	0.08157	0.001	170.017	0.709E-07	0.005	50.1
10015	39.104	172.122	22.5107	0.28879	0.08191	0.001	170.018	0.719E-07	0.007	49.7
10016	39.105	171.764	22.5479	0.23891	0.08226	0.001	170.018	0.750E-07	0.008	47.9
10009	44.440	173.238	23.1731	0.46763	0.08628	0.000	170.022	0.721E-07	0.004	50.6
10010	44.441	172.790	23.2164	0.40301	0.08665	0.001	170.025	0.728E-07	0.004	50.5
10011	44.447	172.384	23.2563	0.34347	0.08686	0.001	170.026	0.737E-07	0.006	50.0
10012	44.453	172.016	23.2926	0.28876	0.08720	0.001	170.027	0.762E-07	0.007	48.5
10005	50.960	173.057	24.0040	0.46749	0.09297	0.000	170.035	0.794E-07	0.004	48.6
10006	50.969	172.643	24.0422	0.40291	0.09315	0.001	170.038	0.785E-07	0.005	49.3
10007	50.976	172.261	24.0773	0.34342	0.09333	0.001	170.039	0.801E-07	0.006	48.3
10008	50.984	171.906	24.1103	0.28876	0.09390	0.001	170.041	0.832E-07	0.008	47.0
10001	59.869	173.198	24.9331	0.53618	0.10045	0.000	170.011	0.772E-07	0.004	52.5
10002	59.873	172.787	24.9676	0.46723	0.10081	0.001	170.013	0.775E-07	0.006	52.5
10003	59.875	172.400	25.0000	0.40266	0.10120	0.001	170.014	0.784E-07	0.005	52.2
10004	59.878	172.048	25.0295	0.34323	0.10168	0.001	170.014	0.801E-07	0.006	51.5

Nominal Temperature 202. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
11133	0.479	203.015	0.2866	0.06703	0.01892 0.002	199.897	0.267E-05 0.021	24.4

11134	0.478	202.545	0.2868	0.05651	0.01883	0.002	199.898	0.267E-05	0.024	24.3
11135	0.478	202.095	0.2875	0.04691	0.01890	0.003	199.897	0.283E-05	0.033	23.1
11136	0.478	201.708	0.2881	0.03819	0.01892	0.003	199.898	0.312E-05	0.042	21.1
11129	0.859	202.814	0.5192	0.06707	0.01919	0.002	199.893	0.154E-05	0.019	23.6
11130	0.859	202.360	0.5205	0.05654	0.01903	0.002	199.896	0.140E-05	0.023	25.5
11131	0.859	201.959	0.5216	0.04693	0.01905	0.003	199.898	0.148E-05	0.030	24.3
11132	0.859	201.589	0.5226	0.03820	0.01904	0.003	199.896	0.158E-05	0.040	22.8
11125	1.204	203.142	0.7323	0.07852	0.01941	0.001	199.891	0.105E-05	0.014	24.6
11126	1.204	202.676	0.7342	0.06707	0.01934	0.002	199.894	0.996E-06	0.018	25.8
11127	1.204	202.247	0.7359	0.05655	0.01932	0.002	199.892	0.101E-05	0.022	25.3
11128	1.204	201.855	0.7375	0.04693	0.01932	0.003	199.895	0.104E-05	0.031	24.7
11121	1.629	202.984	1.0007	0.07850	0.01971	0.001	199.906	0.697E-06	0.013	27.4
11122	1.629	202.545	1.0032	0.06707	0.01957	0.002	199.911	0.645E-06	0.017	29.2
11123	1.629	202.134	1.0055	0.05655	0.01961	0.002	199.914	0.665E-06	0.022	28.5
11124	1.629	201.765	1.0076	0.04694	0.01955	0.003	199.912	0.656E-06	0.028	28.7
11117	2.340	203.219	1.4586	0.09086	0.02023	0.001	199.904	0.460E-06	0.011	28.9
11118	2.340	202.776	1.4625	0.07852	0.02018	0.001	199.904	0.442E-06	0.013	29.9
11119	2.340	202.363	1.4661	0.06710	0.02016	0.002	199.902	0.446E-06	0.017	29.7
11120	2.340	201.981	1.4695	0.05657	0.02017	0.002	199.903	0.452E-06	0.021	29.3
11113	2.951	203.029	1.8666	0.09087	0.02057	0.001	199.887	0.320E-06	0.012	32.5
11114	2.951	202.604	1.8716	0.07852	0.02056	0.001	199.886	0.320E-06	0.014	32.6
11115	2.951	202.208	1.8763	0.06708	0.02061	0.002	199.885	0.324E-06	0.017	32.3
11116	2.951	201.849	1.8805	0.05655	0.02064	0.002	199.884	0.331E-06	0.021	31.8
11109	4.103	202.789	2.6656	0.09074	0.02176	0.001	199.909	0.248E-06	0.011	31.1
11110	4.103	202.406	2.6726	0.07843	0.02169	0.001	199.910	0.239E-06	0.014	32.1
11111	4.102	202.048	2.6787	0.06700	0.02172	0.002	199.909	0.246E-06	0.017	31.3
11112	4.101	201.720	2.6843	0.05650	0.02171	0.002	199.912	0.252E-06	0.022	30.6
11105	5.092	202.951	3.3739	0.10395	0.02275	0.001	199.907	0.186E-06	0.009	34.0
11106	5.092	202.569	3.3834	0.09073	0.02271	0.001	199.910	0.180E-06	0.010	35.0
11107	5.091	202.211	3.3919	0.07843	0.02270	0.001	199.909	0.181E-06	0.012	34.8
11108	5.091	201.882	3.4002	0.06701	0.02267	0.002	199.909	0.180E-06	0.016	35.0
11101	6.108	202.726	4.1370	0.10388	0.02392	0.001	199.906	0.148E-06	0.009	36.7
11102	6.108	202.375	4.1486	0.09070	0.02397	0.001	199.909	0.146E-06	0.009	37.1
11103	6.108	202.043	4.1596	0.07842	0.02393	0.001	199.910	0.148E-06	0.012	36.7
11104	6.107	201.734	4.1694	0.06702	0.02394	0.002	199.909	0.149E-06	0.015	36.5
11097	6.983	202.551	4.8144	0.10387	0.02501	0.001	199.904	0.128E-06	0.008	38.2
11098	6.983	202.220	4.8278	0.09069	0.02513	0.001	199.905	0.132E-06	0.011	37.4
11099	6.983	201.910	4.8405	0.07840	0.02511	0.001	199.905	0.132E-06	0.013	37.3
11100	6.983	201.629	4.8521	0.06698	0.02517	0.002	199.905	0.137E-06	0.018	36.1
11093	7.737	202.405	5.4102	0.10388	0.02604	0.001	199.897	0.113E-06	0.009	40.2
11094	7.737	202.083	5.4256	0.09066	0.02603	0.001	199.900	0.112E-06	0.011	40.4
11095	7.737	201.797	5.4394	0.07837	0.02616	0.001	199.900	0.117E-06	0.013	39.1
11096	7.737	201.528	5.4524	0.06697	0.02619	0.002	199.900	0.119E-06	0.016	38.5
11089	8.847	202.693	6.2727	0.12537	0.02788	0.001	199.900	0.103E-06	0.008	40.8
11090	8.847	202.219	6.3003	0.10387	0.02782	0.001	199.903	0.101E-06	0.009	41.5
11091	8.847	201.788	6.3257	0.08441	0.02787	0.001	199.904	0.103E-06	0.012	41.0
11092	8.847	201.409	6.3483	0.06698	0.02780	0.002	199.903	0.104E-06	0.017	40.4
11085	9.644	202.447	6.9212	0.12534	0.02901	0.001	199.900	0.906E-07	0.008	43.9
11086	9.644	202.018	6.9498	0.10385	0.02902	0.001	199.902	0.915E-07	0.009	43.5
11087	9.644	201.627	6.9761	0.08439	0.02906	0.002	199.900	0.942E-07	0.014	42.3
11088	9.544	201.282	6.9795	0.06697	0.02907	0.002	199.901	0.964E-07	0.019	41.4
11081	10.702	202.284	7.7718	0.12536	0.03077	0.001	199.903	0.841E-07	0.008	45.0
11082	10.702	201.885	7.8025	0.10386	0.03075	0.001	199.904	0.851E-07	0.010	44.3
11083	10.702	201.521	7.8309	0.08441	0.03083	0.002	199.904	0.879E-07	0.015	43.1
11084	10.702	201.193	7.8566	0.06695	0.03082	0.002	199.905	0.898E-07	0.021	42.1
11077	11.705	202.548	8.5312	0.14889	0.03237	0.001	199.899	0.767E-07	0.007	47.2
11078	11.705	202.138	8.5662	0.12534	0.03241	0.001	199.902	0.785E-07	0.009	46.1
11079	11.705	201.755	8.5991	0.10387	0.03245	0.001	199.902	0.791E-07	0.012	45.8
11080	11.705	201.418	8.6285	0.08440	0.03250	0.002	199.899	0.808E-07	0.016	45.0
11073	12.793	202.372	9.3675	0.14870	0.03401	0.001	199.907	0.658E-07	0.007	52.5
11074	12.793	201.983	9.4041	0.12521	0.03409	0.001	199.903	0.668E-07	0.009	51.9
11075	12.792	201.629	9.4372	0.10374	0.03428	0.001	199.907	0.685E-07	0.012	51.1
11076	12.791	201.306	9.4676	0.08430	0.03426	0.002	199.907	0.686E-07	0.015	50.9
11069	13.702	202.519	10.0136	0.16548	0.03559	0.001	199.906	0.641E-07	0.006	52.8
11070	13.702	202.126	10.0527	0.14062	0.03555	0.001	199.908	0.628E-07	0.007	53.7
11071	13.702	201.765	10.0890	0.11783	0.03557	0.001	199.908	0.624E-07	0.009	54.1
11072	13.701	201.432	10.1222	0.09704	0.03578	0.001	199.908	0.644E-07	0.012	53.0
11065	14.665	202.386	10.6963	0.16548	0.03692	0.001	199.901	0.590E-07	0.007	55.4
11066	14.664	202.014	10.7342	0.14061	0.03722	0.001	199.903	0.620E-07	0.008	53.6

11067	14.664	201.670	10.7706	0.11780	0.03719	0.001	199.901	0.609E-07	0.010	54.4
11068	14.664	201.356	10.8041	0.09700	0.03735	0.002	199.902	0.618E-07	0.014	54.0
11061	15.941	202.256	11.5442	0.16531	0.03864	0.001	199.906	0.555E-07	0.008	56.7
11062	15.941	201.908	11.5820	0.14652	0.03930	0.001	199.903	0.622E-07	0.008	52.3
11063	15.941	201.584	11.6178	0.11776	0.03942	0.001	199.909	0.633E-07	0.011	51.6
11064	15.941	201.294	11.6500	0.09699	0.03949	0.002	199.909	0.650E-07	0.013	50.4
11057	17.148	202.388	12.2619	0.18298	0.04059	0.001	199.910	0.560E-07	0.006	55.7
11058	17.148	202.038	12.3011	0.15681	0.04108	0.001	199.912	0.607E-07	0.008	52.6
11059	17.148	201.714	12.3377	0.13270	0.04117	0.001	199.912	0.613E-07	0.009	52.2
11060	17.148	201.423	12.3707	0.11061	0.04130	0.001	199.915	0.642E-07	0.011	50.1
11053	18.446	202.274	13.0023	0.18302	0.04283	0.001	199.912	0.578E-07	0.007	54.1
11054	18.446	201.941	13.0402	0.15685	0.04306	0.001	199.913	0.601E-07	0.007	52.6
11055	18.446	201.631	13.0757	0.13273	0.04324	0.001	199.915	0.621E-07	0.010	51.2
11056	18.446	201.342	13.1089	0.11060	0.04334	0.001	199.913	0.626E-07	0.012	51.0
11049	20.094	202.739	13.7902	0.23109	0.04536	0.001	199.909	0.597E-07	0.005	52.4
11050	20.094	202.147	13.8574	0.18299	0.04555	0.001	199.912	0.608E-07	0.007	51.8
11051	20.094	201.635	13.9159	0.14053	0.04562	0.001	199.912	0.616E-07	0.009	51.1
11052	20.094	201.185	13.9677	0.10371	0.04577	0.002	199.912	0.631E-07	0.015	50.1
11045	21.742	202.583	14.5643	0.23097	0.04774	0.001	199.897	0.596E-07	0.005	52.5
11046	21.742	202.026	14.6271	0.18293	0.04779	0.001	199.898	0.596E-07	0.007	52.4
11047	21.742	201.534	14.6829	0.14052	0.04793	0.001	199.899	0.605E-07	0.010	51.9
11048	21.742	201.103	14.7321	0.10369	0.04813	0.002	199.898	0.620E-07	0.016	50.9
11041	23.791	202.457	15.4179	0.23098	0.05047	0.001	199.900	0.620E-07	0.006	50.5
11042	23.791	201.931	15.4762	0.18291	0.05057	0.001	199.900	0.633E-07	0.008	49.5
11043	23.792	201.462	15.5287	0.14048	0.05081	0.001	199.901	0.651E-07	0.011	48.5
11044	23.792	201.053	15.5744	0.10366	0.05087	0.002	199.901	0.659E-07	0.018	47.9
11037	26.046	202.905	16.1852	0.28482	0.05303	0.001	199.907	0.624E-07	0.005	50.0
11038	26.047	202.341	16.2462	0.23105	0.05340	0.001	199.909	0.644E-07	0.006	48.9
11039	26.048	201.833	16.3012	0.18296	0.05363	0.001	199.911	0.657E-07	0.008	48.3
11040	26.048	201.394	16.3490	0.14051	0.05378	0.001	199.909	0.681E-07	0.012	46.7
11033	28.281	202.874	16.9058	0.28492	0.05600	0.001	199.911	0.647E-07	0.005	49.1
11034	28.281	202.317	16.9640	0.23111	0.05613	0.001	199.912	0.651E-07	0.006	48.9
11035	28.282	201.825	17.0157	0.18298	0.05631	0.001	199.918	0.677E-07	0.008	47.2
11036	28.283	201.379	17.0629	0.14053	0.05647	0.001	199.919	0.694E-07	0.012	46.9
11029	31.113	202.744	17.7216	0.28556	0.05892	0.001	199.928	0.631E-07	0.005	50.4
11030	31.113	202.214	17.7747	0.23164	0.05911	0.001	199.928	0.639E-07	0.007	50.0
11031	31.112	201.732	17.8228	0.18345	0.05950	0.001	199.928	0.664E-07	0.009	48.7
11032	31.109	201.319	17.8640	0.14086	0.05975	0.002	199.926	0.677E-07	0.013	48.0
11025	34.217	202.618	18.5044	0.28552	0.06202	0.001	199.923	0.661E-07	0.006	48.5
11026	34.214	202.115	18.5521	0.23166	0.06284	0.001	199.925	0.726E-07	0.007	45.3
11027	34.211	201.666	18.5948	0.18346	0.06304	0.001	199.924	0.743E-07	0.009	44.4
11028	34.209	201.268	18.6329	0.14090	0.06320	0.002	199.925	0.783E-07	0.014	42.3
11021	37.944	203.003	19.2774	0.34508	0.06580	0.001	199.932	0.683E-07	0.006	48.1
11022	37.946	202.474	19.3262	0.28555	0.06654	0.001	199.934	0.725E-07	0.006	46.2
11023	37.947	201.997	19.3703	0.23165	0.06679	0.001	199.934	0.739E-07	0.007	45.5
11024	37.947	201.569	19.4097	0.18346	0.06697	0.001	199.936	0.756E-07	0.010	44.7
11017	41.959	202.848	20.0537	0.34483	0.06975	0.001	199.938	0.699E-07	0.005	48.2
11018	41.962	202.351	20.0977	0.28533	0.07060	0.001	199.938	0.766E-07	0.006	45.0
11019	41.968	201.891	20.1391	0.23165	0.07070	0.001	199.941	0.762E-07	0.008	45.2
11020	41.969	201.489	20.1747	0.18348	0.07093	0.001	199.942	0.787E-07	0.011	44.0
11013	46.406	203.199	20.7662	0.41008	0.07391	0.000	199.932	0.709E-07	0.004	49.0
11014	46.407	202.680	20.8098	0.34484	0.07463	0.001	199.932	0.757E-07	0.005	46.7
11015	46.409	202.212	20.8493	0.28537	0.07483	0.001	199.932	0.774E-07	0.006	45.8
11016	46.411	201.782	20.8856	0.23158	0.07500	0.001	199.932	0.778E-07	0.008	45.6
11009	51.597	203.021	21.5429	0.40994	0.07881	0.000	199.929	0.747E-07	0.004	48.3
11010	51.598	202.524	21.5826	0.34481	0.07933	0.001	199.931	0.778E-07	0.005	46.9
11011	51.599	202.076	21.6186	0.28537	0.07944	0.001	199.931	0.788E-07	0.006	46.3
11012	51.601	201.672	21.6512	0.23159	0.07980	0.001	199.931	0.805E-07	0.010	45.7
11005	57.785	202.842	22.3516	0.41003	0.08387	0.001	199.930	0.756E-07	0.010	49.3
11006	57.789	202.384	22.3868	0.34477	0.08457	0.001	199.932	0.803E-07	0.005	47.1
11007	57.788	201.962	22.4187	0.28536	0.08487	0.001	199.933	0.814E-07	0.008	46.7
11008	57.790	201.577	22.4482	0.23159	0.08511	0.001	199.934	0.820E-07	0.010	46.5
11001	64.887	203.161	23.1256	0.48079	0.09000	0.000	199.928	0.870E-07	0.003	45.2
11002	64.890	202.684	23.1602	0.41005	0.09032	0.000	199.927	0.881E-07	0.004	44.8
11003	64.893	202.252	23.1915	0.34483	0.09051	0.001	199.932	0.890E-07	0.005	44.4
11004	64.896	201.853	23.2206	0.28538	0.09073	0.001	199.933	0.913E-07	0.007	43.5

Nominal Temperature 232. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
12117	0.946	233.344	0.4936	0.09111	0.02170 0.001	229.865	0.161E-05 0.014	27.2
12118	0.946	232.843	0.4947	0.07788	0.02167 0.001	229.864	0.162E-05 0.015	27.0
12119	0.946	232.378	0.4958	0.06569	0.02166 0.002	229.862	0.164E-05 0.019	26.6
12120	0.946	231.946	0.4967	0.05453	0.02164 0.002	229.863	0.167E-05 0.026	26.2
12113	1.913	233.028	1.0106	0.09109	0.02219 0.001	229.861	0.763E-06 0.012	28.2
12114	1.913	232.567	1.0128	0.07788	0.02216 0.001	229.863	0.772E-06 0.015	27.9
12115	1.913	232.147	1.0148	0.06570	0.02219 0.002	229.861	0.792E-06 0.020	27.3
12116	1.913	231.759	1.0167	0.05455	0.02216 0.002	229.859	0.799E-06 0.024	27.0
12109	2.688	232.846	1.4346	0.09106	0.02268 0.001	229.867	0.542E-06 0.011	28.5
12110	2.688	232.420	1.4377	0.07785	0.02263 0.001	229.867	0.542E-06 0.014	28.4
12111	2.688	232.019	1.4405	0.06568	0.02266 0.002	229.864	0.562E-06 0.019	27.5
12112	2.688	231.657	1.4431	0.05453	0.02256 0.002	229.863	0.552E-06 0.026	27.8
12105	3.714	232.658	2.0073	0.09113	0.02339 0.001	229.870	0.386E-06 0.012	29.3
12106	3.714	232.248	2.0116	0.07787	0.02332 0.001	229.870	0.380E-06 0.015	29.6
12107	3.714	231.880	2.0155	0.06566	0.02336 0.002	229.869	0.396E-06 0.019	28.5
12108	3.714	231.533	2.0192	0.05450	0.02325 0.002	229.870	0.391E-06 0.024	28.6
12101	4.943	232.666	2.7027	0.10536	0.02426 0.001	229.864	0.287E-06 0.011	30.0
12102	4.943	232.463	2.7087	0.09109	0.02427 0.001	229.864	0.293E-06 0.013	29.4
12103	4.943	232.089	2.7144	0.07788	0.02427 0.002	229.865	0.302E-06 0.016	28.6
12104	4.943	231.745	2.7196	0.06569	0.02427 0.002	229.861	0.311E-06 0.020	27.8
12097	6.269	232.649	3.4745	0.10531	0.02537 0.001	229.864	0.225E-06 0.011	31.0
12098	6.269	232.276	3.4821	0.09108	0.02537 0.001	229.864	0.228E-06 0.012	30.6
12099	6.269	231.927	3.4393	0.07786	0.02536 0.002	229.866	0.232E-06 0.017	30.1
12100	6.269	231.605	3.4959	0.06568	0.02532 0.002	229.864	0.237E-06 0.021	29.4
12093	7.264	232.873	4.0528	0.12063	0.02615 0.001	229.857	0.181E-06 0.009	33.8
12094	7.264	232.499	4.0616	0.10533	0.02626 0.001	229.858	0.190E-06 0.011	32.5
12095	7.263	232.138	4.0701	0.09109	0.02621 0.001	229.858	0.192E-06 0.012	32.1
12096	7.263	231.807	4.0784	0.07789	0.02625 0.002	229.856	0.195E-06 0.016	31.6
12089	8.798	232.657	4.9639	0.12059	0.02768 0.001	229.863	0.153E-06 0.009	34.7
12090	8.798	232.301	4.9753	0.10526	0.02774 0.001	229.864	0.160E-06 0.011	33.4
12091	8.798	231.969	4.9859	0.09105	0.02773 0.001	229.865	0.157E-06 0.013	33.9
12092	8.798	231.663	4.9957	0.07785	0.02770 0.002	229.864	0.160E-06 0.018	33.3
12085	9.962	232.488	5.6575	0.12052	0.02868 0.001	229.858	0.128E-06 0.009	37.4
12086	9.962	232.157	5.6699	0.10524	0.02890 0.001	229.861	0.136E-06 0.011	35.9
12087	9.962	231.847	5.6815	0.09103	0.02889 0.002	229.862	0.138E-06 0.014	35.3
12088	9.962	231.558	5.6924	0.07785	0.02889 0.002	229.861	0.140E-06 0.017	34.8
12081	11.371	232.656	6.4773	0.13692	0.03035 0.001	229.860	0.116E-06 0.008	38.4
12082	11.371	232.321	6.4920	0.12058	0.03036 0.001	229.860	0.118E-06 0.009	37.8
12083	11.371	232.004	6.5060	0.10524	0.03028 0.001	229.856	0.116E-06 0.012	38.4
12084	11.371	231.711	6.5189	0.09105	0.03038 0.002	229.858	0.120E-06 0.014	37.3
12077	12.508	232.519	7.1400	0.13696	0.03160 0.001	229.860	0.107E-06 0.008	39.6
12078	12.506	232.204	7.1546	0.12067	0.03167 0.001	229.861	0.111E-06 0.010	38.4
12079	12.506	231.907	7.1689	0.10539	0.03158 0.001	229.864	0.109E-06 0.012	38.8
12080	12.505	231.632	7.1822	0.09114	0.03166 0.002	229.864	0.113E-06 0.013	37.6
12073	13.911	232.356	7.9414	0.13692	0.03312 0.001	229.858	0.977E-07 0.008	40.8
12074	13.911	232.066	7.9574	0.12062	0.03325 0.001	229.860	0.102E-06 0.010	39.5
12075	13.911	231.782	7.9732	0.10531	0.03322 0.001	229.859	0.993E-07 0.011	40.3
12076	13.911	231.517	7.9880	0.09108	0.03323 0.002	229.861	0.101E-06 0.015	39.7
12069	15.284	232.533	8.6823	0.15443	0.03490 0.001	229.865	0.946E-07 0.008	40.8
12070	15.285	232.232	8.7008	0.13701	0.03486 0.001	229.865	0.940E-07 0.009	41.0
12071	15.285	231.938	8.7187	0.12066	0.03484 0.001	229.857	0.926E-07 0.010	41.6
12072	15.285	231.677	8.7345	0.10536	0.03487 0.001	229.859	0.947E-07 0.012	40.7
12065	16.771	232.396	9.4714	0.15413	0.03630 0.001	229.863	0.868E-07 0.008	42.1
12066	16.768	232.108	9.4888	0.13695	0.03652 0.001	229.862	0.907E-07 0.009	40.8
12067	16.768	231.834	9.5063	0.12057	0.03651 0.001	229.864	0.907E-07 0.011	40.8
12068	16.767	231.583	9.5225	0.10520	0.03655 0.002	229.863	0.930E-07 0.013	39.9
12061	18.381	232.548	10.2632	0.17246	0.03785 0.001	229.870	0.783E-07 0.007	44.6
12062	18.380	232.131	10.2915	0.14536	0.03824 0.001	229.872	0.848E-07 0.008	42.0
12063	18.379	231.741	10.3181	0.12049	0.03834 0.001	229.874	0.869E-07 0.011	41.2
12064	18.378	231.390	10.3425	0.09793	0.03838 0.002	229.872	0.904E-07 0.014	39.7
12057	19.831	232.417	10.9545	0.17243	0.03940 0.001	229.865	0.750E-07 0.007	45.5
12058	19.831	232.020	10.9833	0.14533	0.03989 0.001	229.867	0.826E-07 0.008	42.3
12059	19.830	231.647	11.0102	0.12051	0.03996 0.001	229.868	0.841E-07 0.011	41.6

12060	19.830	231.313	11.0348	0.09799	0.03997	0.002	229.867	0.859E-07	0.014	40.7
12053	21.608	232.706	11.7168	0.20202	0.04162	0.001	229.863	0.763E-07	0.007	44.4
12054	21.608	232.293	11.7478	0.17254	0.04165	0.001	229.861	0.768E-07	0.007	44.2
12055	21.608	231.896	11.7776	0.14537	0.04187	0.001	229.860	0.797E-07	0.009	42.9
12056	21.608	231.548	11.8042	0.12050	0.04196	0.001	229.861	0.812E-07	0.011	42.3
12049	23.521	232.358	12.5094	0.20199	0.04376	0.001	229.856	0.754E-07	0.006	44.4
12050	23.521	232.162	12.5399	0.17249	0.04366	0.001	229.858	0.743E-07	0.007	44.8
12051	23.521	231.792	12.5686	0.14535	0.04390	0.001	229.861	0.770E-07	0.010	43.7
12052	23.521	231.458	12.5948	0.12052	0.04402	0.001	229.861	0.790E-07	0.013	42.8
12045	25.412	232.444	13.2315	0.20197	0.04592	0.001	229.862	0.772E-07	0.007	43.3
12046	25.412	232.063	13.2614	0.17248	0.04592	0.001	229.859	0.767E-07	0.008	43.5
12047	25.411	231.714	13.2886	0.14530	0.04576	0.001	229.859	0.760E-07	0.010	43.5
12048	25.410	231.394	13.3135	0.11048	0.04593	0.002	229.860	0.792E-07	0.013	42.1
12041	27.636	232.306	14.0123	0.20206	0.04809	0.001	229.853	0.736E-07	0.008	44.8
12042	27.634	231.956	14.0394	0.17248	0.04824	0.001	229.856	0.768E-07	0.008	43.2
12043	27.634	231.620	14.0657	0.14531	0.04825	0.001	229.857	0.764E-07	0.010	43.4
12044	27.633	231.309	14.0901	0.12047	0.04836	0.002	229.857	0.777E-07	0.014	42.8
12037	30.266	232.163	14.8482	0.20224	0.05086	0.001	229.845	0.742E-07	0.007	44.6
12038	30.266	231.829	14.8745	0.17257	0.05100	0.001	229.847	0.756E-07	0.008	44.0
12039	30.266	231.510	14.8997	0.14533	0.05099	0.001	229.847	0.757E-07	0.011	43.9
12040	30.266	231.223	14.9225	0.12047	0.05104	0.002	229.847	0.764E-07	0.014	43.5
12033	32.884	232.776	15.5419	0.26840	0.05335	0.001	229.845	0.728E-07	0.005	45.6
12034	32.884	232.158	15.5898	0.21255	0.05358	0.001	229.849	0.751E-07	0.007	44.5
12035	32.884	231.615	15.6324	0.16321	0.05353	0.001	229.846	0.739E-07	0.010	45.1
12036	32.886	231.144	15.6697	0.12044	0.05367	0.002	229.845	0.753E-07	0.014	44.3
12029	36.030	233.333	16.3015	0.33096	0.05567	0.001	229.867	0.736E-07	0.005	44.5
12030	36.030	232.669	16.3520	0.26861	0.05596	0.001	229.866	0.749E-07	0.006	44.1
12031	36.028	232.082	16.3965	0.21275	0.05619	0.001	229.865	0.786E-07	0.007	42.3
12032	36.027	231.561	16.4363	0.16347	0.05632	0.001	229.864	0.813E-07	0.011	41.0
12025	39.527	233.149	17.1124	0.33104	0.05891	0.001	229.872	0.743E-07	0.005	44.7
12026	39.526	232.523	17.1587	0.26872	0.05921	0.001	229.871	0.762E-07	0.005	43.9
12027	39.526	231.962	17.2008	0.21285	0.05923	0.001	229.871	0.765E-07	0.008	43.8
12028	39.524	231.473	17.2370	0.16350	0.05932	0.001	229.873	0.791E-07	0.012	42.3
12021	43.255	232.965	17.8843	0.33097	0.06221	0.001	229.861	0.744E-07	0.005	45.4
12022	43.255	232.373	17.9274	0.26862	0.06234	0.001	229.865	0.746E-07	0.005	45.4
12023	43.255	231.842	17.9663	0.21285	0.06255	0.001	229.865	0.765E-07	0.008	44.5
12024	43.253	231.377	18.0000	0.16355	0.06288	0.001	229.865	0.800E-07	0.010	42.9
12017	47.586	232.802	18.6814	0.33115	0.06588	0.001	229.859	0.775E-07	0.006	44.5
12018	47.586	232.240	18.7212	0.26872	0.06608	0.001	229.859	0.787E-07	0.006	44.0
12019	47.586	231.739	18.7566	0.21283	0.06618	0.001	229.857	0.807E-07	0.008	43.0
12020	47.583	231.286	18.7884	0.16352	0.06668	0.001	229.860	0.855E-07	0.011	41.1
12013	52.456	232.643	19.4768	0.33106	0.06960	0.001	229.868	0.761E-07	0.005	46.1
12014	52.456	232.113	19.5130	0.26872	0.07003	0.001	229.870	0.793E-07	0.007	44.7
12015	52.454	231.636	19.5455	0.21284	0.07020	0.001	229.867	0.801E-07	0.009	44.4
12016	52.456	231.216	19.5746	0.16354	0.07055	0.002	229.869	0.838E-07	0.013	42.8
12009	57.943	233.064	20.2331	0.40002	0.07443	0.000	229.855	0.866E-07	0.004	42.3
12010	57.944	232.502	20.2702	0.33100	0.07435	0.001	229.860	0.846E-07	0.005	43.2
12011	57.945	231.999	20.3037	0.26870	0.07436	0.001	229.860	0.850E-07	0.007	42.9
12012	57.945	231.550	20.3333	0.21287	0.07470	0.001	229.860	0.891E-07	0.009	41.2
12005	63.879	232.876	21.0000	0.40015	0.07863	0.001	229.857	0.836E-07	0.005	44.8
12006	63.875	232.349	21.0331	0.33111	0.07905	0.001	229.857	0.859E-07	0.005	44.1
12007	63.872	231.871	21.0632	0.26869	0.07926	0.001	229.857	0.872E-07	0.006	43.5
12008	63.872	231.445	21.0905	0.21284	0.07937	0.001	229.854	0.879E-07	0.009	43.3
12001	70.213	233.251	21.6965	0.47560	0.08323	0.000	229.856	0.835E-07	0.003	46.4
12002	70.213	232.704	21.7301	0.40005	0.08359	0.000	229.854	0.850E-07	0.004	45.9
12003	70.217	232.202	21.7613	0.33111	0.08381	0.001	229.853	0.857E-07	0.005	45.7

Nominal Temperature 263. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT		Cell Temperature K	Thermal Diffusivity m²/s DSTAT		Specific Heat J/(mol.K)
13109	0.593	263.584	0.2716	0.09619	0.02401	0.001	259.941	0.428E-05	0.018	21.1
13110	0.593	263.031	0.2722	0.08175	0.02385	0.002	259.946	0.389E-05	0.024	22.9
13111	0.593	262.525	0.2727	0.06843	0.02389	0.002	259.945	0.408E-05	0.022	21.9
13112	0.593	262.061	0.2732	0.05630	0.02379	0.002	259.942	0.407E-05	0.028	21.8
13105	1.688	263.154	0.7801	0.09623	0.02423	0.001	259.946	0.118E-05	0.010	26.1
13106	1.688	262.664	0.7817	0.08175	0.02417	0.001	259.945	0.117E-05	0.015	26.4

13107	1.688	262.215	0.7828	0.06844	0.02400	0.001	259.948	0.112E-05	0.016	27.1
13108	1.688	261.811	0.7841	0.05631	0.02392	0.002	259.943	0.112E-05	0.021	27.0
13101	2.760	263.415	1.2816	0.11192	0.02473	0.001	259.949	0.682E-06	0.008	27.7
13102	2.759	262.926	1.2839	0.09630	0.02471	0.001	259.951	0.603E-06	0.009	27.7
13103	2.759	262.472	1.2863	0.08182	0.02468	0.001	259.947	0.684E-06	0.012	27.6
13104	2.759	262.064	1.2885	0.06851	0.02454	0.001	259.947	0.668E-06	0.015	28.0
13097	3.839	263.692	1.7916	0.12867	0.02526	0.001	259.942	0.464E-06	0.006	29.4
13098	3.839	263.199	1.7952	0.11186	0.02530	0.001	259.946	0.480E-06	0.008	28.6
13099	3.838	262.739	1.7984	0.09624	0.02524	0.001	259.944	0.474E-06	0.008	28.8
13100	3.838	262.313	1.8018	0.08181	0.02531	0.001	259.943	0.490E-06	0.010	28.1
13093	5.453	263.390	2.5668	0.12865	0.02625	0.001	259.943	0.305E-06	0.005	32.3
13094	5.453	262.926	2.5722	0.11180	0.02630	0.001	259.942	0.316E-06	0.007	31.3
13095	5.453	262.506	2.5769	0.09617	0.02622	0.001	259.943	0.307E-06	0.009	32.1
13096	5.453	262.118	2.5815	0.08173	0.02626	0.001	259.940	0.312E-06	0.010	31.6
13089	6.856	263.233	3.2451	0.12877	0.02714	0.001	259.949	0.269E-06	0.006	29.7
13090	6.856	262.793	3.2519	0.11191	0.02721	0.001	259.948	0.275E-06	0.008	29.3
13091	6.855	262.392	3.2578	0.09624	0.02708	0.001	259.947	0.269E-06	0.009	29.6
13092	6.855	262.015	3.2637	0.08174	0.02714	0.001	259.946	0.276E-06	0.011	29.1
13085	8.213	263.026	3.9042	0.12861	0.02808	0.001	259.942	0.213E-06	0.007	32.3
13086	8.213	262.617	3.9121	0.11183	0.02817	0.001	259.944	0.220E-06	0.008	31.4
13087	8.212	262.243	3.9190	0.09619	0.02796	0.001	259.944	0.210E-06	0.010	32.4
13088	8.212	261.887	3.9259	0.08172	0.02809	0.001	259.944	0.219E-06	0.012	31.4
13081	9.933	263.452	4.7219	0.15617	0.02948	0.001	259.941	0.179E-06	0.005	33.2
13082	9.933	262.826	4.7369	0.12868	0.02933	0.001	259.938	0.174E-06	0.008	33.8
13083	9.933	262.261	4.7502	0.10388	0.02929	0.001	259.937	0.174E-06	0.010	33.8
13084	9.932	261.765	4.7619	0.08173	0.02933	0.001	259.938	0.191E-06	0.012	31.3
13077	11.502	263.250	5.4723	0.15623	0.03069	0.001	259.945	0.155E-06	0.005	34.4
13078	11.500	262.661	5.4884	0.12875	0.03060	0.001	259.940	0.152E-06	0.007	35.0
13079	11.500	262.130	5.5036	0.10392	0.03049	0.001	259.939	0.149E-06	0.010	35.5
13080	11.500	261.648	5.5171	0.08176	0.03089	0.001	259.937	0.168E-06	0.012	32.3
13073	13.183	263.483	6.2498	0.17602	0.03218	0.001	259.958	0.143E-06	0.006	34.3
13074	13.182	262.898	6.2683	0.14680	0.03199	0.001	259.961	0.138E-06	0.006	35.3
13075	13.182	262.351	6.2865	0.12019	0.03183	0.001	259.960	0.133E-06	0.008	36.3
13076	13.181	261.870	6.3022	0.09626	0.03219	0.001	259.961	0.146E-06	0.009	33.7
13069	14.471	263.321	6.8435	0.17598	0.03325	0.001	259.954	0.131E-06	0.006	35.4
13070	14.471	262.754	6.8638	0.14677	0.03308	0.001	259.954	0.127E-06	0.006	36.1
13071	14.471	262.234	6.8828	0.12020	0.03287	0.001	259.955	0.120E-06	0.009	37.8
13072	14.471	261.770	6.8999	0.09625	0.03340	0.001	259.954	0.137E-06	0.010	34.2
13065	16.388	263.125	7.7023	0.17616	0.03493	0.001	259.955	0.118E-06	0.005	36.7
13066	16.388	262.581	7.7246	0.14681	0.03463	0.001	259.952	0.110E-06	0.007	38.7
13067	16.388	262.092	7.7449	0.12017	0.03474	0.001	259.948	0.114E-06	0.009	37.7
13068	16.389	261.653	7.7635	0.09621	0.03510	0.001	259.945	0.125E-06	0.011	35.1
13061	18.117	263.304	8.4329	0.19712	0.03639	0.001	259.945	0.107E-05	0.005	38.6
13062	18.117	262.770	8.4568	0.16600	0.03628	0.001	259.948	0.104E-06	0.005	39.5
13063	18.116	262.269	8.4788	0.13750	0.03614	0.001	259.944	0.100E-06	0.007	40.7
13064	18.115	261.829	8.4984	0.11187	0.03626	0.001	259.944	0.101E-06	0.009	40.6
13057	19.955	263.171	9.1902	0.19691	0.03799	0.001	259.950	0.106E-06	0.007	37.3
13058	19.952	262.656	9.2142	0.16591	0.03785	0.001	259.946	0.104E-06	0.007	37.7
13059	19.951	262.181	9.2367	0.13754	0.03770	0.001	259.945	0.102E-06	0.008	38.4
13060	19.950	261.759	9.2568	0.11187	0.03813	0.001	259.943	0.113E-06	0.009	35.3
13053	21.940	262.998	9.9702	0.19712	0.03962	0.001	259.946	0.985E-07	0.006	38.7
13054	21.940	262.514	9.9948	0.16607	0.03962	0.001	259.945	0.985E-07	0.006	38.7
13055	21.939	262.068	10.0177	0.13767	0.03954	0.001	259.945	0.974E-07	0.008	39.0
13056	21.938	261.663	10.0385	0.11193	0.03993	0.001	259.946	0.106E-06	0.011	36.6
13049	24.286	262.835	10.8350	0.19693	0.04169	0.001	259.945	0.953E-07	0.005	38.8
13050	24.285	262.372	10.8600	0.16596	0.04146	0.001	259.947	0.902E-07	0.006	40.5
13051	24.284	261.954	10.8826	0.13762	0.04173	0.001	259.945	0.963E-07	0.008	38.5
13052	24.284	261.572	10.9036	0.11192	0.04201	0.001	259.946	0.103E-06	0.009	36.5
13045	26.597	262.704	11.6287	0.19705	0.04362	0.001	259.953	0.905E-07	0.005	40.0
13046	26.597	262.258	11.6537	0.16598	0.04354	0.001	259.954	0.894E-07	0.006	40.2
13047	26.596	261.860	11.6762	0.13762	0.04384	0.001	259.952	0.955E-07	0.007	38.2
13048	26.595	261.501	11.6964	0.11191	0.04402	0.001	259.951	0.100E-06	0.010	36.8
13041	28.831	263.352	12.2991	0.25461	0.04539	0.001	259.957	0.873E-07	0.004	40.6
13042	28.830	262.722	12.3353	0.20800	0.04525	0.001	259.958	0.843E-07	0.005	41.7
13043	28.829	262.151	12.3683	0.16604	0.04550	0.001	259.955	0.875E-07	0.006	40.6
13044	28.828	261.558	12.3969	0.12880	0.04586	0.001	259.956	0.944E-07	0.008	36.3
13037	31.430	263.185	13.0725	0.25482	0.04759	0.001	259.951	0.845E-07	0.005	41.5
13038	31.430	262.589	13.1075	0.20814	0.04753	0.001	259.953	0.834E-07	0.006	41.9
13039	31.429	262.031	13.1404	0.16613	0.04761	0.001	259.952	0.839E-07	0.006	41.9



13040	31.429	261.561	13.1684	0.12886	0.04805	0.001	259.951	0.903E-07	0.009	39.5
13033	34.350	263.346	13.8512	0.28021	0.04982	0.000	259.950	0.832E-07	0.004	41.7
13034	34.348	262.742	13.8867	0.23103	0.05000	0.000	259.951	0.841E-07	0.004	41.5
13035	34.346	262.192	13.9193	0.18660	0.04991	0.001	259.949	0.830E-07	0.006	41.8
13036	34.348	261.704	13.9490	0.14687	0.05040	0.001	259.947	0.873E-07	0.007	40.5
13029	37.411	263.170	14.6181	0.28019	0.05222	0.001	259.946	0.808E-07	0.006	42.7
13030	37.413	262.595	14.6529	0.23100	0.05243	0.001	259.955	0.811E-07	0.004	42.9
13031	37.413	262.075	14.6842	0.18662	0.05245	0.001	259.955	0.803E-07	0.006	43.3
13032	37.413	261.606	14.7126	0.14693	0.05285	0.001	259.949	0.826E-07	0.008	42.7
13025	40.523	263.332	15.3125	0.30699	0.05487	0.000	259.956	0.856E-07	0.004	40.8
13026	40.524	262.753	15.3473	0.25536	0.05456	0.001	259.951	0.810E-07	0.007	42.5
13027	40.524	262.228	15.3790	0.20849	0.05495	0.001	259.952	0.844E-07	0.005	41.4
13028	40.526	261.759	15.4075	0.16637	0.05527	0.001	259.950	0.887E-07	0.007	39.8
13021	44.431	263.132	16.1292	0.30617	0.05772	0.000	259.949	0.819E-07	0.003	42.7
13022	44.426	262.592	16.1603	0.25464	0.05776	0.001	259.950	0.823E-07	0.005	42.5
13023	44.424	262.094	16.1895	0.20784	0.05768	0.001	259.947	0.811E-07	0.006	43.0
13024	44.422	261.647	16.2158	0.16587	0.05805	0.001	259.947	0.847E-07	0.009	41.6
13017	48.732	263.252	16.9204	0.33336	0.06052	0.001	259.941	0.810E-07	0.004	43.1
13018	48.729	262.710	16.9517	0.27948	0.06085	0.000	259.944	0.842E-07	0.004	41.8
13019	48.727	262.207	16.9809	0.23039	0.06097	0.001	259.943	0.846E-07	0.006	41.8
13020	48.725	261.768	17.0064	0.18609	0.06086	0.001	259.945	0.832E-07	0.007	42.2
13013	53.553	263.509	17.7101	0.37672	0.06432	0.000	259.949	0.874E-07	0.003	41.0
13014	53.553	262.823	17.7496	0.30587	0.06413	0.000	259.948	0.850E-07	0.004	41.8
13015	53.552	262.215	17.7845	0.24239	0.06408	0.001	259.949	0.846E-07	0.006	41.9
13016	53.551	261.686	17.8151	0.18622	0.06459	0.001	259.949	0.891E-07	0.007	40.3
13009	58.539	263.331	18.4695	0.37694	0.06773	0.000	259.941	0.867E-07	0.003	42.0
13010	58.540	262.687	18.5061	0.30604	0.06789	0.000	259.953	0.879E-07	0.003	41.5
13011	58.542	262.106	18.5391	0.24253	0.06765	0.001	259.953	0.844E-07	0.005	42.8
13012	58.543	261.601	18.5679	0.18637	0.06830	0.001	259.955	0.905E-07	0.008	40.7
13005	63.851	263.153	19.2006	0.37715	0.07141	0.000	259.946	0.866E-07	0.003	42.9
13006	63.852	262.534	19.2350	0.30622	0.07132	0.001	259.943	0.841E-07	0.004	44.0
13007	63.854	261.986	19.2655	0.24262	0.07162	0.001	259.943	0.851E-07	0.005	43.8
13008	63.854	261.506	19.2922	0.18638	0.07224	0.001	259.944	0.916E-07	0.007	41.3
13001	69.394	263.658	19.8560	0.45576	0.07453	0.001	259.935	0.872E-07	0.005	43.0
13002	69.396	263.008	19.8913	0.37731	0.07492	0.000	259.936	0.898E-07	0.003	42.1
13003	69.396	262.425	19.9227	0.30627	0.07484	0.001	259.933	0.888E-07	0.004	42.4
13004	69.397	261.900	19.9512	0.24264	0.07570	0.001	259.934	0.961E-07	0.006	40.1

Nominal Temperature 303. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT		Cell Temperature K	Thermal Diffusivity m**2/s DSTAT		Specific Heat J/(mol.K)
14093	0.852	303.496	0.3381	0.10326	0.02694	0.001	300.001	0.347E-05	0.015	23.5
14094	0.852	302.962	0.3387	0.08715	0.02692	0.002	300.003	0.354E-05	0.022	23.0
14095	0.852	302.457	0.3393	0.07238	0.02692	0.001	300.001	0.352E-05	0.015	23.2
14096	0.852	302.010	0.3398	0.05897	0.02693	0.002	299.998	0.368E-05	0.026	22.2
14089	2.200	303.656	0.8751	0.12070	0.02721	0.001	299.999	0.117E-05	0.007	26.5
14090	2.200	303.133	0.8767	0.10328	0.02705	0.001	300.001	0.110E-05	0.010	27.8
14091	2.200	302.653	0.8782	0.08720	0.02714	0.001	300.001	0.116E-05	0.011	26.7
14092	2.200	302.208	0.8796	0.07244	0.02734	0.001	300.000	0.124E-05	0.013	25.4
14085	3.291	303.448	1.3115	0.12068	0.02771	0.001	299.996	0.776E-06	0.007	27.0
14086	3.291	302.950	1.3139	0.10324	0.02765	0.001	299.997	0.773E-06	0.008	27.0
14087	3.291	302.502	1.3160	0.08714	0.02757	0.001	299.994	0.770E-06	0.013	27.0
14088	3.291	302.076	1.3180	0.07239	0.02749	0.002	299.995	0.742E-06	0.021	27.9
14081	4.747	303.219	1.8954	0.12069	0.02841	0.001	299.985	0.520E-06	0.006	28.4
14082	4.747	302.753	1.8987	0.10324	0.02839	0.001	299.982	0.527E-06	0.009	28.0
14083	4.747	302.328	1.9018	0.08715	0.02831	0.001	299.984	0.516E-06	0.013	28.5
14084	4.747	301.940	1.9045	0.07240	0.02815	0.001	299.983	0.590E-06	0.014	29.0
14077	6.358	303.503	2.5377	0.13949	0.02892	0.001	299.986	0.357E-06	0.006	30.9
14078	6.358	303.026	2.5423	0.12070	0.02900	0.001	299.985	0.361E-06	0.007	30.6
14079	6.358	302.595	2.5464	0.10327	0.02899	0.001	299.984	0.367E-06	0.009	30.2
14080	6.358	302.193	2.5503	0.08716	0.02903	0.001	299.987	0.373E-06	0.009	29.8
14073	8.255	303.313	3.2936	0.13947	0.02996	0.001	300.013	0.280E-06	0.010	31.3
14074	8.255	302.876	3.2992	0.12070	0.03008	0.001	300.007	0.294E-06	0.008	30.0
14075	8.255	302.458	3.3046	0.10325	0.03008	0.001	300.006	0.295E-06	0.008	30.0
14076	8.255	302.085	3.3094	0.08711	0.03012	0.001	300.003	0.306E-06	0.009	29.0
14069	10.379	303.095	4.1313	0.13948	0.03129	0.001	300.003	0.222E-06	0.007	32.9

14070	10.379	302.676	4.1382	0.12071	0.03119	0.001	300.004	0.216E-06	0.008	33.6
14071	10.379	302.287	4.1446	0.10324	0.03136	0.001	300.004	0.227E-06	0.009	32.3
14072	10.379	301.934	4.1505	0.08710	0.03158	0.001	300.000	0.243E-06	0.010	30.7
14065	12.211	302.930	4.8426	0.13946	0.03244	0.001	299.995	0.196E-06	0.007	33.0
14066	12.211	302.537	4.8503	0.12065	0.03192	0.001	299.994	0.172E-06	0.007	36.4
14067	12.211	302.168	4.8576	0.10321	0.03218	0.001	299.994	0.184E-06	0.008	34.6
14068	12.211	301.829	4.8642	0.08710	0.03248	0.001	299.992	0.197E-06	0.010	32.9
14061	14.018	303.429	5.5157	0.17049	0.03354	0.001	299.998	0.180E-06	0.006	32.4
14062	14.018	302.814	5.5295	0.13960	0.03336	0.001	300.001	0.171E-06	0.011	33.8
14063	14.018	302.255	5.5422	0.11178	0.03379	0.001	299.999	0.190E-06	0.008	31.1
14064	14.017	301.776	5.5528	0.08707	0.03367	0.001	299.996	0.193E-06	0.012	30.6
14057	16.202	303.233	6.3244	0.17037	0.03499	0.001	299.996	0.158E-06	0.005	33.6
14058	16.202	302.447	6.3396	0.13955	0.03457	0.001	299.997	0.138E-06	0.011	37.7
14059	16.202	302.139	6.3529	0.11182	0.03490	0.001	300.001	0.153E-06	0.008	34.7
14060	16.202	301.664	6.3651	0.08710	0.03515	0.001	299.998	0.164E-06	0.012	32.8
14053	18.332	303.466	7.0755	0.19275	0.03625	0.001	299.998	0.136E-06	0.005	36.0
14054	18.332	302.876	7.0926	0.15993	0.03578	0.001	299.998	0.120E-06	0.008	39.7
14055	18.332	302.343	7.1079	0.13009	0.03585	0.001	299.996	0.125E-06	0.006	38.5
14056	18.332	301.868	7.1218	0.10330	0.03619	0.001	299.996	0.132E-06	0.009	37.2
14049	20.432	303.340	7.7978	0.19272	0.03771	0.001	299.998	0.136E-06	0.005	34.2
14050	20.432	302.772	7.8158	0.15987	0.03767	0.001	299.998	0.134E-06	0.007	34.5
14051	20.432	302.267	7.8320	0.13004	0.03728	0.001	299.997	0.128E-06	0.007	35.6
14052	20.432	301.805	7.8469	0.10328	0.03791	0.001	299.992	0.149E-06	0.009	31.5
14045	23.042	303.156	8.6572	0.19272	0.03930	0.001	300.002	0.119E-06	0.005	36.5
14046	23.042	302.620	8.6760	0.15987	0.03951	0.001	299.998	0.123E-06	0.007	35.7
14047	23.042	302.135	8.6930	0.13004	0.03974	0.001	300.000	0.131E-06	0.007	34.1
14048	23.042	301.709	8.7080	0.10330	0.03979	0.001	299.998	0.135E-06	0.009	33.0
14041	25.452	303.372	9.3966	0.21638	0.04102	0.000	300.002	0.113E-06	0.004	37.2
14042	25.454	302.839	9.4168	0.18147	0.04101	0.001	300.003	0.114E-06	0.007	36.8
14043	25.454	302.339	9.4355	0.14963	0.04101	0.001	300.003	0.113E-06	0.006	37.0
14044	25.454	301.897	9.4521	0.12082	0.04138	0.001	300.000	0.123E-06	0.008	34.7
14037	27.844	303.234	10.1043	0.21646	0.04223	0.001	300.000	0.101E-06	0.007	39.5
14038	27.844	302.712	10.1250	0.18155	0.04227	0.001	300.002	0.101E-06	0.005	39.6
14039	27.844	302.241	10.1436	0.14969	0.04286	0.001	300.001	0.113E-06	0.006	36.4
14040	27.845	301.809	10.1609	0.12084	0.04292	0.001	300.000	0.114E-06	0.008	36.2
14033	30	303.080	10.9035	0.21644	0.04413	0.001	300.000	0.975E-07	0.005	39.8
14034	30	302.583	10.9242	0.18152	0.04428	0.001	299.999	0.995E-07	0.006	39.2
14035	30	302.136	10.9427	0.14963	0.04468	0.001	300.000	0.106E-06	0.007	37.4
14036	30	301.728	10.9599	0.12082	0.04480	0.001	300.002	0.109E-06	0.009	36.8
14029	33.918	303.459	11.7138	0.25459	0.04656	0.000	300.008	0.998E-07	0.003	38.5
14030	33.918	302.780	11.7433	0.20459	0.04641	0.001	300.010	0.952E-07	0.006	40.0
14031	33.918	302.178	11.7692	0.15989	0.04656	0.001	300.011	0.992E-07	0.006	38.6
14032	33.919	301.660	11.7918	0.12077	0.04661	0.001	300.012	0.992E-07	0.009	38.7
14025	36.992	303.270	12.4585	0.25493	0.04868	0.000	299.986	0.957E-07	0.003	39.7
14026	36.991	302.624	12.4867	0.20475	0.04883	0.001	299.988	0.969E-07	0.005	39.4
14027	36.991	302.059	12.5115	0.16006	0.04873	0.001	299.988	0.955E-07	0.007	39.8
14028	36.989	301.553	12.5337	0.12088	0.04869	0.001	299.987	0.930E-07	0.009	40.7
14021	40.428	303.789	13.2122	0.28177	0.05090	0.000	299.996	0.100E-06	0.004	37.5
14022	40.427	302.842	13.2410	0.22896	0.05080	0.001	299.994	0.999E-07	0.005	37.4
14023	40.427	302.267	13.2669	0.18162	0.05055	0.001	299.994	0.972E-07	0.006	38.0
14024	40.425	301.751	13.2898	0.13971	0.05093	0.001	299.993	0.104E-06	0.003	36.0
14017	43.996	303.327	13.9527	0.28186	0.05300	0.000	300.001	0.949E-07	0.003	39.0
14018	43.997	302.712	13.9808	0.22909	0.05290	0.000	299.998	0.94E-07	0.004	39.5
14019	43.998	302.151	14.0065	0.18171	0.05257	0.001	299.998	0.898E-07	0.005	40.5
14020	43.997	301.665	14.0286	0.13982	0.05303	0.001	299.998	0.953E-07	0.006	38.8
14013	48.088	303.171	14.7341	0.28210	0.05565	0.000	299.992	0.944E-07	0.003	39.2
14014	48.090	302.587	14.7613	0.22921	0.05545	0.000	299.995	0.918E-07	0.004	40.0
14015	48.093	302.051	14.7865	0.18178	0.05546	0.001	299.993	0.907E-07	0.006	40.5
14016	48.095	301.581	14.8085	0.13985	0.05517	0.001	299.993	0.861E-07	0.011	42.2
14009	52.584	303.023	15.5200	0.28178	0.05863	0.000	299.995	0.992E-07	0.004	37.6
14010	52.585	302.468	15.5457	0.22911	0.05846	0.001	299.992	0.967E-07	0.005	38.3
14011	52.587	301.953	15.5697	0.18174	0.05795	0.001	299.991	0.898E-07	0.006	40.5
14012	52.591	301.513	15.5905	0.13983	0.05857	0.001	299.991	0.964E-07	0.009	37.8
14005	57.452	303.602	16.2640	0.35488	0.06120	0.000	299.986	0.923E-07	0.003	40.2
14006	57.453	302.865	16.2978	0.28147	0.06089	0.000	299.984	0.886E-07	0.004	41.4
14007	57.454	302.198	16.3285	0.21663	0.06108	0.000	299.982	0.891E-07	0.004	41.4
14008	57.456	301.630	16.3549	0.16008	0.06121	0.001	299.983	0.893E-07	0.007	41.4
14001	64.403	304.169	17.2277	0.43683	0.06544	0.000	299.999	0.931E-07	0.002	40.6
14002	64.404	303.392	17.2629	0.35501	0.06526	0.000	300.003	0.903E-07	0.003	41.6

14003	64.406	302.686	17.2951	0.28143	0.06516	0.000	300.001	0.874E-07	0.004	42.8
14004	64.409	302.071	17.3233	0.21640	0.06539	0.001	299.999	0.883E-07	0.005	42.6

### 3. Results for the 50% Nitrogen - 50% Oxygen Mixture.

A total of 1058 points is given in table 2. The density reported in the table has been calculated using the DDMIX extended corresponding states correlation [15]. This mixture was gravimetrically prepared from nitrogen, oxygen, and argon with purities of better than 99.999%. The mixture has an actual composition of 49.598% nitrogen, 50.002% oxygen.

Empirical surface fit for the 50% nitrogen - 50% oxygen mixture.

```

FUNCTION TCN50(RHO,T)
  IMPLICIT DOUBLE PRECISION(A-H,O-Z)
  C      EMPIRICAL SURFACE FIT FOR THE 50% N2 - 50% O2 MIXTURE
  C      DILUTE GAS = A1+A2*T+A3*T**2
  C      EXCESS FUNCTION = B1*DEN+B2*DEN**2+B3*DEN**3+B4*DEN**4
  C      TEMPERATURE (K), DENSITY (MOL/L), THERMAL CONDUCTIVITY (W/M-K)
  C      DIMENSION A(3),B(4)
  DATA A/-1.60245D-3,-.110761D-3,-.629578D-7/
  DATA B/.136858D-2,-.127424D-4,.304314D-5,.64744D-8/
  TC0=A(1)+A(2)*T+A(3)*T**2
  EXCESS=B(1)*RHO+B(2)*RHO**2+B(3)*RHO**3+B(4)*RHO**4
  TCN50=TC0+EXCESS+CRITN50(RHO,T)
  RETURN
END

FUNCTION CRITN50(RHO,TEMP)
  IMPLICIT DOUBLE PRECISION(A-H,O-Z)
  C      CRITICAL = EXP(-X**2) - CENTERED ON CRITICAL DENSITY
  C      CRITICAL PARAMETERS ARE MOLE FRACTION AVERAGE OF PURE COMPONENTS
  C      TEMPERATURE (K), DENSITY (MOL/L), THERMAL CONDUCTIVITY (W/M-K)
  C      DIMENSION C(5)
  DATA C/.173392D0,-138.5,-.248939D-2,.745153D-5,.20000/
  TC=139.75D0
  RHOC=12.36D0
  T=TEMP
  DEN=RHO
  IF(T.LT.TC) T=TC+(TC-T)
  AMPL=C(1)/(T+C(2))+C(3)+C(4)*T
  IF (AMPL.LT.0.0) AMPL=0.000
  X1=C(5)*(DEN-RHOC)
  CRITN50=AMPL*DEXP(-(X1**2))
  IF (CRITN50.LT.0.000) CRITN50=0.000
  RETURN
END

```

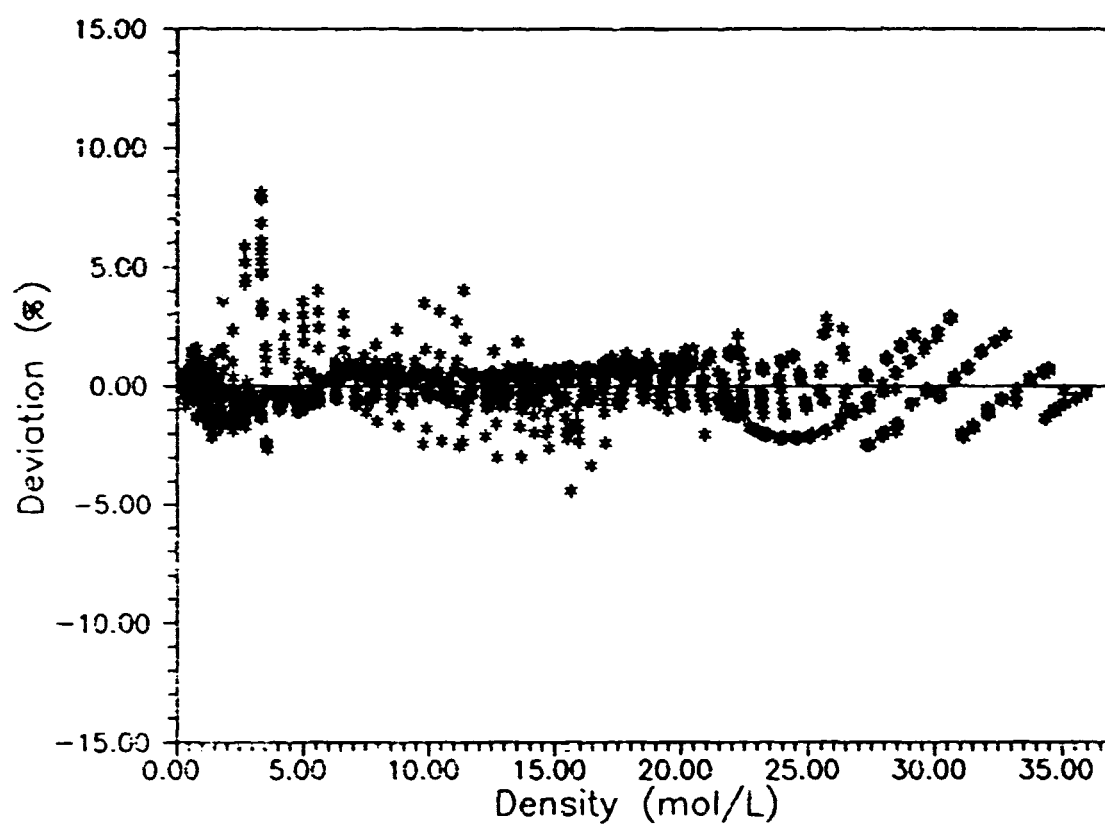


Figure 2. Deviations between the empirical thermal conductivity surface fit and the data for the 50% nitrogen - 50% oxygen mixture.

Table 2. The thermal conductivity, thermal diffusivity, and specific heat of the 50% nitrogen - 50% oxygen mixture

Nominal Temperature 102. K										
Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT		Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT		Specific Heat J/(mol.K)
6001	0.321	103.344	0.4906	0.04026	0.00979	0.002	100.009	0.145E-05	0.027	15.6
6002	0.321	102.880	0.4028	0.03469	0.00973	0.002	100.011	0.139E-05	0.024	16.2
6003	0.321	102.452	0.4048	0.02955	0.00966	0.002	100.011	0.134E-05	0.024	16.5
6004	0.321	102.064	0.4067	0.02484	0.00964	0.002	100.010	0.137E-05	0.027	16.2
Nominal Temperature 112. K										
Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT		Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT		Specific Heat J/(mol.K)
7009	0.330	112.900	0.3710	0.03625	0.01054	0.002	110.127	0.142E-05	0.018	18.9
7010	0.330	112.477	0.3727	0.03070	0.01057	0.002	110.123	0.138E-05	0.017	19.3
7011	0.330	112.082	0.3742	0.02565	0.01055	0.002	110.123	0.136E-05	0.022	19.5
7012	0.330	111.730	0.3756	0.02105	0.01051	0.002	110.124	0.134E-05	0.027	19.7
7005	0.517	112.664	0.6030	0.03622	0.01100	0.002	110.125	0.819E-06	0.026	21.0
7006	0.517	112.279	0.6057	0.03067	0.01092	0.002	110.127	0.797E-06	0.026	21.3
7007	0.517	111.924	0.6082	0.02563	0.01086	0.003	110.128	0.769E-06	0.027	21.9
7008	0.517	111.596	0.6105	0.02102	0.01081	0.003	110.126	0.750E-06	0.032	22.2
7001	0.661	112.503	0.7955	0.03623	0.01134	0.004	110.105	0.640E-06	0.037	21.1
7002	0.661	112.131	0.7992	0.03070	0.01123	0.003	110.107	0.585E-06	0.030	22.7
7003	0.661	111.794	0.8027	0.02564	0.01113	0.003	110.107	0.552E-06	0.030	23.6
7004	0.661	111.488	0.8058	0.02105	0.01109	0.003	110.106	0.547E-06	0.031	23.7
Nominal Temperature 122. K										
Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT		Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT		Specific Heat J/(mol.K)
8017	0.326	122.828	0.3329	0.03733	0.01151	0.002	120.113	0.185E-05	0.018	17.6
8018	0.326	122.401	0.3342	0.03142	0.01147	0.002	120.113	0.183E-05	0.021	17.7
8020	0.326	122.012	0.3355	0.02603	0.01144	0.002	120.114	0.185E-05	0.027	17.5
8020	0.325	121.663	0.3365	0.02116	0.01142	0.003	120.113	0.194E-05	0.037	16.6
8013	0.546	122.582	0.5746	0.03721	0.01183	0.002	120.106	0.959E-06	0.020	20.2
8014	0.546	122.198	0.5768	0.03133	0.01178	0.002	120.108	0.966E-06	0.019	19.9
8015	0.546	121.847	0.5788	0.02598	0.01172	0.002	120.108	0.968E-06	0.025	19.7
8016	0.546	121.515	0.5808	0.02113	0.01169	0.004	120.109	0.953E-06	0.039	20.0
8009	0.902	122.249	1.0066	0.03725	0.01252	0.003	120.101	0.533E-06	0.034	22.1
8010	0.902	121.956	1.0107	0.03134	0.01239	0.003	120.105	0.504E-06	0.028	22.9
8011	0.902	121.644	1.0145	0.02598	0.01233	0.003	120.105	0.507E-06	0.026	22.6
8012	0.902	121.347	1.0181	0.02113	0.01228	0.003	120.103	0.499E-06	0.032	22.8
8005	1.157	121.798	1.3619	0.03127	0.01300	0.004	120.111	0.344E-06	0.035	26.5
8006	1.157	121.510	1.3674	0.02594	0.01292	0.003	120.112	0.329E-06	0.031	27.3
8007	1.157	121.242	1.3725	0.02110	0.01281	0.003	120.111	0.313E-06	0.033	28.3
8008	1.157	120.997	1.3773	0.01677	0.01253	0.005	120.111	0.264E-06	0.045	32.0
8001	1.439	121.486	1.8094	0.02849	0.01395	0.005	120.103	0.254E-06	0.048	29.7
8002	1.439	121.239	1.8171	0.02340	0.01366	0.005	120.105	0.215E-06	0.043	33.6
8003	1.439	121.012	1.8242	0.01884	0.01362	0.005	120.107	0.215E-06	0.043	33.5
8004	1.439	120.810	1.8307	0.01476	0.01351	0.006	120.106	0.220E-06	0.054	32.2
Nominal Temperature 132. K										
Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT		Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT		Specific Heat J/(mol.K)
9041	0.340	133.489	0.3165	0.05102	0.01259	0.001	130.008	0.200E-05	0.017	19.0
9042	0.340	133.005	0.3178	0.04379	0.01250	0.001	130.007	0.196E-05	0.017	19.1

9043	0.340	132.556	0.3190	0.03724	0.01247	0.002	130.006	0.190E-05	0.019	19.6
9044	0.340	132.127	0.3201	0.03110	0.01249	0.002	130.007	0.188E-05	0.022	19.9
9037	0.418	133.381	0.3924	0.05118	0.01271	0.002	130.001	0.158E-05	0.018	19.5
9038	0.418	132.902	0.3940	0.04388	0.01267	0.002	130.002	0.154E-05	0.018	20.0
9039	0.418	132.464	0.3955	0.03712	0.01256	0.001	130.002	0.147E-05	0.017	20.6
9040	0.418	132.055	0.3969	0.03098	0.01254	0.002	130.002	0.146E-05	0.019	20.7
9033	0.606	133.366	0.5804	0.05509	0.01294	0.002	129.998	0.973E-06	0.023	21.8
9034	0.606	132.900	0.5828	0.04752	0.01289	0.002	130.001	0.941E-06	0.021	22.4
9035	0.606	132.475	0.5851	0.04049	0.01280	0.002	130.001	0.897E-06	0.018	23.1
9036	0.606	132.086	0.5872	0.03404	0.01275	0.002	130.000	0.889E-06	0.022	23.2
9029	0.852	133.139	0.8412	0.05502	0.01336	0.003	130.006	0.685E-06	0.033	22.1
9030	0.852	132.708	0.8448	0.04746	0.01324	0.002	130.007	0.642E-06	0.026	23.2
9031	0.852	132.307	0.8481	0.04048	0.01316	0.002	130.007	0.602E-06	0.022	24.5
9032	0.852	131.945	0.8512	0.03406	0.01310	0.002	130.005	0.594E-06	0.022	24.6
9025	1.117	132.564	1.1451	0.04799	0.01375	0.004	130.002	0.473E-06	0.041	24.3
9026	1.117	132.190	1.1498	0.04104	0.01363	0.003	130.005	0.436E-06	0.034	25.9
9027	1.117	131.848	1.1541	0.03458	0.01352	0.002	130.005	0.407E-06	0.025	27.4
9028	1.117	131.530	1.1582	0.02862	0.01345	0.002	130.003	0.390E-06	0.023	28.3
9021	1.460	132.005	1.5801	0.04102	0.01444	0.005	130.006	0.331E-06	0.047	26.7
9022	1.460	131.687	1.5865	0.03457	0.01425	0.004	130.007	0.299E-06	0.041	28.8
9023	1.460	131.403	1.5923	0.02864	0.01413	0.004	130.008	0.282E-06	0.042	30.0
9024	1.460	131.140	1.5977	0.02327	0.01403	0.005	130.008	0.270E-06	0.052	31.0
9017	1.881	131.362	2.2050	0.03147	0.01547	0.006	130.008	0.220E-06	0.054	31.3
9018	1.881	131.126	2.2134	0.02584	0.01525	0.006	130.009	0.199E-06	0.053	33.6
9019	1.881	130.901	2.2216	0.02078	0.01514	0.007	130.008	0.189E-06	0.064	34.9
9020	1.881	130.707	2.2287	0.01632	0.01505	0.010	130.008	0.184E-06	0.093	35.5
9013	2.159	130.985	2.6998	0.02582	0.01680	0.007	129.999	0.159E-06	0.067	40.0
9014	2.159	130.881	2.7054	0.02323	0.01669	0.007	129.999	0.152E-06	0.065	41.3
9015	2.159	130.786	2.7106	0.02080	0.01658	0.008	129.998	0.152E-06	0.074	40.7
9016	2.159	130.694	2.7156	0.01849	0.01654	0.010	130.001	0.148E-06	0.086	41.6
9001	2.454	130.822	3.3285	0.02323	0.01826	0.009	130.009	0.156E-06	0.080	36.6
9005	2.454	130.816	3.3298	0.02323	0.01831	0.007	130.007	0.149E-06	0.062	38.8
9009	2.455	130.810	3.3329	0.02322	0.01828	0.008	130.005	0.143E-06	0.075	40.2
9010	2.455	130.728	3.3402	0.02078	0.01810	0.009	130.008	0.135E-06	0.080	41.5
9002	2.454	130.649	3.3438	0.01846	0.01775	0.006	130.010	0.133E-06	0.057	40.5
9006	2.454	130.638	3.3457	0.01847	0.01793	0.007	130.010	0.136E-06	0.059	40.5
9011	2.455	130.639	3.3481	0.01846	0.01790	0.010	130.010	0.129E-06	0.090	42.6
9012	2.455	130.560	3.3553	0.01629	0.01783	0.012	130.010	0.132E-06	0.105	41.3
9007	2.455	130.513	3.3578	0.01425	0.01774	0.008	130.032	0.138E-06	0.067	39.0
9003	2.454	130.486	3.3585	0.01425	0.01797	0.009	130.010	0.166E-06	0.063	33.4
9004	2.454	130.387	3.3676	0.01059	0.01752	0.013	130.010	0.168E-06	0.116	31.3
9008	2.455	130.385	3.3695	0.01059	0.01746	0.012	130.010	0.149E-06	0.109	35.0

Nominal Temperature 70. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT		Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT		Specific Heat J/(mol.K)
12017	8.186	70.539	34.3225	0.30972	0.16764	0.001	69.981	0.805E-07	0.004	62.6
12018	8.197	70.431	34.3369	0.28048	0.16774	0.001	69.981	0.787E-07	0.005	64.1
12019	8.207	70.331	34.3502	0.25293	0.16790	0.001	69.981	0.801E-07	0.006	63.0
12020	8.215	70.239	34.3624	0.22673	0.16799	0.001	69.981	0.796E-07	0.007	63.5
12013	16.276	70.627	34.6735	0.34040	0.17240	0.000	69.981	0.815E-07	0.004	64.1
12016	16.408	70.315	34.6844	0.25280	0.17268	0.001	69.981	0.801E-07	0.006	65.4
12014	16.386	70.515	34.6878	0.30962	0.17253	0.001	69.981	0.812E-07	0.004	64.3
12015	16.398	70.415	34.7008	0.28036	0.17263	0.000	69.981	0.808E-07	0.004	64.7
12009	26.400	70.599	35.0446	0.34119	0.17753	0.000	69.981	0.806E-07	0.003	67.3
12010	26.415	70.486	35.0572	0.31030	0.17871	0.000	69.981	0.802E-07	0.004	68.4
12011	26.425	70.381	35.0683	0.28012	0.17798	0.000	69.981	0.795E-07	0.004	68.4
12012	26.435	70.289	35.0790	0.25267	0.17801	0.001	69.981	0.782E-07	0.005	69.5
12005	39.924	70.585	35.5103	0.34093	0.18405	0.001	69.982	0.851E-07	0.004	66.8
12006	39.935	70.481	35.5204	0.31013	0.18417	0.001	69.982	0.857E-07	0.005	66.4
12007	39.942	70.382	35.5298	0.28085	0.18435	0.001	69.982	0.839E-07	0.006	67.9
12008	39.951	70.286	35.5391	0.25332	0.18426	0.001	69.982	0.822E-07	0.007	69.1
12001	52.929	70.551	35.9159	0.34058	0.18980	0.001	69.981	0.937E-07	0.004	63.2
12002	52.926	70.451	35.9242	0.30984	0.18989	0.001	69.981	0.951E-07	0.005	62.4
12003	52.926	70.356	35.9321	0.28060	0.19009	0.001	69.981	0.957E-07	0.006	62.2
12004	52.923	70.263	35.9398	0.25310	0.19002	0.001	69.981	0.931E-07	0.007	63.7

Nominal Temperature 91. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
11129	4.268	91.674	31.0513	0.42083	0.13268 0.001	89.609	0.720E-07 0.005	58.2
11130	4.270	91.487	31.0814	0.37932	0.13281 0.001	89.909	0.717E-07 0.005	58.5
11131	4.266	91.313	31.1089	0.33997	0.13299 0.001	89.910	0.727E-07 0.005	57.7
11132	4.275	91.150	31.1358	0.30291	0.13323 0.001	89.912	0.733E-07 0.005	57.3
11125	9.241	91.587	31.4843	0.42058	0.13753 0.001	89.882	0.722E-07 0.005	60.2
11126	9.250	91.405	31.5119	0.37928	0.13771 0.001	89.883	0.718E-07 0.005	60.6
11127	9.259	91.232	31.5381	0.33994	0.13787 0.001	89.884	0.714E-07 0.005	60.9
11128	9.266	91.077	31.5616	0.30287	0.13804 0.001	89.884	0.710E-07 0.006	61.4
11117	16.712	91.496	32.0517	0.41954	0.14449 0.000	89.834	0.777E-07 0.004	59.0
11121	16.716	91.465	32.0561	0.41973	0.14420 0.001	89.836	0.760E-07 0.005	60.1
11118	16.720	91.324	32.0754	0.37835	0.14441 0.000	89.834	0.785E-07 0.004	58.4
11122	16.718	91.294	32.0791	0.37849	0.14441 0.001	89.835	0.762E-07 0.006	60.0
11119	16.726	91.158	32.0978	0.33913	0.14476 0.001	89.834	0.784E-07 0.004	58.5
11123	16.720	91.132	32.1010	0.33934	0.14458 0.001	89.836	0.756E-07 0.007	60.6
11120	16.732	91.001	32.1193	0.30215	0.14486 0.001	89.835	0.773E-07 0.005	59.4
11124	16.721	90.976	32.1219	0.30240	0.14472 0.001	89.836	0.745E-07 0.008	61.5
11113	24.722	91.428	32.5806	0.41930	0.15086 0.001	89.832	0.788E-07 0.004	60.8
11114	24.731	91.260	32.6018	0.37816	0.15099 0.001	89.835	0.785E-07 0.005	61.1
11115	24.738	91.102	32.6215	0.33895	0.15114 0.001	89.835	0.782E-07 0.006	61.4
11116	24.745	90.955	32.6399	0.30206	0.15123 0.001	89.836	0.785E-07 0.007	61.2
11109	34.803	91.373	33.1409	0.41898	0.15810 0.000	89.839	0.835E-07 0.003	60.3
11110	34.817	91.208	33.1801	0.37789	0.15825 0.000	89.840	0.812E-07 0.004	62.2
11111	34.829	91.059	33.1973	0.33874	0.15837 0.001	89.842	0.816E-07 0.004	61.8
11112	34.839	90.918	33.2135	0.30187	0.15853 0.001	89.842	0.833E-07 0.005	60.6
11105	45.581	91.370	33.7015	0.41887	0.16505 0.000	89.876	0.939E-07 0.004	56.3
11106	45.592	91.216	33.7177	0.37783	0.16517 0.000	89.877	0.940E-07 0.004	56.2
11107	45.599	91.067	33.7332	0.33872	0.16526 0.001	89.878	0.927E-07 0.005	57.0
11108	45.604	90.927	33.7477	0.30184	0.16531 0.001	89.878	0.934E-07 0.005	56.5
11101	57.040	91.323	34.2165	0.41876	0.17175 0.000	89.880	0.966E-07 0.004	57.0
11102	57.038	91.174	34.2304	0.37770	0.17182 0.001	89.880	0.965E-07 0.004	57.1
11103	57.041	91.033	34.2437	0.33862	0.17194 0.001	89.883	0.967E-07 0.005	57.0
11104	57.044	90.900	34.2562	0.30180	0.17207 0.001	89.882	0.982E-07 0.006	56.2
11097	62.181	91.300	34.4385	0.41903	0.17469 0.000	89.887	0.976E-07 0.004	57.5
11098	62.172	91.153	34.4515	0.37775	0.17458 0.001	89.887	0.972E-07 0.005	57.6
11099	62.176	91.019	34.4552	0.33858	0.17471 0.001	89.887	0.100E-06 0.005	55.9
11095	62.092	91.007	34.4617	0.33942	0.17473 0.001	89.880	0.921E-07 0.006	60.7
11096	62.095	90.875	34.4650	0.30252	0.17490 0.001	89.881	0.912E-07 0.007	61.4
11100	62.174	90.884	34.4673	0.30164	0.17492 0.001	89.886	0.993E-07 0.006	56.6

Nominal Temperature 112. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
12057	4.473	112.857	27.2765	0.44911	0.10079 0.000	110.338	0.514E-07 0.003	68.3
12058	4.481	112.579	27.3349	0.40006	0.10111 0.000	110.340	0.520E-07 0.004	67.6
12059	4.488	112.315	27.3901	0.35399	0.10156 0.000	110.341	0.530E-07 0.004	66.7
12060	4.494	112.068	27.4412	0.31081	0.10202 0.000	110.342	0.541E-07 0.004	65.7
12053	7.875	112.861	27.8555	0.45902	0.10578 0.000	110.332	0.547E-07 0.003	66.9
12054	7.882	112.586	27.9070	0.41888	0.10622 0.000	110.333	0.558E-07 0.003	65.8
12055	7.888	112.322	27.9560	0.37172	0.10646 0.000	110.335	0.558E-07 0.004	66.0
12056	7.893	111.853	28.0419	0.28609	0.10731 0.001	110.335	0.573E-07 0.005	64.9
12049	11.811	112.804	28.4319	0.47777	0.11102 0.000	110.328	0.581E-07 0.003	65.8
12050	11.317	112.544	28.4758	0.42741	0.11103 0.000	110.329	0.587E-07 0.003	65.0
12051	11.824	112.290	28.5184	0.32056	0.11163 0.000	110.329	0.594E-07 0.003	64.7
12052	11.828	112.055	28.5576	0.33591	0.11210 0.000	110.331	0.605E-07 0.004	63.9
12045	16.677	112.768	29.0333	0.48744	0.11720 0.000	110.337	0.643E-07 0.003	62.7
12046	16.684	112.512	29.0729	0.43646	0.11758 0.000	110.336	0.656E-07 0.003	61.7
12047	16.689	112.268	29.1099	0.38828	0.11801 0.000	110.339	0.670E-07 0.003	60.7
12048	16.693	112.038	29.1447	0.34311	0.11827 0.000	110.339	0.677E-07 0.004	60.2
12041	21.981	112.652	29.6091	0.48722	0.12304 0.000	110.345	0.639E-07 0.003	66.1
12042	21.982	112.401	29.6437	0.43554	0.12354 0.000	110.346	0.649E-07 0.003	65.3



12043	21.982	112.169	29.6756	0.38755	0.12369	0.000	110.345	0.645E-07	0.004	65.8
12044	21.984	111.951	29.7057	0.34245	0.12403	0.000	110.343	0.647E-07	0.004	65.8
12037	27.757	112.760	30.1270	0.51883	0.12787	0.000	110.341	0.738E-07	0.003	59.0
12038	27.767	112.506	30.1602	0.46557	0.12794	0.001	110.344	0.732E-07	0.004	59.4
12039	27.778	112.266	30.1916	0.41536	0.12857	0.000	110.344	0.751E-07	0.004	58.3
12040	27.786	112.043	30.2207	0.36817	0.12861	0.000	110.346	0.748E-07	0.004	58.5
12033	35.164	112.772	30.7244	0.54047	0.13449	0.000	110.354	0.785E-07	0.003	58.1
12034	35.166	112.527	30.7533	0.48614	0.13494	0.000	110.356	0.804E-07	0.003	57.0
12035	35.175	112.297	30.7810	0.43485	0.13523	0.000	110.358	0.811E-07	0.003	56.7
12036	35.182	112.075	30.8075	0.38647	0.13549	0.000	110.358	0.817E-07	0.004	56.4
12029	42.516	112.743	31.2521	0.55150	0.14045	0.000	110.363	0.823E-07	0.003	57.8
12030	42.528	112.504	31.2791	0.49658	0.14085	0.000	110.364	0.836E-07	0.003	57.1
12031	42.535	112.278	31.3044	0.44468	0.14109	0.000	110.365	0.848E-07	0.003	56.4
12032	42.540	112.066	31.3280	0.39579	0.14130	0.000	110.366	0.852E-07	0.004	56.2
12025	50.818	112.709	31.7846	0.56203	0.14704	0.000	110.372	0.872E-07	0.003	57.1
12026	50.826	112.478	31.8088	0.50701	0.14733	0.000	110.375	0.881E-07	0.003	56.6
12027	50.833	112.258	31.8318	0.45458	0.14762	0.000	110.375	0.897E-07	0.003	55.7
12028	50.839	112.054	31.8532	0.40514	0.14786	0.000	110.375	0.907E-07	0.004	55.2
12021	60.128	112.580	32.3281	0.56131	0.15366	0.000	110.352	0.858E-07	0.003	60.4
12022	60.132	112.354	32.3501	0.50636	0.15387	0.000	110.353	0.849E-07	0.003	61.1
12023	60.137	112.143	32.3708	0.45407	0.15413	0.000	110.352	0.851E-07	0.103	61.0
12024	60.141	111.948	32.3899	0.40475	0.15436	0.000	110.352	0.857E-07	0.104	60.8
12017	67.111	112.493	32.6998	0.56084	0.15830	0.000	110.306	0.946E-07	0.003	56.4
12018	67.094	112.276	32.7190	0.50603	0.15851	0.000	110.306	0.951E-07	0.003	56.2
12019	67.083	112.068	32.7378	0.45376	0.15876	0.000	110.307	0.949E-07	0.003	56.4
12020	67.080	111.878	32.7552	0.40449	0.15892	0.000	110.307	0.960E-07	0.004	55.8

Nominal Temperature 132. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m**2/s DSTAT	Specific Heat J/(mol.K)
13077	3.506	132.191	21.4507	0.3011	0.06791 0.001	129.909	0.329E-07 0.006	87.8
13078	3.508	131.831	21.6198	0.25755	0.06836 0.001	129.910	0.315E-07 0.007	92.1
13079	3.505	131.501	21.7692	0.21704	0.06876 0.001	129.910	0.296E-07 0.008	98.4
13069	4.180	132.648	21.7940	0.36936	0.06903 0.001	129.915	0.316E-07 0.006	91.1
13080	3.510	131.215	21.8945	0.18006	0.06911 0.001	129.910	0.282E-07 0.010	104.1
13070	4.182	132.249	21.9572	0.32023	0.06935 0.001	129.918	0.294E-07 0.005	98.2
13073	4.194	132.102	22.0242	0.30156	0.06950 0.001	129.918	0.287E-07 0.006	100.8
13071	4.184	131.902	22.0958	0.27472	0.05981 0.001	129.918	0.294E-07 0.006	98.9
13074	4.195	131.777	22.1513	0.25750	0.07012 0.001	129.918	0.300E-07 0.007	97.3
13072	4.187	131.598	22.2145	0.23281	0.07042 0.001	129.918	0.307E-07 0.008	95.6
13075	4.196	131.471	22.2685	0.21701	0.07064 0.001	129.919	0.305E-07 0.008	96.3
13076	4.197	131.211	22.3663	0.18006	0.07124 0.001	129.918	0.322E-07 0.010	92.1
13065	5.682	132.686	22.6914	0.38988	0.07273 0.001	129.927	0.332E-07 0.004	88.6
13066	5.685	132.324	22.8074	0.33936	0.07327 0.001	129.929	0.343E-07 0.005	86.2
13067	5.687	131.984	22.9144	0.29244	0.07380 0.001	129.929	0.353E-07 0.005	84.3
13068	5.689	131.672	23.0110	0.24911	0.07431 0.001	129.929	0.360E-07 0.008	83.2
13061	6.758	132.702	23.1854	0.40033	0.07528 0.001	129.927	0.362E-07 0.004	82.7
13062	6.762	132.341	23.2880	0.34907	0.07579 0.001	129.928	0.373E-07 0.005	80.7
13063	6.765	132.003	23.3832	0.30144	0.07633 0.001	129.929	0.381E-07 0.005	79.7
13064	6.768	131.692	23.4699	0.25743	0.07680 0.001	129.930	0.393E-07 0.007	77.8
13057	8.508	132.744	23.8350	0.42165	0.07895 0.001	129.915	0.398E-07 0.004	77.4
13058	8.510	132.381	23.9243	0.36898	0.07948 0.001	129.918	0.408E-07 0.005	76.2
13059	8.513	132.042	24.0072	0.31999	0.08000 0.001	129.918	0.414E-07 0.006	75.7
13060	8.515	131.735	24.0816	0.27454	0.08043 0.001	129.919	0.424E-07 0.006	74.3
13053	10.437	132.800	24.4168	0.43259	0.08267 0.000	129.927	0.448E-07 0.003	71.2
13054	10.439	132.438	24.4962	0.37918	0.08309 0.000	129.927	0.456E-07 0.004	70.2
13055	10.442	132.102	24.5691	0.32941	0.08350 0.001	129.929	0.463E-07 0.004	69.5
13056	10.443	131.791	24.6363	0.28329	0.08393 0.001	129.932	0.472E-07 0.005	68.6
13049	12.661	132.783	24.9945	0.44349	0.08646 0.000	129.929	0.485E-07 0.004	67.8
13050	12.664	132.431	25.0639	0.38941	0.08680 0.001	129.931	0.494E-07 0.004	66.8
13051	12.666	132.104	25.1282	0.33901	0.08732 0.001	129.932	0.509E-07 0.005	65.5
13052	12.669	131.860	25.1880	0.29221	0.08774 0.001	129.932	0.520E-07 0.005	64.4
13045	15.221	132.715	25.5673	0.45442	0.09049 0.000	129.908	0.510E-07 0.004	66.9
13041	15.273	132.750	25.5716	0.46621	0.09433 0.001	129.928	0.517E-07 0.004	71.7
13046	15.221	132.371	25.6285	0.39969	0.09089 0.000	129.910	0.517E-07 0.004	66.3
13042	15.273	132.407	25.6327	0.41071	0.09480 0.000	129.929	0.525E-07 0.003	71.1

13047	15.221	132.050	25.5856	0.34660	0.09126	0.001	129.907	0.518E-07	0.004	66.5
13043	15.275	132.091	25.6889	0.35886	0.09575	0.000	129.931	0.559E-07	0.003	67.8
13048	15.221	131.752	25.7384	0.30114	0.09167	0.001	129.907	0.529E-07	0.005	65.4
13044	15.275	131.798	25.7408	0.31062	0.09574	0.001	129.930	0.554E-07	0.004	68.2
13037	18.403	132.767	26.1530	0.46857	0.09496	0.000	129.912	0.554E-07	0.003	64.0
13038	18.407	132.427	26.2086	0.41344	0.09529	0.000	129.912	0.562E-07	0.003	66.3
13039	18.410	132.112	26.2604	0.36186	0.09598	0.000	129.913	0.583E-07	0.003	61.7
13040	18.414	131.818	26.3084	0.31389	0.09619	0.000	129.916	0.592E-07	0.004	60.8
13033	22.005	132.734	26.7360	0.47963	0.09996	0.000	129.918	0.607E-07	0.003	61.2
13034	22.010	132.403	26.7859	0.42389	0.10013	0.000	129.919	0.617E-07	0.003	60.3
13035	22.013	132.096	26.8321	0.37170	0.10046	0.000	129.918	0.629E-07	0.004	59.3
13036	22.015	131.811	26.8748	0.32305	0.10074	0.001	129.919	0.639E-07	0.004	58.5
13029	26.000	132.688	27.2988	0.49094	0.10474	0.000	129.916	0.643E-07	0.003	60.2
13030	26.007	132.368	27.3439	0.43453	0.10480	0.001	129.918	0.642E-07	0.004	60.1
13031	26.014	132.068	27.3860	0.38163	0.10500	0.000	129.918	0.648E-07	0.004	59.6
13032	26.020	131.789	27.4251	0.33231	0.10576	0.000	129.919	0.679E-07	0.004	57.6
13025	30.592	132.624	27.8664	0.50231	0.10986	0.000	129.907	0.667E-07	0.002	60.4
13026	30.599	132.314	27.9070	0.44525	0.11030	0.000	129.910	0.681E-07	0.003	59.4
13027	30.604	132.020	27.9452	0.39172	0.11021	0.000	129.909	0.668E-07	0.003	60.4
13028	30.607	131.751	27.9800	0.34173	0.11066	0.000	129.911	0.690E-07	0.004	58.8
13021	35.643	132.586	28.4128	0.51386	0.11522	0.000	129.914	0.709E-07	0.002	59.4
13022	35.647	132.287	28.4490	0.45610	0.11470	0.000	129.916	0.688E-07	0.003	60.5
13023	35.649	132.002	28.4834	0.40191	0.11576	0.000	129.915	0.721E-07	0.003	58.7
13024	35.652	131.741	28.5149	0.35126	0.11600	0.000	129.916	0.732E-07	0.004	57.9
13017	41.232	132.526	28.9517	0.52552	0.12053	0.000	129.903	0.726E-07	0.002	60.3
13018	41.238	132.233	28.9852	0.46712	0.12081	0.000	129.905	0.733E-07	0.003	59.9
13019	41.239	131.961	29.0160	0.41228	0.12110	0.000	129.906	0.739E-07	0.003	59.6
13020	41.242	131.701	29.0454	0.36099	0.12133	0.000	129.906	0.737E-07	0.004	59.8
13013	48.148	132.547	29.5336	0.54949	0.12643	0.000	129.914	0.757E-07	0.003	60.3
13014	48.157	132.251	29.5641	0.48975	0.12700	0.000	129.916	0.781E-07	0.003	58.8
13015	48.163	131.992	29.5932	0.43361	0.12723	0.000	129.916	0.785E-07	0.003	58.7
13016	48.167	131.738	29.6202	0.38097	0.12744	0.000	129.918	0.785E-07	0.004	58.7
13009	54.861	132.574	30.0378	0.57401	0.13193	0.000	129.919	0.789E-07	0.003	60.1
13010	54.867	132.294	30.0661	0.51291	0.13255	0.000	129.918	0.820E-07	0.003	58.3
13011	54.873	132.023	30.0935	0.45529	0.13272	0.000	129.917	0.814E-07	0.004	58.8
13012	54.875	131.775	30.1183	0.40137	0.13295	0.000	129.920	0.822E-07	0.004	58.3
13005	62.447	132.568	30.5557	0.59915	0.13816	0.000	129.914	0.817E-07	0.003	60.7
13006	62.441	132.290	30.5815	0.53662	0.13851	0.000	129.914	0.826E-07	0.003	60.3
13007	62.441	132.031	30.6059	0.47769	0.13869	0.000	129.914	0.834E-07	0.003	59.8
13008	62.444	131.786	30.6292	0.42227	0.13879	0.001	129.914	0.831E-07	0.005	60.0

Nominal Temperature 152. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT		Cell Temperature K	Thermal Diffusivity m**2/s DSTAT		Specific Heat J/(mol.K)
10157	0.972	153.197	0.8131	0.06048	0.01485	0.002	150.152	0.643E-06	0.017	26.8
10158	0.972	152.982	0.8144	0.05612	0.01484	0.002	150.152	0.637E-06	0.017	27.0
10159	0.971	152.772	0.8155	0.05193	0.01481	0.002	150.154	0.627E-06	0.018	27.3
10160	0.971	152.576	0.8168	0.04790	0.01479	0.002	150.151	0.627E-06	0.018	27.3
10153	1.474	152.917	1.2829	0.06043	0.01547	0.002	150.156	0.397E-06	0.024	28.5
10154	1.474	152.723	1.2852	0.05606	0.01543	0.002	150.157	0.392E-06	0.020	28.8
10155	1.474	152.534	1.2873	0.05187	0.01539	0.002	150.158	0.382E-06	0.019	29.4
10156	1.474	152.358	1.2894	0.04787	0.01539	0.002	150.161	0.388E-06	0.020	29.0
10149	1.707	152.812	1.5143	0.06016	0.01577	0.003	150.146	0.353E-06	0.025	29.4
10150	1.707	152.624	1.5170	0.05583	0.01572	0.003	150.146	0.321E-06	0.026	30.3
10151	1.707	152.453	1.5195	0.05180	0.01569	0.003	150.147	0.321E-06	0.026	30.2
10152	1.707	152.283	1.5219	0.04780	0.01566	0.003	150.147	0.316E-06	0.028	30.5
10145	2.418	152.518	2.2889	0.06004	0.01696	0.003	150.157	0.218E-06	0.031	32.1
10146	2.418	152.350	2.2933	0.05578	0.01691	0.003	150.160	0.211E-06	0.028	33.0
10147	2.418	152.186	2.2976	0.05162	0.01689	0.003	150.161	0.211E-06	0.029	32.9
10148	2.418	152.040	2.3015	0.04764	0.01685	0.003	150.162	0.208E-06	0.031	33.2
10141	2.814	152.363	2.7733	0.06080	0.01786	0.004	150.162	0.180E-06	0.038	34.1
10142	2.814	152.204	2.7790	0.05642	0.01783	0.004	150.162	0.177E-06	0.035	34.5
10143	2.814	152.058	2.7848	0.05222	0.01775	0.004	150.161	0.171E-06	0.034	35.4
10144	2.814	151.909	2.7902	0.04817	0.01773	0.004	150.161	0.169E-06	0.034	35.7
10137	3.352	152.131	3.5179	0.06098	0.01939	0.005	150.138	0.143E-06	0.048	37.6
10138	3.352	151.989	3.5257	0.05659	0.01930	0.005	150.142	0.139E-06	0.041	38.2

10139	3.352	151.851	3.5334	0.05239	0.01921	0.004	150.141	0.133E-06	0.038	39.6
10140	3.352	151.723	3.5400	0.04834	0.01911	0.004	150.143	0.127E-06	0.037	40.9
10133	3.788	151.793	4.2279	0.05657	0.02098	0.006	150.137	0.113E-06	0.052	43.7
10134	3.788	151.670	4.2378	0.05237	0.02052	0.005	150.139	0.107E-06	0.047	45.2
10135	3.788	151.556	4.2470	0.04831	0.02071	0.005	150.137	0.103E-06	0.043	46.8
10136	3.787	151.441	4.2552	0.04444	0.02064	0.005	150.139	0.999E-07	0.042	47.8
10130	4.181	151.514	4.9781	0.05232	0.02274	0.007	150.137	0.890E-07	0.058	52.2
10130	4.181	151.408	4.9904	0.04828	0.02265	0.006	150.140	0.853E-07	0.052	54.0
10131	4.181	151.319	5.0008	0.04440	0.02255	0.006	150.140	0.827E-07	0.049	55.1
10132	4.181	151.218	5.0127	0.04070	0.02246	0.006	150.141	0.802E-07	0.048	56.3
10125	4.439	151.284	5.5589	0.04830	0.02431	0.007	150.133	0.750E-07	0.059	60.5
10126	4.439	151.175	5.5756	0.04443	0.02416	0.007	150.135	0.713E-07	0.056	62.6
10127	4.439	151.107	5.5860	0.04070	0.02403	0.006	150.136	0.683E-07	0.053	64.7
10128	4.439	151.014	5.6003	0.03717	0.02387	0.006	150.138	0.645E-07	0.053	67.6
10121	4.828	151.059	6.5913	0.04437	0.02713	0.008	150.138	0.563E-07	0.062	77.4
10122	4.828	150.990	6.6076	0.04067	0.02699	0.007	150.140	0.553E-07	0.060	78.0
10123	4.828	150.913	6.6261	0.03712	0.02686	0.007	150.141	0.534E-07	0.058	79.8
10124	4.828	150.836	6.6448	0.03375	0.02672	0.007	150.142	0.525E-07	0.060	80.3
10117	5.083	150.822	7.4576	0.03713	0.02968	0.007	150.133	0.473E-07	0.054	91.0
10118	5.083	150.766	7.4766	0.03374	0.02949	0.007	150.134	0.457E-07	0.053	92.6
10119	5.083	150.721	7.4918	0.03051	0.02927	0.007	150.134	0.440E-07	0.053	94.5
10120	5.083	150.668	7.5099	0.02747	0.02923	0.011	150.134	0.435E-07	0.082	95.1
10113	5.205	150.873	7.8793	0.04067	0.03138	0.007	150.139	0.472E-07	0.059	92.6
10114	5.205	150.787	7.9130	0.03714	0.03125	0.008	150.140	0.473E-07	0.066	91.2
10115	5.205	150.733	7.9341	0.03374	0.03098	0.008	150.141	0.441E-07	0.064	95.6
10116	5.205	150.686	7.9529	0.03052	0.03074	0.010	150.141	0.445E-07	0.075	93.2
10109	5.412	150.832	8.7247	0.04436	0.03499	0.010	150.139	0.447E-07	0.081	101.4
10110	5.412	150.786	8.7478	0.04065	0.03471	0.009	150.139	0.438E-07	0.072	101.4
10111	5.412	150.734	8.7746	0.03712	0.03429	0.008	150.140	0.422E-07	0.064	103.0
10112	5.412	150.683	8.8014	0.03374	0.03400	0.008	150.139	0.389E-07	0.060	109.6
10105	5.650	150.812	9.8192	0.04818	0.03999	0.014	150.143	0.466E-07	0.112	102.1
10106	5.650	150.763	9.8516	0.04432	0.03941	0.013	150.146	0.423E-07	0.097	108.7
10107	5.650	150.717	9.8824	0.04061	0.03889	0.011	150.146	0.397E-07	0.088	112.1
10108	5.650	150.674	9.9119	0.03709	0.03843	0.009	150.146	0.370E-07	0.068	116.9
10101	5.769	150.779	10.4197	0.04820	0.04233	0.014	150.145	0.460E-07	0.114	104.6
10102	5.769	150.740	10.4478	0.04433	0.04171	0.013	150.145	0.424E-07	0.099	109.9
10103	5.769	150.715	10.4666	0.04061	0.04111	0.012	150.146	0.408E-07	0.094	110.0
10104	5.769	150.655	10.5111	0.03708	0.04054	0.012	150.145	0.378E-07	0.092	114.6
10097	5.899	150.729	11.1055	0.05220	0.04477	0.014	150.135	0.335E-07	0.104	140.3
10098	5.899	150.690	11.1371	0.04817	0.04419	0.012	150.135	0.316E-07	0.089	146.3
10099	5.899	150.655	11.1653	0.04430	0.04356	0.012	150.138	0.289E-07	0.088	155.4
10100	5.899	150.615	11.1975	0.04062	0.04289	0.012	150.138	0.263E-07	0.090	165.9
10093	5.965	150.770	11.3981	0.05637	0.04633	0.015	150.128	0.428E-07	0.118	115.7
10094	5.965	150.715	11.4435	0.05219	0.04561	0.013	150.125	0.390E-07	0.101	121.0
10095	5.965	150.665	11.4777	0.04817	0.04515	0.012	150.127	0.373E-07	0.088	123.6
10096	5.965	150.659	11.4862	0.04430	0.04442	0.010	150.126	0.355E-07	0.079	125.6
10089	6.208	150.729	12.5805	0.05635	0.04857	0.012	150.134	0.283E-07	0.084	156.9
10090	6.208	150.671	12.6304	0.05218	0.04813	0.010	150.135	0.258E-07	0.076	169.3
10091	6.208	150.610	12.6833	0.04816	0.04747	0.009	150.138	0.234E-07	0.066	180.3
10092	6.208	150.579	12.7099	0.04431	0.04668	0.009	150.138	0.213E-07	0.063	194.1
10085	6.441	150.782	13.5223	0.06518	0.05059	0.011	150.132	0.297E-07	0.083	143.8
10086	6.441	150.735	13.5620	0.06068	0.05013	0.010	150.133	0.279E-07	0.072	149.9
10087	6.441	150.692	13.5986	0.05633	0.04945	0.009	150.133	0.257E-07	0.063	156.9
10088	6.441	150.661	13.6245	0.05215	0.04909	0.008	150.132	0.251E-07	0.057	159.1
10081	6.586	150.797	14.0590	0.06518	0.05079	0.009	150.138	0.307E-07	0.070	131.3
10082	6.586	150.741	14.1039	0.06071	0.05046	0.008	150.138	0.283E-07	0.062	140.6
10083	6.586	150.699	14.1385	0.05636	0.05002	0.007	150.139	0.266E-07	0.053	147.2
10084	6.586	150.652	14.1767	0.05217	0.04974	0.007	150.138	0.265E-07	0.053	144.3
10077	6.760	150.790	14.6579	0.06516	0.05110	0.007	150.135	0.286E-07	0.055	132.5
10078	6.760	150.734	14.7008	0.06068	0.05069	0.007	150.133	0.278E-07	0.050	134.0
10079	6.760	150.692	14.7331	0.05635	0.05042	0.006	150.137	0.261E-07	0.044	140.8
10080	6.760	150.656	14.7605	0.05217	0.05008	0.006	150.135	0.262E-07	0.044	138.1
10073	7.010	150.774	15.4014	0.06519	0.05180	0.005	150.135	0.298E-07	0.043	119.8
10074	7.010	150.747	15.4190	0.06068	0.05137	0.006	150.137	0.290E-07	0.041	121.2
10075	7.010	150.674	15.4708	0.05635	0.05116	0.005	150.136	0.277E-07	0.039	125.1
10076	7.010	150.637	15.4970	0.05217	0.05106	0.006	150.136	0.281E-07	0.041	122.5
10069	7.197	150.777	15.8687	0.06521	0.05206	0.005	150.139	0.327E-07	0.037	104.4
10070	7.197	150.740	15.8925	0.06068	0.05177	0.004	150.141	0.308E-07	0.033	109.2
10071	7.197	150.687	15.9275	0.05636	0.05168	0.005	150.141	0.306E-07	0.036	109.7

10072	7.197	150.659	15.9460	0.05217	0.05147	0.005	150.164	0.290E-07	0.037	111.2
10065	7.704	150.860	16.8514	0.07469	0.05389	0.004	150.139	0.291E-07	0.030	111.5
10066	7.704	150.765	16.9034	0.06520	0.05363	0.004	150.140	0.281E-07	0.031	114.1
10067	7.704	150.682	16.9495	0.05636	0.05348	0.004	150.139	0.276E-07	0.033	115.2
10068	7.705	150.591	16.9997	0.04817	0.05291	0.005	150.144	0.252E-07	0.038	123.3
10061	8.092	151.009	17.3976	0.09012	0.05509	0.004	150.152	0.328E-07	0.029	96.7
10062	8.092	150.905	17.4482	0.07969	0.05455	0.004	150.149	0.311E-07	0.029	99.7
10063	8.092	150.831	17.4841	0.06985	0.05478	0.004	150.148	0.308E-07	0.027	101.4
10064	8.092	150.725	17.5355	0.06070	0.05470	0.004	150.148	0.309E-07	0.030	100.3
10057	9.003	151.030	18.5005	0.10123	0.05785	0.003	150.128	0.343E-07	0.022	89.3
10058	9.003	150.926	18.5412	0.09010	0.05758	0.003	150.130	0.325E-07	0.021	93.3
10059	9.003	150.830	18.5791	0.07965	0.05754	0.003	150.129	0.321E-07	0.022	94.3
10060	9.003	150.741	18.6141	0.06984	0.05754	0.003	150.129	0.326E-07	0.025	92.4
10053	9.935	151.127	19.3044	0.11296	0.06222	0.003	150.135	0.383E-07	0.020	79.2
10054	9.936	150.977	19.3550	0.09560	0.06019	0.002	150.137	0.374E-07	0.017	80.6
10055	9.937	150.838	19.4018	0.07966	0.06010	0.004	150.138	0.363E-07	0.032	82.7
10056	9.937	150.713	19.4432	0.06519	0.05986	0.006	150.139	0.357E-07	0.045	83.1
10049	10.945	151.271	19.9767	0.12182	0.06264	0.002	150.143	0.422E-07	0.016	71.6
10050	10.946	151.102	20.0266	0.11298	0.06245	0.002	150.143	0.410E-07	0.015	73.1
10051	10.946	150.958	20.0690	0.09558	0.06253	0.002	150.144	0.412E-07	0.017	72.8
10052	10.947	150.826	20.1078	0.07965	0.06244	0.003	150.145	0.407E-07	0.023	73.4
10045	12.587	151.489	20.8360	0.16649	0.06623	0.002	150.135	0.457E-07	0.015	67.0
10046	12.588	151.330	20.8765	0.14511	0.06604	0.002	150.136	0.450E-07	0.012	67.7
10047	12.589	151.162	20.9185	0.12531	0.06603	0.002	150.137	0.446E-07	0.014	68.0
10048	12.589	150.999	20.9589	0.10698	0.06605	0.002	150.138	0.439E-07	0.015	69.1
10041	14.741	151.626	21.7338	0.18914	0.07015	0.001	150.145	0.502E-07	0.011	62.1
10042	14.743	151.455	21.7713	0.16638	0.07007	0.001	150.147	0.494E-07	0.010	62.7
10043	14.744	151.292	21.8066	0.14508	0.07011	0.001	150.147	0.492E-07	0.011	63.0
10044	14.746	151.133	21.8413	0.12528	0.07016	0.002	150.149	0.486E-07	0.013	63.8
10037	16.845	152.001	22.3873	0.24807	0.07380	0.001	150.146	0.539E-07	0.012	59.4
10038	16.848	151.802	22.4267	0.22186	0.07367	0.001	150.146	0.529E-07	0.011	60.3
10039	16.850	151.628	22.4609	0.19705	0.07366	0.001	150.147	0.529E-07	0.009	60.1
10040	16.851	151.451	22.4954	0.17383	0.07363	0.001	150.149	0.515E-07	0.010	61.5
10033	19.674	152.294	23.1442	0.30514	0.07793	0.001	150.140	0.564E-07	0.011	58.3
10034	19.677	152.094	23.1795	0.27578	0.07799	0.001	150.142	0.558E-07	0.010	58.9
10035	19.679	151.910	23.2117	0.24805	0.07791	0.001	150.143	0.550E-07	0.009	59.6
10036	19.680	151.733	23.2425	0.22174	0.07790	0.001	150.143	0.545E-07	0.008	59.7
10029	23.264	152.303	23.9524	0.34616	0.08278	0.001	150.167	0.609E-07	0.010	56.0
10030	23.268	152.225	23.9941	0.30489	0.08282	0.001	150.168	0.598E-07	0.009	57.0
10031	23.269	151.961	24.0368	0.26629	0.08284	0.001	150.169	0.593E-07	0.009	57.3
10032	23.273	151.724	24.0744	0.23035	0.08295	0.001	150.170	0.593E-07	0.011	57.4
10025	27.986	152.568	24.8459	0.37853	0.08860	0.001	150.151	0.673E-07	0.009	53.0
10026	27.988	152.370	24.8734	0.34566	0.08865	0.001	150.154	0.675E-07	0.008	52.8
10027	27.991	152.182	24.8999	0.31460	0.08869	0.001	150.154	0.677E-07	0.008	52.6
10028	27.994	151.984	24.9278	0.28500	0.08878	0.001	150.155	0.670E-07	0.007	53.2
10021	32.431	153.025	25.4964	0.47627	0.09339	0.001	150.141	0.698E-07	0.010	53.1
10022	32.432	152.519	25.5610	0.38921	0.09355	0.001	150.140	0.700E-07	0.007	52.9
10023	32.434	152.243	25.5961	0.34568	0.09375	0.001	150.141	0.697E-07	0.008	53.2
10024	32.435	151.983	25.6293	0.30454	0.09387	0.001	150.142	0.695E-07	0.008	53.4
10017	39.151	152.929	26.4120	0.48970	0.10031	0.001	150.133	0.729E-07	0.005	53.6
10018	39.157	152.643	26.4456	0.44044	0.10049	0.000	150.134	0.730E-07	0.004	53.6
10019	39.162	152.286	26.4872	0.37678	0.10064	0.000	150.136	0.729E-07	0.004	53.7
10020	39.166	152.035	26.5164	0.33391	0.10085	0.001	150.135	0.728E-07	0.004	53.8
10013	46.265	152.920	27.2134	0.51466	0.10714	0.001	150.148	0.771E-07	0.005	53.5
10014	46.272	152.649	27.2426	0.46401	0.10725	0.001	150.150	0.772E-07	0.006	53.4
10015	46.278	152.393	27.2703	0.41610	0.10738	0.000	150.149	0.776E-07	0.004	53.2
10016	46.282	152.060	27.3059	0.35491	0.10757	0.000	150.150	0.768E-07	0.004	53.8
10009	54.873	152.880	28.0398	0.53167	0.11468	0.001	150.174	0.828E-07	0.005	52.6
10010	54.880	152.610	28.0666	0.48012	0.11482	0.001	150.177	0.827E-07	0.005	52.7
10011	54.887	152.364	28.0912	0.43106	0.11493	0.001	150.177	0.828E-07	0.006	52.7
10012	54.891	152.038	28.1232	0.36910	0.11521	0.001	150.177	0.825E-07	0.007	53.0
10005	61.674	152.834	28.6118	0.54466	0.12022	0.001	150.192	0.867E-07	0.005	52.3
10006	61.676	152.573	28.6360	0.49241	0.12042	0.001	150.192	0.858E-07	0.006	53.0
10007	61.681	152.333	28.6585	0.44274	0.12050	0.001	150.191	0.860E-07	0.006	52.8
10008	61.682	152.036	28.6859	0.37997	0.12066	0.001	150.192	0.858E-07	0.008	53.0
10001	68.092	152.703	29.1082	0.54322	0.12520	0.001	150.132	0.945E-07	0.005	49.6
10002	68.092	152.456	29.1300	0.49113	0.12536	0.001	150.133	0.955E-07	0.006	49.2
10003	68.093	152.224	29.1505	0.44175	0.12559	0.001	150.136	0.958E-07	0.007	49.2
10004	68.092	151.932	29.1760	0.37972	0.12577	0.001	150.135	0.979E-07	0.008	48.1

Nominal Temperature 182. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
2145	0.958	184.315	0.6461	0.08045	0.01746 0.001	180.759	0.112E-05 0.014	23.3
2146	0.958	183.838	0.6480	0.06949	0.01741 0.001	180.717	0.112E-05 0.013	23.2
2147	0.957	183.390	0.6495	0.05940	0.01738 0.001	180.719	0.113E-05 0.016	22.8
2148	0.957	182.972	0.6512	0.05010	0.01736 0.002	180.720	0.115E-05 0.018	22.5
2141	1.472	184.040	1.0141	0.08045	0.01787 0.001	180.697	0.671E-06 0.012	25.1
2142	1.472	183.586	1.0171	0.06951	0.01784 0.001	180.697	0.671E-06 0.013	25.0
2143	1.472	183.168	1.0198	0.05937	0.01777 0.001	180.697	0.658E-06 0.012	25.4
2144	1.472	182.779	1.0224	0.05006	0.01778 0.001	180.698	0.668E-06 0.016	25.1
2137	1.944	183.829	1.3650	0.08040	0.01827 0.001	180.677	0.484E-06 0.014	26.3
2139	1.944	183.413	1.3686	0.06948	0.01823 0.001	180.678	0.481E-06 0.012	26.4
2139	1.943	183.021	1.3721	0.05936	0.01819 0.001	180.677	0.483E-06 0.012	26.2
2140	1.943	182.644	1.3756	0.05004	0.01817 0.002	180.676	0.484E-06 0.016	26.1
2133	2.477	183.256	1.7832	0.06951	0.01876 0.001	180.675	0.376E-06 0.013	26.5
2134	2.477	182.886	1.7881	0.05936	0.01872 0.001	180.672	0.377E-06 0.015	26.4
2135	2.477	182.540	1.7927	0.05001	0.01865 0.002	180.671	0.371E-06 0.016	26.6
2136	2.477	182.228	1.7966	0.04151	0.01864 0.002	180.674	0.382E-06 0.021	25.9
2129	2.997	182.925	2.2091	0.06430	0.01929 0.001	180.685	0.272E-06 0.013	30.4
2130	2.997	182.588	2.2150	0.05460	0.01927 0.002	180.689	0.276E-06 0.016	30.0
2131	2.997	182.270	2.2203	0.04569	0.01918 0.002	180.688	0.260E-06 0.018	31.6
2132	2.997	181.986	2.2253	0.03757	0.01921 0.002	180.685	0.265E-06 0.023	31.1
2125	3.594	182.941	2.7157	0.06931	0.02005 0.001	180.685	0.216E-06 0.014	32.4
2126	3.594	182.617	2.7232	0.05922	0.02001 0.001	180.691	0.215E-06 0.013	32.5
2127	3.593	182.314	2.7297	0.04994	0.01992 0.002	180.697	0.207E-06 0.017	33.4
2128	3.593	182.034	2.7363	0.04146	0.01991 0.002	180.697	0.207E-06 0.019	33.3
2121	4.263	182.479	3.3299	0.05914	0.02095 0.003	180.681	0.172E-06 0.024	34.8
2122	4.263	182.194	3.3389	0.04991	0.02088 0.003	180.685	0.166E-06 0.027	35.9
2123	4.263	181.940	3.3469	0.04142	0.02085 0.004	180.686	0.166E-06 0.035	35.7
2124	4.263	181.707	3.3543	0.03372	0.02083 0.005	180.689	0.168E-06 0.048	35.3
2117	4.933	182.369	3.9739	0.05918	0.02204 0.003	180.710	0.149E-06 0.025	35.5
2118	4.933	182.107	3.9850	0.04993	0.02199 0.003	180.704	0.149E-06 0.030	35.5
2119	4.933	181.868	3.9949	0.04142	0.02194 0.004	180.706	0.148E-06 0.038	35.6
2120	4.933	181.647	4.0047	0.03365	0.02192 0.005	180.694	0.149E-06 0.049	35.1
2113	5.742	182.056	4.8166	0.05387	0.02340 0.003	180.676	0.121E-06 0.026	38.3
2114	5.742	181.940	4.8231	0.04550	0.02342 0.003	180.731	0.119E-06 0.030	39.1
2115	5.741	181.821	4.8286	0.04522	0.02343 0.004	180.674	0.120E-06 0.032	39.1
2116	5.741	181.724	4.8341	0.04108	0.02338 0.004	180.675	0.119E-06 0.039	39.2
2109	6.307	181.753	5.4514	0.04517	0.02455 0.004	180.666	0.109E-06 0.035	40.0
2110	6.306	181.660	5.4570	0.04107	0.02454 0.005	180.726	0.109E-06 0.040	39.7
2111	6.305	181.566	5.4627	0.03700	0.02449 0.005	180.672	0.108E-06 0.044	39.9
2112	6.305	181.465	5.4697	0.03337	0.02446 0.006	180.677	0.111E-06 0.053	38.9
2105	7.033	181.665	6.2953	0.04518	0.02620 0.004	180.676	0.911E-07 0.038	44.4
2106	7.033	181.572	6.3035	0.04111	0.02623 0.005	180.671	0.946E-07 0.042	42.9
2107	7.032	181.482	6.3105	0.03718	0.02627 0.006	180.674	0.947E-07 0.048	43.0
2108	7.032	181.386	6.3191	0.03340	0.02621 0.007	180.672	0.902E-07 0.056	44.9
2101	7.468	181.604	6.8255	0.04498	0.02718 0.004	180.659	0.843E-07 0.036	46.0
2102	7.467	181.506	6.8344	0.04110	0.02729 0.005	180.697	0.817E-07 0.043	47.8
2103	7.467	181.439	6.8403	0.03717	0.02727 0.006	180.663	0.853E-07 0.050	45.7
2104	7.466	181.353	6.8481	0.03349	0.02724 0.007	180.661	0.844E-07 0.058	46.1
2097	8.296	181.447	7.8773	0.04109	0.02952 0.005	180.683	0.797E-07 0.046	46.3
2098	8.296	181.363	7.8800	0.03714	0.02954 0.006	180.680	0.812E-07 0.053	45.5
2099	8.295	181.305	7.8959	0.03344	0.02941 0.007	180.683	0.822E-07 0.062	44.5
2100	8.295	181.222	7.9065	0.02987	0.02920 0.008	180.679	0.804E-07 0.070	44.9
2093	8.696	181.471	8.3898	0.04558	0.03068 0.005	180.685	0.594E-07 0.041	60.8
2094	8.695	181.403	8.3978	0.04142	0.03069 0.006	180.686	0.595E-07 0.047	60.7
2095	8.694	181.334	8.4061	0.03747	0.03061 0.006	180.690	0.597E-07 0.052	60.2
2096	8.694	181.256	8.4167	0.03372	0.03056 0.008	180.688	0.573E-07 0.067	62.5
2089	9.493	181.495	9.4153	0.04709	0.03076 0.005	180.681	0.536E-07 0.038	56.4
2090	9.492	181.401	9.4298	0.04521	0.03306 0.005	180.678	0.537E-07 0.040	64.8
2091	9.492	181.334	9.4407	0.04109	0.03322 0.006	180.680	0.557E-07 0.052	63.0
2092	9.492	181.261	9.4527	0.03690	0.03294 0.007	180.679	0.526E-07 0.055	65.6
2085	9.729	181.473	9.7226	0.05000	0.03376 0.003	180.683	0.563E-07 0.026	61.2
2086	9.729	181.406	9.7341	0.04567	0.03380 0.006	180.683	0.569E-07 0.045	60.7
2087	9.729	181.314	9.7492	0.04099	0.03357 0.006	180.682	0.564E-07 0.048	60.3

2088	9.729	181.282	9.7546	0.03646	0.03283	0.007	180.682	0.563E-07	0.059	57.8
2081	10.331	181.506	10.4797	0.05406	0.03551	0.004	180.683	0.539E-07	0.036	62.3
2082	10.350	181.433	10.4917	0.04957	0.03548	0.005	180.685	0.536E-07	0.042	62.5
2083	10.329	181.366	10.5033	0.04527	0.03536	0.006	180.687	0.536E-07	0.047	62.0
2084	10.329	181.295	10.5155	0.04117	0.03538	0.007	180.692	0.540E-07	0.053	61.7
2078	11.039	181.512	11.3429	0.05764	0.03676	0.004	180.683	0.525E-07	0.035	59.8
2078	11.038	181.453	11.3534	0.05352	0.03710	0.005	180.681	0.518E-07	0.038	61.7
2079	11.037	181.374	11.3681	0.04944	0.03748	0.005	180.679	0.521E-07	0.044	62.5
2080	11.037	181.323	11.3782	0.04518	0.03746	0.006	180.683	0.522E-07	0.049	62.4
2073	11.831	181.516	12.2518	0.06311	0.03908	0.004	180.673	0.473E-07	0.031	65.4
2074	11.829	181.449	12.2644	0.05901	0.03979	0.004	180.678	0.477E-07	0.034	67.2
2075	11.829	181.374	12.2791	0.05431	0.03996	0.005	180.677	0.469E-07	0.037	68.9
2076	11.829	181.321	12.2899	0.04961	0.03963	0.006	180.679	0.471E-07	0.045	67.4
2069	12.329	181.574	12.7777	0.06927	0.04117	0.004	180.682	0.498E-07	0.032	63.8
2070	12.329	181.509	12.7905	0.06411	0.04104	0.004	180.679	0.492E-07	0.035	64.2
2071	12.327	181.384	12.8150	0.05445	0.04098	0.005	180.681	0.490E-07	0.041	64.2
2072	12.326	181.310	12.8286	0.04991	0.04102	0.006	180.682	0.471E-07	0.050	66.8
2065	13.195	181.516	13.5551	0.06930	0.04321	0.004	180.691	0.496E-07	0.033	62.4
2066	13.194	181.459	13.6664	0.06310	0.04215	0.004	180.687	0.476E-07	0.035	62.0
2067	13.194	181.391	13.6805	0.05928	0.04343	0.005	180.685	0.472E-07	0.037	66.2
2068	13.194	181.332	13.6928	0.05431	0.04306	0.005	180.688	0.493E-07	0.042	63.6
2061	13.918	181.574	14.3014	0.07509	0.04500	0.004	180.693	0.524E-07	0.030	58.7
2062	13.916	181.439	14.3278	0.06418	0.04490	0.004	180.696	0.528E-07	0.036	57.9
2063	13.914	181.329	14.3492	0.05462	0.04496	0.006	180.694	0.537E-07	0.047	57.1
2064	13.914	181.215	14.3725	0.04574	0.04490	0.007	180.697	0.545E-07	0.059	56.1
2057	14.769	181.550	15.0109	0.08069	0.04694	0.003	180.656	0.468E-07	0.027	65.1
2058	14.769	181.421	15.0369	0.06967	0.04692	0.004	180.659	0.465E-07	0.032	65.5
2059	14.768	181.296	15.0622	0.05954	0.04680	0.005	180.661	0.452E-07	0.041	66.9
2060	14.767	181.209	15.0750	0.05024	0.04671	0.007	180.663	0.470E-07	0.054	64.1
2053	16.224	181.586	16.0546	0.08640	0.04991	0.003	180.667	0.518E-07	0.025	58.2
2054	16.224	181.473	16.0766	0.07509	0.04985	0.004	180.672	0.515E-07	0.030	58.3
2055	16.223	181.354	16.0997	0.06455	0.04997	0.005	180.676	0.520E-07	0.039	58.1
2056	16.223	181.253	16.1195	0.05475	0.04984	0.006	180.675	0.559E-07	0.050	53.6
2049	17.515	181.758	16.8205	0.10467	0.05242	0.003	180.691	0.558E-07	0.025	54.1
2050	17.515	181.568	16.8560	0.08633	0.05240	0.003	180.688	0.579E-07	0.027	52.0
2051	17.515	181.392	16.8887	0.06967	0.05227	0.005	180.689	0.579E-07	0.037	51.7
2052	17.515	181.238	16.9175	0.05482	0.05235	0.007	180.690	0.604E-07	0.053	49.7
2045	18.945	181.912	17.5616	0.12540	0.05490	0.002	180.678	0.502E-07	0.013	60.3
2046	18.944	181.708	17.5971	0.10499	0.05470	0.002	180.681	0.487E-07	0.014	61.7
2047	18.943	181.526	17.6290	0.08657	0.05475	0.002	180.675	0.483E-07	0.017	62.2
2048	18.943	181.361	17.6577	0.06984	0.05468	0.003	180.680	0.474E-07	0.024	63.2
2041	20.760	181.945	18.3953	0.13209	0.05769	0.001	180.675	0.595E-07	0.012	51.0
2042	20.760	181.753	18.4271	0.11116	0.05761	0.002	180.678	0.605E-07	0.014	49.9
2043	20.760	181.567	18.4576	0.09223	0.05772	0.002	180.676	0.639E-07	0.016	47.4
2044	20.760	181.414	18.4828	0.07497	0.05763	0.003	180.678	0.677E-07	0.024	44.5
2037	22.606	182.168	19.0934	0.16244	0.06043	0.001	180.672	0.590E-07	0.010	52.0
2038	22.606	181.883	19.1376	0.13200	0.06054	0.001	180.674	0.599E-07	0.011	51.3
2039	22.605	181.631	19.1763	0.10436	0.06050	0.002	180.678	0.601E-07	0.015	51.3
2040	22.603	181.416	19.2089	0.08025	0.06057	0.002	180.676	0.638E-07	0.020	48.0
2033	25.093	182.395	19.9075	0.15733	0.06395	0.001	180.675	0.602E-07	0.009	52.0
2034	25.093	182.098	19.9503	0.14341	0.06390	0.001	180.677	0.595E-07	0.008	52.4
2035	25.092	181.821	19.9901	0.13120	0.06386	0.001	180.680	0.596E-07	0.010	52.1
2036	25.091	181.586	20.0237	0.10421	0.06406	0.002	180.681	0.606E-07	0.015	51.5
2029	28.113	182.624	20.7472	0.23302	0.06779	0.001	180.701	0.641E-07	0.008	50.0
2030	28.113	182.315	20.7884	0.19597	0.06780	0.001	180.702	0.643E-07	0.007	49.7
2031	28.113	182.038	20.8255	0.16299	0.06796	0.001	180.702	0.654E-07	0.009	49.0
2032	28.111	181.770	20.8609	0.13267	0.06903	0.001	180.701	0.668E-07	0.012	49.4
2025	31.111	182.858	21.4573	0.27291	0.07129	0.001	180.695	0.660E-07	0.007	49.7
2027	31.113	182.534	21.4983	0.23286	0.07135	0.001	180.697	0.654E-07	0.007	50.1
2027	31.114	182.262	21.5326	0.19602	0.07138	0.001	180.699	0.672E-07	0.007	48.7
2028	31.115	181.994	21.5663	0.16229	0.07145	0.001	180.699	0.683E-07	0.009	47.9
2021	35.447	183.037	22.3490	0.31701	0.07634	0.001	180.692	0.705E-07	0.007	48.5
2022	35.447	182.730	22.3845	0.27299	0.07632	0.001	180.691	0.708E-07	0.006	48.2
2023	35.447	182.417	22.4209	0.23303	0.07637	0.001	180.692	0.710E-07	0.006	48.1
2024	35.447	182.165	22.4501	0.19583	0.07628	0.001	180.692	0.725E-07	0.008	46.8
2017	39.643	183.060	23.1009	0.33891	0.08070	0.001	180.686	0.720E-07	0.006	49.2
2018	39.646	182.742	23.1359	0.29405	0.08072	0.001	180.692	0.715E-07	0.005	49.4
2019	39.648	182.443	23.1681	0.25249	0.08080	0.001	180.693	0.720E-07	0.006	49.1
2020	39.649	182.167	23.1988	0.21411	0.08092	0.001	180.685	0.722E-07	0.007	49.0

2013	44.711	183.540	23.8405	0.42588	0.08551	0.001	180.689	0.772E-07	0.006	47.7
2014	44.712	183.199	23.8751	0.37542	0.08555	0.001	180.684	0.768E-07	0.005	47.9
2015	44.712	182.886	23.9068	0.32819	0.08558	0.001	180.692	0.777E-07	0.005	47.3
2016	44.712	182.590	23.9369	0.28414	0.08572	0.001	180.693	0.783E-07	0.005	47.0
2009	50.825	183.721	24.6459	0.47892	0.09110	0.001	180.705	0.794E-07	0.005	48.5
2010	50.825	183.381	24.6781	0.42523	0.09116	0.001	180.699	0.793E-07	0.004	48.6
2011	50.826	183.063	24.7082	0.37460	0.09124	0.000	180.699	0.802E-07	0.004	48.0
2012	50.326	182.767	24.7362	0.32724	0.09129	0.001	180.699	0.804E-07	0.005	47.9
2005	57.522	183.702	25.4279	0.49661	0.09572	0.000	180.707	0.822E-07	0.004	47.9
2006	57.524	183.305	25.4634	0.43426	0.09663	0.000	180.706	0.820E-07	0.004	48.9
2007	57.523	182.999	25.4906	0.38443	0.09702	0.001	180.703	0.820E-07	0.006	49.2
2008	57.527	182.712	25.5166	0.33697	0.09714	0.001	180.704	0.821E-07	0.007	49.2
2001	66.108	183.500	26.3091	0.50301	0.10380	0.000	180.674	0.869E-07	0.003	48.9
2002	66.108	183.034	26.3478	0.42414	0.10501	0.000	180.670	0.877E-07	0.004	49.5
2003	66.106	182.760	26.3704	0.37139	0.10429	0.001	180.676	0.878E-07	0.005	48.7
2004	66.106	182.492	26.3927	0.32407	0.10407	0.001	180.674	0.876E-07	0.005	48.6

Nominal Temperature 212. K

Run Pt.	Pressure MPa	Temperature K	Density mg./L	Power W/m	Thermal Conductivity W/(m.K) STAT		Cell Temperature K	Thermal Diffusivity m**2/s DSTAT		Specific Heat J/(mol.K)
3133	1.117	213.678	0.6430	0.08862	0.02012	0.001	210.055	0.126E-05	0.014	24.4
3134	1.117	213.159	0.6447	0.07620	0.02007	0.001	210.058	0.124E-05	0.017	24.7
3135	1.116	212.698	0.6460	0.06469	0.02001	0.002	210.058	0.122E-05	0.020	25.0
3136	1.116	212.289	0.6473	0.05414	0.02001	0.002	210.059	0.127E-05	0.026	24.2
3129	1.979	213.593	1.1603	0.09515	0.02066	0.001	210.058	0.645E-06	0.012	26.9
3130	1.979	213.115	1.1633	0.08225	0.02063	0.001	210.059	0.647E-06	0.014	26.8
3131	1.978	212.679	1.1657	0.07029	0.02057	0.002	210.059	0.640E-06	0.019	26.9
3132	1.978	212.273	1.1683	0.05926	0.02056	0.002	210.060	0.639E-06	0.023	27.0
3125	2.850	213.567	1.7026	0.10197	0.02134	0.001	210.062	0.437E-06	0.011	27.7
3126	2.850	213.114	1.7066	0.08858	0.02126	0.001	210.061	0.425E-06	0.011	28.4
3127	2.850	212.691	1.7108	0.07614	0.02122	0.001	210.059	0.425E-06	0.015	28.2
3128	2.849	212.298	1.7143	0.06472	0.02120	0.002	210.059	0.422E-06	0.019	28.4
3121	3.550	213.497	2.1521	0.10896	0.02183	0.001	210.056	0.324E-06	0.008	29.5
3122	3.550	213.070	2.1577	0.09511	0.02178	0.001	210.058	0.320E-06	0.008	30.2
3123	3.549	212.661	2.1627	0.08220	0.02176	0.001	210.058	0.323E-06	0.010	29.9
3124	3.549	212.280	2.1678	0.07024	0.02174	0.001	210.058	0.320E-06	0.012	30.2
3117	4.196	213.551	2.5771	0.11618	0.02240	0.001	210.054	0.264E-06	0.009	31.4
3118	4.196	213.129	2.5838	0.10185	0.02237	0.001	210.056	0.263E-06	0.010	31.4
3119	4.195	212.718	2.5904	0.08848	0.02233	0.001	210.055	0.260E-06	0.009	31.7
3120	4.195	212.350	2.5964	0.07607	0.02228	0.001	210.055	0.258E-06	0.012	31.8
3113	5.608	213.477	3.5442	0.12368	0.02350	0.001	210.050	0.200E-06	0.009	31.0
3114	5.607	213.070	3.5539	0.10889	0.02346	0.001	210.055	0.199E-06	0.008	31.1
3115	5.607	212.687	3.5633	0.09505	0.02343	0.001	210.055	0.197E-06	0.008	31.4
3116	5.607	212.333	3.5721	0.08215	0.02337	0.001	210.053	0.193E-06	0.009	31.9
3109	6.431	213.438	4.1289	0.13141	0.02476	0.001	210.054	0.175E-06	0.011	32.6
3110	6.431	213.050	4.1409	0.11614	0.02473	0.001	210.054	0.174E-06	0.009	32.6
3111	6.430	212.693	4.1517	0.10180	0.02469	0.001	210.055	0.173E-06	0.008	32.8
3112	6.430	212.349	4.1622	0.08846	0.02464	0.001	210.054	0.173E-06	0.009	32.6
3105	7.199	213.268	4.6930	0.13138	0.02568	0.001	210.052	0.152E-06	0.010	34.3
3106	7.199	212.888	4.7067	0.11614	0.02563	0.001	210.051	0.149E-06	0.009	34.8
3107	7.198	212.545	4.7192	0.10181	0.02560	0.001	210.051	0.150E-06	0.009	34.5
3108	7.198	212.221	4.7311	0.08848	0.02555	0.001	210.051	0.149E-06	0.008	34.7
3101	8.373	212.650	5.5953	0.11608	0.02717	0.001	210.058	0.115E-06	0.012	40.3
3102	8.373	212.321	5.6109	0.10179	0.02713	0.001	210.057	0.112E-06	0.013	41.2
3103	8.373	212.029	5.6247	0.08845	0.02711	0.002	210.056	0.112E-06	0.015	41.2
3104	8.373	211.757	5.6378	0.07603	0.02708	0.002	210.057	0.111E-06	0.019	41.4
3097	9.316	212.347	6.3318	0.10870	0.02847	0.001	210.052	0.112E-06	0.009	38.5
3098	9.315	212.053	6.3475	0.09489	0.02840	0.001	210.054	0.110E-06	0.008	39.1
3099	9.315	211.785	6.3621	0.08202	0.02842	0.001	210.053	0.112E-06	0.010	38.2
3100	9.314	211.528	6.3762	0.07011	0.02835	0.002	210.053	0.110E-06	0.013	38.8
3093	10.231	212.193	7.0482	0.10873	0.02980	0.001	210.044	0.967E-07	0.011	42
3094	10.230	211.916	7.0650	0.09493	0.02978	0.001	210.044	0.973E-07	0.010	41.7
3095	10.229	211.667	7.0808	0.08205	0.02977	0.001	210.044	0.974E-07	0.010	41.6
3096	10.228	211.426	7.0960	0.07012	0.02968	0.001	210.045	0.959E-07	0.013	42.0
3089	11.189	212.077	7.7975	0.10869	0.03123	0.002	210.049	0.896E-07	0.013	42.9
3090	11.188	211.819	7.8158	0.09489	0.03123	0.002	210.051	0.889E-07	0.014	43.3

3091	11.187	211.568	7.8337	0.08204	0.03118	0.002	210.051	0.881E-07	0.016	43.5
3092	11.186	211.350	7.8495	0.07012	0.03118	0.002	210.052	0.896E-07	0.021	42.8
3085	12.435	211.949	8.7639	0.10363	0.03322	0.001	210.056	0.830E-07	0.013	44.0
3086	12.434	211.710	8.7838	0.0935	0.03321	0.002	210.057	0.832E-07	0.014	43.8
3087	12.434	211.487	8.8024	0.08199	0.03312	0.002	210.060	0.825E-07	0.014	44.0
3088	12.433	211.282	8.8195	0.07019	0.03318	0.002	210.058	0.849E-07	0.018	42.9
3081	13.257	211.976	9.3789	0.11597	0.03451	0.001	210.054	0.782E-07	0.009	45.3
3082	13.256	211.742	9.3999	0.10149	0.03450	0.001	210.058	0.787E-07	0.009	45.0
3083	13.255	211.517	9.4199	0.08638	0.03451	0.001	210.060	0.787E-07	0.010	45.0
3084	13.254	211.310	9.4389	0.07598	0.03453	0.001	210.056	0.814E-07	0.012	43.5
3077	14.055	212.017	9.9608	0.12342	0.03580	0.001	210.058	0.737E-07	0.009	47.0
3078	14.054	211.784	9.9828	0.10870	0.03581	0.001	210.060	0.742E-07	0.009	46.6
3079	14.053	211.559	10.0044	0.09491	0.03578	0.001	210.062	0.747E-07	0.009	46.2
3080	14.052	211.357	10.0232	0.08206	0.03573	0.002	210.063	0.737E-07	0.013	46.7
3073	15.361	212.023	10.8804	0.13111	0.03787	0.001	210.057	0.704E-07	0.010	47.6
3074	15.360	211.799	10.9034	0.11594	0.03791	0.001	210.062	0.709E-07	0.008	47.3
3075	15.359	211.576	10.9266	0.10164	0.03787	0.001	210.061	0.698E-07	0.010	47.9
3076	15.359	211.373	10.9476	0.08836	0.03776	0.001	210.061	0.695E-07	0.011	47.8
3069	16.498	212.028	11.6374	0.13901	0.03970	0.001	210.054	0.669E-07	0.009	49.2
3070	16.497	211.800	11.6618	0.12337	0.03965	0.001	210.057	0.666E-07	0.008	49.2
3071	16.496	211.595	11.6843	0.10864	0.03966	0.001	210.059	0.668E-07	0.009	49.0
3072	16.496	211.396	11.7062	0.09487	0.03961	0.001	210.058	0.665E-07	0.010	48.8
3065	17.449	212.295	12.2085	0.16429	0.04116	0.001	210.050	0.664E-07	0.011	48.8
3066	17.448	212.050	12.2349	0.14723	0.04117	0.001	210.052	0.663E-07	0.011	48.9
3067	17.448	211.831	12.2596	0.13110	0.04108	0.001	210.055	0.665E-07	0.008	49.1
3068	17.447	211.626	12.2822	0.11593	0.04115	0.001	210.055	0.664E-07	0.008	48.8
3061	18.650	212.291	12.9211	0.17317	0.04298	0.001	210.054	0.650E-07	0.012	9.2
3062	18.650	212.076	12.9460	0.15563	0.04299	0.001	210.051	0.654E-07	0.009	48.9
3063	18.650	211.853	12.9719	0.13905	0.04290	0.001	210.046	0.642E-07	0.009	49.6
3064	18.650	211.657	12.9946	0.12334	0.04292	0.001	210.046	0.644E-07	0.008	49.4
3057	20.065	212.420	13.6841	0.19189	0.04507	0.001	210.061	0.627E-07	0.012	50.6
3058	20.065	212.196	13.7099	0.17339	0.04495	0.001	210.062	0.617E-07	0.011	51.1
3059	20.064	211.980	13.7350	0.15586	0.04500	0.001	210.060	0.624E-07	0.011	50.6
3060	20.064	211.768	13.7598	0.13925	0.04493	0.001	210.064	0.608E-07	0.012	51.7
3053	21.851	212.415	14.5775	0.20152	0.04751	0.001	210.065	0.618E-07	0.010	50.8
3054	21.850	212.194	14.6027	0.18255	0.04742	0.001	210.065	0.611E-07	0.010	51.2
3055	21.850	211.978	14.6278	0.16450	0.04745	0.001	210.069	0.613E-07	0.010	51.0
3056	21.848	211.773	14.6514	0.14742	0.04741	0.001	210.067	0.599E-07	0.010	52.0
3049	23.643	212.655	15.3553	0.23167	0.04986	0.001	210.055	0.661E-07	0.012	47.3
3050	23.643	212.312	15.3949	0.20149	0.04982	0.001	210.057	0.656E-07	0.010	47.5
3051	23.642	212.001	15.4304	0.17341	0.04979	0.001	210.057	0.653E-07	0.009	47.6
3052	23.641	211.714	15.4637	0.14744	0.04977	0.001	210.060	0.662E-07	0.011	46.9
3045	25.468	212.657	16.0949	0.24235	0.05212	0.001	210.059	0.660E-07	0.010	47.4
3046	25.468	212.327	16.1324	0.21140	0.05211	0.001	210.062	0.657E-07	0.008	47.5
3047	25.468	212.073	16.1671	0.18256	0.05213	0.001	210.060	0.642E-07	0.009	47.1
3048	25.468	211.732	16.2004	0.15588	0.05206	0.001	210.062	0.665E-07	0.011	46.7
3041	27.750	212.632	16.9254	0.25313	0.05488	0.001	210.052	0.661E-07	0.009	47.6
3042	27.750	212.308	16.9615	0.22150	0.05488	0.001	210.052	0.660E-07	0.008	47.6
3043	27.751	212.013	16.9945	0.19198	0.05486	0.001	210.054	0.662E-07	0.009	47.3
3044	27.751	211.731	17.0260	0.16460	0.05486	0.001	210.053	0.660E-07	0.011	47.4
3037	30.232	212.749	17.7104	0.27551	0.05766	0.001	210.059	0.676E-07	0.008	46.9
3038	30.232	212.420	17.7458	0.24242	0.05767	0.001	210.063	0.679E-07	0.007	46.6
3039	30.232	212.114	17.7787	0.21147	0.05766	0.001	210.064	0.679E-07	0.008	46.5
3040	30.232	211.839	17.8085	0.18263	0.05772	0.001	210.064	0.678E-07	0.009	46.7
3033	33.204	212.819	18.5447	0.29865	0.06091	0.001	210.058	0.690E-07	0.008	46.7
3034	33.202	212.491	18.5781	0.26418	0.06087	0.001	210.060	0.681E-07	0.007	47.1
3035	33.202	212.198	18.6084	0.23181	0.06092	0.001	210.060	0.689E-07	0.006	46.6
3036	33.201	211.914	18.6378	0.20155	0.06098	0.001	210.061	0.689E-07	0.008	46.7
3029	36.121	212.791	19.2774	0.31064	0.06390	0.001	210.060	0.699E-07	0.007	46.8
3030	36.123	212.493	19.3076	0.27546	0.06394	0.001	210.060	0.703E-07	0.007	46.6
3031	36.123	212.199	19.3370	0.24237	0.06397	0.001	210.062	0.696E-07	0.007	47.0
3032	36.124	211.919	19.3651	0.21142	0.06405	0.001	210.063	0.706E-07	0.008	46.4
3025	39.625	212.952	20.0384	0.34586	0.06741	0.001	210.063	0.701E-07	0.006	47.8
3026	39.625	212.627	20.0695	0.30854	0.06760	0.001	210.056	0.697E-07	0.006	48.3
3027	39.626	212.322	20.0989	0.27509	0.06802	0.001	210.055	0.701E-07	0.006	48.6
3028	39.627	212.052	20.1250	0.23889	0.06738	0.001	210.056	0.698E-07	0.007	47.8
3021	43.783	212.981	20.8465	0.36903	0.07121	0.001	210.070	0.729E-07	0.005	47.2
3022	43.783	212.688	20.8732	0.33132	0.07126	0.001	210.069	0.731E-07	0.005	47.0
3023	43.782	212.402	20.8991	0.29543	0.07135	0.001	210.070	0.731E-07	0.005	47.1



3024	43.781	212.124	20.9243	0.25569	0.06985	0.001	210.069	0.728E-07	0.008	45.2
3017	48.282	213.042	21.6125	0.39595	0.07524	0.001	210.073	0.745E-07	0.006	47.5
3018	48.281	212.735	21.5392	0.35609	0.07538	0.001	210.073	0.743E-07	0.005	47.8
3019	48.282	212.449	21.6643	0.31787	0.07531	0.001	210.074	0.746E-07	0.006	47.4
3020	48.283	212.183	21.6875	0.28273	0.07538	0.001	210.075	0.743E-07	0.007	47.7
3013	53.722	213.303	22.4108	0.45374	0.08016	0.000	210.072	0.787E-07	0.004	47.1
3014	53.723	212.977	22.4362	0.41116	0.07978	0.000	210.071	0.764E-07	0.004	48.0
3015	53.725	212.702	22.4608	0.37112	0.07999	0.000	210.073	0.763E-07	0.003	48.2
3016	53.725	212.424	22.4839	0.33289	0.08008	0.000	210.071	0.762E-07	0.004	48.3
3009	59.463	213.262	23.1763	0.46859	0.08449	0.000	210.068	0.836E-07	0.003	45.6
3010	59.466	212.969	23.1997	0.42532	0.08452	0.000	210.071	0.832E-07	0.003	45.8
3011	59.468	212.686	23.2221	0.38425	0.08460	0.000	210.071	0.839E-07	0.003	45.5
3012	59.470	212.420	23.2435	0.34513	0.08464	0.000	210.072	0.846E-07	0.003	45.1
3005	65.677	213.187	23.9135	0.48358	0.08928	0.000	210.069	0.841E-07	0.003	47.1
3006	65.675	212.724	23.9482	0.41134	0.08938	0.000	210.067	0.847E-07	0.003	46.8
3007	65.675	212.288	23.9812	0.34512	0.08958	0.000	210.066	0.857E-07	0.004	46.3
3008	65.675	211.897	24.0107	0.28467	0.08964	0.001	210.067	0.860E-07	0.005	46.1
3001	69.668	213.187	24.3418	0.49847	0.09228	0.000	210.050	0.886E-07	0.003	45.8
3002	69.666	212.721	24.3759	0.42506	0.09237	0.000	210.049	0.888E-07	0.003	45.7
3003	69.664	212.293	24.4072	0.35769	0.09261	0.000	210.051	0.895E-07	0.004	45.5
3004	69.660	211.906	24.4352	0.29604	0.09269	0.001	210.050	0.917E-07	0.005	44.4

Nominal Temperature 242. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
4125	1.248	243.728	0.6251	0.10313	0.02281 0.001	239.942	0.143E-05 0.011	25.8
4126	1.248	243.195	0.6266	0.08869	0.02277 0.001	239.941	0.141E-05 0.014	26.0
4127	1.248	242.713	0.6279	0.07532	0.02275 0.001	239.944	0.142E-05 0.015	25.8
4128	1.248	242.256	0.6292	0.06307	0.02273 0.002	239.943	0.142E-05 0.022	25.9
4121	2.118	243.703	1.0711	0.11075	0.02326 0.001	239.943	0.198E-06 0.008	27.2
4122	2.118	243.216	1.0735	0.09577	0.02324 0.001	239.943	0.181E-06 0.010	26.7
4123	2.118	242.745	1.0758	0.08188	0.02321 0.001	239.942	0.155E-06 0.013	26.6
4124	2.118	242.313	1.0781	0.06907	0.02317 0.002	239.937	0.180E-06 0.016	26.8
4117	3.207	243.428	1.6448	0.11085	0.02391 0.001	239.930	0.523E-06 0.003	27.5
4118	3.206	242.739	1.6499	0.08874	0.02387 0.001	239.932	0.530E-06 0.010	27.1
4119	3.206	242.121	1.6546	0.06911	0.02382 0.002	239.933	0.532E-06 0.016	26.6
4120	3.205	241.755	1.6574	0.05738	0.02372 0.002	239.934	0.536E-06 0.023	26.5
4113	3.997	243.737	2.0640	0.12695	0.02440 0.001	239.928	0.399E-06 0.008	29.0
4114	3.997	243.034	2.0718	0.10319	0.02436 0.001	239.929	0.403E-06 0.010	28.7
4115	3.996	242.400	2.0783	0.08191	0.02431 0.001	239.927	0.408E-06 0.012	28.3
4116	3.996	241.842	2.0838	0.06310	0.02429 0.002	239.926	0.423E-06 0.016	27.3
4109	5.656	243.644	2.9725	0.13539	0.02561 0.001	239.921	0.277E-06 0.005	30.3
4110	5.655	242.979	2.9828	0.11081	0.02558 0.001	239.925	0.278E-06 0.009	30.1
4111	5.655	242.380	2.9923	0.08872	0.02551 0.001	239.924	0.281E-06 0.012	29.7
4112	5.654	241.835	3.0010	0.06909	0.02553 0.001	239.925	0.288E-06 0.010	29.0
4105	6.682	243.682	3.5444	0.14406	0.02642 0.001	239.926	0.229E-06 0.007	31.5
4106	6.682	243.032	3.5569	0.11869	0.02639 0.001	239.926	0.229E-06 0.009	31.5
4107	6.680	242.434	3.5634	0.09578	0.02638 0.001	239.926	0.234E-06 0.011	30.9
4108	6.680	241.938	3.5790	0.07533	0.02634 0.002	239.926	0.239E-06 0.016	30.1
4101	8.174	243.455	4.3936	0.15305	0.02764 0.001	239.913	0.177E-06 0.006	34.2
4102	8.173	242.861	4.4089	0.12687	0.02762 0.001	239.915	0.179E-06 0.010	33.9
4103	8.172	242.307	4.4229	0.10315	0.02761 0.001	239.915	0.179E-06 0.014	33.8
4104	8.172	241.813	4.4356	0.06188	0.02759 0.002	239.912	0.181E-06 0.016	33.4
4097	9.501	243.438	5.1527	0.16240	0.02886 0.001	239.924	0.150E-06 0.006	36.0
4098	9.500	242.858	5.1707	0.13544	0.02885 0.001	239.930	0.153E-06 0.009	35.3
4099	9.499	242.323	5.1872	0.11084	0.02887 0.001	239.930	0.155E-06 0.012	35.0
4100	9.498	241.845	5.2024	0.08874	0.02883 0.002	239.930	0.153E-06 0.017	35.3
4093	10.871	243.430	5.9412	0.17192	0.03021 0.001	239.934	0.133E-06 0.005	36.8
4094	10.876	242.871	5.9618	0.14410	0.03022 0.001	239.934	0.134E-06 0.007	36.4
4095	10.875	242.355	5.9810	0.11875	0.03021 0.001	239.934	0.135E-06 0.008	36.3
4096	10.873	241.886	5.9983	0.09585	0.03021 0.001	239.935	0.137E-06 0.011	35.9
4089	11.955	243.460	6.5562	0.18174	0.03130 0.001	239.934	0.121E-06 0.005	37.8
4090	11.957	242.913	6.5791	0.15308	0.03132 0.001	239.936	0.123E-06 0.007	37.3
4091	11.955	242.400	6.6006	0.12691	0.03129 0.001	239.939	0.122E-06 0.008	37.6
4092	11.954	241.936	6.6199	0.10318	0.03130 0.001	239.934	0.125E-06 0.009	36.6
4085	13.397	243.247	7.3784	0.18166	0.03288 0.001	239.946	0.105E-06 0.005	40.9

4086	13.396	242.723	7.4039	0.15304	0.03284	0.001	239.946	0.104E-06	0.007	41.2
4087	13.396	242.247	7.4272	0.12687	0.03283	0.001	239.944	0.103E-06	0.009	41.7
4088	13.396	241.610	7.4491	0.10315	0.03282	0.001	239.946	0.101E-06	0.013	42.2
4081	14.454	243.284	7.9635	0.19186	0.03399	0.001	239.940	0.908E-07	0.006	41.6
4082	14.455	242.764	7.9918	0.16236	0.03398	0.001	239.938	0.973E-07	0.007	42.2
4083	14.455	242.299	8.0176	0.13536	0.03396	0.001	239.935	0.961E-07	0.009	42.7
4084	14.455	241.863	8.0412	0.11080	0.03399	0.001	239.934	0.960E-07	0.011	42.3
4077	15.957	243.265	8.7793	0.20220	0.03556	0.001	239.928	0.900E-07	0.005	42.9
4078	15.956	242.763	8.8086	0.17192	0.03561	0.001	239.931	0.912E-07	0.005	42.8
4079	15.954	242.305	8.8353	0.14411	0.03561	0.001	239.930	0.914E-07	0.007	42.7
4080	15.953	241.890	8.8597	0.11873	0.03563	0.001	239.930	0.920E-07	0.009	42.4
4073	17.449	243.250	9.5612	0.21280	0.03720	0.000	239.933	0.852E-07	0.004	43.9
4074	17.447	242.765	9.5418	0.18172	0.03726	0.001	239.932	0.850E-07	0.006	43.6
4075	17.445	242.303	9.6206	0.15316	0.03728	0.001	239.931	0.855E-07	0.006	43.8
4076	17.444	241.904	9.6466	0.12696	0.03722	0.001	239.932	0.838E-07	0.008	44.6
4069	18.936	243.239	10.3087	0.27377	0.03879	0.001	239.930	0.799E-07	0.005	45.2
4070	18.935	242.759	10.3410	0.19185	0.03889	0.001	239.933	0.811E-07	0.007	44.7
4071	18.934	242.328	10.3705	0.16237	0.03886	0.001	239.931	0.809E-07	0.006	44.8
4072	18.933	241.932	10.3978	0.13539	0.03889	0.001	239.931	0.815E-07	0.007	44.4
4065	20.485	243.226	11.0504	0.23498	0.04056	0.000	239.916	0.766E-07	0.004	46.1
4066	20.485	242.753	11.0843	0.20223	0.04056	0.001	239.918	0.757E-07	0.005	46.6
4067	20.485	242.325	11.1156	0.17197	0.04057	0.001	239.920	0.755E-07	0.006	46.7
4068	20.485	241.929	11.1448	0.14413	0.04058	0.001	239.919	0.746E-07	0.007	47.3
4061	22.054	243.238	11.7593	0.24636	0.04216	0.000	239.924	0.735E-07	0.004	46.9
4062	22.054	242.779	11.7940	0.21280	0.04222	0.001	239.925	0.736E-07	0.005	46.9
4063	22.052	242.355	11.8256	0.18173	0.04224	0.001	239.924	0.725E-07	0.006	47.6
4064	22.052	241.970	11.8548	0.15309	0.04233	0.001	239.925	0.730E-07	0.008	47.4
4057	23.886	243.409	12.5248	0.27023	0.04409	0.001	239.938	0.716E-07	0.005	47.3
4058	23.886	242.947	12.5607	0.23504	0.04419	0.001	239.938	0.724E-07	0.006	46.9
4059	23.885	242.524	12.5935	0.20234	0.04419	0.001	239.939	0.727E-07	0.005	46.7
4060	23.885	242.130	12.6245	0.17208	0.04424	0.001	239.939	0.713E-07	0.006	47.6
4053	25.785	243.408	13.2758	0.28236	0.04612	0.000	239.942	0.719E-07	0.004	46.6
4054	25.786	242.964	13.3114	0.24636	0.04615	0.001	239.938	0.717E-07	0.004	46.8
4055	25.787	242.539	13.3457	0.21280	0.04617	0.001	239.939	0.712E-07	0.005	47.0
4056	25.787	242.153	13.3767	0.18170	0.04618	0.001	239.939	0.701E-07	0.007	47.7
4049	28.324	243.317	14.2042	0.29351	0.04854	0.000	239.903	0.712E-07	0.003	46.3
4050	28.323	242.885	14.2388	0.25689	0.04866	0.000	239.903	0.722E-07	0.004	45.8
4051	28.322	242.494	14.2701	0.22252	0.04868	0.000	239.900	0.724E-07	0.004	45.7
4052	28.320	242.119	14.3001	0.19078	0.04872	0.001	239.901	0.728E-07	0.005	45.4
4045	30.547	243.320	14.9397	0.30628	0.05071	0.000	239.906	0.708E-07	0.004	46.4
4046	30.546	242.915	14.9723	0.26877	0.05086	0.001	239.908	0.724E-07	0.005	45.5
4047	30.544	242.521	15.0038	0.23367	0.05086	0.001	239.907	0.720E-07	0.005	45.8
4048	30.544	242.150	15.0340	0.20110	0.05091	0.001	239.905	0.727E-07	0.005	45.4
4037	32.704	243.553	15.5788	0.33913	0.05271	0.000	239.899	0.709E-07	0.003	46.3
4041	32.705	243.295	15.5999	0.31147	0.05283	0.000	239.897	0.695E-07	0.003	47.4
4038	32.704	243.142	15.6119	0.30029	0.05288	0.000	239.900	0.722E-07	0.004	45.7
4042	32.705	242.891	15.6326	0.28107	0.05290	0.000	239.897	0.699E-07	0.004	47.2
4039	32.703	242.793	15.6399	0.25458	0.05021	0.000	239.898	0.719E-07	0.004	41.3
4043	32.705	242.510	15.6633	0.24523	0.05297	0.000	239.899	0.701E-07	0.004	47.1
4040	32.703	242.376	15.6721	0.22527	0.05169	0.001	239.898	0.727E-07	0.005	43.2
4044	32.705	242.137	15.6936	0.21180	0.05302	0.001	239.901	0.700E-07	0.005	47.2
4034	35.766	243.501	16.4351	0.30069	0.05332	0.000	239.873	0.686E-07	0.003	44.6
4033	35.767	243.428	16.4393	0.34326	0.05501	0.000	239.873	0.686E-07	0.003	47.1
4035	35.767	242.779	16.4912	0.25963	0.05064	0.000	239.872	0.692E-07	0.004	39.5
4036	35.767	242.325	16.5275	0.24008	0.05575	0.001	239.871	0.699E-07	0.005	47.4
4029	38.899	243.423	17.2222	0.36177	0.05844	0.000	239.912	0.718E-07	0.003	46.5
4030	38.899	243.042	17.2521	0.32261	0.05869	0.000	239.915	0.730E-07	0.004	46.1
4031	38.899	242.674	17.2811	0.28177	0.05862	0.000	239.912	0.734E-07	0.004	45.7
4032	38.899	242.329	17.3084	0.24764	0.05867	0.001	239.913	0.738E-07	0.004	45.5
4025	42.057	243.466	17.9379	0.37801	0.06102	0.000	239.898	0.711E-07	0.003	47.4
4026	42.059	243.011	17.9684	0.33671	0.06119	0.000	239.895	0.712E-07	0.004	47.5
4027	42.060	242.652	17.9963	0.29802	0.06139	0.000	239.895	0.716E-07	0.004	47.5
4028	42.061	242.286	18.0248	0.26056	0.06119	0.001	239.887	0.713E-07	0.005	47.3
4021	46.293	243.554	18.7856	0.36509	0.06449	0.000	239.910	0.763E-07	0.002	45.0
4022	46.293	243.155	18.8155	0.35199	0.06470	0.000	239.911	0.774E-07	0.003	44.5
4023	46.292	242.792	18.8426	0.31331	0.06473	0.000	239.912	0.776E-07	0.003	44.4
4024	46.292	242.395	18.8725	0.27490	0.06479	0.000	239.911	0.792E-07	0.003	43.5
4017	50.708	243.690	19.5878	0.40851	0.06807	0.000	239.915	0.770E-07	0.003	45.6
4018	50.703	243.002	19.6234	0.35293	0.06803	0.000	239.917	0.785E-07	0.003	44.6

4019	50.709	242.541	19.6572	0.30136	0.06839	0.000	239.916	0.802E-07	0.003	44.1
4020	50.709	242.104	19.6892	0.25173	0.06862	0.001	239.914	0.801E-07	0.004	44.3
4013	55.305	243.480	20.3326	0.42706	0.07149	0.000	239.921	0.788E-07	0.002	45.5
4014	55.305	242.953	20.3699	0.36657	0.07178	0.000	239.918	0.784E-07	0.003	46.0
4015	55.306	242.506	20.4318	0.31332	0.07215	0.000	239.916	0.797E-07	0.004	45.7
4016	55.306	242.090	20.4314	0.26201	0.07222	0.001	239.916	0.812E-07	0.004	44.8
4009	60.266	243.425	21.0591	0.44090	0.07544	0.000	239.924	0.828E-07	0.002	44.8
4010	60.265	242.963	21.0907	0.38214	0.07552	0.000	239.920	0.838E-07	0.003	44.3
4011	60.265	242.529	21.1204	0.32741	0.07561	0.000	239.921	0.853E-07	0.004	43.6
4012	60.265	242.148	21.1469	0.27957	0.07589	0.000	239.921	0.872E-07	0.004	42.9
4005	66.468	243.582	21.8575	0.48968	0.07981	0.000	239.903	0.818E-07	0.002	46.8
4006	66.468	243.110	21.8387	0.42567	0.07996	0.000	239.904	0.832E-07	0.003	46.1
4007	66.468	242.666	21.9182	0.36818	0.08017	0.000	239.905	0.833E-07	0.003	46.3
4008	66.468	242.258	21.9452	0.31329	0.08011	0.000	239.906	0.833E-07	0.003	46.1
4001	68.912	243.497	22.1577	0.48807	0.08154	0.000	239.895	0.859E-07	0.002	45.2
4002	68.915	242.918	22.1957	0.41197	0.08227	0.000	239.895	0.875E-07	0.003	45.0
4003	68.915	242.413	22.2238	0.34233	0.08192	0.000	239.894	0.885E-07	0.003	44.2
4004	68.915	241.946	22.2594	0.27649	0.08196	0.000	239.894	0.891E-07	0.004	43.8

Nominal Temperature 2/3. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m**2/s DSTAT	Specific Heat J/(mol.K)
5113	1.962	273.835	0.8726	0.11731	0.02533 0.001	270.098	0.105E-05 0.009	27.9
5114	1.962	273.315	0.8742	0.10089	0.02533 0.001	270.098	0.105E-05 0.010	27.8
5115	1.962	272.822	0.8759	0.08583	0.02535 0.001	270.094	0.105E-05 0.013	28.0
5116	1.961	272.378	0.8773	0.07185	0.02537 0.001	270.090	0.106E-05 0.017	27.9
5109	2.963	273.857	1.3254	0.12603	0.02581 0.001	270.091	0.663E-06 0.008	29.3
5110	2.962	273.340	1.3278	0.10898	0.02577 0.001	270.091	0.652E-06 0.011	29.8
5111	2.962	272.868	1.3302	0.09317	0.02581 0.001	270.089	0.665E-06 0.013	29.3
5112	2.962	272.425	1.3326	0.07861	0.02581 0.001	270.089	0.663E-06 0.015	29.5
5105	4.194	273.682	1.8892	0.13495	0.02648 0.001	270.104	0.456E-06 0.006	30.5
5106	4.194	273.191	1.8931	0.11731	0.02646 0.001	270.106	0.458E-06 0.009	30.3
5107	4.193	272.930	1.8965	0.10089	0.02647 0.001	270.104	0.456E-06 0.011	30.5
5108	4.193	272.500	1.9000	0.08573	0.02648 0.001	270.102	0.461E-06 0.013	30.2
5101	5.071	273.741	2.2959	0.13490	0.02695 0.001	270.104	0.378E-06 0.006	30.6
5102	5.071	273.264	2.3007	0.11730	0.02695 0.001	270.103	0.377E-06 0.008	30.7
5103	5.070	272.824	2.3049	0.10083	0.02697 0.001	270.103	0.384E-06 0.010	30.3
5104	5.070	272.402	2.3090	0.08571	0.02698 0.001	270.100	0.378E-06 0.012	30.8
5097	6.243	273.782	2.8413	0.14422	0.02765 0.001	270.094	0.299E-06 0.006	31.9
5098	6.243	273.313	2.8473	0.12598	0.02767 0.001	270.092	0.301E-06 0.007	31.8
5099	6.243	272.879	2.8527	0.10896	0.02768 0.001	270.093	0.301E-06 0.008	31.8
5100	6.243	272.472	2.8579	0.09316	0.02766 0.001	270.093	0.301E-06 0.010	31.8
5093	7.238	273.882	3.3055	0.15381	0.02832 0.001	270.090	0.261E-06 0.007	32.1
5094	7.237	273.404	3.3124	0.13491	0.02833 0.001	270.088	0.261E-06 0.007	32.2
5095	7.237	272.970	3.3189	0.11724	0.02833 0.001	270.086	0.262E-06 0.008	32.1
5096	7.237	272.565	3.3251	0.10084	0.02832 0.001	270.085	0.261E-06 0.009	32.2
5089	8.759	273.505	4.0263	0.15392	0.02936 0.001	270.100	0.209E-06 0.007	34.0
5090	8.760	273.087	4.0347	0.13501	0.02938 0.001	270.100	0.210E-06 0.009	33.9
5091	8.760	272.685	4.0425	0.11732	0.02940 0.001	270.089	0.209E-06 0.010	34.2
5092	8.760	272.320	4.0496	0.10094	0.02940 0.001	270.091	0.209E-06 0.014	34.1
5085	10.558	273.467	4.8718	0.16409	0.03045 0.001	270.074	0.171E-06 0.005	35.2
5086	10.556	273.056	4.8812	0.14451	0.03046 0.001	270.072	0.171E-06 0.005	35.3
5087	10.556	272.668	4.8903	0.12618	0.03049 0.001	270.070	0.171E-06 0.006	35.5
5088	10.555	272.315	4.8987	0.10909	0.03051 0.001	270.066	0.174E-06 0.010	35.0
5081	12.082	273.500	5.5815	0.17425	0.03171 0.000	270.078	0.156E-06 0.005	35.2
5082	12.081	273.108	5.5923	0.15411	0.03173 0.001	270.076	0.158E-06 0.006	34.8
5083	12.080	272.727	5.6026	0.13517	0.03170 0.001	270.075	0.157E-06 0.007	35.1
5084	12.079	272.371	5.6124	0.11753	0.03166 0.001	270.075	0.154E-06 0.007	35.6
5077	13.594	273.542	6.2768	0.18482	0.03250 0.001	270.083	0.141E-06 0.005	35.9
5078	13.592	273.158	6.2885	0.16398	0.03288 0.001	270.082	0.142E-06 0.005	35.7
5079	13.592	272.784	6.3003	0.14446	0.03287 0.001	270.080	0.141E-06 0.005	35.8
5080	13.591	272.433	6.3114	0.12618	0.03291 0.001	270.080	0.141E-06 0.007	35.9
5073	15.459	273.511	7.1204	0.19561	0.03447 0.000	270.069	0.124E-06 0.004	37.7
5074	15.457	273.131	7.1339	0.17418	0.03445 0.001	270.069	0.124E-06 0.005	37.7
5075	15.457	272.775	7.1470	0.15405	0.03443 0.001	270.068	0.124E-06 0.006	37.8
5076	15.455	272.432	7.1587	0.13530	0.03449 0.001	270.064	0.123E-06 0.007	38.0

5069	17.235	273.522	7.9007	0.20692	0.03598	0.000	270.075	0.116E-06	0.004	38.0
5070	17.232	273.142	7.9152	0.18494	0.03596	0.001	270.071	0.114E-06	0.005	38.7
5071	17.232	272.795	7.9246	0.16415	0.03597	0.001	270.073	0.113E-06	0.006	38.8
5072	17.231	272.474	7.9427	0.14455	0.03600	0.001	270.070	0.115E-06	0.007	38.2
5055	18.876	273.535	8.5992	0.21842	0.03732	0.000	270.078	0.105E-06	0.005	40.0
5066	18.875	272.999	8.6230	0.18491	0.03737	0.001	270.074	0.107E-06	0.005	39.4
5067	18.874	272.505	8.6449	0.15421	0.03740	0.001	270.073	0.107E-06	0.006	39.5
5068	18.873	272.055	8.6650	0.12628	0.03743	0.001	270.071	0.106E-06	0.009	39.6
5061	20.482	273.605	9.2572	0.23017	0.03867	0.000	270.093	0.100E-06	0.004	40.1
5062	20.481	273.074	9.2825	0.19576	0.03871	0.001	270.091	0.102E-06	0.003	39.6
5063	20.480	272.582	9.3059	0.16414	0.03875	0.001	270.092	0.102E-06	0.007	39.6
5064	20.479	272.133	9.3273	0.13526	0.03878	0.001	270.092	0.103E-06	0.008	39.5
5057	22.659	273.562	10.1164	0.24235	0.04052	0.001	270.079	0.926E-07	0.005	41.8
5058	22.658	273.037	10.1430	0.20701	0.04057	0.001	270.078	0.935E-07	0.008	41.5
5059	22.658	272.573	10.1674	0.17439	0.04059	0.001	270.076	0.932E-07	0.010	41.7
5060	22.657	272.143	10.1895	0.14460	0.04064	0.001	270.075	0.941E-07	0.013	41.3
5053	24.580	273.627	10.8305	0.25485	0.04177	0.000	270.087	0.863E-07	0.004	42.8
5054	24.581	273.114	10.8584	0.21852	0.04172	0.001	270.086	0.845E-07	0.006	43.6
5055	24.581	272.644	10.8845	0.18504	0.04208	0.001	270.083	0.890E-07	0.006	42.1
5056	24.583	272.213	10.9085	0.15432	0.04227	0.001	270.077	0.909E-07	0.006	41.6
5049	26.624	273.651	11.5519	0.26576	0.04345	0.001	270.076	0.872E-07	0.005	41.3
5050	26.626	273.161	11.5804	0.22874	0.04358	0.001	270.075	0.891E-07	0.006	40.7
5051	26.623	272.698	11.6058	0.19456	0.04377	0.001	270.073	0.913E-07	0.008	40.0
5052	26.623	272.291	11.6298	0.16312	0.04392	0.001	270.072	0.944E-07	0.009	39.0
5045	29.184	273.607	12.4025	0.27895	0.04544	0.001	270.069	0.809E-07	0.006	43.5
5046	29.182	273.124	12.4304	0.24098	0.04563	0.001	270.067	0.833E-07	0.006	42.5
5047	29.181	272.686	12.4561	0.20585	0.04584	0.001	270.065	0.862E-07	0.007	41.5
5048	29.181	272.285	12.4799	0.17344	0.04614	0.001	270.065	0.899E-07	0.008	40.2
5041	31.421	273.659	13.0910	0.29201	0.04715	0.001	270.077	0.792E-07	0.005	43.6
5042	31.420	273.187	13.1191	0.25317	0.04746	0.001	270.080	0.825E-07	0.005	42.4
5043	31.418	272.738	13.1456	0.21722	0.04767	0.001	270.078	0.851E-07	0.006	41.5
5044	31.415	272.336	13.1692	0.18396	0.04788	0.001	270.077	0.871E-07	0.008	40.9
5037	33.952	273.641	13.8223	0.30577	0.04941	0.000	270.085	0.779E-07	0.003	44.5
5038	34.227	273.171	13.9274	0.26603	0.04942	0.001	270.081	0.778E-07	0.006	44.1
5039	34.227	272.742	13.9537	0.22896	0.04986	0.001	270.079	0.820E-07	0.005	42.5
5040	34.226	272.354	13.9775	0.19470	0.05011	0.001	270.078	0.848E-07	0.006	41.5
5033	36.992	273.622	14.6336	0.31958	0.05075	0.001	270.058	0.705E-07	0.007	46.8
5034	36.992	273.178	14.6609	0.27884	0.05196	0.001	270.058	0.822E-07	0.005	42.1
5035	36.990	272.751	14.6870	0.24093	0.05210	0.001	270.058	0.841E-07	0.006	41.0
5036	36.986	272.358	14.7107	0.20581	0.05225	0.001	270.056	0.854E-07	0.008	40.9
5029	40.443	273.636	15.4732	0.33375	0.05398	0.000	270.083	0.774E-07	0.003	43.7
5030	40.441	273.191	15.5003	0.29216	0.05456	0.001	270.087	0.823E-07	0.004	42.0
5031	40.439	272.787	15.5252	0.25329	0.05471	0.001	270.085	0.836E-07	0.005	41.6
5032	40.438	272.398	15.5493	0.21729	0.05488	0.001	270.082	0.855E-07	0.006	40.8
5025	43.980	273.724	16.2527	0.34614	0.05650	0.001	270.068	0.764E-07	0.008	44.4
5027	43.977	272.862	16.3056	0.26587	0.05728	0.000	270.071	0.832E-07	0.004	41.8
5028	43.978	272.477	16.3299	0.22889	0.05745	0.000	270.070	0.853E-07	0.004	41.0
5026	44.691	273.293	16.4287	0.30559	0.05704	0.000	270.069	0.814E-07	0.004	41.7
5021	47.432	273.743	16.9530	0.36295	0.05914	0.000	270.078	0.776E-07	0.003	44.3
5022	47.430	273.176	16.9876	0.30553	0.05968	0.000	270.080	0.829E-07	0.004	42.1
5023	47.430	272.639	17.0208	0.25319	0.05988	0.001	270.076	0.848E-07	0.005	41.4
5024	47.430	272.155	17.0509	0.20577	0.06007	0.001	270.075	0.866E-07	0.007	40.8
5017	51.520	273.730	17.7136	0.37773	0.06246	0.000	270.086	0.821E-07	0.003	43.0
5018	51.520	273.170	17.7479	0.31928	0.06260	0.000	270.084	0.831E-07	0.004	42.6
5019	51.522	272.662	17.7791	0.26573	0.06285	0.001	270.084	0.861E-07	0.005	41.4
5020	51.524	272.184	17.8088	0.21706	0.06315	0.001	270.079	0.890E-07	0.007	40.4
5013	55.877	273.786	18.4477	0.40925	0.06541	0.000	270.091	0.765E-07	0.004	46.8
5014	56.588	273.229	18.5950	0.34824	0.06603	0.000	270.095	0.808E-07	0.004	44.5
5015	56.588	272.719	18.6256	0.29216	0.06626	0.001	270.095	0.820E-07	0.005	44.1
5016	56.586	272.248	18.6536	0.24097	0.06654	0.001	270.092	0.845E-07	0.007	43.1
5009	61.684	273.752	19.3355	0.42481	0.06888	0.000	270.076	0.798E-07	0.003	45.3
5010	61.679	273.220	19.3659	0.36261	0.06951	0.000	270.081	0.853E-07	0.004	43.2
5011	61.676	272.721	19.3948	0.30540	0.06967	0.001	270.081	0.858E-07	0.005	43.0
5012	61.670	272.273	19.4204	0.25306	0.06984	0.001	270.081	0.871E-07	0.007	42.6
5005	67.073	273.711	20.0777	0.44120	0.07237	0.000	270.081	0.794E-07	0.004	46.6
5006	67.072	273.180	20.1081	0.37783	0.07288	0.001	270.082	0.829E-07	0.005	45.2
5007	67.069	272.698	20.1354	0.31930	0.07326	0.001	270.083	0.855E-07	0.005	44.3
5008	67.059	272.266	20.1603	0.25565	0.07347	0.001	270.082	0.876E-07	0.006	43.4
5001	69.310	273.636	20.3691	0.44122	0.07409	0.001	270.083	0.822E-07	0.005	45.8

5002	69.310	273.115	20.3988	0.37787	0.07446	0.000	270.082	0.840E-07	0.004	45.3
5003	69.309	272.634	20.4261	0.31940	0.07468	0.001	270.081	0.847E-07	0.006	45.1
5004	69.303	272.212	20.4494	0.26571	0.07490	0.001	270.084	0.859E-07	0.007	44.7

Nominal Temperature 303. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
1213	1.935	304.078	0.7700	0.15154	0.02757 0.001	300.102	0.135E-05 0.008	27.1
1214	1.935	303.523	0.7715	0.11317	0.02747 0.001	300.103	0.131E-05 0.010	27.8
1215	1.935	303.006	0.7729	0.09616	0.02735 0.001	300.104	0.124E-05 0.011	29.1
1216	1.935	302.542	0.7741	0.08054	0.02742 0.001	300.104	0.129E-05 0.014	28.1
1209	3.330	304.051	1.3297	0.14130	0.02801 0.001	300.109	0.709E-06 0.006	29.8
1210	3.330	303.522	1.3322	0.12222	0.02805 0.001	300.109	0.721E-06 0.008	29.5
1211	3.330	303.035	1.3345	0.10452	0.02806 0.001	300.110	0.736E-06 0.009	28.9
1212	3.330	302.562	1.3367	0.08820	0.02808 0.001	300.109	0.741E-06 0.011	28.8
1205	4.305	303.882	1.7239	0.14131	0.02856 0.000	300.107	0.559E-06 0.005	29.7
1206	4.305	303.374	1.7271	0.12223	0.02847 0.001	300.106	0.546E-06 0.006	30.3
1205	4.305	302.902	1.7301	0.10453	0.02844 0.001	300.108	0.535E-06 0.008	30.9
1208	4.304	302.469	1.7326	0.08820	0.02847 0.001	300.107	0.548E-06 0.010	30.2
1201	5.700	303.933	2.2889	0.15137	0.02916 0.001	300.101	0.407E-06 0.005	31.0
1202	5.700	303.443	2.2931	0.13162	0.02914 0.001	300.099	0.407E-06 0.006	31.1
1203	5.700	302.970	2.2972	0.11111	0.02904 0.001	300.101	0.388E-06 0.006	32.3
1204	5.700	302.544	2.3009	0.09620	0.02905 0.001	300.100	0.394E-06 0.008	31.8
1197	6.169	303.875	2.4794	0.15140	0.02946 0.000	300.106	0.383E-06 0.004	30.8
1198	6.169	303.385	2.4840	0.13164	0.02945 0.001	300.105	0.382E-06 0.006	30.9
1199	6.169	302.933	2.4883	0.11323	0.02934 0.001	300.103	0.372E-06 0.007	31.5
1200	6.169	302.502	2.4924	0.09620	0.02928 0.001	300.104	0.366E-06 0.008	31.9
1193	7.829	303.909	3.1518	0.16165	0.03029 0.001	300.099	0.300E-06 0.006	31.5
1194	7.829	303.425	3.1578	0.14139	0.03033 0.001	300.098	0.301E-06 0.007	31.5
1195	7.829	302.986	3.1633	0.12229	0.03021 0.001	300.099	0.294E-06 0.009	32.1
1196	7.829	302.561	3.1686	0.10458	0.03014 0.001	300.096	0.286E-06 0.010	32.8
1189	9.975	303.894	4.0178	0.17265	0.03157 0.001	300.092	0.239E-06 0.005	32.2
1190	9.975	303.434	4.0253	0.15148	0.03143 0.001	300.092	0.232E-06 0.006	33.0
1191	9.975	302.990	4.0326	0.13169	0.03146 0.001	300.091	0.232E-06 0.007	33.0
1192	9.975	302.587	4.0392	0.11329	0.03140 0.001	300.090	0.227E-06 0.009	33.7
1185	11.735	303.940	4.7202	0.18383	0.03264 0.001	300.088	0.210E-06 0.005	32.3
1186	11.735	303.479	4.7293	0.16194	0.03258 0.001	300.088	0.206E-06 0.006	32.8
1187	11.735	303.052	4.7376	0.14147	0.03248 0.001	300.089	0.202E-06 0.007	33.3
1188	11.735	302.654	4.7455	0.12236	0.03241 0.001	300.085	0.198E-06 0.009	33.7
1181	13.399	303.736	5.3813	0.18387	0.03366 0.000	300.088	0.170E-06 0.004	35.9
1182	13.399	303.291	5.3913	0.16201	0.03364 0.001	300.086	0.168E-06 0.005	36.2
1177	13.429	303.723	5.3931	0.18280	0.03365 0.001	300.059	0.172E-06 0.005	34.1
1183	13.400	302.887	5.4008	0.14151	0.03363 0.001	300.087	0.166E-06 0.005	36.8
1178	13.429	303.284	5.4031	0.16195	0.03362 0.001	300.091	0.178E-06 0.005	34.2
1184	13.400	302.501	5.4096	0.12240	0.03353 0.001	300.085	0.159E-06 0.007	38.0
1179	13.429	302.877	5.4123	0.14146	0.03361 0.001	300.059	0.176E-06 0.005	34.4
1180	13.429	302.495	5.4211	0.12236	0.03355 0.001	300.059	0.173E-06 0.007	34.9
1173	15.703	303.738	6.2728	0.19512	0.03506 0.000	300.063	0.158E-06 0.004	34.3
1174	15.703	303.314	6.2842	0.17259	0.03508 0.001	300.062	0.160E-06 0.005	34.0
1175	15.703	302.890	6.2955	0.15143	0.03508 0.001	300.062	0.148E-06 0.006	36.7
1176	15.703	302.519	6.3054	0.13165	0.03507 0.001	300.063	0.149E-06 0.007	36.5
1169	17.767	303.771	7.0486	0.20696	0.03639 0.000	300.058	0.142E-06 0.004	35.2
1170	17.767	303.353	7.0612	0.18372	0.03634 0.001	300.061	0.140E-06 0.005	35.5
1171	17.767	302.762	7.0731	0.16187	0.03627 0.001	300.061	0.139E-06 0.006	35.7
1172	17.766	302.591	7.0842	0.14139	0.03647 0.001	300.059	0.146E-06 0.006	34.5
1165	19.586	303.834	7.7114	0.21913	0.03765 0.001	300.063	0.132E-06 0.005	35.8
1166	19.585	303.417	7.7251	0.19519	0.03761 0.001	300.065	0.131E-06 0.005	36.1
1167	19.585	303.034	7.7378	0.17265	0.03756 0.001	300.067	0.130E-06 0.005	36.1
1168	19.585	302.670	7.7497	0.15147	0.03762 0.001	300.066	0.132E-06 0.005	35.9
1161	21.742	303.860	8.4722	0.23164	0.03915 0.001	300.063	0.122E-06 0.005	36.6
1162	21.742	303.453	8.4869	0.20702	0.03907 0.001	300.062	0.120E-06 0.006	37.2
1163	21.741	303.076	8.5003	0.18378	0.03900 0.001	300.063	0.118E-06 0.006	37.5
1164	21.741	302.710	8.5136	0.16192	0.03887 0.001	300.064	0.114E-06 0.007	38.8
1157	24.081	303.675	9.2710	0.23169	0.04069 0.001	300.062	0.112E-06 0.005	38.0
1158	24.081	303.287	9.2862	0.20707	0.04067 0.001	300.063	0.111E-06 0.006	38.3
1159	24.081	302.926	9.3005	0.18382	0.04064 0.001	300.065	0.111E-06 0.007	38.3

1160	24.381	302.588	9.3138	0.16196	0.04057	0.001	300.067	0.108E-06	0.008	39.0
1153	26.286	303.713	9.9823	0.24456	0.04219	0.001	300.064	0.105E-06	0.005	39.0
1154	26.287	303.341	9.9980	0.21924	0.04219	0.001	300.067	0.105E-06	0.005	38.8
1155	26.287	302.981	10.0130	0.19530	0.04224	0.001	300.068	0.106E-06	0.006	38.8
1156	26.287	302.641	10.0273	0.17274	0.04218	0.001	300.069	0.104E-06	0.007	39.1
1149	28.854	303.928	10.7610	0.27126	0.04407	0.001	300.066	0.104E-06	0.004	38.4
1150	28.855	303.546	10.7780	0.24460	0.04392	0.001	300.070	0.999E-07	0.005	39.5
1151	28.856	303.188	10.7939	0.21927	0.04388	0.000	300.067	0.995E-07	0.003	39.6
1152	28.856	302.844	10.8092	0.19532	0.04391	0.000	300.064	0.993E-07	0.004	39.7
1145	31.379	303.906	11.4932	0.28058	0.04580	0.001	300.081	0.101E-06	0.005	35.5
1146	31.379	303.540	11.5100	0.25362	0.04568	0.001	300.085	0.987E-07	0.004	39.0
1147	31.380	303.194	11.5261	0.22802	0.04559	0.000	300.123	0.977E-07	0.004	39.3
1148	31.381	302.865	11.5414	0.20380	0.04569	0.000	300.118	0.992E-07	0.004	38.8
1141	34.311	303.728	12.2983	0.28064	0.04770	0.001	300.077	0.962E-07	0.005	39.3
1142	34.311	303.376	12.3157	0.25371	0.04774	0.000	300.078	0.955E-07	0.004	39.2
1137	34.417	303.684	12.3288	0.28044	0.04766	0.001	300.048	0.949E-07	0.005	39.6
1143	34.312	303.038	12.3319	0.22810	0.04766	0.001	300.075	0.951E-07	0.005	39.6
1138	34.417	303.330	12.3456	0.25351	0.04772	0.000	300.049	0.957E-07	0.004	39.3
1144	34.313	302.728	12.3469	0.20386	0.04770	0.000	300.078	0.958E-07	0.004	39.4
1139	34.417	302.999	12.3613	0.22793	0.04766	0.001	300.050	0.938E-07	0.005	40.0
1140	34.417	302.688	12.3762	0.20369	0.04766	0.001	300.049	0.933E-07	0.005	40.2
1133	37.437	303.684	13.0938	0.29450	0.04973	0.001	300.047	0.918E-07	0.006	40.4
1134	37.438	303.342	13.1106	0.26688	0.04966	0.001	300.046	0.900E-07	0.005	41.0
1135	37.436	303.025	13.1257	0.24060	0.04950	0.001	300.049	0.878E-07	0.005	41.8
1136	37.436	302.714	13.1409	0.21568	0.04976	0.001	300.049	0.906E-07	0.005	40.9
1129	40.520	303.701	13.8207	0.30887	0.05178	0.001	300.035	0.923E-07	0.006	39.8
1130	40.520	303.360	13.8376	0.28057	0.05179	0.001	300.034	0.926E-07	0.005	39.7
1131	40.519	303.050	13.8529	0.25361	0.05175	0.001	300.039	0.925E-07	0.006	39.6
1132	40.519	302.734	13.8686	0.22802	0.05176	0.001	300.037	0.916E-07	0.006	40.0
1125	44.021	303.702	14.5881	0.32361	0.05396	0.001	300.043	0.892E-07	0.005	40.8
1126	44.021	303.382	14.6042	0.29462	0.05407	0.001	300.043	0.905E-07	0.005	40.3
1127	44.022	303.063	14.6204	0.26698	0.05407	0.001	300.045	0.903E-07	0.006	40.4
1128	44.022	302.766	14.6354	0.24070	0.05404	0.001	300.043	0.895E-07	0.006	40.7
1121	48.285	303.688	15.4476	0.33872	0.05684	0.000	300.049	0.885E-07	0.004	41.3
1122	48.285	303.363	15.4640	0.30901	0.05678	0.001	300.048	0.874E-07	0.005	41.7
1123	48.285	303.051	15.4798	0.28069	0.05671	0.001	300.048	0.859E-07	0.005	42.3
1124	48.285	302.756	15.4948	0.25372	0.05677	0.001	300.049	0.857E-07	0.006	42.5
1117	52.074	303.691	16.1489	0.35417	0.05911	0.000	300.043	0.853E-07	0.003	42.8
1118	52.076	303.367	16.1655	0.32381	0.05915	0.000	300.043	0.845E-07	0.003	43.2
1119	52.077	303.072	16.1807	0.29480	0.05920	0.000	300.046	0.855E-07	0.003	42.8
1120	52.077	302.777	16.1957	0.26713	0.05916	0.000	300.045	0.835E-07	0.004	43.7
1113	56.558	303.707	16.9128	0.36989	0.06192	0.000	300.043	0.916E-07	0.003	40.5
1114	56.558	303.397	16.9284	0.33868	0.06184	0.000	300.047	0.893E-07	0.004	41.1
1115	56.558	303.100	16.9434	0.30922	0.06167	0.000	300.048	0.882E-07	0.004	41.4
1116	56.558	302.815	16.9579	0.28088	0.06170	0.000	300.047	0.874E-07	0.004	41.8
1109	61.446	303.669	17.6783	0.38616	0.06448	0.000	300.031	0.838E-07	0.004	44.0
1110	61.448	303.219	17.7011	0.33907	0.06446	0.000	300.032	0.852E-07	0.004	43.4
1111	61.449	302.793	17.7226	0.29499	0.06465	0.001	300.029	0.843E-07	0.005	43.9
1112	61.450	302.407	17.7423	0.25398	0.06492	0.001	300.031	0.858E-07	0.006	43.5
1105	64.016	303.724	18.0512	0.40252	0.06599	0.000	300.029	0.841E-07	0.003	44.1
1106	64.017	303.280	18.0735	0.35450	0.06606	0.000	300.028	0.841E-07	0.004	44.1
1107	64.018	302.851	18.0951	0.30944	0.06631	0.000	300.028	0.853E-07	0.004	43.8
1108	64.018	302.466	18.1145	0.26748	0.06631	0.001	300.030	0.845E-07	0.006	44.2

#### 4. Results for the 25% Nitrogen - 75% Oxygen Mixture.

A total of 864 points is given in table 3. The density reported in the table has been calculated using the DDMIX extended corresponding states correlation [15]. This mixture was gravimetrically prepared from nitrogen, oxygen, and argon with purities of better than 99.999%. The mixture has an actual composition of 24.967% nitrogen, 75.033% oxygen.

Empirical surface fit for the 25% nitrogen - 75% oxygen mixture.

```

FUNCTION TCN25(RHO,T)
  IMPLICIT DOUBLE PRECISION(A-H,O-Z)
  C   EMPIRICAL SURFACE FIT FOR THE 25% N2 - 75% O2 MIXTURE
  C   DILUTE GAS = A1+A2*T+A3*T**2
  C   EXCESS FUNCTION = B1*DEN+B2*DEN**2+B3*DEN**3+B4*DEN**4
  C   TEMPERATURE (K), DENSITY (MOL/L), THERMAL CONDUCTIVITY (W/M-K)
  DIMENSION A(3),B(4)
  DATA A/-1.51540D-3,.107915D-3,-.499459D-7/
  DATA B/.137768D-2,-.261038D-4,.369656D-5,-.144763D-7/
  TC0=A(1)+A(2)*T+A(3)*T**2.
  EXCESS=B(1)*RHO+B(2)*RHO**2.+B(3)*RHO**3.+B(4)*RHO**4.
  TCN25=TC0+EXCESS+CRITN25(RHO,T)
  RETURN
END

FUNCTION CRITN25(RHO,TEMP)
  IMPLICIT DOUBLE PRECISION(A-H,O-Z)
  C   CRITICAL = EXP(-X**2) - CENTERED ON CRITICAL DENSITY
  C   CRITICAL PARAMETERS ARE MOLE FRACTION AVERAGE OF PURE COMPONENTS
  C   TEMPERATURE (K), DENSITY (MOL/L), THERMAL CONDUCTIVITY (W/M-K)
  DIMENSION C(5)
  DATA C/.163566D0,-145.0,-.651545D-3,.247907D-5,.20000/
  TC=146.61D0
  RHOC=12.98D0
  T=TEMP
  DEN=RHO
  IF(T.LT.TC) T=TC+(TC-T)
  AMPL=C(1)/(T+C(2))+C(3)+C(4)*T
  IF (AMPL.LT.0.0) AMPL=0.000
  X1=C(5)*(DEN-RHOC)
  CRITN25=AMPL*DEXP(-(X1**2))
  IF (CRITN25.LT.0.000) CRITN25=0.000
  RETURN
END

```

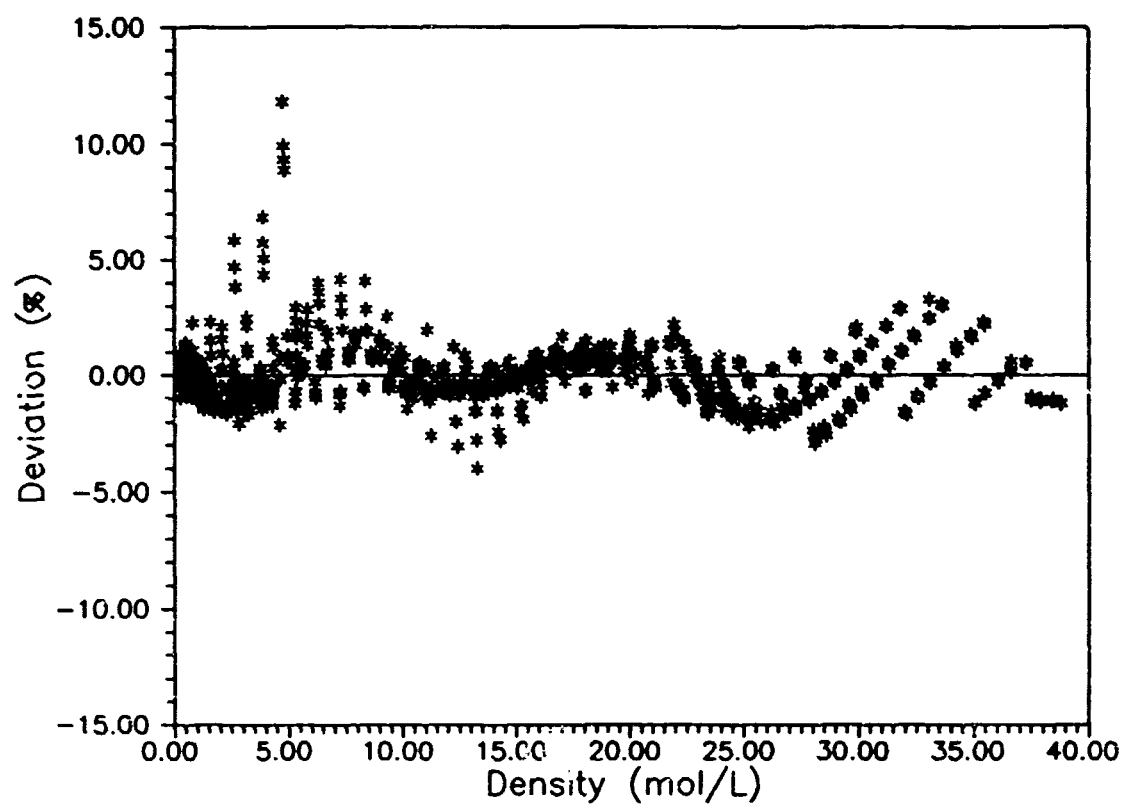


Figure 3. Deviations between the empirical thermal conductivity surface fit and the data for the 25% nitrogen - 75% oxygen mixture.



Table 3. The thermal conductivity, thermal diffusivity, and specific heat of the 25% nitrogen - 75% oxygen mixture

Nominal Temperature 102. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
5005	0.200	103.108	0.2437	0.03425	0.00937 0.002	99.952	0.277E-05 0.026	12.8
5006	0.200	102.632	0.2450	0.02916	0.00935 0.002	99.954	0.272E-05 0.027	12.9
5007	0.200	102.198	0.2462	0.02451	0.00929 0.003	99.954	0.270E-05 0.032	13.0
5008	0.200	101.800	0.2473	0.02028	0.00926 0.003	99.954	0.266E-05 0.039	13.1
5001	0.304	102.837	0.3806	0.03417	0.00963 0.002	99.955	0.148E-05 0.028	16.0
5002	0.304	102.404	0.3826	0.02910	0.00956 0.002	99.956	0.141E-05 0.028	16.6
5003	0.304	102.004	0.3845	0.02446	0.00951 0.003	99.957	0.137E-05 0.030	16.8
5004	0.304	101.639	0.3862	0.02025	0.00945 0.003	99.958	0.131E-05 0.036	17.5

Nominal Temperature 111. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
6013	0.232	112.270	0.2585	0.02777	0.01033 0.002	109.936	0.253E-05 0.030	14.8
6014	0.232	111.871	0.2595	0.02300	0.01030 0.003	109.938	0.258E-05 0.037	14.5
6015	0.232	111.511	0.2605	0.01868	0.01026 0.004	109.939	0.265E-05 0.048	14.0
6016	0.232	111.188	0.2613	0.01483	0.01024 0.006	109.940	0.278E-05 0.067	13.4
6009	0.378	112.077	0.4341	0.02773	0.01060 0.003	109.938	0.132E-05 0.030	17.5
6010	0.378	111.712	0.4359	0.02297	0.01053 0.003	109.941	0.131E-05 0.036	17.5
6011	0.378	111.380	0.4375	0.01866	0.01049 0.004	109.942	0.131E-05 0.047	17.3
6012	0.378	111.084	0.4389	0.01482	0.01046 0.006	109.944	0.139E-05 0.062	16.3
6005	0.528	111.916	0.6254	0.02770	0.01092 0.003	109.926	0.876E-06 0.034	19.0
6006	0.528	111.574	0.6280	0.02294	0.01081 0.003	109.929	0.816E-06 0.037	20.0
6008	0.528	111.266	0.6303	0.01864	0.01076 0.004	109.929	0.839E-06 0.045	19.3
6008	0.528	110.993	0.6324	0.01481	0.01072 0.006	109.931	0.848E-06 0.064	19.0
6001	0.642	111.823	0.7815	0.02769	0.01125 0.004	109.936	0.729E-06 0.043	19.1
6002	0.642	111.500	0.7848	0.02294	0.01109 0.004	109.937	0.663E-06 0.039	20.4
6003	0.642	111.210	0.7878	0.01864	0.01103 0.005	109.928	0.675E-06 0.048	19.8
6004	0.642	110.948	0.7905	0.01480	0.01094 0.006	109.938	0.660E-06 0.062	19.9

Nominal Temperature 121. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
7017	0.318	122.320	0.3262	0.03104	0.01142 0.002	119.986	0.187E-05 0.028	17.8
7018	0.318	121.928	0.3274	0.02571	0.01139 0.003	119.987	0.190E-05 0.035	17.5
7019	0.318	121.575	0.3285	0.02090	0.01137 0.004	119.990	0.195E-05 0.047	16.9
7020	0.318	121.256	0.3294	0.01660	0.01131 0.006	119.990	0.199E-05 0.065	16.5
7013	0.511	121.775	0.5419	0.02568	0.01164 0.003	119.990	0.102E-05 0.034	20.0
7014	0.511	121.447	0.5437	0.02087	0.01161 0.004	119.991	0.104E-05 0.046	19.6
7015	0.511	121.158	0.5453	0.01658	0.01156 0.006	119.992	0.107E-05 0.064	18.9
7016	0.511	120.897	0.5467	0.01279	0.01152 0.008	119.991	0.114E-05 0.093	17.7
7009	0.790	121.590	0.8792	0.02565	0.01205 0.004	119.988	0.566E-06 0.044	22.9
7010	0.790	121.296	0.8822	0.02086	0.01195 0.006	119.990	0.558E-06 0.057	22.9
7011	0.790	121.038	0.8849	0.01657	0.01196 0.008	119.989	0.606E-06 0.081	21.1
7012	0.790	120.803	0.8874	0.01278	0.01192 0.012	119.990	0.621E-06 0.121	20.5
7005	1.007	121.480	1.1692	0.02564	0.01253 0.005	119.991	0.422E-06 0.047	24.2
7006	1.007	121.206	1.1735	0.02085	0.01244 0.006	119.992	0.418E-06 0.061	24.1
7007	1.007	120.957	1.1774	0.01656	0.01238 0.008	119.993	0.434E-06 0.083	23.1
7008	1.007	120.753	1.1806	0.01278	0.01236 0.012	119.993	0.492E-06 0.123	20.3
7001	1.265	121.335	1.5576	0.02561	0.01327 0.005	119.982	0.296E-06 0.054	27.9
7002	1.265	121.094	1.5637	0.02083	0.01315 0.006	119.986	0.291E-06 0.063	27.9
7003	1.265	120.872	1.5693	0.01655	0.01305 0.009	119.987	0.299E-06 0.084	26.7
7004	1.265	120.676	1.5743	0.01277	0.01291 0.012	119.987	0.287E-06 0.120	27.2

Nominal Temperature 131. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
8025	0.337	131.572	0.3195	0.02827	0.01231 0.003	129.569	0.203E-05 0.035	18.2
8026	0.337	131.210	0.3204	0.02298	0.01227 0.004	129.570	0.204E-05 0.047	18.0
8027	0.337	130.881	0.3213	0.01826	0.01224 0.006	129.569	0.214E-05 0.065	17.2
8028	0.337	130.592	0.3221	0.01409	0.01222 0.008	129.571	0.233E-05 0.096	15.8
8021	0.602	131.386	0.5891	0.02825	0.01262 0.003	129.568	0.954E-06 0.034	21.4
8022	0.602	131.060	0.5909	0.02297	0.01259 0.004	129.569	0.978E-06 0.044	20.9
8023	0.602	130.766	0.5925	0.01825	0.01253 0.005	129.569	0.102E-05 0.060	19.8
8024	0.602	130.502	0.5940	0.01408	0.01257 0.008	129.570	0.113E-05 0.089	18.0
8017	0.887	131.256	0.9010	0.02823	0.01303 0.003	129.571	0.607E-06 0.035	22.7
8018	0.887	130.948	0.9039	0.02295	0.01300 0.004	129.573	0.626E-06 0.043	22.0
8019	0.887	130.680	0.9064	0.01824	0.01292 0.006	129.573	0.633E-06 0.058	21.5
8020	0.887	130.443	0.9087	0.01407	0.01288 0.008	129.569	0.674E-06 0.087	20.1
8013	1.149	131.116	1.2141	0.02821	0.01343 0.004	129.569	0.419E-06 0.042	25.1
8014	1.149	130.839	1.2180	0.02294	0.01335 0.006	129.572	0.414E-06 0.056	25.1
8015	1.149	130.583	1.2217	0.01823	0.01331 0.009	129.572	0.440E-06 0.077	23.6
8016	1.149	130.360	1.2249	0.01407	0.01330 0.011	129.572	0.488E-06 0.116	21.3
8009	1.364	130.761	1.4965	0.02293	0.01380 0.006	129.565	0.326E-06 0.055	27.0
8010	1.364	130.524	1.5011	0.01823	0.01371 0.008	129.566	0.334E-06 0.079	26.0
8011	1.364	130.311	1.5053	0.01407	0.01366 0.011	129.567	0.362E-06 0.114	24.0
8012	1.364	130.139	1.5087	0.01015	0.01366 0.018	129.566	0.410E-06 0.182	21.1
8005	1.762	130.619	2.0879	0.02292	0.01491 0.006	129.555	0.224E-06 0.059	31.1
8006	1.762	130.415	2.0951	0.01822	0.01482 0.008	129.556	0.226E-06 0.080	30.5
8007	1.762	130.210	2.1023	0.01406	0.01462 0.013	129.557	0.220E-06 0.119	30.4
8008	1.762	130.043	2.1082	0.01044	0.01471 0.019	129.559	0.265E-06 0.186	25.7
8001	2.059	130.515	2.6245	0.02291	0.01624 0.008	129.562	0.179E-06 0.071	34.9
8002	2.059	130.330	2.6345	0.01821	0.01606 0.009	129.565	0.181E-06 0.087	33.8
8003	2.059	130.155	2.6448	0.01406	0.01592 0.013	129.564	0.189E-06 0.123	31.8
8004	2.059	130.017	2.6527	0.01044	0.01592 0.021	129.564	0.230E-06 0.198	26.1

Nominal Temperature 141. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
9033	0.371	142.098	0.3243	0.03735	0.01334 0.003	139.678	0.185E-05 0.035	21.4
9034	0.371	141.691	0.3253	0.03096	0.01331 0.004	139.679	0.184E-05 0.045	21.5
9035	0.371	141.322	0.3262	0.02517	0.01328 0.005	139.681	0.182E-05 0.062	21.6
9036	0.371	140.989	0.3271	0.02000	0.01326 0.007	139.679	0.182E-05 0.085	21.6
9029	0.722	141.856	0.6520	0.03731	0.01373 0.003	139.679	0.824E-06 0.034	24.6
9030	0.722	141.487	0.6540	0.03093	0.01365 0.004	139.681	0.786E-06 0.044	25.5
9031	0.722	141.158	0.6559	0.02516	0.01363 0.005	139.682	0.782E-06 0.057	25.6
9032	0.722	140.860	0.6576	0.01999	0.01358 0.008	139.682	0.771E-06 0.081	25.8
9025	1.071	141.654	1.0033	0.03728	0.01411 0.004	139.676	0.492E-06 0.043	27.2
9026	1.071	141.321	1.0065	0.03091	0.01402 0.005	139.677	0.470E-06 0.055	28.2
9028	1.071	141.019	1.0074	0.02514	0.01402 0.007	139.679	0.470E-06 0.074	28.2
9027	1.071	140.752	1.0120	0.01998	0.01400 0.010	139.679	0.467E-06 0.103	28.4
9021	1.448	141.197	1.4219	0.03090	0.01464 0.006	139.679	0.330E-06 0.058	29.8
9022	1.448	140.921	1.4261	0.02513	0.01457 0.008	139.681	0.321E-06 0.074	30.4
9023	1.448	140.666	1.4301	0.01998	0.01453 0.011	139.682	0.321E-06 0.104	30.3
9024	1.448	140.443	1.4336	0.01542	0.01451 0.016	139.682	0.326E-06 0.155	29.7
9017	1.908	141.050	1.9906	0.03088	0.01559 0.006	139.675	0.229E-06 0.059	33.1
9018	1.908	140.799	1.9911	0.02512	0.01546 0.008	139.678	0.214E-06 0.078	34.7
9019	1.908	140.579	2.0029	0.01997	0.01541 0.011	139.680	0.217E-06 0.107	34.1
9020	1.908	140.365	2.0086	0.01542	0.01527 0.016	139.680	0.207E-06 0.154	35.1
9013	2.323	140.872	2.5901	0.03086	0.01649 0.007	139.677	0.151E-06 0.062	40.7
9014	2.323	140.653	2.5993	0.02511	0.01644 0.009	139.675	0.146E-06 0.082	41.8
9015	2.323	140.456	2.6076	0.01996	0.01636 0.012	139.676	0.140E-06 0.112	43.3
9016	2.323	140.264	2.6158	0.01541	0.01638 0.018	139.676	0.149E-06 0.162	40.9
9009	2.652	140.741	3.1493	0.03084	0.01776 0.007	139.672	0.115E-06 0.065	48.7
9010	2.652	140.549	3.1613	0.02510	0.01769 0.010	139.672	0.112E-06 0.084	49.7
9011	2.652	140.366	3.1729	0.01996	0.01751 0.014	139.671	0.102E-06 0.118	53.3
9012	2.652	140.214	3.1827	0.01541	0.01747 0.020	139.668	0.104E-06 0.170	52.0

9005	2.994	140.587	3.8661	0.03082	0.01965	0.009	139.667	0.873E-07	0.077	61.4
9006	2.994	140.417	3.8836	0.02508	0.01964	0.011	139.668	0.810E-07	0.093	64.5
9007	2.994	140.250	3.9011	0.01995	0.01939	0.015	139.668	0.738E-07	0.124	68.9
9008	2.994	140.137	3.9132	0.01540	0.01952	0.022	139.668	0.814E-07	0.188	63.2
9001	3.297	140.287	4.7427	0.02508	0.02272	0.013	139.676	0.556E-07	0.108	94.9
9002	3.297	140.166	4.7659	0.01994	0.02236	0.018	139.677	0.525E-07	0.141	96.8
9003	3.297	140.020	4.7948	0.01540	0.02227	0.025	139.676	0.529E-07	0.200	93.7
9004	3.297	139.925	4.8141	0.01144	0.02220	0.038	139.676	0.559E-07	0.307	87.4

Nominal Temperature 65. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
15013	12.498	65.040	37.5125	0.29825	0.18479 0.001	63.892	0.845E-07 0.006	61.4
15014	12.508	64.951	37.5246	0.27130	0.18502 0.001	63.892	0.850E-07 0.007	61.2
15015	12.517	64.866	37.5362	0.24571	0.18492 0.001	63.893	0.842E-07 0.008	61.7
15016	12.539	64.792	37.5469	0.22166	0.18530 0.001	63.895	0.880E-07 0.010	59.2
15009	22.483	65.005	37.9033	0.29788	0.18917 0.001	63.888	0.816E-07 0.006	66.2
15010	22.498	64.919	37.9146	0.27103	0.18957 0.001	63.889	0.834E-07 0.007	65.0
15011	22.513	64.838	37.9253	0.24548	0.18947 0.001	63.891	0.842E-07 0.009	64.2
15012	22.526	64.760	37.9356	0.22140	0.18973 0.001	63.892	0.807E-07 0.010	67.0
15005	37.211	65.014	38.4255	0.29778	0.19562 0.001	63.907	0.900E-07 0.006	63.7
15006	37.233	64.927	38.4365	0.27088	0.19586 0.001	63.908	0.904E-07 0.008	63.6
15007	37.247	64.841	38.4472	0.24535	0.19583 0.001	63.910	0.896E-07 0.008	63.9
15008	37.266	64.774	38.4557	0.22133	0.19610 0.001	63.910	0.900E-07 0.010	63.9
15001	48.339	64.947	38.7954	0.29705	0.19997 0.001	63.866	0.873E-07 0.007	68.2
15002	48.358	64.865	38.8053	0.27028	0.20007 0.001	63.867	0.870E-07 0.008	68.6
15003	48.375	64.793	38.8140	0.24484	0.20019 0.001	63.869	0.884E-07 0.009	67.5
15004	48.395	64.713	38.8237	0.22084	0.20035 0.001	63.870	0.862E-07 0.011	69.1

Nominal Temperature 81. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
10017	8.826	81.871	35.0397	0.43224	0.15852 0.001	80.401	0.817E-07 0.006	55.8
10018	8.844	81.725	35.0610	0.39318	0.15868 0.001	80.402	0.821E-07 0.006	55.6
10019	8.856	81.583	35.0812	0.35610	0.15881 0.001	80.402	0.824E-07 0.007	55.4
10020	8.868	81.452	35.0999	0.32121	0.15904 0.001	80.404	0.842E-07 0.008	54.3
10013	16.755	81.831	35.4653	0.43165	0.16368 0.001	80.405	0.846E-07 0.005	56.3
10014	16.761	81.688	35.4837	0.39284	0.16387 0.001	80.407	0.858E-07 0.007	55.6
10015	16.768	81.551	35.5015	0.35585	0.16406 0.001	80.407	0.853E-07 0.007	56.0
10016	16.776	81.424	35.5180	0.32096	0.16422 0.001	80.408	0.858E-07 0.007	55.7
10009	28.765	81.763	36.0475	0.43103	0.17101 0.001	80.401	0.865E-07 0.005	58.4
10010	28.778	81.622	36.0645	0.39212	0.17110 0.001	80.403	0.853E-07 0.006	59.2
10011	28.788	81.495	36.0796	0.35519	0.17118 0.001	80.403	0.860E-07 0.006	58.8
10012	28.801	81.371	36.0947	0.32040	0.17137 0.001	80.404	0.848E-07 0.008	59.7
10005	41.742	81.706	36.6005	0.43048	0.17808 0.001	80.385	0.941E-07 0.005	57.0
10006	41.758	81.574	36.6152	0.39167	0.17818 0.001	80.386	0.966E-07 0.006	55.6
10007	41.773	81.448	36.6292	0.35479	0.17822 0.001	80.386	0.956E-07 0.008	56.1
10008	41.788	81.329	36.6424	0.32004	0.17824 0.001	80.386	0.956E-07 0.009	56.1
10001	59.341	81.574	37.2652	0.42937	0.18646 0.001	80.329	0.904E-07 0.005	63.3
10002	59.334	81.453	37.2765	0.39069	0.18655 0.001	80.331	0.911E-07 0.006	62.8
10003	59.328	81.327	37.2884	0.35394	0.18668 0.001	80.331	0.908E-07 0.007	63.1
10004	59.320	81.213	37.2991	0.31929	0.18667 0.001	80.334	0.900E-07 0.009	63.5

Nominal Temperature 101. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
11025	7.221	101.866	31.9644	0.44063	0.12984 0.001	100.027	0.715E-07 0.006	56.3
11026	7.234	101.670	31.9969	0.39498	0.13007 0.001	100.028	0.732E-07 0.007	55.1
11027	7.254	101.482	32.0287	0.35196	0.13028 0.001	100.028	0.744E-07 0.007	54.3
11028	7.265	101.303	32.0582	0.31150	0.13045 0.001	100.027	0.739E-07 0.009	54.7

11021	13.737	101.998	32.5200	0.48817	0.13591	0.001	100.027	0.760E-07	0.005	55.8
11022	13.750	101.798	32.5500	0.44029	0.13610	0.001	100.028	0.770E-07	0.006	55.2
11023	13.760	101.602	32.5794	0.39471	0.13634	0.001	100.029	0.769E-07	0.007	55.3
11024	13.770	101.419	32.6068	0.35172	0.13645	0.001	100.031	0.767E-07	0.008	55.5
11017	20.728	101.914	33.0727	0.48781	0.14198	0.001	100.026	0.783E-07	0.005	57.0
11018	20.739	101.724	33.0989	0.44000	0.14220	0.001	100.028	0.800E-07	0.006	55.8
11019	20.752	101.536	33.1251	0.39446	0.14234	0.001	100.029	0.794E-07	0.007	56.3
11020	20.763	101.363	33.1490	0.35155	0.14258	0.001	100.028	0.799E-07	0.008	56.0
11013	29.498	101.841	33.6772	0.48747	0.14889	0.001	100.033	0.826E-07	0.006	56.9
11014	29.508	101.652	33.7012	0.43971	0.14909	0.001	100.034	0.823E-07	0.006	57.3
11015	29.517	101.473	33.7237	0.39424	0.14932	0.001	100.035	0.826E-07	0.007	57.2
11016	29.525	101.305	33.7449	0.35134	0.14941	0.001	100.036	0.823E-07	0.009	57.4
11009	38.953	102.060	34.2185	0.53815	0.15580	0.001	100.054	0.899E-07	0.005	55.4
11010	38.953	101.867	34.2405	0.48747	0.15574	0.001	100.057	0.908E-07	0.005	54.8
11011	38.958	101.677	34.2625	0.43973	0.15587	0.001	100.057	0.902E-07	0.006	55.2
11012	38.964	101.506	34.2824	0.39427	0.15603	0.001	100.057	0.924E-07	0.007	53.9
11005	51.063	101.974	34.8694	0.53750	0.16343	0.001	100.053	0.921E-07	0.006	57.2
11006	51.079	101.783	34.8904	0.48690	0.16353	0.001	100.054	0.916E-07	0.007	57.5
11007	51.096	101.607	34.9097	0.43923	0.16367	0.001	100.055	0.929E-07	0.008	56.8
11008	51.106	101.439	34.9278	0.39583	0.16373	0.001	100.056	0.930E-07	0.009	56.6
11001	63.496	102.037	35.4457	0.58979	0.17061	0.001	100.009	0.930E-07	0.006	59.6
11002	63.496	101.845	35.4644	0.53664	0.17074	0.001	100.010	0.929E-07	0.007	59.7
11003	63.495	101.666	35.4818	0.48619	0.17085	0.001	100.010	0.938E-07	0.008	59.1
11004	63.495	101.496	35.4984	0.43866	0.17090	0.001	100.010	0.934E-07	0.009	59.4

Nominal Temperature 121. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
12041	4.275	121.298	27.9965	0.26020	0.09876 0.002	119.851	0.553E-07 0.013	61.4
12042	4.281	121.079	28.0456	0.22171	0.09887 0.002	119.852	0.544E-07 0.016	62.3
12043	4.286	120.881	28.0898	0.18634	0.09883 0.002	119.854	0.545E-07 0.020	62.1
12044	4.290	120.703	28.1291	0.15412	0.09925 0.003	119.854	0.548E-07 0.027	62.0
12037	6.941	121.485	28.4669	0.30178	0.10236 0.001	119.857	0.582E-07 0.011	60.2
12038	6.941	121.259	28.5117	0.26012	0.10255 0.002	119.858	0.579E-07 0.013	60.5
12039	6.941	121.047	28.5536	0.22165	0.10272 0.002	119.858	0.580E-07 0.016	60.5
12040	6.941	120.856	28.5914	0.18630	0.10282 0.003	119.858	0.588E-07 0.021	59.6
12033	10.802	121.404	29.1079	0.30097	0.10758 0.001	119.844	0.622E-07 0.012	59.0
12034	10.810	121.187	29.1471	0.25949	0.10777 0.002	119.846	0.622E-07 0.014	59.0
12035	10.818	120.981	29.1845	0.22113	0.10794 0.002	119.847	0.625E-07 0.018	58.9
12036	10.824	120.803	29.2169	0.18588	0.10816 0.003	119.847	0.619E-07 0.022	59.5
12029	14.662	121.811	29.5741	0.39363	0.11195 0.001	119.842	0.644E-07 0.007	59.3
12030	14.670	121.571	29.6142	0.34574	0.11212 0.001	119.843	0.650E-07 0.008	58.8
12031	14.678	121.347	29.6515	0.30106	0.11227 0.001	119.846	0.650E-07 0.009	58.8
12032	14.684	121.133	29.6870	0.25955	0.11245 0.001	119.845	0.645E-07 0.010	59.4
12025	19.265	121.990	30.1052	0.44446	0.11690 0.001	119.844	0.681E-07 0.006	58.7
12026	19.274	121.738	30.1439	0.39339	0.11703 0.001	119.847	0.672E-07 0.006	59.4
12027	19.285	121.511	30.1791	0.34557	0.11720 0.001	119.847	0.677E-07 0.008	59.0
12028	19.291	121.294	30.2119	0.30092	0.11736 0.001	119.847	0.676E-07 0.009	59.2
12021	24.989	121.906	30.7212	0.44413	0.12266 0.001	119.848	0.711E-07 0.006	59.0
12022	24.996	121.669	30.7545	0.39317	0.12282 0.001	119.851	0.708E-07 0.006	59.2
12023	25.001	121.441	30.7862	0.34539	0.12303 0.001	119.851	0.700E-07 0.008	59.9
12024	25.005	121.233	30.8150	0.30078	0.12315 0.001	119.850	0.704E-07 0.009	59.6
12017	31.079	122.087	31.2596	0.49799	0.12826 0.001	119.845	0.790E-07 0.005	55.7
12018	31.089	121.839	31.2920	0.44384	0.12842 0.001	119.847	0.788E-07 0.006	55.8
12019	31.099	121.613	31.3214	0.39291	0.12860 0.001	119.847	0.799E-07 0.007	55.1
12020	31.102	121.394	31.3495	0.34515	0.12876 0.001	119.847	0.803E-07 0.008	54.9
12013	37.607	121.981	31.3074	0.49774	0.13390 0.001	119.832	0.798E-07 0.005	57.6
12014	37.619	121.748	31.8359	0.44364	0.13408 0.001	119.835	0.806E-07 0.006	57.1
12015	37.627	121.530	31.8624	0.39273	0.13425 0.001	119.835	0.808E-07 0.007	57.0
12016	37.636	121.324	31.8875	0.34501	0.13432 0.001	119.835	0.808E-07 0.008	57.0
12009	45.436	121.892	32.3878	0.49750	0.14022 0.001	119.829	0.824E-07 0.005	58.7
12010	45.444	121.667	32.4153	0.44341	0.14032 0.001	119.831	0.822E-07 0.006	58.8
12011	45.449	121.454	32.4374	0.39258	0.14045 0.001	119.831	0.819E-07 0.007	59.0
12012	45.455	121.255	32.4598	0.34489	0.14059 0.001	119.833	0.815E-07 0.009	59.2
12005	55.994	122.047	33.0498	0.55722	0.1761 0.000	119.839	0.850E-07 0.004	60.0
12006	56.017	121.802	33.0763	0.49763	0.14906 0.001	119.840	0.852E-07 0.006	60.7

12007	56.024	121.593	33.0984	0.44322	0.14815	0.001	119.836	0.850E-07	0.007	60.2
12008	56.027	121.386	33.1198	0.39243	0.14828	0.001	119.839	0.843E-07	0.008	60.7
12001	66.115	122.186	33.6134	0.61703	0.15428	0.000	119.836	0.873E-07	0.004	61.3
12002	66.118	121.958	33.6356	0.55678	0.15445	0.001	119.841	0.874E-07	0.005	61.2
12003	66.115	121.735	33.6569	0.49936	0.15457	0.001	119.842	0.858E-07	0.005	62.4
12004	66.118	121.532	33.6767	0.44517	0.15475	0.001	119.842	0.863E-07	0.006	62.1

Nominal Temperature 141. K

Run Pt.	Pressure Mpa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m**2/s DSTAT	Specific Heat J/(mol.K)
13073	4.056	140.571	21.9423	0.09738	0.06835 0.004	139.833	0.320E-07 0.033	93.1
13074	4.057	140.499	21.9824	0.08697	0.06829 0.005	139.835	0.311E-07 0.038	95.4
13075	4.058	140.427	22.0210	0.07715	0.06826 0.006	139.834	0.317E-07 0.046	93.4
13076	4.059	140.337	22.0688	0.06794	0.06837 0.007	139.836	0.324E-07 0.053	91.5
13069	4.580	140.682	22.3762	0.11410	0.06979 0.004	139.830	0.341E-07 0.028	87.2
13070	4.580	140.555	22.4342	0.09737	0.06990 0.004	139.833	0.341E-07 0.034	87.2
13071	4.583	140.455	22.4824	0.08199	0.06992 0.006	139.832	0.350E-07 0.043	84.6
13072	4.585	140.358	22.5275	0.06795	0.06981 0.007	139.831	0.345E-07 0.056	85.5
13065	5.319	140.810	22.8777	0.13217	0.07164 0.003	139.833	0.372E-07 0.023	79.9
13066	5.319	140.675	22.9305	0.11409	0.07160 0.004	139.834	0.366E-07 0.027	80.8
13067	5.319	140.560	22.9753	0.09739	0.07171 0.005	139.836	0.370E-07 0.035	80.0
13068	5.319	140.439	23.0216	0.08200	0.07178 0.006	139.835	0.378E-07 0.044	78.4
13061	6.426	140.879	23.5108	0.14490	0.07422 0.002	139.837	0.399E-07 0.017	75.2
13062	6.427	140.705	23.5688	0.11774	0.07405 0.003	139.838	0.385E-07 0.021	77.5
13063	6.428	140.543	23.6225	0.09735	0.07441 0.004	139.839	0.398E-07 0.030	75.3
13064	6.428	140.390	23.6722	0.07715	0.07427 0.005	139.840	0.407E-07 0.041	73.3
13057	7.642	140.860	24.0937	0.14487	0.07692 0.002	139.841	0.424E-07 0.016	72.0
13058	7.644	140.596	24.1416	0.11992	0.07683 0.003	139.844	0.433E-07 0.022	70.1
13059	7.645	140.522	24.1920	0.09734	0.07712 0.004	139.844	0.436E-07 0.030	70.0
13060	7.646	140.373	24.2347	0.07715	0.07716 0.006	139.844	0.453E-07 0.044	67.3
13053	9.034	141.128	24.5690	0.18675	0.07958 0.002	139.847	0.472E-07 0.013	66.0
13054	9.037	140.881	24.6337	0.15146	0.07967 0.002	139.849	0.460E-07 0.016	67.7
13055	9.039	140.677	24.6868	0.11990	0.07966 0.003	139.849	0.464E-07 0.023	66.8
13056	9.042	140.490	24.7355	0.09206	0.07985 0.004	139.849	0.475E-07 0.035	65.5
13049	10.442	141.080	25.0543	0.18674	0.08205 0.002	139.837	0.475E-07 0.013	66.7
13050	10.445	140.853	25.1086	0.15145	0.08213 0.002	139.839	0.472E-07 0.017	67.0
13051	10.446	140.635	25.1600	0.11990	0.08234 0.003	139.839	0.474E-07 0.025	66.9
13052	10.448	140.444	25.2050	0.09206	0.08232 0.004	139.840	0.469E-07 0.034	67.5
13045	12.560	141.298	25.6127	0.22573	0.08544 0.001	139.844	0.511E-07 0.011	63.8
13046	12.563	141.049	25.6659	0.18670	0.08551 0.002	139.847	0.509E-07 0.013	63.9
13047	12.565	140.817	25.7152	0.15143	0.08582 0.002	139.846	0.512E-07 0.018	63.9
13048	12.568	140.612	25.7589	0.11989	0.08592 0.003	139.844	0.512E-07 0.025	63.9
13041	14.896	141.250	26.1899	0.22569	0.03906 0.001	139.842	0.540E-07 0.011	62.4
13042	14.898	141.095	26.2373	0.18667	0.08911 0.002	139.844	0.530E-07 0.014	63.4
13043	14.901	140.784	26.2801	0.15141	0.08929 0.002	139.844	0.525E-07 0.018	64.0
13044	14.902	140.584	26.3185	0.11988	0.08938 0.003	139.844	0.526E-07 0.027	63.9
13037	17.370	141.469	26.6692	0.26841	0.09243 0.001	139.848	0.568E-07 0.009	61.1
13038	17.372	141.215	26.7147	0.22563	0.09253 0.001	139.850	0.566E-07 0.011	61.3
13039	17.375	140.979	26.7568	0.18664	0.09258 0.002	139.851	0.567E-07 0.014	61.1
13040	17.376	140.759	26.7957	0.15140	0.09285 0.002	139.851	0.553E-07 0.018	62.9
13033	20.413	141.674	27.1935	0.31483	0.09616 0.001	139.840	0.584E-07 0.008	61.3
13034	20.416	141.407	27.2375	0.26832	0.09637 0.001	139.840	0.584E-07 0.009	61.5
13035	20.419	141.156	27.2788	0.22556	0.09652 0.001	139.842	0.579E-07 0.012	62.1
13036	20.421	140.929	27.3159	0.18659	0.09662 0.002	139.846	0.562E-07 0.015	63.9
13029	24.147	141.632	27.7956	0.31487	0.10071 0.001	139.830	0.694E-07 0.008	53.8
13030	24.152	141.372	27.8352	0.26834	0.10085 0.001	139.834	0.702E-07 0.010	53.3
13031	24.156	141.137	27.8711	0.22558	0.10099 0.001	139.834	0.715E-07 0.012	52.3
13032	24.159	140.917	27.9044	0.18660	0.10116 0.002	139.837	0.729E-07 0.016	51.4
13025	28.029	141.565	28.3459	0.31477	0.10498 0.001	139.834	0.715E-07 0.008	54.3
13026	28.032	141.318	28.3808	0.26827	0.10516 0.001	139.836	0.732E-07 0.011	53.1
13027	28.033	141.080	28.4139	0.22552	0.10528 0.002	139.836	0.727E-07 0.013	53.4
13028	28.034	140.877	28.4424	0.18557	0.10548 0.002	139.833	0.751E-07 0.017	51.8
13021	32.720	141.790	28.8918	0.36482	0.10963 0.001	139.857	0.753E-07 0.010	53.7
13022	32.726	141.530	28.9262	0.31456	0.10983 0.001	139.860	0.764E-07 0.012	53.0
13023	32.729	141.282	28.9587	0.26810	0.10995 0.002	139.860	0.773E-07 0.015	52.4
13024	32.732	141.063	28.9875	0.22542	0.11016 0.002	139.860	0.788E-07 0.020	51.5

13017	37.794	141.726	29.4514	0.36471	0.11460	0.001	139.860	0.794E-07	0.010	53.2
13018	37.798	141.471	29.4828	0.31449	0.11475	0.001	139.862	0.802E-07	0.013	52.7
13019	37.803	141.236	29.5118	0.26806	0.11486	0.002	139.864	0.300E-07	0.016	52.8
13020	37.807	141.027	29.5376	0.22538	0.11505	0.002	139.863	0.807E-07	0.020	51.2
13013	43.767	141.916	30.0063	0.41846	0.11979	0.001	139.868	0.816E-07	0.008	54.1
13014	43.772	141.649	30.0371	0.36451	0.12002	0.001	139.868	0.805E-07	0.010	54.9
13015	43.775	141.407	30.0649	0.31432	0.12011	0.002	139.868	0.814E-07	0.013	54.3
13016	43.776	141.183	30.0904	0.26792	0.12023	0.002	139.868	0.819E-07	0.016	54.0
13009	49.751	141.829	30.5337	0.41822	0.12493	0.001	139.856	0.835E-07	0.009	55.1
13010	49.761	141.572	30.5621	0.36427	0.12510	0.001	139.857	0.827E-07	0.011	55.6
13011	49.768	141.348	30.5867	0.31415	0.12528	0.002	139.858	0.853E-07	0.013	54.0
13012	49.771	141.126	30.6109	0.26773	0.12543	0.002	139.858	0.843E-07	0.017	54.7
13005	56.353	141.965	31.1829	0.47563	0.13157	0.001	139.830	0.858E-07	0.006	56.6
13005	58.362	141.704	31.2098	0.41790	0.13174	0.001	139.832	0.848E-07	0.007	57.3
13007	58.366	141.469	31.2336	0.36403	0.13188	0.001	139.832	0.856E-07	0.008	56.8
13008	58.366	141.243	31.2563	0.31396	0.13210	0.001	139.831	0.861E-07	0.010	56.4
13001	67.094	142.136	31.7657	0.53680	0.13787	0.001	139.835	0.875E-07	0.005	58.2
13002	67.094	141.872	31.7907	0.47535	0.13805	0.001	139.835	0.868E-07	0.006	58.7
13004	67.092	141.630	31.8134	0.41769	0.13818	0.001	139.835	0.866E-07	0.010	58.8
13004	67.092	141.397	31.8355	0.36389	0.13839	0.001	139.836	0.868E-07	0.009	58.7

Nominal Temperature 162. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m**2/s DSTAT	Specific Heat J/(mol.K)
1123	0.710	162.715	0.5459	0.03655	0.01545 0.004	160.805	0.124E-05 0.042	22.1
1134	0.710	162.363	0.5473	0.02974	0.01542 0.005	160.804	0.125E-05 0.052	21.9
1135	0.710	162.050	0.5485	0.02365	0.01540 0.007	160.806	0.133E-05 0.077	20.5
1136	0.710	161.770	0.5495	0.01825	0.01538 0.010	160.806	0.145E-05 0.111	18.8
1129	1.181	162.555	0.9364	0.03653	0.01585 0.004	160.805	0.672E-06 0.039	24.1
1130	1.181	162.229	0.9387	0.02973	0.01582 0.005	160.808	0.682E-06 0.054	23.8
1131	1.181	161.944	0.9408	0.02364	0.01583 0.007	160.807	0.747E-06 0.073	21.7
1132	1.181	161.680	0.9427	0.01825	0.01577 0.010	160.809	0.799E-06 0.110	20.2
1125	1.566	162.452	1.2737	0.03653	0.01624 0.004	160.804	0.476E-06 0.038	25.6
1126	1.566	162.152	1.2768	0.02973	0.01623 0.005	160.804	0.498E-06 0.050	24.5
1127	1.566	161.830	1.2796	0.02364	0.01619 0.007	160.809	0.525E-06 0.072	23.1
1128	1.566	161.634	1.2823	0.01825	0.01615 0.010	160.809	0.555E-06 0.107	21.8
1121	2.038	162.335	1.7140	0.03651	0.01685 0.004	160.801	0.350E-06 0.039	26.8
1122	2.038	162.056	1.7183	0.02971	0.01680 0.005	160.801	0.358E-06 0.052	26.1
1123	2.038	161.803	1.7223	0.02363	0.01674 0.007	160.803	0.373E-06 0.074	25.0
1124	2.038	161.579	1.7258	0.01825	0.01675 0.010	160.804	0.417E-06 0.104	22.3
1117	2.597	162.208	2.2806	0.03651	0.01767 0.004	160.803	0.252E-06 0.039	29.5
1118	2.597	161.947	2.2868	0.02971	0.01759 0.005	160.802	0.254E-06 0.050	29.0
1119	2.597	161.717	2.2922	0.02362	0.01752 0.007	160.800	0.268E-06 0.072	27.3
1120	2.597	161.516	2.2970	0.01824	0.01748 0.011	160.800	0.292E-06 0.103	24.9
1113	3.054	162.112	2.7885	0.03650	0.01851 0.004	160.800	0.206E-06 0.040	31.1
1114	3.054	161.867	2.7964	0.02971	0.01841 0.005	160.800	0.205E-06 0.051	30.9
1115	3.054	161.652	2.8034	0.02362	0.01837 0.008	160.800	0.210E-06 0.073	30.0
1116	3.054	161.457	2.8099	0.01824	0.01812 0.011	160.800	0.210E-06 0.106	29.3
1109	3.443	161.994	3.2604	0.03648	0.01912 0.007	160.809	0.153E-06 0.060	36.8
1110	3.443	161.767	3.2700	0.02969	0.01909 0.009	160.813	0.155E-06 0.080	36.0
1111	3.443	161.572	3.2783	0.02362	0.01909 0.012	160.811	0.164E-06 0.113	34.2
1112	3.443	161.380	3.2866	0.01824	0.01914 0.018	160.811	0.175E-06 0.165	32.3
1105	3.802	161.913	3.7323	0.03648	0.01999 0.007	160.806	0.130E-06 0.060	39.7
1106	3.802	161.711	3.7433	0.02969	0.01993 0.009	160.806	0.136E-06 0.075	37.8
1107	3.802	161.528	3.7533	0.02361	0.01990 0.012	160.808	0.142E-06 0.110	36.2
1108	3.802	161.347	3.7632	0.01823	0.01983 0.018	160.810	0.143E-06 0.162	35.6
1101	4.204	161.800	4.3148	0.03647	0.02117 0.005	160.805	0.913E-07 0.046	52.7
1102	4.204	161.619	4.3278	0.02969	0.02112 0.010	160.806	0.896E-07 0.082	53.5
1103	4.204	161.433	4.3413	0.02362	0.02095 0.013	160.803	0.805E-07 0.112	58.6
1104	4.204	161.288	4.3519	0.01824	0.02096 0.019	160.808	0.811E-07 0.164	58.2
1097	4.792	161.672	5.2961	0.03646	0.02329 0.006	160.795	0.742E-07 0.049	59.3
1098	4.792	161.515	5.3136	0.02968	0.02319 0.007	160.797	0.718E-07 0.061	60.7
1100	4.792	161.354	5.3317	0.02361	0.02305 0.010	160.797	0.680E-07 0.084	63.3
1100	4.792	161.191	5.3504	0.01823	0.02314 0.016	160.797	0.662E-07 0.129	65.3
1093	5.287	161.566	6.2913	0.03647	0.02575 0.009	160.795	0.625E-07 0.074	67.1
1094	5.287	161.419	6.3157	0.02969	0.02571 0.011	160.796	0.644E-07 0.093	64.6

1095	5.257	161.301	6.3557	0.02362	0.02564	0.016	160.793	0.647E-07	0.134	64.1
1096	5.267	161.148	6.3619	0.01824	0.02548	0.024	160.793	0.647E-07	0.194	65.0
1099	5.690	161.467	7.2664	0.03646	0.02837	0.007	160.791	0.489E-07	0.057	83.4
1090	5.608	161.350	7.2908	0.02968	0.02823	0.009	160.791	0.495E-07	0.075	81.5
1091	5.688	161.231	7.3196	0.02361	0.02816	0.013	160.792	0.495E-07	0.101	81.9
1092	5.688	161.081	7.3567	0.01824	0.02806	0.019	160.792	0.497E-07	0.152	79.1
1085	6.063	161.376	8.3510	0.03645	0.03174	0.011	160.791	0.405E-07	0.086	100.9
1096	6.063	161.245	8.3957	0.02968	0.03154	0.015	160.793	0.401E-07	0.114	99.8
1087	6.073	161.173	8.4207	0.02361	0.03136	0.020	160.793	0.392E-07	0.151	101.0
1088	6.053	161.058	8.4612	0.01824	0.03149	0.030	160.792	0.441E-07	0.231	89.3
1081	6.345	161.293	9.3137	0.03644	0.03461	0.012	160.790	0.305E-07	0.093	132.0
1082	6.345	161.207	9.352	0.02967	0.03434	0.015	160.792	0.290E-07	0.112	136.2
1083	6.345	161.109	9.3975	0.02361	0.03404	0.022	160.792	0.273E-07	0.159	141.1
1084	6.345	160.997	9.4489	0.01824	0.03418	0.032	160.792	0.316E-07	0.236	120.9
1077	6.547	161.246	10.0696	0.02339	0.03671	0.013	160.804	0.327E-07	0.099	121.3
1078	6.547	161.150	10.1197	0.02964	0.03651	0.017	160.789	0.318E-07	0.127	122.3
1079	6.547	161.071	10.1618	0.02358	0.03652	0.024	160.784	0.332E-07	0.178	116.4
1080	6.547	161.018	10.1903	0.01822	0.03641	0.035	160.783	0.385E-07	0.264	99.4
1073	6.822	161.292	11.0902	0.04390	0.04074	0.009	160.787	0.299E-07	0.065	136.9
1074	6.822	161.199	11.1465	0.03644	0.04021	0.010	160.787	0.278E-07	0.073	142.6
1075	6.822	161.117	11.1974	0.02967	0.03994	0.013	160.787	0.274E-07	0.095	142.2
1076	6.822	161.040	11.2456	0.02361	0.03954	0.017	160.788	0.258E-07	0.122	146.8
1069	7.119	161.258	12.2444	0.04389	0.04413	0.010	160.787	0.277E-07	0.071	145.2
1070	7.119	161.186	12.2931	0.03643	0.04359	0.011	160.791	0.277E-07	0.080	141.4
1071	7.119	161.114	12.3426	0.02966	0.04307	0.014	160.795	0.275E-07	0.101	138.8
1072	7.119	160.991	12.4271	0.02360	0.04290	0.019	160.797	0.274E-07	0.137	133.8
1065	7.361	161.227	13.1454	0.03387	0.04553	0.009	160.800	0.253E-07	0.068	146.8
1066	7.361	161.177	13.1802	0.03641	0.04534	0.011	160.802	0.255E-07	0.081	146.8
1067	7.361	161.077	13.2505	0.02965	0.04499	0.014	160.804	0.248E-07	0.104	146.0
1068	7.361	161.011	13.2968	0.02359	0.04457	0.021	160.802	0.250E-07	0.148	142.0
1051	7.671	161.332	14.0974	0.05202	0.04803	0.008	160.807	0.288E-07	0.060	128.2
1062	7.671	161.234	14.1643	0.04387	0.04731	0.009	160.810	0.268E-07	0.069	132.4
1063	7.671	161.158	14.2097	0.03641	0.04702	0.012	160.809	0.259E-07	0.084	135.1
1064	7.671	161.036	14.3010	0.02965	0.04766	0.015	160.809	0.273E-07	0.112	125.8
1057	8.033	161.321	15.1433	0.05199	0.04958	0.008	160.822	0.300E-07	0.057	114.2
1058	8.033	161.235	15.1984	0.04385	0.04896	0.009	160.821	0.291E-07	0.064	114.7
1059	8.033	161.149	15.2547	0.03641	0.04925	0.011	160.820	0.329E-07	0.086	101.8
1060	8.033	161.061	15.3115	0.02965	0.04906	0.015	160.820	0.359E-07	0.117	91.8
1053	8.376	161.376	15.9383	0.06084	0.05127	0.006	160.810	0.283E-07	0.046	117.1
1054	8.376	161.281	15.9953	0.05199	0.05101	0.007	160.810	0.271E-07	0.054	120.5
1055	8.376	161.214	16.0352	0.04385	0.05063	0.009	160.810	0.265E-07	0.066	121.1
1056	8.376	161.100	16.1035	0.03640	0.05068	0.012	160.811	0.296E-07	0.087	107.9
1049	8.960	161.453	17.0359	0.07038	0.05346	0.005	160.815	0.307E-07	0.041	102.6
1050	8.960	161.351	17.0888	0.06083	0.05311	0.006	160.815	0.297E-07	0.047	104.4
1051	8.960	161.289	17.1211	0.05199	0.05303	0.007	160.816	0.298E-07	0.055	103.4
1052	8.960	161.210	17.1622	0.04385	0.05272	0.010	160.815	0.293E-07	0.071	103.7
1045	9.648	161.445	18.0632	0.07038	0.05547	0.005	160.817	0.334E-07	0.039	90.3
1046	9.648	161.348	18.1063	0.06084	0.05526	0.006	160.817	0.330E-07	0.048	90.5
1047	9.648	161.260	18.1455	0.05200	0.05513	0.008	160.818	0.330E-07	0.059	89.9
1048	9.648	161.200	18.1719	0.04385	0.05522	0.010	160.817	0.341E-07	0.075	87.2
1041	10.625	161.516	19.1231	0.08062	0.05817	0.004	160.825	0.374E-07	0.033	78.8
1042	10.625	161.430	19.1548	0.07038	0.05796	0.005	160.826	0.377E-07	0.039	77.4
1043	10.625	161.356	19.1823	0.06084	0.05802	0.006	160.827	0.375E-07	0.048	77.9
1044	10.625	161.273	19.2129	0.05200	0.05743	0.008	160.829	0.368E-07	0.063	77.8
1037	11.906	161.600	20.1522	0.09155	0.06126	0.004	160.828	0.428E-07	0.028	68.2
1038	11.906	161.501	20.1830	0.08061	0.06121	0.004	160.829	0.423E-07	0.034	68.8
1039	11.906	161.406	20.2125	0.07037	0.06114	0.005	160.829	0.438E-07	0.041	66.2
1040	11.906	161.321	20.2422	0.06083	0.06124	0.007	160.829	0.448E-07	0.054	65.0
1033	13.313	161.75	21.0055	0.11550	0.06434	0.003	160.802	0.417E-07	0.022	70.6
1034	13.314	161.74	21.0470	0.09726	0.06436	0.003	160.803	0.408E-07	0.027	72.0
1035	13.315	161.735	21.0848	0.08060	0.06441	0.005	160.802	0.418E-07	0.036	70.3
1036	13.316	161.711	21.1186	0.06550	0.06440	0.006	160.804	0.418E-07	0.048	70.2
1029	16.165	161.842	22.3147	0.13530	0.06971	0.002	160.812	0.480E-07	0.019	63.0
1030	16.167	161.678	22.3515	0.11548	0.06964	0.003	160.810	0.472E-07	0.024	63.8
1031	16.179	161.543	22.3821	0.09725	0.06979	0.004	160.807	0.475E-07	0.029	63.6
1032	16.170	161.414	22.4108	0.08059	0.06983	0.005	160.810	0.487E-07	0.039	62.1
1025	19.013	161.920	23.2909	0.15671	0.07434	0.002	160.798	0.495E-07	0.016	63.2
1026	19.014	161.702	23.3329	0.12853	0.07419	0.003	160.798	0.479E-07	0.021	65.0
1027	19.015	161.521	23.3681	0.10317	0.07449	0.004	160.795	0.483E-07	0.028	64.9

1021	19.016	161.348	23.4013	0.08060	0.07441	0.005	160.794	0.487E-07	0.041	64.2
1022	23.095	161.095	24.3635	0.18748	0.08002	0.001	160.819	0.583E-07	0.012	56.3
1023	23.095	161.062	24.3996	0.15653	0.08015	0.002	160.819	0.590E-07	0.016	54.9
1024	23.096	161.624	24.4325	0.12839	0.08001	0.002	160.820	0.583E-07	0.020	56.1
1017	28.525	161.561	24.4419	0.10306	0.08020	0.003	160.820	0.616E-07	0.027	53.2
1018	28.529	162.158	25.1182	0.25775	0.08669	0.001	160.817	0.625E-07	0.009	55.8
1019	28.531	162.224	25.1628	0.22115	0.08683	0.001	160.819	0.629E-07	0.010	55.5
1020	28.533	162.296	25.2148	0.18741	0.08676	0.002	160.818	0.620E-07	0.013	56.1
1013	35.529	161.801	25.3447	0.15647	0.08694	0.002	160.819	0.625E-07	0.016	55.7
1014	35.536	162.720	26.5634	0.31778	0.09431	0.001	160.821	0.722E-07	0.007	51.8
1015	35.541	162.415	27.6032	0.26719	0.09446	0.001	160.822	0.727E-07	0.009	51.5
1016	35.546	162.139	28.6391	0.22107	0.09468	0.001	160.822	0.751E-07	0.011	50.0
1009	43.771	161.881	28.6725	0.17935	0.09477	0.002	160.822	0.752E-07	0.015	49.9
1010	43.781	162.873	27.6238	0.37258	0.10230	0.001	160.810	0.741E-07	0.006	54.2
1011	43.789	162.563	27.6601	0.31760	0.10244	0.001	160.812	0.735E-07	0.008	54.7
1012	43.794	162.280	27.6932	0.26707	0.10257	0.001	160.812	0.733E-07	0.009	54.9
1005	54.475	162.724	27.7228	0.22096	0.10270	0.001	160.813	0.741E-07	0.012	54.3
1006	54.485	163.028	28.7369	0.43177	0.11160	0.001	160.805	0.815E-07	0.006	53.5
1007	54.492	162.724	28.7687	0.37239	0.11176	0.001	160.806	0.842E-07	0.006	51.9
1008	54.498	162.435	28.7987	0.31746	0.11194	0.001	160.807	0.826E-07	0.008	53.0
1001	67.213	162.171	28.8260	0.26696	0.11208	0.001	160.807	0.848E-07	0.010	51.7
1002	67.217	162.814	29.8505	0.43143	0.12175	0.001	160.764	0.874E-07	0.005	54.3
1003	67.218	162.527	29.8770	0.37219	0.12184	0.001	160.763	0.865E-07	0.007	54.9
1004	67.221	162.267	29.9010	0.31727	0.12199	0.001	160.763	0.883E-07	0.008	53.8
		162.023	29.9235	0.26682	0.12246	0.001	160.763	0.897E-07	0.011	53.3

Nominal Temperature 191. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
2117	0.857	191.875	0.5522	0.05293	0.01810 0.003	189.461	0.134E-05 0.038	23.9
2118	0.857	191.472	0.5535	0.04392	0.01805 0.004	189.462	0.135E-05 0.051	23.8
2119	0.857	191.103	0.5546	0.03576	0.01803 0.006	189.464	0.137E-05 0.066	23.3
2120	0.857	190.778	0.5557	0.02844	0.01803 0.008	189.463	0.146E-05 0.093	21.9
2113	1.589	191.638	1.0525	0.05291	0.01860 0.003	189.457	0.634E-06 0.037	27.1
2114	1.589	191.278	1.0548	0.04391	0.01856 0.004	189.457	0.650E-06 0.047	26.3
2115	1.589	190.944	1.0570	0.03574	0.01854 0.006	189.457	0.651E-06 0.064	26.2
2116	1.589	190.641	1.0590	0.02843	0.01851 0.008	189.458	0.660E-06 0.088	25.8
2109	2.347	191.466	1.5985	0.05290	0.01928 0.004	189.457	0.413E-06 0.036	28.2
2110	2.347	191.135	1.6021	0.04390	0.01918 0.005	189.457	0.438E-06 0.047	28.3
2111	2.347	190.825	1.6055	0.03574	0.01919 0.006	189.457	0.416E-06 0.063	27.8
2112	2.347	190.552	1.6085	0.02842	0.01914 0.009	189.458	0.422E-06 0.088	27.3
2105	3.060	191.331	2.1432	0.05292	0.01995 0.004	189.456	0.297E-06 0.036	30.1
2106	3.060	191.017	2.1482	0.04392	0.01990 0.005	189.457	0.296E-06 0.047	30.1
2108	3.060	190.731	2.1528	0.03575	0.01990 0.007	189.457	0.309E-06 0.065	28.9
2108	3.060	190.482	2.1568	0.02844	0.01985 0.009	189.456	0.316E-06 0.089	28.2
2101	3.706	191.220	2.6637	0.05291	0.02069 0.004	189.457	0.238E-06 0.037	31.4
2102	3.706	190.923	2.6700	0.04391	0.02063 0.005	189.459	0.237E-06 0.048	31.4
2104	3.706	190.657	2.6757	0.03575	0.02058 0.007	189.457	0.238E-06 0.063	31.1
2104	3.706	190.424	2.6808	0.02842	0.02056 0.009	189.458	0.251E-06 0.090	29.4
2077	4.471	191.105	3.3166	0.05304	0.02166 0.003	189.455	0.191E-06 0.029	32.9
2098	4.471	190.825	3.3248	0.04462	0.02159 0.004	189.456	0.186E-06 0.036	33.5
2099	4.471	190.581	3.3320	0.03575	0.02155 0.007	189.456	0.193E-06 0.066	32.2
2100	4.471	190.348	3.3389	0.02843	0.02141 0.010	189.456	0.191E-06 0.091	32.3
2093	4.989	191.025	3.7233	0.05304	0.02233 0.003	189.456	0.165E-06 0.031	34.6
2094	4.989	190.767	3.7926	0.04402	0.02240 0.004	189.456	0.172E-06 0.037	33.2
2095	4.989	190.530	3.8011	0.03584	0.02230 0.006	189.457	0.171E-06 0.052	33.1
2096	4.989	190.317	3.8088	0.02851	0.02224 0.008	189.457	0.176E-06 0.069	32.0
2089	6.188	190.852	4.9449	0.05303	0.02454 0.004	189.461	0.130E-06 0.033	37.4
2090	6.188	190.616	4.9578	0.04401	0.02433 0.004	189.460	0.124E-06 0.040	38.5
2091	6.188	190.411	4.9691	0.03584	0.02426 0.006	189.461	0.125E-06 0.050	37.9
2092	6.188	190.225	4.9753	0.02851	0.02426 0.008	189.461	0.137E-06 0.072	34.6
2085	6.981	190.726	5.7805	0.05271	0.02604 0.004	189.470	0.104E-06 0.034	42.3
2086	6.980	190.516	5.7945	0.04375	0.02591 0.005	189.472	0.102E-06 0.042	42.8
2087	6.979	190.327	5.8072	0.03562	0.02581 0.006	189.471	0.104E-06 0.056	41.6
2088	6.979	190.161	5.8182	0.02834	0.02621 0.009	189.471	0.120E-06 0.079	37.4
2081	7.786	190.566	6.6818	0.05269	0.02756 0.004	189.457	0.784E-07 0.035	51.4



2082	7.780	190.373	6.6983	0.04374	0.02752	0.005	189.459	0.777E-07	0.042	51.7
2083	7.779	190.198	6.7134	0.03561	0.02753	0.007	189.457	0.306E-07	0.053	49.9
2084	7.778	190.050	6.7261	0.02833	0.02736	0.010	189.459	0.768E-07	0.083	51.7
2077	8.792	190.440	7.8888	0.05261	0.02997	0.004	189.460	0.611E-07	0.036	61.0
2078	8.791	190.272	7.9079	0.04371	0.03000	0.006	189.461	0.597E-07	0.046	62.6
2079	8.790	190.120	7.9242	0.03560	0.03000	0.007	189.461	0.589E-07	0.060	63.4
2080	8.789	189.962	7.9424	0.02833	0.02991	0.011	189.461	0.573E-07	0.089	64.8
2073	9.691	190.364	9.0068	0.05262	0.03246	0.005	189.470	0.549E-07	0.039	64.8
2074	9.690	190.206	9.0289	0.04368	0.03241	0.006	189.471	0.528E-07	0.048	67.1
2075	9.689	190.073	9.0474	0.03557	0.03223	0.008	189.471	0.506E-07	0.065	69.3
2076	9.688	189.931	9.0666	0.02830	0.03230	0.012	189.470	0.531E-07	0.093	66.3
2069	10.394	190.291	9.8972	0.05208	0.03446	0.004	189.474	0.518E-07	0.034	66.5
2070	10.393	190.159	9.9183	0.04323	0.03442	0.006	189.474	0.502E-07	0.047	68.5
2071	10.393	190.030	9.9388	0.03547	0.03397	0.009	189.473	0.475E-07	0.070	70.4
2072	10.392	189.899	9.9599	0.02830	0.03429	0.016	189.474	0.519E-07	0.127	65.6
2065	11.232	190.228	10.9435	0.05210	0.03681	0.005	189.465	0.459E-07	0.042	72.4
2066	11.230	190.089	10.9677	0.04324	0.03673	0.007	189.466	0.445E-07	0.055	74.2
2067	11.229	189.955	10.9918	0.03521	0.03680	0.010	189.466	0.442E-07	0.075	74.9
2068	11.229	189.856	11.0097	0.02801	0.03688	0.013	189.466	0.432E-07	0.104	76.3
2061	12.150	190.321	12.0148	0.04179	0.03940	0.004	189.455	0.539E-07	0.035	59.9
2062	12.149	190.176	12.0424	0.05211	0.03929	0.006	189.454	0.555E-07	0.046	57.8
2063	12.149	190.059	12.0660	0.04325	0.03920	0.008	189.455	0.538E-07	0.062	59.4
2064	12.148	189.935	12.0904	0.03522	0.03923	0.010	189.455	0.585E-07	0.079	54.6
2057	13.220	190.381	13.1767	0.07232	0.04213	0.004	189.467	0.429E-07	0.030	72.9
2058	13.219	189.249	13.2038	0.05181	0.04211	0.004	189.465	0.417E-07	0.033	74.9
2059	13.219	190.108	13.2356	0.05212	0.04205	0.006	189.467	0.409E-07	0.047	76.1
2060	13.218	190.004	13.2550	0.04326	0.04181	0.008	189.467	0.398E-07	0.060	77.3
2053	14.133	190.345	14.0957	0.07235	0.04432	0.004	189.470	0.435E-07	0.032	70.4
2054	14.133	190.209	14.1248	0.06183	0.04426	0.005	189.470	0.429E-07	0.039	71.2
2055	14.132	190.098	14.1479	0.05214	0.04427	0.006	189.477	0.438E-07	0.047	69.7
2056	14.132	189.972	14.1749	0.04328	0.04399	0.008	189.472	0.408E-07	0.065	73.8
2049	15.153	190.420	14.9982	0.08370	0.04673	0.003	189.468	0.433E-07	0.027	69.9
2050	15.153	190.290	15.0257	0.07236	0.04667	0.004	189.467	0.425E-07	0.030	71.0
2051	15.152	190.174	15.0498	0.06184	0.04659	0.005	189.468	0.423E-07	0.042	71.1
2052	15.152	190.054	15.0752	0.05215	0.04657	0.007	189.467	0.419E-07	0.055	71.6
2045	16.493	190.385	16.0625	0.08469	0.04942	0.005	189.473	0.441E-07	0.037	67.5
2046	16.493	190.265	16.0875	0.07339	0.04940	0.006	189.473	0.446E-07	0.045	66.6
2047	16.493	190.145	16.1119	0.06272	0.04941	0.007	189.470	0.426E-07	0.056	69.7
2048	16.493	190.032	16.1352	0.05290	0.04941	0.010	189.472	0.434E-07	0.074	68.5
2041	17.786	190.436	16.9248	0.09718	0.05186	0.003	189.464	0.512E-07	0.024	57.8
2042	17.786	190.354	16.9509	0.08484	0.05181	0.003	189.466	0.504E-07	0.027	58.4
2043	17.785	190.237	16.9730	0.07334	0.05205	0.005	189.465	0.537E-07	0.039	55.4
2044	17.784	190.122	16.9953	0.06269	0.05189	0.006	189.466	0.539E-07	0.046	54.8
2037	19.613	190.624	17.9612	0.11725	0.05508	0.002	189.462	0.509E-07	0.020	58.1
2038	19.613	190.429	17.9972	0.09717	0.05503	0.003	189.464	0.513E-07	0.024	57.0
2039	19.613	190.246	18.0309	0.07898	0.05490	0.004	189.463	0.517E-07	0.034	56.8
2040	19.612	190.078	18.0616	0.06268	0.05499	0.006	189.464	0.536E-07	0.048	54.9
1033	21.833	190.772	19.0065	0.13920	0.05859	0.002	189.465	0.535E-07	0.016	55.8
2034	21.833	190.565	19.0420	0.11723	0.05851	0.003	189.465	0.533E-07	0.021	55.8
2035	21.833	190.378	19.0744	0.09716	0.05856	0.003	189.468	0.541E-07	0.028	55.0
2036	21.833	190.204	19.1042	0.07897	0.05864	0.005	189.466	0.543E-07	0.038	54.9
2029	24.335	190.689	20.0195	0.13919	0.06227	0.002	189.459	0.535E-07	0.018	56.9
2030	24.335	190.450	20.0510	0.11723	0.06212	0.003	189.462	0.532E-07	0.021	56.8
2031	24.335	190.309	20.0798	0.09715	0.06227	0.003	189.459	0.530E-07	0.028	57.3
2032	24.335	190.153	20.1046	0.07897	0.06230	0.005	189.460	0.530E-07	0.039	57.3
2025	27.493	190.003	21.0260	0.17139	0.06629	0.002	189.458	0.607E-07	0.014	51.3
2026	27.494	190.634	21.0682	0.13916	0.06640	0.002	189.461	0.627E-07	0.018	49.7
2027	27.494	190.394	21.1032	0.11030	0.06650	0.003	189.462	0.651E-07	0.025	47.9
2028	27.494	190.185	21.1336	0.08481	0.06654	0.005	189.460	0.687E-07	0.038	45.4
2021	31.343	191.098	22.0473	0.20696	0.07104	0.001	189.462	0.631E-07	0.011	51.3
2022	31.344	190.822	22.0841	0.17137	0.07106	0.002	189.462	0.633E-07	0.015	51.0
2023	31.345	190.572	22.1176	0.13915	0.07114	0.003	189.463	0.655E-07	0.021	49.4
2024	31.345	190.339	22.1468	0.11029	0.07122	0.003	189.462	0.693E-07	0.028	47.4
2017	35.994	191.417	23.0483	0.26662	0.07615	0.001	189.448	0.439E-07	0.009	52.9
2018	35.996	191.047	23.0937	0.21634	0.07625	0.001	189.451	0.639E-07	0.011	52.9
2019	35.997	190.721	23.1338	0.17133	0.07628	0.002	189.453	0.636E-07	0.016	53.2
2020	35.998	190.420	23.1707	0.13160	0.07624	0.003	189.452	0.629E-07	0.023	53.6
2013	41.769	191.666	24.0875	0.22207	0.08193	0.001	189.448	0.658E-07	0.007	54.1
2014	41.775	191.282	24.1312	0.26652	0.08203	0.001	189.450	0.650E-07	0.009	54.8

2015	41.776	190.931	24.1706	0.21029	0.08207	0.001	189.448	0.638E-07	0.012	55.7
2016	41.779	190.622	24.2055	0.17132	0.08224	0.002	189.447	0.631E-07	0.016	56.5
2009	49.003	191.928	25.162	0.38291	0.08859	0.001	189.449	0.745E-07	0.006	50.9
2010	49.002	191.540	25.217	0.32205	0.08862	0.001	189.450	0.754E-07	0.007	50.2
2011	48.999	191.178	25.2390	0.25649	0.08870	0.001	189.452	0.750E-07	0.010	50.5
2012	49.001	190.854	25.2714	0.21624	0.08882	0.002	189.452	0.760E-07	0.013	49.8
2005	57.141	191.763	26.2075	0.38278	0.09550	0.001	189.445	0.757E-07	0.006	53.2
2006	57.141	191.395	26.2419	0.32194	0.09563	0.001	189.449	0.765E-07	0.008	52.7
2007	57.143	191.061	26.2734	0.26647	0.09578	0.001	189.450	0.764E-07	0.011	52.9
2008	57.143	190.759	26.3019	0.21623	0.09579	0.002	189.449	0.769E-07	0.014	52.4
2001	66.098	191.620	27.1748	0.38263	0.10268	0.001	189.435	0.850E-07	0.007	50.7
2002	66.091	191.271	27.2045	0.32182	0.10286	0.001	189.437	0.864E-07	0.009	49.9
2003	66.086	190.954	27.2317	0.26634	0.10298	0.001	189.436	0.861E-07	0.011	50.1
2004	66.085	190.674	27.2559	0.21615	0.10296	0.002	189.433	0.861E-07	0.015	50.0

Nominal Temperature 220. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K)	STAT	Cell Temperature K	Thermal Diffusivity m²/s	DSTAT	Specific Heat J/(mol.K)
3113	0.901	222.612	0.4970	0.07365	0.02081	0.002	219.032	0.178E-05	0.021	23.6
3114	0.901	221.556	0.4981	0.06211	0.02075	0.002	219.031	0.179E-05	0.025	23.3
3115	0.901	221.132	0.4991	0.05156	0.02071	0.003	219.031	0.179E-05	0.032	23.3
3116	0.901	220.744	0.5000	0.04198	0.02068	0.004	219.032	0.182E-05	0.045	22.8
3109	1.759	221.742	0.9874	0.07364	0.02122	0.002	219.033	0.804E-06	0.019	26.4
3110	1.759	221.319	0.9896	0.06210	0.02121	0.002	219.033	0.814E-06	0.025	26.1
3111	1.759	220.938	0.9915	0.05155	0.02117	0.003	219.033	0.819E-06	0.031	25.9
3112	1.759	220.590	0.9933	0.04197	0.02115	0.004	219.032	0.838E-06	0.042	25.3
3105	2.473	221.585	1.4160	0.07364	0.02166	0.002	219.035	0.543E-06	0.019	27.7
3106	2.473	221.188	1.4131	0.06210	0.02166	0.002	219.036	0.553E-06	0.025	27.3
3107	2.473	220.814	1.4159	0.05154	0.02157	0.003	219.036	0.544E-06	0.034	27.6
3108	2.473	220.496	1.4184	0.04197	0.02160	0.004	219.036	0.575E-06	0.045	26.2
3101	3.234	221.440	1.8739	0.07374	0.02221	0.002	219.033	0.402E-06	0.020	28.2
3102	3.234	221.065	1.8779	0.06218	0.02222	0.003	219.032	0.407E-06	0.025	28.5
3103	3.234	220.717	1.8816	0.05155	0.02211	0.003	219.030	0.396E-06	0.032	29.0
3104	3.234	220.410	1.8849	0.04198	0.02220	0.004	219.032	0.429E-06	0.042	27.0
3097	3.968	221.320	2.3354	0.07374	0.02280	0.002	219.033	0.320E-06	0.020	29.7
3098	3.968	220.963	2.3404	0.06219	0.02278	0.002	219.033	0.319E-06	0.025	29.8
3099	3.968	220.639	2.3450	0.05162	0.02274	0.003	219.034	0.324E-06	0.032	29.2
3100	3.968	220.351	2.3491	0.04203	0.02274	0.004	219.034	0.334E-06	0.043	28.4
3093	4.695	221.225	2.8057	0.07373	0.02341	0.002	219.044	0.266E-06	0.019	30.4
3094	4.695	220.885	2.8118	0.06218	0.02337	0.003	219.046	0.265E-06	0.025	30.5
3095	4.695	220.576	2.8173	0.05162	0.02338	0.003	219.046	0.270E-06	0.033	29.9
3096	4.695	220.293	2.8224	0.04203	0.02335	0.005	219.044	0.277E-06	0.046	29.1
3089	5.457	221.121	3.3124	0.07397	0.02411	0.002	219.047	0.219E-06	0.020	32.1
3090	5.457	220.797	3.3196	0.06238	0.02409	0.003	219.047	0.219E-06	0.025	32.2
3092	5.457	220.508	3.3260	0.05179	0.02407	0.003	219.048	0.228E-06	0.033	30.9
3092	5.457	220.229	3.3322	0.04217	0.02405	0.005	219.047	0.228E-06	0.046	30.8
3085	6.202	221.016	3.8265	0.07361	0.02480	0.002	219.040	0.191E-06	0.021	33.1
3086	6.208	220.709	3.8347	0.06208	0.02479	0.003	219.041	0.189E-06	0.025	33.1
3087	6.208	220.426	3.8423	0.05154	0.02479	0.004	219.047	0.190E-06	0.033	32.9
3083	6.208	220.176	3.8491	0.04196	0.02491	0.005	219.048	0.204E-06	0.047	31.0
3081	6.902	220.931	4.3133	0.07361	0.02561	0.002	219.047	0.172E-06	0.021	33.4
3082	6.902	220.641	4.3225	0.06207	0.02552	0.003	219.049	0.170E-06	0.027	33.6
3083	6.902	220.369	4.3312	0.05153	0.02558	0.004	219.049	0.175E-06	0.034	32.8
3084	6.902	220.123	4.3390	0.04196	0.02552	0.005	219.047	0.180E-06	0.048	31.7
3077	8.307	221.047	5.3191	0.08615	0.02730	0.002	219.034	0.132E-06	0.016	37.6
3078	8.307	220.756	5.3309	0.07362	0.02727	0.002	219.036	0.133E-06	0.022	37.4
3079	8.307	220.480	5.3422	0.06208	0.02724	0.003	219.036	0.135E-06	0.028	36.5
3080	8.307	220.242	5.3528	0.05154	0.02721	0.004	219.042	0.137E-06	0.037	36.1
3073	9.833	220.849	6.4610	0.08598	0.02925	0.002	219.037	0.105E-06	0.018	41.5
3074	9.831	220.582	6.4747	0.07348	0.02919	0.002	219.037	0.104E-06	0.021	42.1
3076	9.831	220.345	6.4874	0.06197	0.02920	0.003	219.038	0.105E-06	0.027	41.4
3076	9.830	220.122	6.4993	0.05144	0.02920	0.004	219.038	0.104E-06	0.035	41.8
3069	11.334	220.703	7.6105	0.08597	0.03140	0.002	219.045	0.911E-07	0.019	43.9
3070	11.337	220.458	7.6269	0.07348	0.03128	0.003	219.046	0.879E-07	0.023	45.2
3071	11.335	220.235	7.6408	0.06196	0.03129	0.003	219.047	0.878E-07	0.029	44.2
3072	11.334	220.035	7.6543	0.05144	0.03130	0.004	219.051	0.905E-07	0.036	43.9

3065	12.640	220.568	8.6096	0.08602	0.03334	0.002	219.039	0.791E-07	0.020	47.4
3066	12.639	220.345	8.6272	0.07753	0.03332	0.003	219.044	0.788E-07	0.024	47.5
3067	12.637	220.140	8.6423	0.06202	0.03331	0.004	219.044	0.794E-07	0.032	47.2
3068	12.636	219.948	8.6576	0.05149	0.03331	0.005	219.042	0.778E-07	0.041	48.2
3061	13.956	220.468	9.6043	0.08602	0.03533	0.003	219.038	0.779E-07	0.028	45.7
3062	13.953	220.269	9.6212	0.07352	0.03531	0.004	219.038	0.797E-07	0.035	44.6
3063	13.953	220.072	9.6389	0.06201	0.03531	0.005	219.038	0.799E-07	0.044	44.5
3064	13.951	219.890	9.6550	0.05148	0.03527	0.007	219.041	0.816E-07	0.052	43.5
3057	15.455	220.565	10.6811	0.09948	0.03770	0.003	219.031	0.707E-07	0.023	48.3
3058	15.453	220.354	10.7018	0.08601	0.03754	0.003	219.032	0.686E-07	0.028	49.3
3059	15.452	220.164	10.7204	0.07351	0.03770	0.004	219.033	0.725E-07	0.037	47.0
3060	15.450	219.982	10.7384	0.06200	0.03762	0.006	219.035	0.697E-07	0.047	48.7
3053	16.995	220.485	11.7470	0.09957	0.04006	0.003	219.048	0.682E-07	0.025	48.3
3054	16.994	220.289	11.7678	0.08609	0.03996	0.004	219.046	0.675E-07	0.031	48.5
3055	16.993	220.103	11.7882	0.07359	0.03997	0.005	219.050	0.683E-07	0.040	47.9
3056	16.992	219.905	11.8100	0.06206	0.03998	0.006	219.049	0.598E-07	0.053	46.9
3049	18.431	220.583	12.6575	0.11406	0.04223	0.003	219.039	0.630E-07	0.022	51.1
3050	18.430	220.386	12.6797	0.09958	0.04216	0.003	219.040	0.625E-07	0.025	51.3
3051	18.429	220.206	12.6999	0.08609	0.04220	0.004	219.041	0.641E-07	0.033	50.1
3052	18.428	220.032	12.7199	0.07359	0.04215	0.005	219.041	0.626E-07	0.041	51.1
3045	20.208	220.498	13.7173	0.11406	0.04481	0.003	219.046	0.625E-07	0.023	50.4
3046	20.207	220.312	13.7390	0.09957	0.04467	0.003	219.047	0.603E-07	0.027	51.8
3047	20.206	220.132	13.7604	0.08609	0.04477	0.004	219.047	0.605E-07	0.033	51.5
3048	20.206	219.977	13.7788	0.07358	0.04477	0.005	219.046	0.632E-07	0.042	49.7
3041	21.967	220.694	14.6353	0.13760	0.04720	0.002	219.033	0.595E-07	0.018	52.2
3042	21.967	220.416	14.6691	0.11405	0.04713	0.003	219.037	0.595E-07	0.022	52.0
3043	21.965	220.150	14.7009	0.09271	0.04719	0.004	219.038	0.589E-07	0.031	52.6
3044	21.964	219.913	14.7293	0.07359	0.04714	0.005	219.036	0.580E-07	0.044	53.3
3037	24.127	220.612	15.6811	0.13762	0.05005	0.002	219.041	0.589E-07	0.019	52.4
3038	24.127	220.336	15.7146	0.11405	0.05000	0.003	219.042	0.580E-07	0.024	53.0
3039	24.127	220.085	15.7452	0.09271	0.05001	0.004	219.044	0.574E-07	0.032	53.6
3040	24.127	219.866	15.7720	0.07359	0.05008	0.006	219.042	0.578E-07	0.047	53.3
3033	26.365	220.793	16.6082	0.16351	0.05284	0.002	219.039	0.576E-07	0.016	53.6
3034	26.366	220.422	16.6531	0.12964	0.05289	0.003	219.035	0.560E-07	0.021	55.1
3035	26.369	220.096	16.6930	0.09968	0.05284	0.004	219.033	0.539E-07	0.030	57.1
3036	26.370	219.814	16.7274	0.07367	0.05294	0.006	219.030	0.540E-07	0.046	57.2
3029	29.453	221.101	17.7113	0.20167	0.05653	0.002	219.045	0.654E-07	0.014	47.8
3030	29.452	220.712	17.7556	0.16378	0.05641	0.002	219.047	0.644E-07	0.017	48.2
3031	29.450	220.360	17.7958	0.12983	0.05645	0.003	219.047	0.650E-07	0.023	47.7
3032	29.450	220.055	17.8310	0.09983	0.05642	0.004	219.047	0.654E-07	0.033	47.3
3025	32.320	220.972	18.6435	0.20146	0.05968	0.002	219.030	0.640E-07	0.015	49.4
3026	32.319	220.604	18.6811	0.16360	0.05952	0.002	219.032	0.627E-07	0.017	50.0
3027	32.318	220.271	18.7180	0.12970	0.05964	0.003	219.031	0.632E-07	0.024	49.8
3028	32.317	219.980	18.7503	0.09973	0.05968	0.004	219.031	0.622E-07	0.035	50.5
3021	36.189	221.251	19.6760	0.24317	0.06365	0.001	219.032	0.694E-07	0.012	46.6
3022	36.191	220.870	19.7168	0.20138	0.06364	0.002	219.033	0.697E-07	0.015	46.3
3023	36.190	220.518	19.7538	0.16355	0.06355	0.002	219.034	0.690E-07	0.018	46.6
3024	36.188	220.205	19.7865	0.12966	0.06362	0.003	219.032	0.691E-07	0.026	46.5
3017	40.612	221.498	20.6899	0.28886	0.06799	0.001	219.026	0.691E-07	0.011	48.3
3018	40.612	221.095	20.7302	0.24313	0.06788	0.001	219.027	0.674E-07	0.011	49.3
3019	40.611	220.738	20.7658	0.20136	0.06786	0.002	219.027	0.677E-07	0.015	49.0
3020	40.612	220.414	20.7985	0.16353	0.06788	0.002	219.026	0.569E-07	0.020	49.5
3013	45.854	221.539	21.7347	0.31316	0.07272	0.001	219.014	0.741E-07	0.009	46.8
3014	45.852	221.062	21.7793	0.25417	0.07265	0.001	219.014	0.736E-07	0.012	46.9
3015	45.854	220.637	21.8200	0.20134	0.07268	0.002	219.014	0.746E-07	0.016	46.2
3016	45.851	220.256	21.8556	0.15469	0.07277	0.003	219.016	0.753E-07	0.023	45.8
3009	52.159	221.881	22.7711	0.37830	0.07801	0.001	219.027	0.759E-07	0.009	47.8
3010	52.142	221.386	22.8155	0.31313	0.07801	0.001	219.027	0.753E-07	0.009	48.1
3011	52.140	220.934	22.8555	0.25415	0.07797	0.001	219.026	0.744E-07	0.012	48.5
3012	52.142	220.539	22.8910	0.20133	0.07800	0.002	219.029	0.754E-07	0.016	47.8
3005	59.297	221.651	23.8211	0.37813	0.08368	0.001	219.030	0.758E-07	0.008	50.3
3006	59.297	221.228	23.8600	0.31336	0.08368	0.001	219.031	0.751E-07	0.010	50.6
3007	59.303	220.812	23.8953	0.25409	0.08374	0.002	219.032	0.755E-07	0.013	50.3
3008	59.303	220.434	23.9270	0.20130	0.08384	0.002	219.030	0.739E-07	0.011	51.4
3001	65.714	221.532	24.7547	0.37806	0.08923	0.001	219.020	0.799E-07	0.008	50.1
3002	66.713	221.093	24.7892	0.31296	0.08930	0.001	219.022	0.790E-07	0.010	50.7
3003	66.711	220.698	24.8203	0.25401	0.08945	0.002	219.021	0.797E-07	0.013	50.5
3004	66.711	220.348	24.8480	0.20123	0.08953	0.002	219.022	0.796E-07	0.019	50.5

Nominal Temperature 262. K

Run Pt.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT	Cell Temperature K	Thermal Diffusivity m <sup>2</sup> /s DSTAT	Specific Heat J/(mol.K)
4101	1.107	263.460	0.5107	0.10247	0.02430 0.001	259.868	0.186E-05 0.015	26.0
4102	1.107	262.941	0.5118	0.08762	0.02440 0.002	259.867	0.196E-05 0.018	24.9
4103	1.107	262.461	0.5128	0.07392	0.02437 0.002	259.866	0.199E-05 0.022	24.5
4104	1.107	262.018	0.5137	0.06138	0.02437 0.003	259.866	0.200E-05 0.029	24.4
4097	2.280	263.115	1.0651	0.10250	0.02482 0.001	259.869	0.831E-06 0.015	28.2
4098	2.280	262.649	1.0672	0.08763	0.02489 0.002	259.868	0.866E-06 0.019	27.3
4099	2.280	262.209	1.0691	0.07393	0.02487 0.002	259.870	0.852E-06 0.023	27.7
4100	2.280	261.817	1.0709	0.06138	0.02488 0.003	259.867	0.901E-06 0.031	26.2
4093	3.317	262.910	1.5650	0.10249	0.02538 0.001	259.868	0.554E-06 0.011	29.3
4096	3.317	262.469	1.5681	0.08762	0.02539 0.001	259.868	0.561E-06 0.014	29.0
4095	3.317	262.062	1.5709	0.07392	0.02542 0.002	259.866	0.577E-06 0.023	28.3
4096	3.317	261.688	1.5735	0.06139	0.02539 0.003	259.867	0.570E-06 0.030	28.5
4089	4.435	262.748	2.1160	0.10252	0.02605 0.001	259.872	0.417E-06 0.014	29.4
4090	4.435	262.334	2.1200	0.08763	0.02601 0.002	259.871	0.421E-06 0.018	29.0
4091	4.435	261.949	2.1238	0.07393	0.02604 0.002	259.870	0.433E-06 0.022	28.3
4092	4.435	261.594	2.1272	0.06139	0.02599 0.003	259.867	0.433E-06 0.030	28.2
4085	5.384	262.600	2.5911	0.10254	0.02662 0.001	259.857	0.328E-06 0.014	31.0
4086	5.384	262.264	2.5950	0.08764	0.02664 0.002	259.854	0.336E-06 0.017	30.3
4087	5.384	261.855	2.6005	0.07395	0.02666 0.002	259.853	0.346E-06 0.023	29.5
4088	5.384	261.492	2.6048	0.06141	0.02660 0.003	259.852	0.337E-06 0.030	30.2
4061	6.380	262.888	3.0899	0.11858	0.02733 0.001	259.853	0.274E-06 0.012	31.9
4082	6.380	262.479	3.0962	0.10254	0.02736 0.001	259.853	0.278E-06 0.014	31.5
4083	6.380	262.093	3.1021	0.08766	0.02735 0.002	259.850	0.279E-06 0.018	31.4
4084	6.380	261.711	3.1075	0.07395	0.02735 0.002	259.854	0.284E-06 0.022	30.8
4077	7.224	262.779	3.5223	0.11868	0.02794 0.001	259.856	0.240E-06 0.011	32.5
4078	7.223	262.381	3.5290	0.10262	0.02794 0.001	259.856	0.242E-06 0.014	32.3
4079	7.223	262.017	3.5352	0.08773	0.02794 0.002	259.857	0.245E-06 0.018	31.9
4080	7.222	261.674	3.5410	0.07401	0.02796 0.002	259.855	0.249E-06 0.023	31.5
4073	8.233	263.074	4.0356	0.13591	0.02871 0.001	259.853	0.212E-06 0.010	32.9
4074	8.233	262.676	4.0478	0.11050	0.02872 0.001	259.853	0.215E-06 0.013	32.5
4075	8.233	261.932	4.0594	0.08772	0.02869 0.002	259.852	0.215E-06 0.017	32.5
4076	8.232	261.456	4.0692	0.06758	0.02862 0.003	259.853	0.215E-06 0.025	32.4
4069	9.344	262.935	4.6136	0.13594	0.02901 0.001	259.867	0.159E-06 0.010	37.9
4070	9.344	262.367	4.6274	0.11053	0.02956 0.001	259.868	0.189E-06 0.013	33.3
4071	9.343	261.855	4.6398	0.08775	0.02962 0.002	259.867	0.196E-06 0.016	32.3
4072	9.341	261.392	4.6508	0.06762	0.02953 0.002	259.864	0.193E-06 0.018	32.5
4065	11.307	262.679	5.6427	0.13621	0.03118 0.001	259.866	0.152E-06 0.013	35.4
4066	11.307	262.149	5.6597	0.11074	0.03116 0.002	259.863	0.151E-06 0.018	35.7
4067	11.307	261.676	5.6749	0.08793	0.03124 0.003	259.860	0.157E-06 0.024	34.6
4068	11.307	261.283	5.6876	0.06764	0.03124 0.004	259.858	0.162E-06 0.036	33.5
4061	13.161	263.006	6.5930	0.16361	0.03279 0.001	259.872	0.126E-06 0.008	38.3
4062	13.159	262.469	6.6104	0.13568	0.03281 0.001	259.872	0.127E-06 0.010	38.2
4063	13.157	261.979	6.6204	0.11033	0.03280 0.002	259.871	0.127E-06 0.014	38.1
4064	13.154	261.546	6.6262	0.08760	0.03286 0.002	259.870	0.131E-06 0.020	37.1
4057	15.089	262.786	7.5893	0.16366	0.03458 0.001	259.868	0.109E-06 0.008	40.5
4058	15.087	262.280	7.6112	0.13570	0.03460 0.001	259.869	0.109E-06 0.010	40.8
4059	15.087	261.828	7.6315	0.11034	0.03468 0.002	259.870	0.111E-06 0.015	40.2
4060	15.084	261.411	7.6492	0.08761	0.03460 0.002	259.867	0.108E-06 0.019	41.0
4053	17.200	262.598	8.6533	0.16367	0.03655 0.001	259.865	0.103E-06 0.008	39.8
4054	17.197	262.132	8.6764	0.13570	0.03661 0.001	259.864	0.105E-06 0.011	39.1
4055	17.196	261.706	8.6982	0.11034	0.03664 0.002	259.860	0.107E-06 0.015	38.5
4056	17.195	261.325	8.7177	0.08760	0.03657 0.002	259.862	0.107E-06 0.020	38.3
4049	19.293	262.907	9.6423	0.19423	0.03855 0.001	259.859	0.923E-07 0.007	41.9
4050	19.291	262.430	9.6694	0.16365	0.03856 0.001	259.858	0.940E-07 0.009	41.1
4051	19.289	261.987	9.6946	0.13569	0.03859 0.001	259.858	0.947E-07 0.012	40.8
4052	19.286	261.587	9.7169	0.11033	0.03868 0.002	259.857	0.968E-07 0.015	40.1
4045	21.554	262.710	10.6887	0.19431	0.04077 0.001	259.854	0.862E-07 0.006	42.8
4046	21.552	262.252	10.7169	0.16370	0.04080 0.001	259.854	0.857E-07 0.008	43.1
4047	21.550	261.842	10.7424	0.13573	0.04080 0.001	259.855	0.860E-07 0.011	42.9
4048	21.548	261.463	10.7660	0.11035	0.04089 0.002	259.852	0.867E-07 0.015	42.8
4041	24.029	262.540	11.7621	0.19430	0.04312 0.001	259.864	0.808E-07 0.007	43.9
4042	24.028	262.111	11.7909	0.16370	0.04319 0.001	259.862	0.811E-07 0.009	43.9
4043	24.027	261.726	11.8173	0.13573	0.04325 0.001	259.861	0.812E-07 0.012	43.9

4044	24.026	261.375	11.8410	0.11036	0.04327	0.002	259.863	0.836E-07	0.015	42.6
4037	26.502	262.972	12.7156	0.23917	0.04535	0.001	259.864	0.760E-07	0.006	43.3
4038	26.509	262.385	12.7572	0.19430	0.04547	0.001	259.861	0.771E-07	0.008	44.8
4039	26.499	261.856	12.7951	0.15409	0.04550	0.001	259.864	0.768E-07	0.011	45.0
4040	26.497	261.390	12.8279	0.11854	0.04568	0.002	259.859	0.790E-07	0.016	44.1
4033	29.351	262.803	13.7689	0.23918	0.04801	0.001	259.877	0.743E-07	0.006	45.5
4034	29.350	262.249	13.8096	0.19431	0.04810	0.001	259.877	0.748E-07	0.008	45.3
4035	29.348	261.752	13.8462	0.15410	0.04815	0.001	259.876	0.744E-07	0.012	45.6
4036	29.347	261.311	13.8788	0.11853	0.04826	0.002	259.876	0.753E-07	0.016	45.3
4029	31.975	262.657	14.6565	0.23924	0.05037	0.001	259.867	0.721E-07	0.006	46.4
4030	31.974	262.127	14.6962	0.19436	0.05053	0.001	259.866	0.730E-07	0.009	46.1
4031	31.972	261.655	14.7316	0.15413	0.05061	0.002	259.870	0.734E-07	0.013	46.0
4032	31.971	261.234	14.7632	0.11849	0.05054	0.002	259.873	0.714E-07	0.017	47.1
4025	35.647	263.064	15.7336	0.28993	0.05340	0.001	259.888	0.708E-07	0.005	46.9
4026	35.647	262.539	15.7758	0.24020	0.05362	0.001	259.889	0.720E-07	0.007	46.4
4027	35.647	262.014	15.8135	0.19513	0.05378	0.001	259.886	0.727E-07	0.009	46.2
4028	35.647	261.570	15.8473	0.15474	0.05385	0.002	259.887	0.739E-07	0.013	45.5
4021	39.182	262.932	16.6958	0.29004	0.05660	0.001	259.875	0.711E-07	0.005	47.3
4022	39.182	262.399	16.7364	0.24028	0.05669	0.001	259.874	0.708E-07	0.005	47.6
4023	39.183	261.920	16.7729	0.19518	0.05679	0.001	259.875	0.704E-07	0.007	48.0
4024	39.185	261.494	16.8060	0.15479	0.05686	0.001	259.877	0.696E-07	0.010	48.5
4017	43.769	262.753	17.8054	0.28931	0.06021	0.000	259.871	0.756E-07	0.004	44.9
4018	43.768	262.258	17.8422	0.23969	0.06037	0.001	259.871	0.775E-07	0.005	44.0
4019	43.767	261.808	17.8756	0.19472	0.06049	0.001	259.873	0.787E-07	0.007	43.4
4020	43.766	261.406	17.9056	0.15442	0.06058	0.001	259.873	0.808E-07	0.010	42.3
4013	48.578	263.106	18.7897	0.34481	0.06380	0.000	259.875	0.735E-07	0.004	46.9
4014	48.578	262.585	18.8277	0.29035	0.06400	0.001	259.872	0.719E-07	0.004	46.3
4015	48.577	262.112	18.8622	0.23958	0.06412	0.001	259.873	0.756E-07	0.006	46.0
4016	48.574	261.686	18.8927	0.19472	0.06425	0.001	259.870	0.765E-07	0.008	45.5
4009	54.472	262.895	19.8894	0.34481	0.06817	0.000	259.876	0.730E-07	0.004	48.6
4010	54.467	262.410	19.9229	0.29033	0.06836	0.001	259.877	0.731E-07	0.004	48.7
4011	54.467	261.967	19.9544	0.24055	0.06853	0.001	259.877	0.741E-07	0.006	48.3
4012	54.466	261.572	19.9823	0.19541	0.06856	0.001	259.875	0.736E-07	0.008	48.7
4005	60.741	262.587	20.8899	0.37379	0.07259	0.000	259.884	0.795E-07	0.004	46.3
4006	60.738	262.397	20.9299	0.30352	0.07290	0.001	259.884	0.808E-07	0.005	45.7
4007	60.736	261.872	20.9657	0.24052	0.07305	0.001	259.882	0.820E-07	0.007	45.2
4008	60.734	261.404	20.9977	0.18484	0.07318	0.001	259.883	0.832E-07	0.009	44.6
4001	66.357	262.824	21.7020	0.37373	0.07664	0.000	259.883	0.798E-07	0.004	47.7
4002	66.356	262.261	21.7393	0.30349	0.07680	0.001	259.881	0.797E-07	0.005	47.9
4003	66.354	261.762	21.7724	0.24052	0.07705	0.001	259.878	0.805E-07	0.007	47.6
4004	66.350	261.315	21.8018	0.18485	0.07697	0.001	259.881	0.794E-07	0.010	48.1

Nominal Temperature 300. K

Run No.	Pressure MPa	Temperature K	Density mol/L	Power W/m	Thermal Conductivity W/(m.K) STAT		Cell Temperature K	Thermal Diffusivity m²/s DSTAT		Specific Heat J/(mol.K)
14093	1.184	301.505	0.4748	0.10195	0.02749	0.001	298.260	0.234E-05	0.016	25.7
14094	1.134	301.909	0.4756	0.08604	0.02741	0.002	298.259	0.233E-05	0.020	25.7
14095	1.184	300.547	0.4764	0.07146	0.02740	0.002	298.251	0.235E-05	0.026	25.5
14096	1.184	300.129	0.4770	0.05822	0.02736	0.003	298.257	0.236E-05	0.033	25.3
14089	2.299	301.263	0.9271	0.10196	0.02762	0.001	298.265	0.113E-05	0.014	27.1
14090	2.299	300.791	0.9286	0.08604	0.02778	0.002	298.265	0.115E-05	0.018	26.8
14091	2.298	300.374	0.9297	0.07147	0.02771	0.002	298.266	0.116E-05	0.024	26.4
14092	2.298	299.934	0.9310	0.05822	0.02760	0.003	298.266	0.113E-05	0.033	26.8
14085	3.286	301.098	1.3312	0.10195	0.02821	0.001	298.266	0.753E-06	0.013	28.7
14086	3.286	300.659	1.3333	0.08603	0.02822	0.002	298.268	0.777E-06	0.017	27.9
14087	3.286	300.259	1.3353	0.07144	0.02819	0.002	298.270	0.786E-06	0.022	27.5
14088	3.285	299.892	1.3368	0.05820	0.02809	0.003	298.266	0.767E-06	0.030	28.0
14081	4.362	300.965	1.7756	0.10195	0.02867	0.001	298.262	0.560E-06	0.014	29.2
14082	4.362	300.545	1.7784	0.08603	0.02848	0.002	298.264	0.531E-06	0.018	30.4
14083	4.362	300.158	1.7810	0.07145	0.02837	0.002	298.264	0.515E-06	0.023	31.1
14084	4.362	299.807	1.7831	0.05821	0.02840	0.003	298.261	0.525E-06	0.031	30.6
14077	5.588	301.278	2.2817	0.11924	0.02930	0.001	298.268	0.424E-06	0.011	30.4
14078	5.588	300.846	2.2855	0.10197	0.02925	0.001	298.271	0.430E-06	0.013	29.9
14079	5.588	300.447	2.2890	0.08604	0.02910	0.002	298.271	0.410E-06	0.017	31.1
14080	5.588	300.079	2.2923	0.07146	0.02898	0.002	298.270	0.403E-06	0.022	31.4
14073	6.652	301.162	2.7261	0.11925	0.02980	0.001	298.258	0.348E-06	0.010	31.4

14074	6.652	300.742	2.7306	0.10197	0.02963	0.001	298.260	0.330E-06	0.013	32.8
14075	6.652	300.359	2.7348	0.08604	0.02962	0.002	298.265	0.332E-06	0.016	32.5
14076	6.652	300.006	2.7386	0.07146	0.02956	0.002	298.267	0.330E-06	0.021	32.6
14069	7.793	301.056	3.2047	0.11927	0.03042	0.001	298.261	0.296E-06	0.010	32.0
14070	7.793	300.654	3.2099	0.10199	0.03042	0.001	298.261	0.300E-06	0.013	31.6
14071	7.792	300.284	3.2145	0.08605	0.03022	0.002	298.262	0.282E-06	0.017	33.2
14072	7.792	299.941	3.2190	0.07147	0.03014	0.002	298.259	0.278E-06	0.022	33.4
14065	9.273	300.936	3.8268	0.11927	0.03127	0.001	298.266	0.248E-06	0.011	32.7
14065	9.273	300.549	3.8330	0.10199	0.03119	0.001	298.268	0.243E-06	0.013	33.3
14067	9.273	300.196	3.8387	0.08605	0.03113	0.002	298.271	0.241E-06	0.018	33.4
14068	9.273	299.872	3.8439	0.07147	0.03105	0.002	298.271	0.241E-06	0.022	33.3
14061	10.365	301.246	4.2783	0.13793	0.03192	0.001	298.271	0.221E-06	0.009	33.3
14062	10.365	300.848	4.2856	0.11930	0.03181	0.001	298.272	0.214E-06	0.011	34.3
14063	10.366	300.475	4.2927	0.10200	0.03179	0.001	298.271	0.214E-06	0.014	34.2
14064	10.366	300.131	4.2990	0.08606	0.03173	0.002	298.271	0.211E-06	0.017	34.6
14057	12.749	301.341	5.2677	0.15797	0.03340	0.001	298.155	0.184E-06	0.008	33.8
14058	12.749	300.754	5.2812	0.12848	0.03319	0.001	298.155	0.176E-06	0.009	35.0
14059	12.749	300.220	5.2936	0.10203	0.03327	0.001	298.155	0.180E-06	0.013	34.4
14060	12.749	299.753	5.3045	0.07862	0.03333	0.002	298.153	0.185E-06	0.021	33.5
14053	14.903	301.146	6.1567	0.15799	0.03486	0.001	298.151	0.156E-06	0.008	35.6
14054	14.903	300.593	6.1720	0.12849	0.03465	0.001	298.155	0.150E-06	0.011	36.7
14055	14.903	300.094	6.1858	0.10204	0.03467	0.002	298.155	0.151E-06	0.014	36.4
14056	14.903	299.655	6.1980	0.07863	0.03488	0.002	298.154	0.161E-06	0.021	34.6
14049	17.556	300.981	7.2265	0.15800	0.03639	0.001	298.152	0.138E-06	0.008	35.5
14050	17.556	300.450	7.2440	0.12850	0.03620	0.001	298.153	0.131E-06	0.010	36.8
14051	17.554	299.978	7.2588	0.10206	0.03641	0.002	298.152	0.137E-06	0.015	35.9
14052	17.555	299.562	7.2728	0.07863	0.03640	0.002	298.154	0.139E-06	0.021	35.2
14045	20.284	301.326	8.2713	0.19054	0.03838	0.001	298.145	0.120E-06	0.007	37.3
14046	20.284	300.787	8.2916	0.15802	0.03837	0.001	298.149	0.120E-06	0.008	37.4
14047	20.284	300.295	8.3102	0.12852	0.03833	0.001	298.148	0.120E-06	0.011	37.4
14048	20.284	299.849	8.3272	0.10206	0.03833	0.002	298.148	0.119E-06	0.014	37.7
14041	23.243	301.118	9.3741	0.19053	0.04049	0.001	298.153	0.107E-06	0.007	39.1
14042	23.243	300.608	9.3956	0.15804	0.04045	0.001	298.151	0.106E-06	0.008	39.6
14043	23.242	300.151	9.4148	0.12853	0.04068	0.001	298.149	0.110E-06	0.011	38.4
14044	23.242	299.739	9.4325	0.10207	0.04055	0.002	298.149	0.107E-06	0.016	39.1
14037	26.215	301.470	10.3969	0.22613	0.04273	0.001	298.158	0.101E-06	0.006	39.5
14038	26.215	300.939	10.4212	0.19058	0.04268	0.001	298.154	0.987E-07	0.007	40.3
14039	26.214	300.464	10.4431	0.15806	0.04256	0.001	298.151	0.954E-07	0.009	41.4
14040	26.214	300.031	10.4633	0.12855	0.04245	0.001	298.156	0.926E-07	0.012	42.5
14033	29.307	301.307	11.4172	0.22609	0.04499	0.001	298.164	0.100E-06	0.006	38.3
14034	29.307	300.807	11.4418	0.19056	0.04486	0.001	298.168	0.972E-07	0.007	39.2
14035	29.307	300.361	11.4643	0.15803	0.04474	0.001	298.165	0.960E-07	0.009	39.4
14036	29.307	299.950	11.4848	0.12853	0.04482	0.001	298.166	0.977E-07	0.012	38.9
14029	32.719	301.132	12.4644	0.22604	0.04747	0.001	298.161	0.973E-07	0.006	38.2
14030	32.719	300.665	12.4888	0.19049	0.04725	0.001	298.160	0.942E-07	0.007	39.1
14031	32.719	300.243	12.5108	0.15797	0.04713	0.001	298.165	0.931E-07	0.010	39.3
14032	32.719	299.857	12.5312	0.12847	0.04715	0.001	298.165	0.939E-07	0.012	39.0
14025	36.375	300.985	13.4960	0.22608	0.04984	0.001	298.180	0.911E-07	0.006	39.6
14026	36.376	300.541	13.5205	0.19052	0.04974	0.001	298.180	0.895E-07	0.007	40.1
14027	36.375	300.142	13.5422	0.15799	0.04965	0.001	298.177	0.882E-07	0.010	40.5
14028	36.375	299.713	13.5624	0.12848	0.04963	0.002	298.178	0.895E-07	0.014	39.9
14021	40.013	301.420	14.4067	0.27824	0.05232	0.001	298.167	0.878E-07	0.005	42.0
14022	40.013	300.809	14.4407	0.22612	0.05220	0.001	298.164	0.822E-07	0.006	43.1
14023	40.013	300.261	14.4712	0.17936	0.05218	0.001	298.166	0.817E-07	0.008	43.3
14024	40.013	299.778	14.4983	0.13800	0.05227	0.002	298.163	0.823E-07	0.013	43.1
14017	44.460	301.232	15.4567	0.27760	0.05540	0.001	298.169	0.856E-07	0.005	41.5
14018	44.460	300.655	15.4893	0.22560	0.05541	0.001	298.169	0.851E-07	0.006	41.7
14019	44.461	300.141	15.5186	0.17898	0.05519	0.001	298.165	0.821E-07	0.009	42.8
14020	44.461	299.683	15.5447	0.13770	0.05528	0.002	298.166	0.833E-07	0.013	42.3
14013	49.768	301.349	16.5630	0.30558	0.05886	0.001	298.162	0.870E-07	0.005	40.9
14014	49.768	300.781	16.5953	0.25088	0.05882	0.001	298.163	0.868E-07	0.006	41.0
14015	49.768	300.267	16.6245	0.20156	0.05884	0.001	298.164	0.885E-07	0.008	40.2
14016	49.768	299.813	16.6504	0.15761	0.05873	0.001	298.161	0.864E-07	0.011	40.9
14009	54.913	301.159	17.5395	0.30562	0.06213	0.001	298.164	0.833E-07	0.005	43.2
14010	54.912	300.624	17.5696	0.25092	0.06194	0.001	298.163	0.814E-07	0.006	43.9
14011	54.913	300.140	17.5972	0.20159	0.06219	0.001	298.164	0.830E-07	0.008	43.3
14012	54.913	299.707	17.6218	0.15763	0.06237	0.001	298.163	0.844E-07	0.011	42.9
14005	60.883	301.280	18.5373	0.33500	0.06584	0.000	298.168	0.855E-07	0.004	47.7
14006	60.884	300.747	18.5672	0.27762	0.06562	0.001	298.169	0.835E-07	0.006	47.7

14007	60.883	300.264	18.5942	0.22557	0.06581	0.001	298.167	0.856E-07	0.008	42.7
14008	60.884	299.835	18.6184	0.17893	0.06615	0.001	298.170	0.898E-07	0.010	41.1
14001	70.467	301.029	19.9551	0.33509	0.07150	0.000	298.172	0.812E-07	0.004	46.7
14012	70.466	300.533	19.9819	0.27768	0.07161	0.001	298.175	0.812E-07	0.006	46.8
14003	70.465	300.088	20.0062	0.22543	0.07206	0.001	298.174	0.835E-07	0.008	46.1
14004	70.465	299.690	20.0280	0.17897	0.07224	0.001	298.174	0.845E-07	0.011	45.7

## 5. References

- [1] Roder, H.M., A transient hot wire thermal conductivity apparatus for fluids, J. Res. Nat. Bur. Stand. (U.S.) 86, 457 (1981).
- [2] Roder, H.M., The thermal conductivity of oxygen, J. Res. Nat. Bur. Stand. (U.S.) 86, 279 (1982).
- [3] Roder, H.M., Experimental thermal conductivity values for hydrogen, methane, ethane, and propane, Nat. Bur. Stand. Interagency Report 84-3006 (1984).
- [4] Roder, H.M., The thermal conductivity of hydrogen for temperatures between 78 and 310 K with pressures to 70 MPa, Int. J. Thermophys. 5, 323 (1984).
- [5] Roder, H.M., The thermal conductivity of methane for temperatures between 110 and 310 K with pressures to 70 MPa, Int. J. Thermophys. 6, 119 (1985).
- [6] Roder, H.M., Nieto de Castro, C.A., The thermal conductivity of ethane for temperatures between 110 and 325 K at pressures to 70 MPa, High Temp. High Press. 17, 453 (1985).
- [7] Roder, H.M., Friend, D.G., Experimental thermal conductivity values for mixtures of methane and ethane, Nat. Bur. Stand. Interagency Report 85-3024 (1985).
- [8] Roder, H.M., Friend, D.G., The thermal conductivity of methane-ethane mixtures at temperatures between 140 and 330 K and at pressures to 70 MPa, Int. J. Thermophys. 6, 607 (1985).
- [9] Roder, H.M., Nieto de Castro, C.A., The thermal conductivity of liquid propane, J. Chem. Eng. Data 27, 12 (1982).
- [10] Roder, H.M., Perkins, R.A., Nieto de Castro, C.A., Experimental thermal conductivity, thermal diffusivity, and specific heat values of argon and nitrogen, Nat. Inst. Stand. Tech. Interagency Report 88-3902 (1988).
- [11] Roder, H.M., Nieto de Castro, C.A., Mardolcar, U.V., The thermal conductivity of liquid argon for temperatures between 110 and 140 K with pressures to 70 MPa, Int. J. Thermophys. 8, 521 (1987).
- [12] Roder, H.M., Perkins, R.A., Nieto de Castro, C.A., The thermal conductivity and heat capacity of gaseous argon, Int. J. Thermophys. 10, 1141 (1989).



- [13] Perkins, R.A., Roder, H.M., Friend, D.G., Nieto de Castro, C.A., The thermal conductivity and heat capacity of fluid nitrogen, submitted to *Physica A*. (1991).
- [14] Nieto de Castro, C.A., Taxis, B., Roder, H.M., Wakeham, W.A., Thermal diffusivity measurement by the transient hot-wire technique: A reappraisal, *Int. J. Thermophys.* 9, 293 (1988).
- [15] Ely, J.F., A predictive, exact shape factor extended corresponding states model for mixtures, *Adv. Cryo. Eng.* 35, 1511 (1990).