



*Technical Note*

*No. 202*

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THERMODYNAMIC PROPERTY VALUES  
FOR GASEOUS AND LIQUID CARBON MONOXIDE  
FROM 70 TO 300°K WITH PRESSURES TO 300 ATMOSPHERES

J. G. HUST AND R. B. STEWART



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U. S. DEPARTMENT OF COMMERCE  
NATIONAL BUREAU OF STANDARDS

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# NATIONAL BUREAU OF STANDARDS

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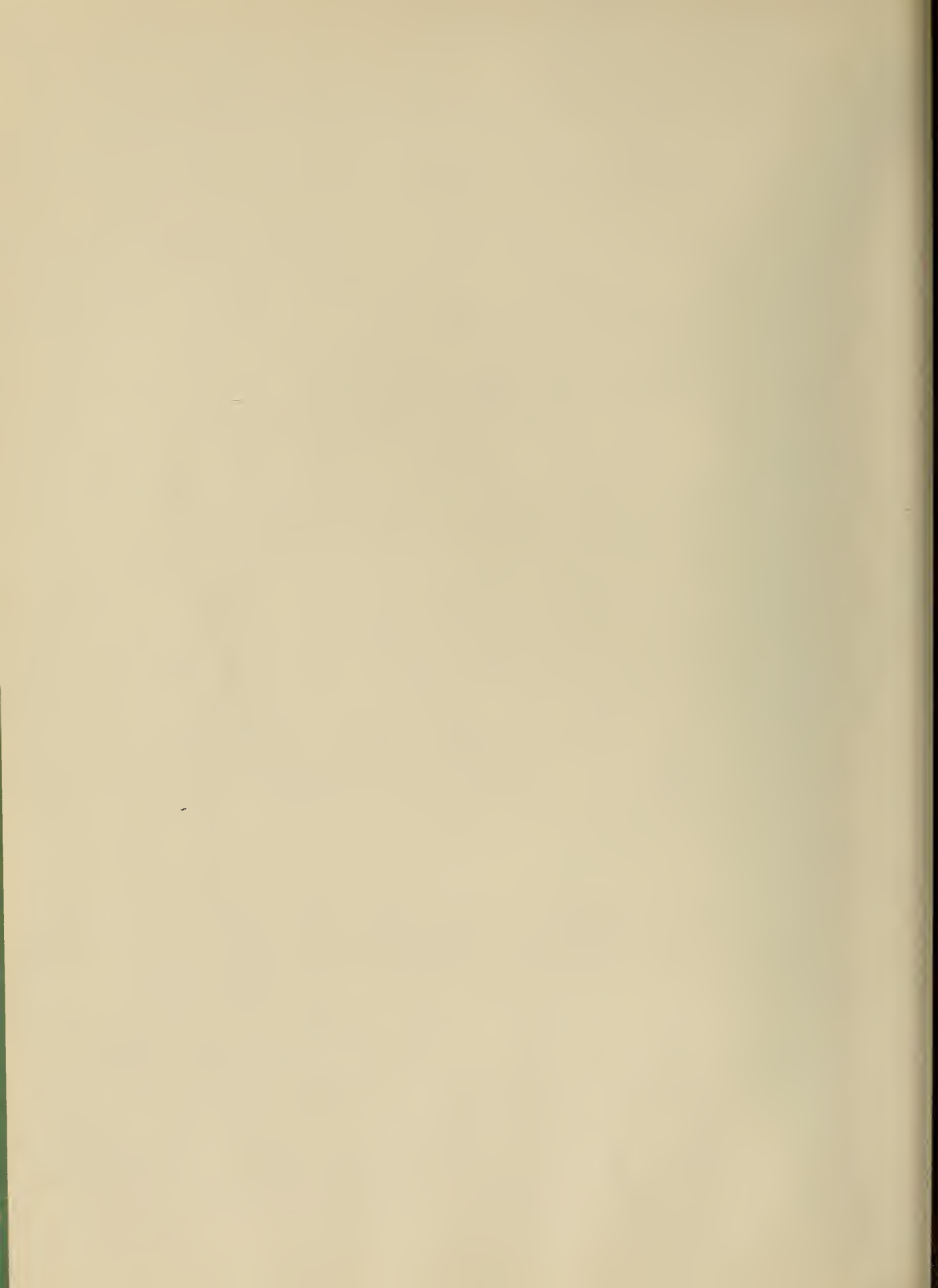
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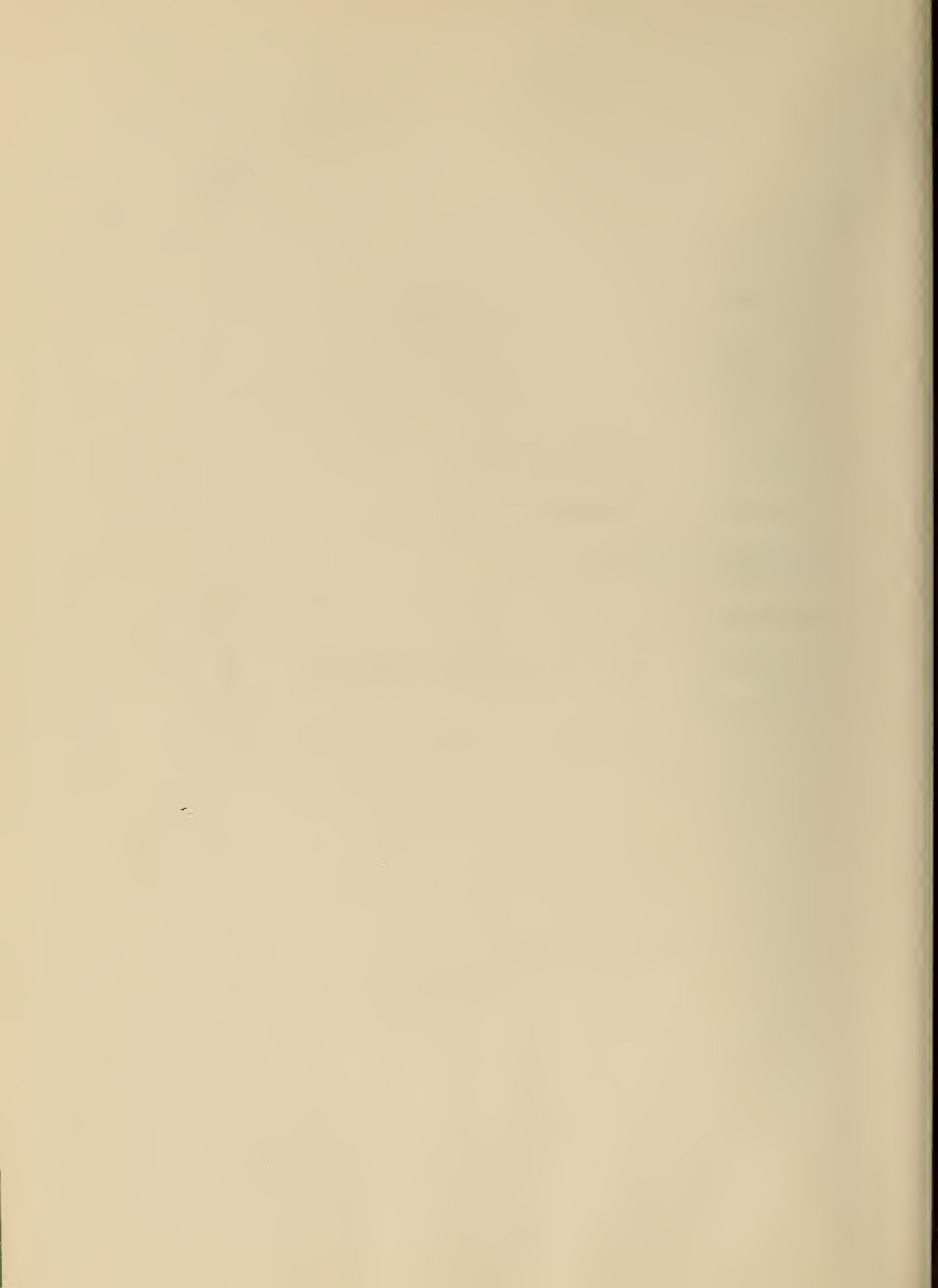
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J. G. Hust and R. B. Stewart

The internal energy, entropy, enthalpy, and density of carbon monoxide are tabulated as functions of pressure and temperature from 70 to 300°K and 0.1 to 300 atmospheres. A compressibility factor-pressure chart and a temperature-entropy chart are also included. The P- $\rho$ -T values have been calculated using the Su principle of corresponding states with nitrogen as a model. Extensive comparisons are included, illustrating the deviations of the calculated values from the experimental data and from other correlated data. Equations representing the P- $\rho$ -T surface and the vapor pressure are given.

1.0 INTRODUCTION

The experimental P- $\rho$ -T data for carbon monoxide are limited to temperatures greater than 200°K except for values of vapor pressure and saturated liquid and vapor densities. Included in the published compilations of thermodynamic properties [Deming and Shupe, 1931; Hilsenrath et al., 1955; Keesom et al., 1955; Leah, 1956] which correlate the experimental data are two [Keesom et al., 1955; Leah, 1956] in which the authors used the theory of corresponding states, based on a nitrogen model, to extrapolate the experimental data to the two-phase coexistence range; one of these [Keesom, 1955] also predicts the properties of the liquid. The newer data [Michels et al., 1952] above 273°K which extend to pressures of 3000 atmospheres were not considered in these earlier compilations.

A comparison of the data in these compilations has revealed significant differences particularly for the extrapolated values at densities greater than the critical density.

In view of these differences in the low temperature data for carbon monoxide, this study was undertaken to determine the most

satisfactory means of predicting low temperature P- $\rho$ -T data over a broad range of temperature and pressure. The experimental data have been evaluated and the existing correlations carefully reviewed and compared. As a result, thermodynamic property values have been generated using the Su principle of corresponding states and the equation of state for nitrogen as presented by Strobridge [1962]. Other corresponding states methods and the generalized equations of state of Hirschfelder, et al. [1958], were considered. The predicted P- $\rho$ -T values compare favorably with experimental data.

## 2.0 NOTATIONS, CONVERSIONS, AND FIXED POINTS

### 2.1 Symbols

P - Pressure

T - Temperature

V - Specific Volume

$\rho$  - Density

R - Gas Constant = 0.0820797 liter-atm/g mole-°K

Z - Compressibility Factor, PV/RT

U - Internal Energy

H - Enthalpy

S - Entropy

### 2.2 Subscripts

r - reduced variable

c - critical point value

### 2.3 Superscripts

o - Ideal gas or zero pressure state

### 2.4 Conversions

$$1 \text{ atm} = 1.013250 \times 10^6 \text{ dyne/cm}^2$$

$$1 \text{ joule} = 9.86896 \times 10^{-3} \text{ liter-atm}$$

$$1 \text{ calorie} = 4.1840 \text{ joules}$$

$$1 \text{ g mole of carbon monoxide} = 28.01 \text{ g}$$



## 2.5 Fixed Points

Critical pressure	=	34.529 atm [Leah, 1956]
Critical temperature	=	132.91°K [Leah, 1956]
Critical density	=	10.7 g mole/liter [Leah, 1956]
Normal boiling point	=	81.63°K [Clayton and Giaque, 1932]*
Triple point temperature	=	68.14°K [Clayton and Giaque, 1932]*
Triple point pressure	=	0.1515 atm [Clayton and Giaque, 1932]

## 3.0 PUBLISHED P-ρ-T VALUES BELOW 300°K

The published experimental P-ρ-T data for carbon monoxide are limited to the region above 200°K and the saturated liquid and vapor.

The experimental gaseous P-ρ-T data considered in this study are:

1. the 66 points by Bartlet, Hetherington, Kvalnes, and Tremearne [1930] at temperatures from -70 to 25°C and pressures from 25 to 1000 atmospheres,
2. the 27 points by Michels, Lupton, Wassenaar, and De Graaff [1952] at 0 and 25°C with pressures from 1 to 1000 atmospheres,
3. the 40 points by Townend and Bhatt [1931] at 0 and 25°C with pressures from 1 to 600 atmospheres,
4. the 110 points by Goig-Botella [1929a and b] between 0 and 21°C with pressures from 50 to 130 atmospheres,
5. the 18 points by Scott [1929] at 25°C and pressures between 1 and 170 atmospheres.

The experimental vapor pressure data considered are:

1. the 23 points from 68 to 90°K by Baly and Donnan [1902],
2. the 35 points from 68 to 81°K by Estreicher and Bobotek [1913],
3. the 16 points from 69.1 to 83.1°K by Clayton and Giaque [1932],
4. the 22 points from 69 to 80°K by Clusius and Teske [1929],

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\* These values differ from those calculated in this paper by less than 0.04%.

5. the 11 points from  $-185.4$  to  $-205.03^{\circ}\text{C}$  by Verschoyle [1931],
6. the 19 points from  $-180$  to  $-140^{\circ}\text{C}$  by Michels, Wassenaar, and Zwietering [1952],
7. the 18 points from  $-205$  to  $-140^{\circ}\text{C}$  by Crommelin, Bijleveld, and Brown [1931].

The experimental saturated liquid and vapor density data considered are:

1. liquid density-temperature values at 11 points from 71 to  $88^{\circ}\text{K}$  by Baly and Donnan [1902],
2. liquid density-temperature values at 18 points from 81 to  $133^{\circ}\text{K}$  and vapor density-temperature values at 11 points from 100 to  $133^{\circ}\text{K}$  by Mathias and Crommelin [1936]\*,
3. liquid and vapor density-temperature values at 5 points from  $-150$  to  $-140^{\circ}\text{C}$  by Cardoso [1916].

No other experimental P- $\rho$ -T data for liquid carbon monoxide have been found in the literature.

The more recent compilations reviewed in this study, which contain P- $\rho$ -T values below  $300^{\circ}\text{K}$  based on limited experimental data or predicted from corresponding states methods, are as follows:

1. Tabular values at temperatures from  $-200$  to  $400^{\circ}\text{C}$  and pressures from 0.1 to 1200 atmospheres are presented by Leah [1956], together with saturated liquid and vapor P- $\rho$ -T values. The liquid range is not included. A T-S diagram is also presented.
2. A P-H diagram illustrating P- $\rho$ -T data for temperatures from  $-200$  to  $200^{\circ}\text{C}$  and pressures from 0.15 to 300 atmospheres was published by Keesom, Bijl, and Van Ierland [1955]. Liquid P- $\rho$ -T data are included on this chart down to  $-180^{\circ}\text{C}$ .

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\* These data represent the same measurements reported in Mathias, et al. [1932].

3. Tabular values at temperatures from -70 to 400°C and pressures from 25 to 1200 atmospheres have been tabulated by Deming and Shupe [1931]. These data resulted essentially from a smoothing of the data of Bartlett, Hetherington, Kvalnes, and Tremearne [1930].
4. Tabular values at temperatures from 200 to 300°K and pressures from 0.01 to 40 atmospheres are included in NBS Circular 564 by Hilsenrath, et al.[1955], which includes vapor pressure data but no saturated vapor or liquid density data.

#### 4.0 SELECTION OF VAPOR PRESSURE VALUES

The comparisons of the vapor pressure data were made by determining differences between experimental and calculated pressures. The calculated pressures were from the equation suggested by Crommelin, Bijleveld, and Brown [1931],

$$\log_{10}P = A + B/T + CT + D \log_{10}T . \quad (1)$$

As a result of this comparison the data by Crommelin, Bijleveld, and Brown [1931], Michels, Wassenaar, and Zwietering [1952], and Clayton and Giaque [1932] were selected as the "best values" of the experimental vapor pressure measurements. New coefficients for (1) were then determined from these best values by minimizing the sum of the squared differences in  $\log_{10}P$ . These coefficients are listed in Table I.

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TABLE I. Coefficients for the Vapor Pressure, Equation (1)  
(P is in atmospheres and T in °K)

Coefficients from Least Squares Fit of Selected Data	Coefficients by Crommelin, et al [1931]
A = 23.314809	A = 24.45338
B = -534.88067	B = -544.66
C = 0.020465422	C = 0.02178
D = -9.6410329	D = -10.217

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The selected experimental vapor pressure data display maximum deviations from calculated pressures, using the new coefficients, of 0.5% with an average deviation of 0.1%. Deviations from calculated pressures for all of the vapor pressure data, including the correlated values of Leah [1956] and Hilsenrath, et al. [1955], are illustrated in figure 1.

## 6.0 SELECTION OF SATURATED LIQUID AND VAPOR DENSITY VALUES

Among the sources of experimental saturated densities [Baly and Donnan, 1902; Mathias and Crommelin, 1936; Cardoso, 1916], the data of Mathias and Crommelin [1936] are believed to be the most reliable and are also the most extensive. In reviewing the paper by Baly and Donnan [1902] it appears that their measurements were for a liquid cooled slightly below saturation, which is in agreement with the fact that their measured densities were generally 0.7% greater than the saturated data of Mathias and Crommelin [1936]. The older limited data of Cardoso [1916] deviate by as much as 20% from those of Mathias and Crommelin [1936].

The densities selected for saturated liquid and vapor were obtained by the simultaneous solution of the vapor pressure equation (1) and the equation of state (2). These liquid values agree with the experimental data reported by Mathias and Crommelin [1936] to better than 1% except near the critical point where the greatest experimental uncertainties occur. The vapor values differ from the data of Mathias and Crommelin [1936] by as much as 5.5%, which is probably less than experimental uncertainty. Figures 2 and 3 illustrate the agreement of the selected saturated density values with experimental data and values appearing in the correlations of Leah [1956] and Keesom, et al. [1955].

## 6.0 SELECTION OF P- $\rho$ -T VALUES

Several equations were investigated in the attempt to obtain P- $\rho$ -T values in agreement with the available experimental data and which are physically reasonable in regions where no data exist. The Su

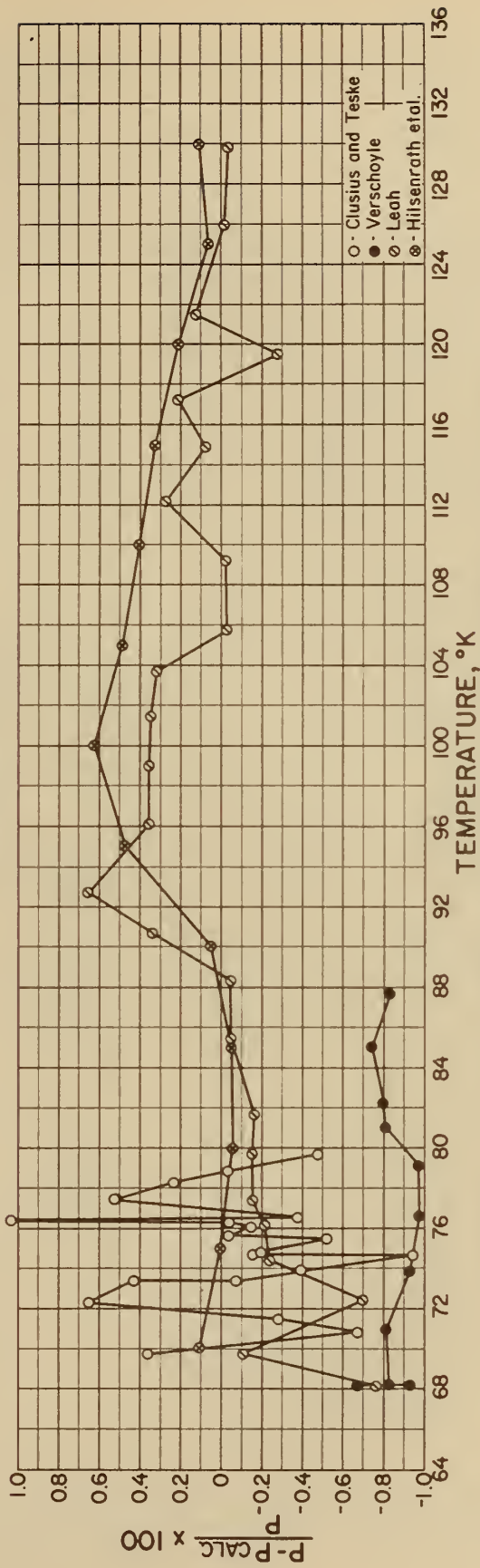
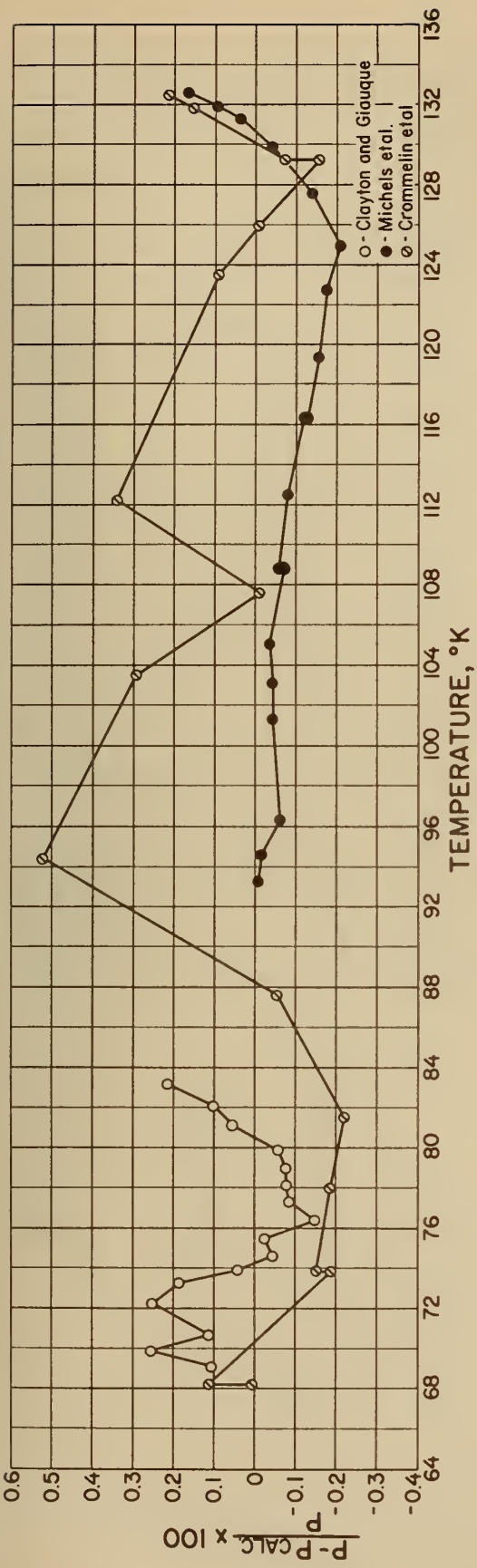


FIGURE 1 - DEVIATIONS OF VAPOR PRESSURE VALUES FROM THOSE CALCULATED WITH EQUATION (1).

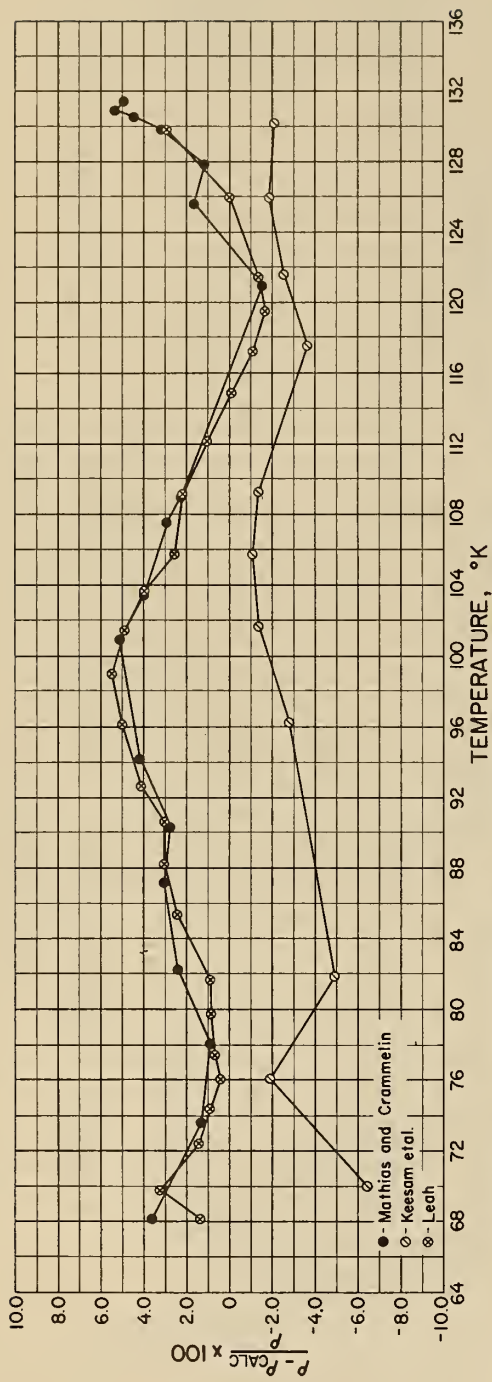


FIGURE 2 - DEVIATIONS OF SATURATED VAPOR DENSITY VALUES FROM THOSE OBTAINED BY THE SIMULTANEOUS SOLUTION OF THE VAPOR PRESSURE EQUATION (1) AND THE EQUATION OF STATE (2).

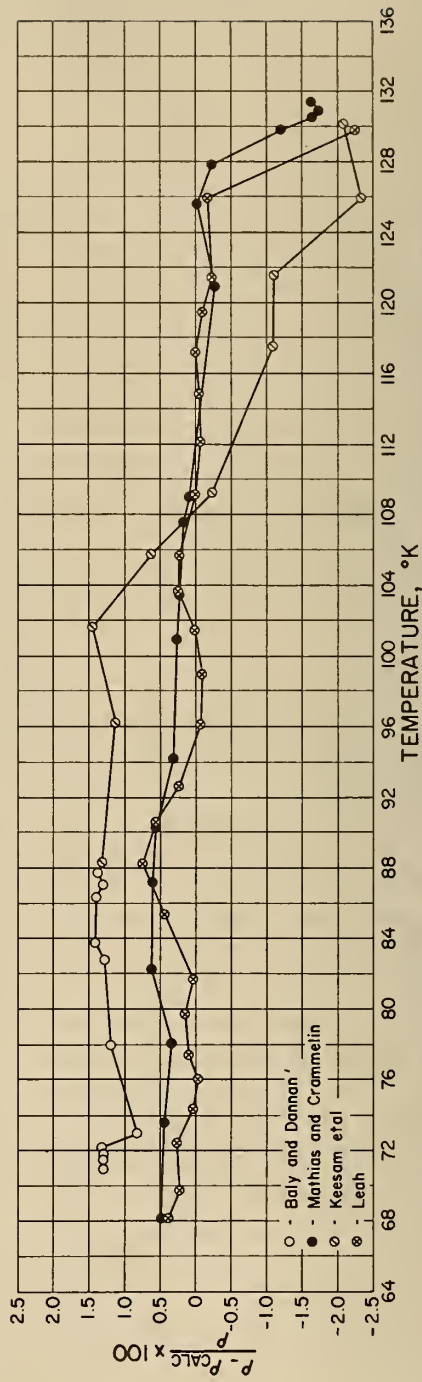


FIGURE 3 - DEVIATIONS OF SATURATED LIQUID DENSITY VALUES FROM THOSE OBTAINED BY THE SIMULTANEOUS SOLUTION OF THE VAPOR PRESSURE EQUATION (1) AND THE EQUATION OF STATE (2).

principle of corresponding states\* applied to the nitrogen equation of state (2) presented by Strobridge [1962] resulted in a satisfactory equation of state for liquid and gaseous carbon monoxide. This equation of state is

$$\begin{aligned}
 P = RT\rho + (Rn_1T + n_2 + n_3/T + n_4/T^2 + n_5/T^4) \rho^2 + (Rn_6T + n_7) \rho^3 \\
 + n_8T\rho^4 + \rho^3(n_9/T^2 + n_{10}/T^3 + n_{11}/T^4) e^{-n_{16}\rho^2} \\
 + \rho^5(n_{12}/T^2 + n_{13}/T^3 + n_{14}/T^4) e^{-n_{16}\rho^2} + n_{15}\rho^6. \quad (2)
 \end{aligned}$$

The Su principle as used here assumes a common relation exists for both nitrogen and carbon monoxide of the form

$$f(P_r, T_r, Z) = 0 \quad (3)$$

where the reduced pressure and temperature are defined as  $P_r = P/P_c$  and  $T_r = T/T_c$ , respectively. A pseudo-reduced density is defined as  $\rho_r = \rho/(P_c/RT_c)$ . The van der Waals principle of corresponding states, which differs only in that the reduced density is defined as  $\rho/\rho_c$ , is not as successful in reproducing experimental data.

The coefficients for (2) obtained by converting the original nitrogen coefficients to carbon monoxide with the Su method are listed in Table II.

TABLE II. Coefficients for the Equation of State (2) for Carbon Monoxide  
(P in atmospheres,  $\rho$  in g mole/liter, T in °K)

$R = 0.8207970 \times 10^{-1}$	
$n_1 = 0.34475299 \times 10^{-1}$	$n_9 = 0.39168058 \times 10^3$
$n_2 = -0.62127636$	$n_{10} = 0.13866970 \times 10^6$
$n_3 = -0.12940822 \times 10^3$	$n_{11} = -0.14415389 \times 10^8$
$n_4 = 0.10165305 \times 10^4$	$n_{12} = -0.42137005 \times 10^1$
$n_5 = 0.45468538 \times 10^7$	$n_{13} = 0.16425701 \times 10^4$
$n_6 = 0.17255282 \times 10^{-2}$	$n_{14} = -0.80449880 \times 10^5$
$n_7 = -0.17377607 \times 10^{-1}$	$n_{15} = 0.19710819 \times 10^{-5}$
$n_8 = 0.44563334 \times 10^{-5}$	$n_{16} = 0.58550402 \times 10^{-2}$

\* A review of the theory of corresponding states and the applications referred to in this paper are presented in CONCEPTS OF THERMODYNAMICS, E. F. Obert, McGraw-Hill Book Co., New York (1960).

The experimental P- $\rho$ -T data considered in this study are compared in figure 4 to smoothed values calculated with (2). Also included in this comparison are the values of Deming and Shupe [1931] which represent essentially a smoothing of the data of Bartlett, Hetherington, Kvalnes, and Tremearne [1930], but also include small temperature corrections which were based upon a recalibration of the experimental apparatus. These comparisons indicate a scatter in experimental data of less than 1% in density and a systematic deviation from the theory of corresponding states of less than 1%. As the coefficients in (2), as determined by Strobridge [1962], for nitrogen were obtained by a fit of the nitrogen data below 200 atmospheres, the validity of (2) above the corresponding pressure of 210 atmospheres is subject to question. The small systematic deviation at higher pressures is attributed to this factor. The data cited in figure 4 as those of Michels, Lupton, Wassenaar, and DeGraaff [1952] are calculated from the isothermal power series expansions presented in their paper, which are reported to reproduce the measured PV values to within 0.1%.

The corresponding states principle applied by Keesom, Bijl, and Van Ierland [1955] to generate carbon monoxide data from a nitrogen model was based on the assumption that a common relation exists for nitrogen and carbon monoxide of the form

$$f(T_r, V_r, Z) = 0 \quad (4)$$

where the reduced specific volume is defined as the volume relative to the volume of the liquid at the normal boiling point; i.e.,  $V_r = V/V_{nbp}$ , and the reduced temperature is defined as  $T_r = T/T_c$ . The pseudo-reduced pressure is defined as  $P_r = P/(RT_c/V_{nbp})$ .

The form of the principle of corresponding states expressed in (3) and (4) was originally proposed by Kamerlingh Onnes to provide an exact correspondence as pressure approaches zero, whereas, by definition, the van der Waals theory provides an exact correspondence at the critical point. It is usually observed, however, that the Onnes Principle produces a more accurate universal function for the P- $\rho$ -T surface than is obtained



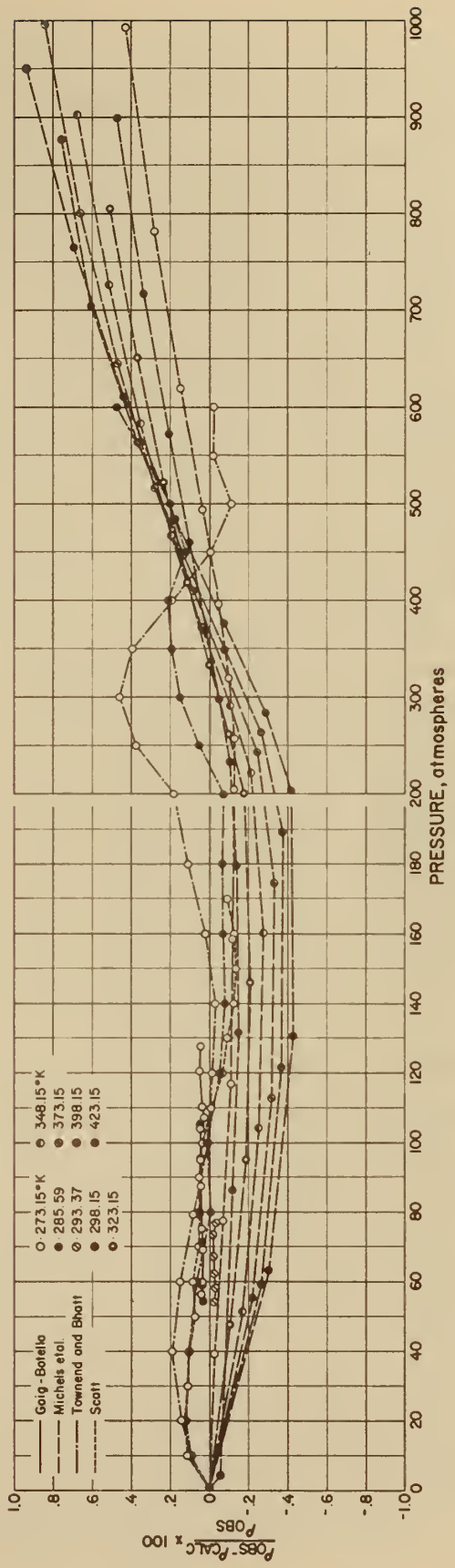
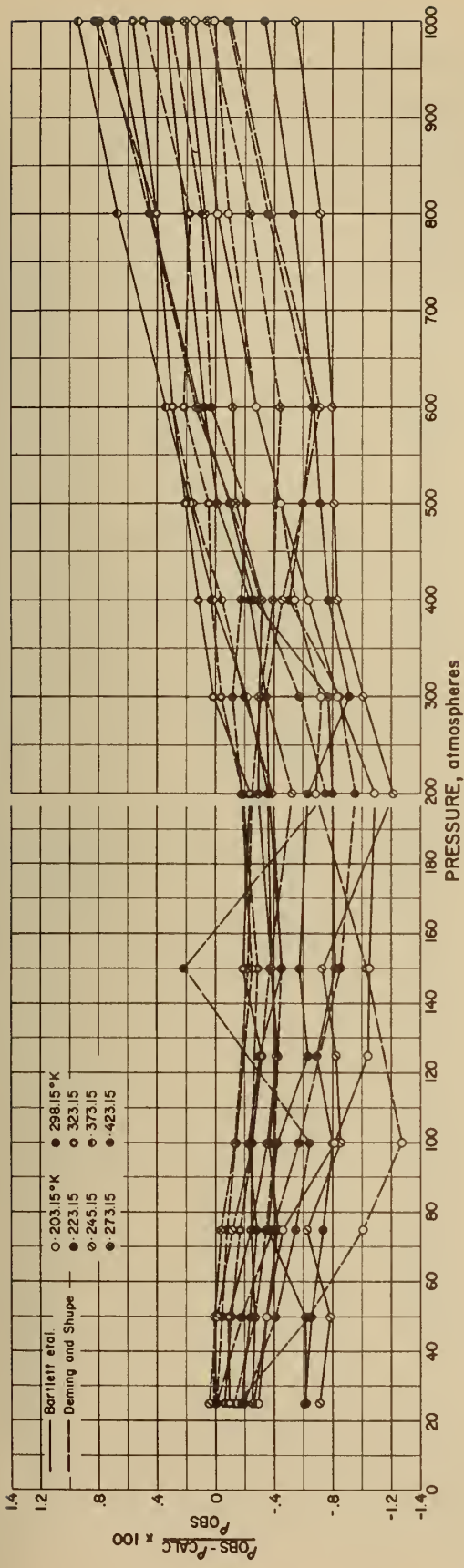


FIGURE 4: DENSITY DEVIATIONS OF EXPERIMENTAL DATA FROM THOSE CALCULATED WITH THE EQUATION OF STATE FOR CARBON MONOXIDE OBTAINED BY APPLYING THE SU PRINCIPLE OF CORRESPONDING STATES TO THE NITROGEN EQUATION (2).

by the van der Waals form. It should be noted that in using (3) the pseudo-reduced density is equivalent to the density divided by an ideal gas density at  $P_c$  and  $T_c$ , that is,  $\rho_r = \rho/\rho_k$ , where  $\rho_k = P_c/RT_c$  and the subscript k refers to the reducing parameter selected for that property; whereas in using (4), the pseudo-reducing pressure is similarly the pressure divided by an ideal gas pressure at  $T_k$  and  $V_k$ , that is,  $P_r = P/P_k$ , where  $P_k = RT_c/V_{nbp}$ .

Figures 5a and 5b are comparisons of the correlated data of Leah [1956], Keesom, Bijl, and Van Ierland [1955]\*, and Hilsenrath, et al. [1955], with densities calculated from (2).

P- $\rho$ -T values as calculated by the generalized equation of state presented by Hirschfelder, Buehler, McGee, and Sutton [1958] were also compared to experimental data and values generated with (2). Although (2) was somewhat superior in reproducing experimental data, the excellent agreement of the values predicted by the two equations, including the liquid region where no experimental data exist, lends support to the validity of (2) for both the liquid and gaseous regions. It is to be noted that this generalized equation of state is not based on the postulate that a universal function in reduced P- $\rho$ -T coordinates exists, but rather allows for departures from this principle of corresponding states by introducing two additional correlating parameters, the slope of the reduced vapor pressure curve at the critical point and the critical compressibility factor. To further substantiate the validity of (2) in the liquid region, the authors have recently made comparisons, using the Su corresponding states principle, between the nitrogen P- $\rho$ -T surface as represented by (2) and experimental liquid oxygen data. Values of the density of oxygen predicted from the P- $\rho$ -T surface were within 1% of the experimental oxygen data. This comparison included data from the triple point to near the critical point with pressures as high as 250 atmospheres.

Based on these comparisons, the authors believe that the P- $\rho$ -T values generated with (2) are accurate for liquid and gaseous carbon

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\* The data cited as those of Keesom, Bijl, and Van Ierland were read from their P-H chart and thus contain reading scatter of as much as 1%, becoming larger than 1% at high densities.

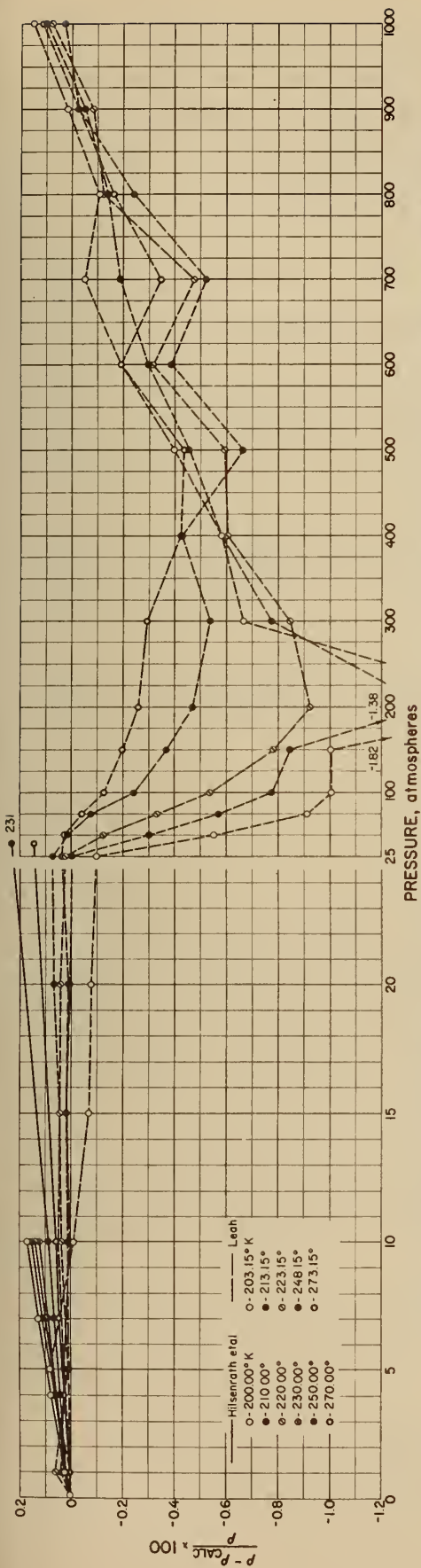


FIGURE 5a - DENSITY DEVIATIONS OF THE DATA OF HILSEN RATH et al. and LEAH (above 200°K) WITH THE EQUATION OF STATE FOR CARBON MONOXIDE OBTAINED BY APPLYING THE SU PRINCIPLE OF CORRESPONDING STATES TO THE NITROGEN EQUATION (2).

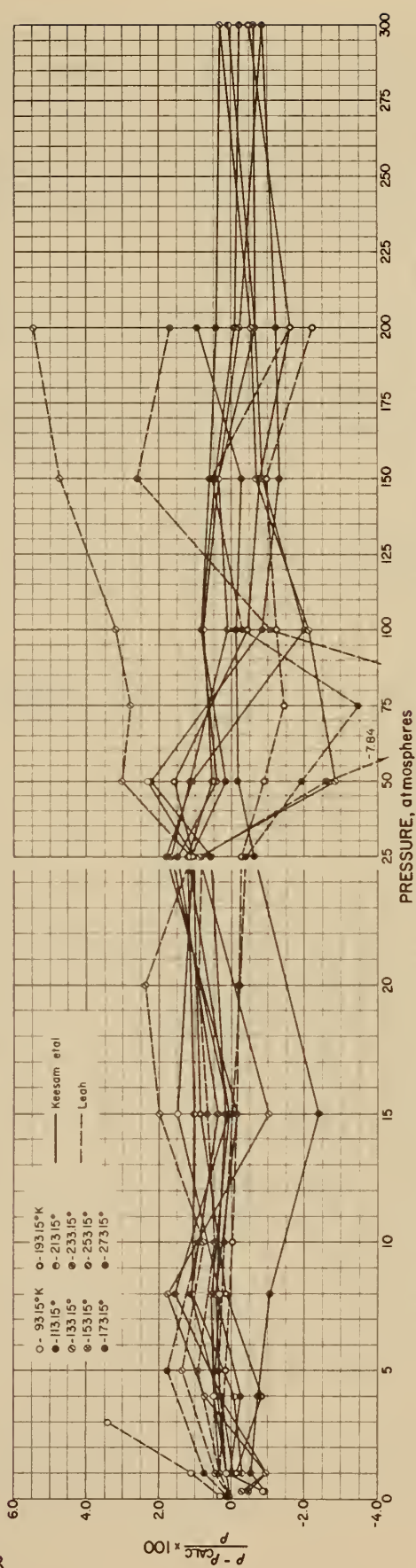


FIGURE 5b - DENSITY DEVIATIONS OF THE DATA OF KEESOM et al. and LEAH (below 200°K) WITH THE EQUATION OF STATE FOR CARBON MONOXIDE OBTAINED BY APPLYING THE SU PRINCIPLE OF CORRESPONDING STATES TO THE NITROGEN EQUATION (2).

monoxide to within 1% in density except in the immediate vicinity of the critical point, where the uncertainty is much greater. The calculated P-ρ-T surface is represented graphically in the compressibility factor chart and in tabular form in the thermodynamic property tables at the end of this report.

## 7.0 CALCULATION OF DERIVED THERMODYNAMIC PROPERTIES

The entropy, enthalpy, and internal energy of the gas phase, including saturated vapor, were calculated with (5), (6), and (7), respectively.

$$S(T, \rho) = S_{T_0}^{\circ} + \int_{T_0}^T C_p^{\circ} \frac{dT}{T} - R \ln(RT\rho) + \int_0^{\rho} \left[ \frac{R}{\rho} - \frac{1}{\rho^2} \left( \frac{\partial P}{\partial T} \right)_{\rho} \right]_{T_0} d\rho \quad (5)$$

$$H(T, \rho) = H_{T_0}^{\circ} + \int_{T_0}^T C_p^{\circ} dT + (Z - 1)RT + \int_0^{\rho} \left[ \frac{P}{\rho^2} - \frac{T}{\rho^2} \left( \frac{\partial P}{\partial T} \right)_{\rho} \right]_{T_0} d\rho \quad (6)$$

$$U(T, \rho) = H(T, \rho) - P/\rho \quad (7)$$

The reference entropy,  $S_{T_0}^{\circ}$ , and enthalpy,  $H_{T_0}^{\circ}$ , of the ideal gas at  $T_0$  (68.14°K) and 1 atmosphere were chosen as 5.47267 joules/g °K and 353.870 joules/g, respectively, so that the calculated entropy and enthalpy of the saturated liquid at the normal boiling point agree with the values listed by Leah [1956]. These values were determined by Leah [1956] taking the entropy and enthalpy of the perfect crystal to be zero at 0°K.

The zero pressure specific heat,  $C_p^{\circ}$ , as tabulated by Hilsenrath, et al. [1955], are represented by (8) between 60 and 300°K, with a maximum deviation of 0.03%.

$$C_p^{\circ} = A + BT + CT^2 \quad (8)$$

where  $C_p^{\circ}$  is in joules/g °K, T is in °K and

$$A = 1.0392602$$

$$B = -0.50333220 \times 10^{-5}$$

$$C = 0.26032523 \times 10^{-7}$$

The saturated liquid entropies and enthalpies were determined by subtracting the entropy and enthalpy changes due to vaporization as given by Clapeyron's equation (9) from the saturated vapor values.

$$\Delta H = T\Delta S = T \frac{dP}{dT} \Delta V \text{ (vaporization)} \quad (9)$$

The change in volume of vaporization,  $\Delta V$ , was obtained from (1) and (2), while the slope of the vapor pressure curve,  $\frac{dP}{dT}$ , was obtained from (1).

Clayton and Giauque [1932] report a latent heat of vaporization of  $1443.6 \pm 1.0$  cal/mole at  $81.61^\circ\text{K}$ , which is 0.5% greater than the value calculated with (9) at the same temperature.

The liquid entropies and enthalpies were determined by calculating the isothermal changes from saturated liquid states with (10) and (11), respectively.

$$\Delta S = \int_{\rho_{\text{sat}}}^{\rho} \left[ -\frac{1}{\rho^2} \left( \frac{\partial P}{\partial T} \right)_{\rho} \right] d\rho \quad (10)$$

$$\Delta H = \frac{P}{\rho} - \frac{P}{\rho_{\text{sat}}} + \int_{\rho_{\text{sat}}}^{\rho} \left[ \frac{P}{\rho^2} - \frac{T}{\rho^2} \left( \frac{\partial P}{\partial T} \right)_{\rho} \right] d\rho \quad (11)$$

It has been noted in these calculations that the derived properties, entropy, enthalpy and internal energy, contain a discontinuity at critical temperature and above critical pressure. These discontinuities, probably due to small errors in (2) near saturation and in (1) near the critical temperature, have been reduced by making corrections to the vaporization values as indicated in Table III. These corrections, found graphically, decrease the saturated liquid entropy, enthalpy, and internal energy values as predicted by (9).

The derived properties calculated in this manner are illustrated graphically in the Temperature-Entropy diagram and are tabulated at the end of this report.

The melting curve pressures from Clusius, Piesbergen, and Varde [1960] were used to restrict all tabular and graphical data to the fluid region.

TABLE III - CORRECTIONS FOR ENTROPY AND ENTHALPY OF VAPORIZATION

Temperature °K	Entropy of Vaporization joules/g °K		Enthalpy of Vaporization joules/g	
	Calculated*	Correction	Calculated*	Correction
132	0.4167	0.0115	55.01	1.52
131	0.5073	0.0107	66.44	1.40
130	0.5830	0.0100	75.79	1.30
129	0.6493	0.0092	83.77	1.19
128	0.7093	0.0084	90.80	1.08
127	0.7648	0.0077	97.14	0.98
126	0.8165	0.0069	102.89	0.87
125	0.8654	0.0061	108.18	0.76
124	0.9122	0.0054	113.11	0.67
123	0.9568	0.0046	117.69	0.57
122	0.9999	0.0038	121.98	0.46
121	1.0416	0.0031	126.04	0.38
120	1.0820	0.0022	129.84	0.26
119	1.1221	0.0015	133.53	0.18
118	1.1609	0.0008	136.98	0.09
117	1.1989	0.0000	140.27	0.00

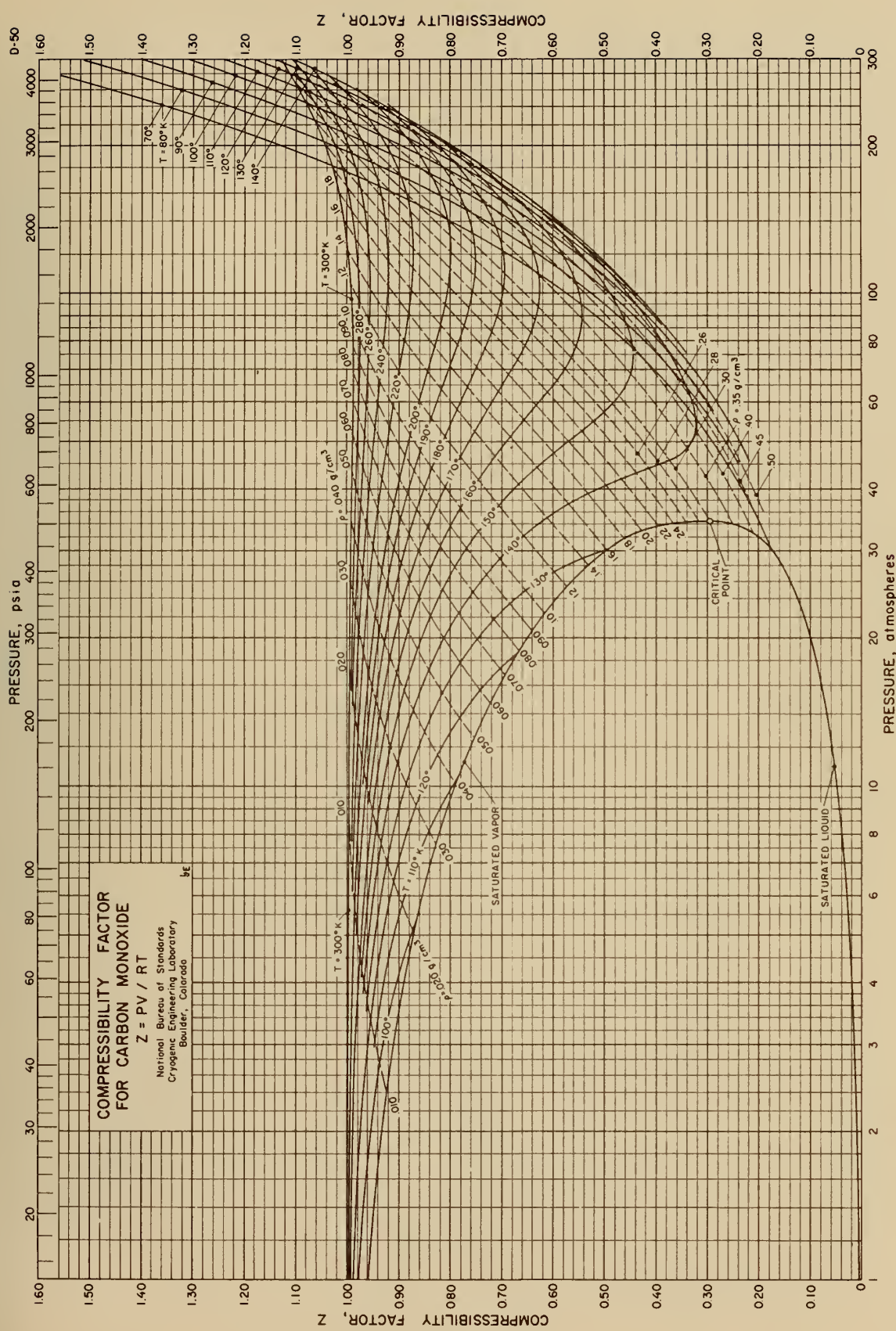
\* The corrections have been added to the calculated values for vaporization.

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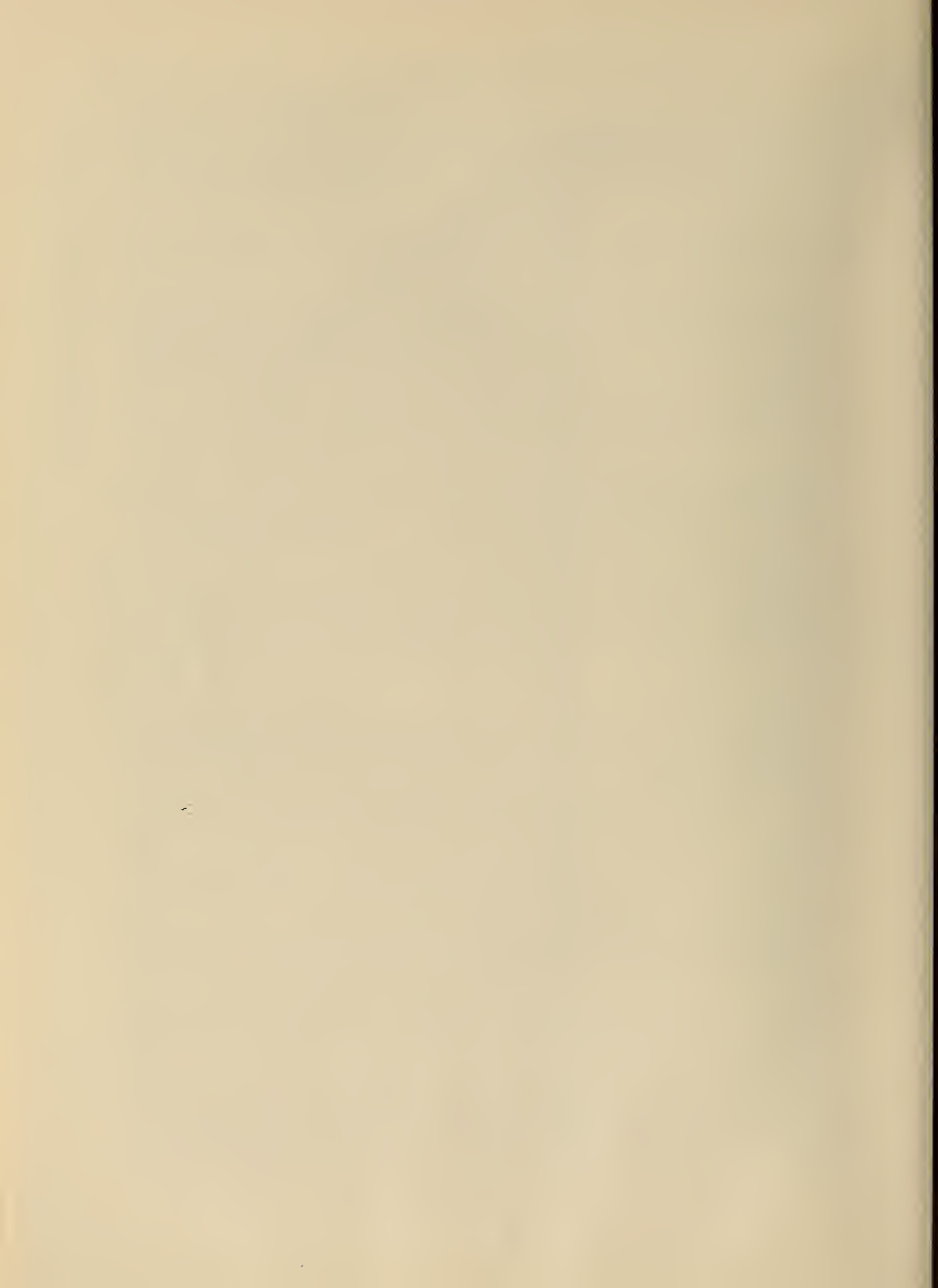
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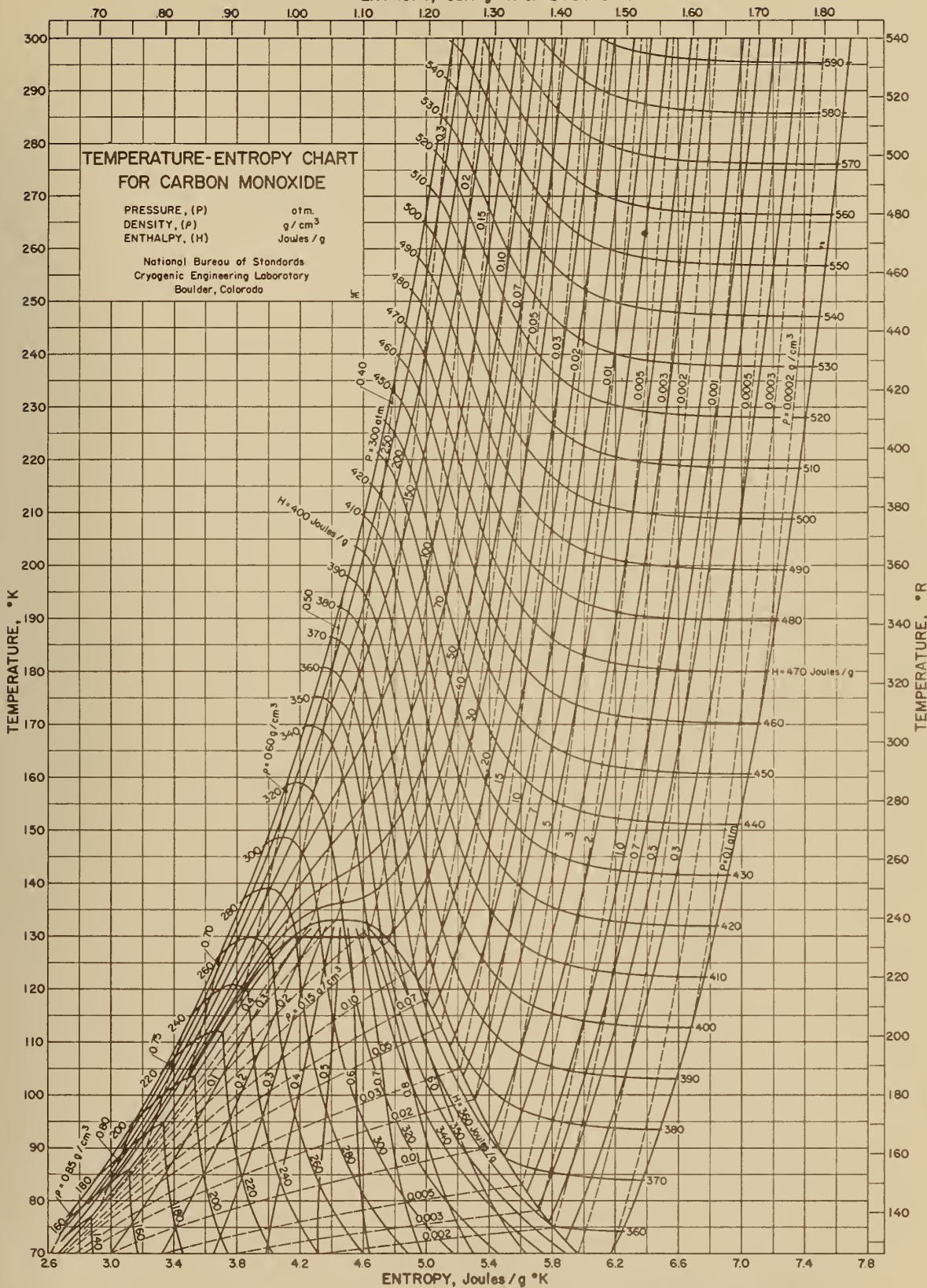
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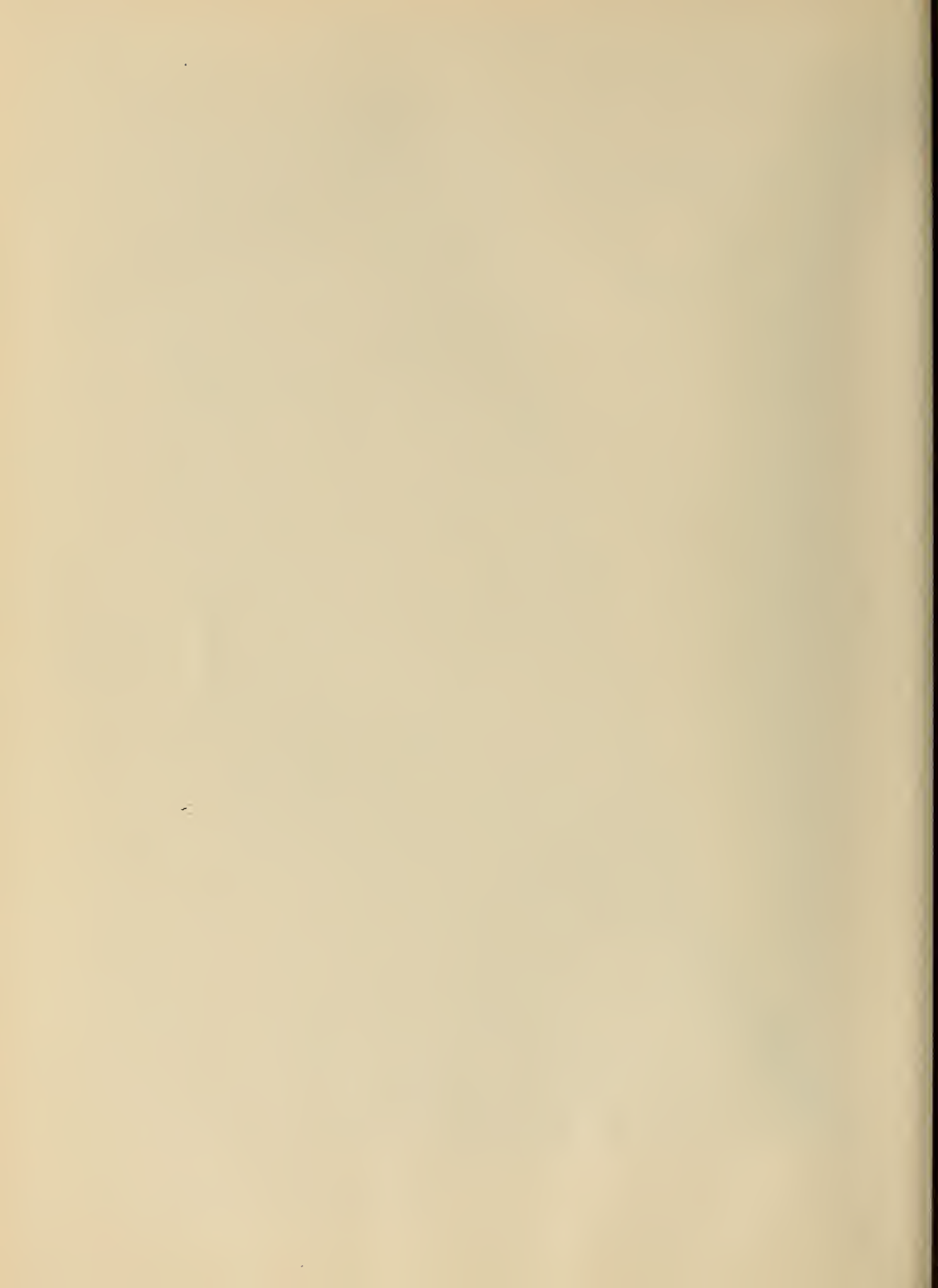




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TABLES OF THERMODYNAMIC PROPERTIES

OF

CARBON MONOXIDE

0.10 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	0.2824	408.67	372.79	6.7522
					122	0.2801	409.71	373.53	6.7607
					123	0.2778	410.75	374.27	6.7692
					124	0.2755	411.79	375.01	6.7777
					125	0.2733	412.83	375.76	6.7860
					126	0.2711	413.87	376.50	6.7943
					127	0.2690	414.91	377.24	6.8025
					128	0.2669	415.95	377.99	6.8107
					129	0.2648	416.99	378.73	6.8188
70	0.4903	355.51	334.85	6.1817	130	0.2628	418.04	379.47	6.8268
71	0.4833	356.56	335.59	6.1965	131	0.2608	419.08	380.22	6.8348
72	0.4765	357.60	336.34	6.2111	132	0.2588	420.12	380.96	6.8427
73	0.4699	358.64	337.08	6.2255	133	0.2568	421.16	381.70	6.8506
74	0.4634	359.69	337.82	6.2397	134	0.2549	422.20	382.45	6.8584
75	0.4572	360.73	338.57	6.2537	135	0.2530	423.24	383.19	6.8661
76	0.4511	361.77	339.31	6.2675	136	0.2511	424.28	383.93	6.8738
77	0.4452	362.82	340.06	6.2812	137	0.2493	425.32	384.68	6.8814
78	0.4394	363.86	340.80	6.2946	138	0.2475	426.36	385.42	6.8890
79	0.4338	364.90	341.54	6.3079	139	0.2457	427.40	386.16	6.8965
80	0.4283	365.95	342.29	6.3210	140	0.2440	428.44	386.91	6.9039
81	0.4230	366.99	343.03	6.3340	141	0.2422	429.48	387.65	6.9113
82	0.4177	368.03	343.78	6.3468	142	0.2405	430.52	388.39	6.9187
83	0.4127	369.08	344.52	6.3594	143	0.2388	431.56	389.13	6.9260
84	0.4077	370.12	345.27	6.3719	144	0.2372	432.60	389.88	6.9332
85	0.4029	371.16	346.01	6.3843	145	0.2355	433.64	390.62	6.9404
86	0.3981	372.20	346.75	6.3965	146	0.2339	434.68	391.36	6.9476
87	0.3935	373.25	347.50	6.4085	147	0.2323	435.72	392.11	6.9547
88	0.3890	374.29	348.24	6.4204	148	0.2307	436.76	392.85	6.9618
89	0.3846	375.33	348.99	6.4322	149	0.2292	437.80	393.59	6.9688
90	0.3803	376.38	349.73	6.4439	150	0.2277	438.84	394.33	6.9757
91	0.3761	377.42	350.47	6.4554	151	0.2261	439.88	395.08	6.9826
92	0.3720	378.46	351.22	6.4668	152	0.2247	440.92	395.82	6.9895
93	0.3679	379.50	351.96	6.4780	153	0.2232	441.97	396.56	6.9963
94	0.3640	380.54	352.71	6.4892	154	0.2217	443.01	397.31	7.0031
95	0.3601	381.59	353.45	6.5002	155	0.2203	444.05	398.05	7.0098
96	0.3563	382.63	354.19	6.5111	156	0.2189	445.09	398.79	7.0165
97	0.3527	383.67	354.94	6.5219	157	0.2175	446.13	399.53	7.0232
98	0.3490	384.71	355.68	6.5326	158	0.2161	447.17	400.28	7.0298
99	0.3455	385.76	356.43	6.5432	159	0.2147	448.21	401.02	7.0363
100	0.3420	386.80	357.17	6.5537	160	0.2134	449.25	401.76	7.0428
101	0.3386	387.84	357.91	6.5640	161	0.2121	450.29	402.51	7.0493
102	0.3353	388.88	358.66	6.5743	162	0.2108	451.33	403.25	7.0558
103	0.3320	389.92	359.40	6.5845	163	0.2095	452.37	403.99	7.0622
104	0.3288	390.96	360.15	6.5945	164	0.2082	453.41	404.73	7.0685
105	0.3256	392.01	360.89	6.6045	165	0.2069	454.45	405.48	7.0748
106	0.3225	393.05	361.63	6.6144	166	0.2057	455.49	406.22	7.0811
107	0.3195	394.09	362.38	6.6241	167	0.2044	456.53	406.96	7.0874
108	0.3165	395.13	363.12	6.6338	168	0.2032	457.57	407.71	7.0936
109	0.3136	396.17	363.86	6.6434	169	0.2020	458.61	408.45	7.0998
110	0.3108	397.21	364.61	6.6529	170	0.2008	459.65	409.19	7.1059
111	0.3079	398.26	365.35	6.6624	171	0.1996	460.69	409.93	7.1120
112	0.3052	399.30	366.09	6.6717	172	0.1985	461.73	410.68	7.1181
113	0.3025	400.34	366.84	6.6810	173	0.1973	462.77	411.42	7.1241
114	0.2998	401.38	367.58	6.6901	174	0.1962	463.81	412.16	7.1301
115	0.2972	402.42	368.32	6.6992	175	0.1951	464.85	412.91	7.1360
116	0.2946	403.46	369.07	6.7082	176	0.1940	465.89	413.65	7.1420
117	0.2921	404.50	369.81	6.7172	177	0.1929	466.93	414.39	7.1479
118	0.2896	405.54	370.56	6.7260	178	0.1918	467.97	415.13	7.1537
119	0.2871	406.59	371.30	6.7348	179	0.1907	469.01	415.88	7.1595
120	0.2847	407.63	372.04	6.7435	180	0.1897	470.05	416.62	7.1653

## 0.10 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	0.1886	471.09	417.36	7.1711	241	0.1416	533.48	461.93	7.4688
182	0.1876	472.13	418.11	7.1768	242	0.1410	534.52	462.67	7.4731
183	0.1865	473.17	418.85	7.1825	243	0.1405	535.56	463.42	7.4774
184	0.1855	474.21	419.59	7.1882	244	0.1399	536.60	464.16	7.4817
185	0.1845	475.25	420.33	7.1938	245	0.1393	537.64	464.90	7.4859
186	0.1835	476.29	421.08	7.1994	246	0.1387	538.68	465.65	7.4901
187	0.1825	477.33	421.82	7.2050	247	0.1382	539.72	466.39	7.4944
188	0.1816	478.37	422.56	7.2105	248	0.1376	540.76	467.13	7.4986
189	0.1806	479.41	423.30	7.2161	249	0.1371	541.80	467.87	7.5028
190	0.1797	480.45	424.05	7.2216	250	0.1365	542.84	468.62	7.5069
191	0.1787	481.49	424.79	7.2270	251	0.1360	543.88	469.36	7.5111
192	0.1778	482.53	425.53	7.2324	252	0.1354	544.92	470.10	7.5152
193	0.1769	483.57	426.28	7.2378	253	0.1349	545.96	470.85	7.5193
194	0.1760	484.61	427.02	7.2432	254	0.1344	547.00	471.59	7.5234
195	0.1751	485.65	427.76	7.2486	255	0.1338	548.04	472.33	7.5275
196	0.1742	486.69	428.50	7.2539	256	0.1333	549.08	473.07	7.5316
197	0.1733	487.73	429.25	7.2592	257	0.1328	550.12	473.82	7.5356
198	0.1724	488.77	429.99	7.2644	258	0.1323	551.16	474.56	7.5397
199	0.1715	489.81	430.73	7.2697	259	0.1318	552.20	475.30	7.5437
200	0.1707	490.85	431.47	7.2749	260	0.1313	553.24	476.05	7.5477
201	0.1698	491.89	432.22	7.2801	261	0.1308	554.28	476.79	7.5517
202	0.1690	492.93	432.96	7.2852	262	0.1303	555.32	477.53	7.5557
203	0.1681	493.97	433.70	7.2904	263	0.1298	556.36	478.28	7.5596
204	0.1673	495.01	434.45	7.2955	264	0.1293	557.40	479.02	7.5636
205	0.1665	496.05	435.19	7.3006	265	0.1288	558.44	479.76	7.5675
206	0.1657	497.09	435.93	7.3056	266	0.1283	559.48	480.51	7.5714
207	0.1649	498.12	436.67	7.3107	267	0.1278	560.52	481.25	7.5753
208	0.1641	499.16	437.42	7.3157	268	0.1273	561.56	481.99	7.5792
209	0.1633	500.20	438.16	7.3207	269	0.1269	562.60	482.73	7.5831
210	0.1625	501.24	438.90	7.3256	270	0.1264	563.64	483.48	7.5870
211	0.1618	502.28	439.65	7.3306	271	0.1259	564.68	484.22	7.5908
212	0.1610	503.32	440.39	7.3355	272	0.1255	565.72	484.96	7.5946
213	0.1602	504.36	441.13	7.3404	273	0.1250	566.76	485.71	7.5985
214	0.1595	505.40	441.87	7.3452	274	0.1246	567.80	486.45	7.6023
215	0.1588	506.44	442.62	7.3501	275	0.1241	568.84	487.19	7.6060
216	0.1580	507.48	443.36	7.3549	276	0.1237	569.88	487.94	7.6098
217	0.1573	508.52	444.10	7.3597	277	0.1232	570.92	488.68	7.6136
218	0.1566	509.56	444.85	7.3645	278	0.1228	571.96	489.42	7.6173
219	0.1559	510.60	445.59	7.3693	279	0.1223	573.00	490.17	7.6211
220	0.1551	511.64	446.33	7.3740	280	0.1219	574.04	490.91	7.6248
221	0.1544	512.68	447.07	7.3787	281	0.1215	575.08	491.65	7.6285
222	0.1537	513.72	447.82	7.3834	282	0.1210	576.12	492.40	7.6322
223	0.1531	514.76	448.56	7.3881	283	0.1206	577.16	493.14	7.6359
224	0.1524	515.80	449.30	7.3927	284	0.1202	578.21	493.88	7.6395
225	0.1517	516.84	450.04	7.3974	285	0.1197	579.25	494.62	7.6432
226	0.1510	517.88	450.79	7.4020	286	0.1193	580.29	495.37	7.6468
227	0.1504	518.92	451.53	7.4066	287	0.1189	581.33	496.11	7.6505
228	0.1497	519.96	452.27	7.4111	288	0.1185	582.37	496.85	7.6541
229	0.1490	521.00	453.02	7.4157	289	0.1181	583.41	497.60	7.6577
230	0.1484	522.04	453.76	7.4202	290	0.1177	584.45	498.34	7.6613
231	0.1478	523.08	454.50	7.4247	291	0.1173	585.49	499.08	7.6649
232	0.1471	524.12	455.24	7.4292	292	0.1169	586.53	499.83	7.6684
233	0.1465	525.16	455.99	7.4337	293	0.1165	587.57	500.57	7.6720
234	0.1459	526.20	456.73	7.4381	294	0.1161	588.61	501.31	7.6755
235	0.1452	527.24	457.47	7.4426	295	0.1157	589.65	502.06	7.6791
236	0.1446	528.28	458.22	7.4470	296	0.1153	590.69	502.80	7.6826
237	0.1440	529.32	458.96	7.4514	297	0.1149	591.73	503.54	7.6861
238	0.1434	530.36	459.70	7.4558	298	0.1145	592.77	504.29	7.6896
239	0.1428	531.40	460.44	7.4601	299	0.1141	593.81	505.03	7.6931
240	0.1422	532.44	461.19	7.4645	300	0.1138	594.85	505.77	7.6966

0.20 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	0.5655	408.53	372.70	6.5457
					122	0.5608	409.57	373.44	6.5542
					123	0.5562	410.62	374.18	6.5628
					124	0.5517	411.66	374.93	6.5712
					125	0.5473	412.70	375.67	6.5796
					126	0.5429	413.75	376.42	6.5879
					127	0.5386	414.79	377.16	6.5961
					128	0.5344	415.83	377.91	6.6043
					129	0.5302	416.87	378.65	6.6124
70	0.9864	355.22	334.67	5.9734	130	0.5261	417.92	379.39	6.6205
71	0.9721	356.26	335.42	5.9883	131	0.5220	418.96	380.14	6.6284
72	0.9582	357.31	336.16	6.0029	132	0.5181	420.00	380.88	6.6364
73	0.9447	358.36	336.91	6.0174	133	0.5141	421.04	381.63	6.6442
74	0.9316	359.41	337.65	6.0316	134	0.5103	422.08	382.37	6.6520
75	0.9189	360.45	338.40	6.0457	135	0.5065	423.13	383.11	6.6598
76	0.9065	361.50	339.15	6.0596	136	0.5027	424.17	383.86	6.6675
77	0.8944	362.55	339.89	6.0733	137	0.4990	425.21	384.60	6.6751
78	0.8827	363.60	340.64	6.0868	138	0.4954	426.25	385.35	6.6827
79	0.8713	364.64	341.38	6.1001	139	0.4918	427.29	386.09	6.6902
80	0.8601	365.69	342.13	6.1133	140	0.4883	428.34	386.83	6.6977
81	0.8493	366.74	342.88	6.1263	141	0.4848	429.38	387.58	6.7051
82	0.8387	367.79	343.62	6.1391	142	0.4814	430.42	388.32	6.7124
83	0.8284	368.83	344.37	6.1518	143	0.4780	431.46	389.07	6.7198
84	0.8183	369.88	345.12	6.1644	144	0.4747	432.50	389.81	6.7270
85	0.8085	370.93	345.86	6.1768	145	0.4714	433.54	390.55	6.7342
86	0.7990	371.97	346.61	6.1890	146	0.4681	434.59	391.30	6.7414
87	0.7896	373.02	347.35	6.2011	147	0.4649	435.63	392.04	6.7485
88	0.7805	374.07	348.10	6.2131	148	0.4618	436.67	392.78	6.7556
89	0.7716	375.11	348.85	6.2249	149	0.4587	437.71	393.53	6.7626
90	0.7629	376.16	349.59	6.2366	150	0.4556	438.75	394.27	6.7695
91	0.7543	377.20	350.34	6.2481	151	0.4526	439.79	395.01	6.7764
92	0.7460	378.25	351.09	6.2596	152	0.4496	440.83	395.76	6.7833
93	0.7379	379.30	351.83	6.2709	153	0.4466	441.87	396.50	6.7901
94	0.7299	380.34	352.58	6.2820	154	0.4437	442.92	397.25	6.7969
95	0.7221	381.39	353.32	6.2931	155	0.4408	443.96	397.99	6.8037
96	0.7145	382.43	354.07	6.3041	156	0.4380	445.00	398.73	6.8104
97	0.7070	383.48	354.81	6.3149	157	0.4352	446.04	399.48	6.8170
98	0.6997	384.52	355.56	6.3256	158	0.4324	447.08	400.22	6.8236
99	0.6925	385.57	356.31	6.3362	159	0.4297	448.12	400.96	6.8302
100	0.6855	386.61	357.05	6.3467	160	0.4270	449.16	401.71	6.8367
101	0.6787	387.66	357.80	6.3571	161	0.4244	450.20	402.45	6.8432
102	0.6719	388.70	358.54	6.3674	162	0.4217	451.25	403.19	6.8497
103	0.6653	389.75	359.29	6.3776	163	0.4191	452.29	403.94	6.8561
104	0.6589	390.79	360.03	6.3877	164	0.4166	453.33	404.68	6.8624
105	0.6525	391.84	360.78	6.3977	165	0.4140	454.37	405.42	6.8688
106	0.6463	392.88	361.52	6.4076	166	0.4115	455.41	406.17	6.8750
107	0.6402	393.92	362.27	6.4174	167	0.4091	456.45	406.91	6.8813
108	0.6342	394.97	363.01	6.4271	168	0.4066	457.49	407.65	6.8875
109	0.6283	396.01	363.76	6.4367	169	0.4042	458.53	408.40	6.8937
110	0.6225	397.06	364.50	6.4462	170	0.4018	459.57	409.14	6.8998
111	0.6169	398.10	365.25	6.4557	171	0.3995	460.61	409.88	6.9059
112	0.6113	399.14	365.99	6.4650	172	0.3971	461.65	410.63	6.9120
113	0.6059	400.19	366.74	6.4743	173	0.3948	462.70	411.37	6.9180
114	0.6005	401.23	367.48	6.4835	174	0.3926	463.74	412.11	6.9240
115	0.5952	402.27	368.23	6.4926	175	0.3903	464.78	412.86	6.9300
116	0.5901	403.32	368.97	6.5017	176	0.3881	465.82	413.60	6.9359
117	0.5850	404.36	369.72	6.5106	177	0.3859	466.86	414.34	6.9418
118	0.5800	405.40	370.46	6.5195	178	0.3837	467.90	415.09	6.9477
119	0.5751	406.45	371.21	6.5283	179	0.3816	468.94	415.83	6.9535
120	0.5702	407.49	371.95	6.5370	180	0.3794	469.98	416.57	6.9593



## 0.20 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	0.3773	471.02	417.32	6.9651	241	0.2833	533.44	461.90	7.2629
182	0.3753	472.06	418.06	6.9708	242	0.2821	534.48	462.64	7.2672
183	0.3732	473.10	418.80	6.9765	243	0.2809	535.52	463.39	7.2715
184	0.3712	474.14	419.54	6.9822	244	0.2798	536.56	464.13	7.2758
185	0.3692	475.18	420.29	6.9878	245	0.2786	537.60	464.87	7.2800
186	0.3672	476.22	421.03	6.9934	246	0.2775	538.65	465.62	7.2843
187	0.3652	477.26	421.77	6.9990	247	0.2764	539.69	466.36	7.2885
188	0.3633	478.30	422.52	7.0046	248	0.2753	540.73	467.10	7.2927
189	0.3613	479.35	423.26	7.0101	249	0.2742	541.77	467.85	7.2969
190	0.3594	480.39	424.00	7.0156	250	0.2731	542.81	468.59	7.3011
191	0.3575	481.43	424.75	7.0210	251	0.2720	543.85	469.33	7.3052
192	0.3557	482.47	425.49	7.0265	252	0.2709	544.89	470.08	7.3093
193	0.3538	483.51	426.23	7.0319	253	0.2698	545.93	470.82	7.3135
194	0.3520	484.55	426.98	7.0372	254	0.2688	546.97	471.56	7.3176
195	0.3502	485.59	427.72	7.0426	255	0.2677	548.01	472.30	7.3216
196	0.3484	486.63	428.46	7.0479	256	0.2666	549.05	473.05	7.3257
197	0.3466	487.67	429.21	7.0532	257	0.2656	550.09	473.79	7.3298
198	0.3449	488.71	429.95	7.0585	258	0.2646	551.13	474.53	7.3338
199	0.3431	489.75	430.69	7.0637	259	0.2636	552.17	475.28	7.3378
200	0.3414	490.79	431.43	7.0689	260	0.2625	553.21	476.02	7.3418
201	0.3397	491.83	432.18	7.0741	261	0.2615	554.25	476.76	7.3458
202	0.3380	492.87	432.92	7.0793	262	0.2605	555.29	477.51	7.3498
203	0.3364	493.91	433.66	7.0844	263	0.2595	556.33	478.25	7.3538
204	0.3347	494.95	434.41	7.0895	264	0.2586	557.37	478.99	7.3577
205	0.3331	495.99	435.15	7.0946	265	0.2576	558.41	479.74	7.3617
206	0.3315	497.03	435.89	7.0997	266	0.2566	559.45	480.48	7.3656
207	0.3299	498.07	436.64	7.1047	267	0.2557	560.49	481.22	7.3695
208	0.3283	499.11	437.38	7.1097	268	0.2547	561.53	481.97	7.3734
209	0.3267	500.15	438.12	7.1147	269	0.2538	562.57	482.71	7.3772
210	0.3251	501.19	438.87	7.1197	270	0.2528	563.61	483.45	7.3811
211	0.3236	502.23	439.61	7.1246	271	0.2519	564.65	484.20	7.3850
212	0.3221	503.28	440.35	7.1295	272	0.2510	565.69	484.94	7.3888
213	0.3205	504.32	441.09	7.1344	273	0.2500	566.73	485.68	7.3926
214	0.3190	505.36	441.84	7.1393	274	0.2491	567.77	486.43	7.3964
215	0.3176	506.40	442.58	7.1442	275	0.2482	568.81	487.17	7.4002
216	0.3161	507.44	443.32	7.1490	276	0.2473	569.85	487.91	7.4040
217	0.3146	508.48	444.07	7.1538	277	0.2464	570.90	488.66	7.4077
218	0.3132	509.52	444.81	7.1586	278	0.2455	571.94	489.40	7.4115
219	0.3118	510.56	445.55	7.1633	279	0.2447	572.98	490.14	7.4152
220	0.3103	511.60	446.30	7.1681	280	0.2438	574.02	490.89	7.4189
221	0.3089	512.64	447.04	7.1728	281	0.2429	575.06	491.63	7.4227
222	0.3075	513.68	447.73	7.1775	282	0.2420	576.10	492.37	7.4263
223	0.3062	514.72	448.53	7.1822	283	0.2412	577.14	493.12	7.4300
224	0.3048	515.76	449.27	7.1868	284	0.2403	578.18	493.86	7.4337
225	0.3034	516.80	450.01	7.1915	285	0.2395	579.22	494.60	7.4374
226	0.3021	517.84	450.75	7.1961	286	0.2387	580.26	495.35	7.4410
227	0.3008	518.88	451.50	7.2007	287	0.2378	581.30	496.09	7.4446
228	0.2994	519.92	452.24	7.2052	288	0.2370	582.34	496.83	7.4482
229	0.2981	520.96	452.98	7.2098	289	0.2362	583.38	497.58	7.4519
230	0.2968	522.00	453.73	7.2143	290	0.2354	584.42	498.32	7.4554
231	0.2955	523.04	454.47	7.2188	291	0.2346	585.46	499.06	7.4590
232	0.2943	524.08	455.21	7.2233	292	0.2338	586.50	499.81	7.4626
233	0.2930	525.12	455.96	7.2278	293	0.2330	587.54	500.55	7.4662
234	0.2917	526.16	456.70	7.2323	294	0.2322	588.58	501.29	7.4697
235	0.2905	527.20	457.44	7.2367	295	0.2314	589.62	502.04	7.4732
236	0.2893	528.24	458.19	7.2411	296	0.2306	590.66	502.78	7.4768
237	0.2880	529.28	458.93	7.2455	297	0.2298	591.70	503.52	7.4803
238	0.2868	530.32	459.67	7.2499	298	0.2290	592.74	504.27	7.4838
239	0.2856	531.36	460.41	7.2542	299	0.2283	593.79	505.01	7.4872
240	0.2844	532.40	461.16	7.2586	300	0.2275	594.83	505.75	7.4907

0.30 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	0.8493	408.40	372.61	6.4246
					122	0.8423	409.44	373.35	6.4332
					123	0.8354	410.49	374.10	6.4417
					124	0.8286	411.53	374.84	6.4501
					125	0.8219	412.57	375.59	6.4585
					126	0.8153	413.62	376.33	6.4669
					127	0.8088	414.66	377.08	6.4751
					128	0.8024	415.71	377.82	6.4833
					129	0.7961	416.75	378.57	6.4914
70	835.83	124.41	124.37	2.6649	130	0.7899	417.80	379.31	6.4995
71	831.96	126.64	126.61	2.6966					
72	828.05	128.87	128.84	2.7277	131	0.7839	418.84	380.06	6.5075
* 72.373	826.58	129.70	129.67	2.7393	132	0.7779	419.88	380.80	6.5154
• 72.373	1.4375	357.41	336.26	5.8855	133	0.7720	420.93	381.55	6.5233
73	1.4246	358.07	336.73	5.8946	134	0.7661	421.97	382.29	6.5311
74	1.4046	359.12	337.48	5.9089	135	0.7604	423.01	383.04	6.5389
75	1.3852	360.17	338.23	5.9230	136	0.7548	424.06	383.78	6.5466
76	1.3662	361.23	338.98	5.9370	137	0.7492	425.10	384.53	6.5542
77	1.3479	362.28	339.72	5.9507	138	0.7438	426.14	385.27	6.5618
78	1.3300	363.33	340.47	5.9643	139	0.7384	427.19	386.02	6.5693
79	1.3125	364.38	341.22	5.9777	140	0.7331	428.23	386.76	6.5768
80	1.2956	365.43	341.97	5.9909					
81	1.2791	366.48	342.72	6.0040	141	0.7278	429.27	387.51	6.5842
82	1.2630	367.54	343.47	6.0169	142	0.7227	430.32	388.25	6.5916
83	1.2473	368.59	344.22	6.0296	143	0.7176	431.36	389.00	6.5989
84	1.2320	369.64	344.96	6.0422	144	0.7125	432.40	389.74	6.6062
85	1.2171	370.69	345.71	6.0546	145	0.7076	433.44	390.49	6.6134
86	1.2025	371.74	346.46	6.0669	146	0.7027	434.49	391.23	6.6206
87	1.1883	372.79	347.21	6.0791	147	0.6979	435.53	391.97	6.6277
88	1.1745	373.84	347.96	6.0911	148	0.6932	436.57	392.72	6.6347
89	1.1610	374.89	348.71	6.1029	149	0.6885	437.62	393.46	6.6418
90	1.1477	375.94	349.46	6.1147	150	0.6839	438.66	394.21	6.6487
91	1.1348	376.99	350.20	6.1263	151	0.6793	439.70	394.95	6.6557
92	1.1222	378.04	350.95	6.1377	152	0.6748	440.74	395.70	6.6625
93	1.1098	379.09	351.70	6.1491	153	0.6704	441.78	396.44	6.6694
94	1.0978	380.14	352.45	6.1603	154	0.6660	442.83	397.18	6.6762
95	1.0860	381.19	353.19	6.1714	155	0.6617	443.87	397.93	6.6829
96	1.0744	382.23	353.94	6.1824	156	0.6574	444.91	398.67	6.6896
97	1.0631	383.28	354.69	6.1932	157	0.6532	445.95	399.42	6.6963
98	1.0520	384.33	355.44	6.2040	158	0.6490	447.00	400.16	6.7029
99	1.0412	385.38	356.18	6.2146	159	0.6449	448.04	400.90	6.7095
100	1.0306	386.43	356.93	6.2252	160	0.6409	449.08	401.65	6.7160
101	1.0202	387.48	357.68	6.2356	161	0.6369	450.12	402.39	6.7225
102	1.0100	388.52	358.43	6.2459	162	0.6329	451.16	403.14	6.7289
103	1.0000	389.57	359.17	6.2561	163	0.6290	452.21	403.88	6.7354
104	0.9903	390.62	359.92	6.2662	164	0.6252	453.25	404.62	6.7417
105	0.9807	391.66	360.67	6.2762	165	0.6214	454.29	405.37	6.7481
106	0.9713	392.71	361.41	6.2862	166	0.6176	455.33	406.11	6.7544
107	0.9620	393.76	362.16	6.2960	167	0.6139	456.37	406.86	6.7606
108	0.9530	394.80	362.91	6.3057	168	0.6102	457.41	407.60	6.7668
109	0.9441	395.85	363.65	6.3154	169	0.6066	458.46	408.34	6.7730
110	0.9354	396.90	364.40	6.3249	170	0.6030	459.50	409.09	6.7792
111	0.9269	397.94	365.15	6.3344	171	0.5995	460.54	409.83	6.7853
112	0.9185	398.99	365.89	6.3438	172	0.5960	461.58	410.57	6.7913
113	0.9102	400.03	366.64	6.3531	173	0.5925	462.62	411.32	6.7974
114	0.9021	401.08	367.39	6.3623	174	0.5891	463.66	412.06	6.8034
115	0.8942	402.13	368.13	6.3714	175	0.5857	464.71	412.81	6.8093
116	0.8864	403.17	368.88	6.3805	176	0.5824	465.75	413.55	6.8153
117	0.8787	404.22	369.62	6.3894	177	0.5791	466.79	414.29	6.8212
118	0.8712	405.26	370.37	6.3983	178	0.5758	467.83	415.04	6.8270
119	0.8638	406.31	371.11	6.4071	179	0.5726	468.87	415.78	6.8329
120	0.8565	407.35	371.86	6.4159	180	0.5694	469.91	416.52	6.8387

\* PHASE CHANGE

## 0.30 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	0.5662	470.95	417.27	6.8444	241	0.4249	533.41	461.87	7.1424
182	0.5631	472.00	418.01	6.8502	242	0.4232	534.45	462.61	7.1467
183	0.5600	473.04	418.76	6.8559	243	0.4214	535.49	463.36	7.1510
184	0.5569	474.08	419.50	6.8616	244	0.4197	536.53	464.10	7.1553
185	0.5539	475.12	420.24	6.8672	245	0.4180	537.57	464.84	7.1596
186	0.5509	476.16	420.99	6.8728	246	0.4163	538.61	465.59	7.1638
187	0.5480	477.20	421.73	6.8784	247	0.4146	539.65	466.33	7.1680
188	0.5451	478.24	422.47	6.8840	248	0.4129	540.69	467.07	7.1722
189	0.5422	479.28	423.22	6.8895	249	0.4113	541.73	467.82	7.1764
190	0.5393	480.33	423.96	6.8950	250	0.4096	542.77	468.56	7.1806
191	0.5365	481.37	424.70	6.9004	251	0.4080	543.81	469.30	7.1847
192	0.5337	482.41	425.45	6.9059	252	0.4064	544.85	470.05	7.1889
193	0.5309	483.45	426.19	6.9113	253	0.4048	545.89	470.79	7.1930
194	0.5281	484.49	426.93	6.9167	254	0.4032	546.93	471.53	7.1971
195	0.5254	485.53	427.68	6.9220	255	0.4016	547.97	472.28	7.2012
196	0.5227	486.57	428.42	6.9273	256	0.4000	549.01	473.02	7.2053
197	0.5201	487.61	429.16	6.9326	257	0.3984	550.05	473.76	7.2093
198	0.5174	488.65	429.91	6.9379	258	0.3969	551.10	474.51	7.2134
199	0.5148	489.69	430.65	6.9431	259	0.3954	552.14	475.25	7.2174
200	0.5123	490.74	431.39	6.9484	260	0.3938	553.18	475.99	7.2214
201	0.5097	491.78	432.14	6.9536	261	0.3923	554.22	476.74	7.2254
202	0.5072	492.82	432.88	6.9587	262	0.3908	555.26	477.48	7.2294
203	0.5047	493.86	433.62	6.9639	263	0.3893	556.30	478.22	7.2333
204	0.5022	494.90	434.37	6.9690	264	0.3879	557.34	478.97	7.2373
205	0.4997	495.94	435.11	6.9741	265	0.3864	558.38	479.71	7.2412
206	0.4973	496.98	435.85	6.9791	266	0.3849	559.42	480.45	7.2451
207	0.4949	498.02	436.60	6.9842	267	0.3835	560.46	481.20	7.2490
208	0.4925	499.06	437.34	6.9892	268	0.3821	561.50	481.94	7.2529
209	0.4901	500.10	438.08	6.9942	269	0.3807	562.54	482.68	7.2568
210	0.4878	501.14	438.83	6.9991	270	0.3792	563.58	483.43	7.2607
211	0.4855	502.18	439.57	7.0041	271	0.3778	564.62	484.17	7.2645
212	0.4832	503.23	440.31	7.0090	272	0.3764	565.66	484.91	7.2683
213	0.4809	504.27	441.06	7.0139	273	0.3751	566.70	485.66	7.2722
214	0.4787	505.31	441.80	7.0188	274	0.3737	567.74	486.40	7.2760
215	0.4764	506.35	442.54	7.0236	275	0.3723	568.79	487.14	7.2797
216	0.4742	507.39	443.29	7.0285	276	0.3710	569.83	487.89	7.2835
217	0.4720	508.43	444.03	7.0333	277	0.3696	570.87	488.63	7.2873
218	0.4699	509.47	444.77	7.0381	278	0.3683	571.91	489.37	7.2910
219	0.4677	510.51	445.52	7.0428	279	0.3670	572.95	490.12	7.2948
220	0.4656	511.55	446.26	7.0476	280	0.3657	573.99	490.86	7.2985
221	0.4635	512.59	447.00	7.0523	281	0.3644	575.03	491.61	7.3022
222	0.4614	513.63	447.75	7.0570	282	0.3631	576.07	492.35	7.3059
223	0.4593	514.67	448.49	7.0617	283	0.3618	577.11	493.09	7.3096
224	0.4572	515.71	449.23	7.0663	284	0.3605	578.15	493.84	7.3133
225	0.4552	516.76	449.98	7.0709	285	0.3593	579.19	494.58	7.3169
226	0.4532	517.80	450.72	7.0756	286	0.3580	580.23	495.32	7.3206
227	0.4512	518.84	451.46	7.0802	287	0.3568	581.27	496.07	7.3242
228	0.4492	519.88	452.21	7.0847	288	0.3555	582.31	496.81	7.3278
229	0.4472	520.92	452.95	7.0893	289	0.3543	583.35	497.55	7.3314
230	0.4453	521.96	453.69	7.0938	290	0.3531	584.39	498.30	7.3350
231	0.4434	523.00	454.44	7.0983	291	0.3518	585.44	499.04	7.3386
232	0.4415	524.04	455.18	7.1028	292	0.3506	586.48	499.78	7.3422
233	0.4396	525.08	455.92	7.1073	293	0.3494	587.52	500.53	7.3457
234	0.4377	526.12	456.67	7.1118	294	0.3483	588.56	501.27	7.3493
235	0.4358	527.16	457.41	7.1162	295	0.3471	589.60	502.01	7.3528
236	0.4340	528.20	458.15	7.1206	296	0.3459	590.64	502.76	7.3563
237	0.4321	529.24	458.90	7.1250	297	0.3447	591.68	503.50	7.3598
238	0.4303	530.28	459.64	7.1294	298	0.3436	592.72	504.24	7.3633
239	0.4285	531.32	460.38	7.1338	299	0.3424	593.76	504.99	7.3668
240	0.4267	532.36	461.13	7.1381	300	0.3413	594.80	505.73	7.3703

0.40 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	1.1339	408.26	372.52	6.3384
					122	1.1245	409.31	373.26	6.3470
					123	1.1152	410.35	374.01	6.3556
					124	1.1061	411.40	374.76	6.3640
					125	1.0971	412.45	375.50	6.3725
					126	1.0883	413.49	376.25	6.3808
					127	1.0796	414.54	377.00	6.3891
					128	1.0710	415.58	377.74	6.3973
					129	1.0626	416.63	378.49	6.4054
70	835.85	124.42	124.37	2.6648	130	1.0543	417.67	379.23	6.4135
71	831.98	126.65	126.60	2.6965					
72	828.07	128.88	128.83	2.7277	131	1.0462	418.72	379.98	6.4215
73	824.12	131.11	131.06	2.7584	132	1.0382	419.77	380.73	6.4294
74	820.13	133.33	133.28	2.7886	133	1.0303	420.81	381.47	6.4373
• 74.363	818.67	134.13	134.09	2.7995	134	1.0225	421.86	382.22	6.4451
• 74.363	1.8730	359.22	337.58	5.8263	135	1.0148	422.90	382.96	6.4529
75	1.8562	359.89	338.05	5.8353	136	1.0073	423.95	383.71	6.4606
76	1.8306	360.95	338.80	5.8493	137	0.9999	424.99	384.45	6.4683
77	1.8056	362.00	339.56	5.8631	138	0.9925	426.04	385.20	6.4759
78	1.7813	363.06	340.31	5.8767	139	0.9853	427.08	385.95	6.4834
79	1.7577	364.12	341.06	5.8902	140	0.9782	428.12	386.69	6.4909
80	1.7348	365.17	341.81	5.9035					
81	1.7124	366.23	342.56	5.9166	141	0.9712	429.17	387.44	6.4983
82	1.6906	367.28	343.31	5.9295	142	0.9643	430.21	388.18	6.5057
83	1.6694	368.34	344.06	5.9423	143	0.9575	431.26	388.93	6.5130
84	1.6488	369.39	344.81	5.9550	144	0.9508	432.30	389.67	6.5203
85	1.6286	370.45	345.56	5.9675	145	0.9442	433.35	390.42	6.5275
86	1.6089	371.50	346.31	5.9798	146	0.9376	434.39	391.16	6.5347
87	1.5898	372.56	347.06	5.9920	147	0.9312	435.43	391.91	6.5418
88	1.5711	373.61	347.82	6.0040	148	0.9249	436.48	392.65	6.5489
89	1.5528	374.67	348.57	6.0159	149	0.9186	437.52	393.40	6.5559
90	1.5350	375.72	349.32	6.0277	150	0.9124	438.56	394.14	6.5629
91	1.5175	376.77	350.07	6.0393	151	0.9063	439.61	394.89	6.5699
92	1.5005	377.83	350.82	6.0509	152	0.9003	440.65	395.63	6.5767
93	1.4839	378.88	351.57	6.0622	153	0.8944	441.69	396.38	6.5836
94	1.4676	379.93	352.32	6.0735	154	0.8885	442.74	397.12	6.5904
95	1.4517	380.98	353.07	6.0846	155	0.8827	443.78	397.87	6.5971
96	1.4362	382.04	353.82	6.0956	156	0.8770	444.82	398.61	6.6038
97	1.4210	383.09	354.56	6.1065	157	0.8714	445.87	399.36	6.6105
98	1.4061	384.14	355.31	6.1173	158	0.8659	446.91	400.10	6.6171
99	1.3915	385.19	356.06	6.1280	159	0.8604	447.95	400.85	6.6237
100	1.3772	386.24	356.81	6.1386	160	0.8550	449.00	401.59	6.6302
101	1.3632	387.29	357.56	6.1490	161	0.8496	450.04	402.34	6.6367
102	1.3496	388.34	358.31	6.1594	162	0.8443	451.08	403.08	6.6432
103	1.3361	389.39	359.06	6.1696	163	0.8391	452.13	403.82	6.6496
104	1.3230	390.44	359.81	6.1797	164	0.8340	453.17	404.57	6.6560
105	1.3101	391.49	360.56	6.1898	165	0.8289	454.21	405.31	6.6623
106	1.2975	392.54	361.30	6.1997	166	0.8239	455.25	406.06	6.6686
107	1.2851	393.59	362.05	6.2096	167	0.8189	456.30	406.80	6.6749
108	1.2730	394.64	362.80	6.2193	168	0.8140	457.34	407.55	6.6811
109	1.2610	395.69	363.55	6.2290	169	0.8091	458.38	408.29	6.6873
110	1.2493	396.74	364.30	6.2386	170	0.8044	459.42	409.04	6.6935
111	1.2379	397.79	365.04	6.2481	171	0.7996	460.47	409.78	6.6996
112	1.2266	398.83	365.79	6.2575	172	0.7949	461.51	410.52	6.7056
113	1.2156	399.88	366.54	6.2668	173	0.7903	462.55	411.27	6.7117
114	1.2047	400.93	367.29	6.2760	174	0.7858	463.59	412.01	6.7177
115	1.1940	401.98	368.03	6.2852	175	0.7812	464.64	412.76	6.7237
116	1.1836	403.03	368.78	6.2942	176	0.7768	465.68	413.50	6.7296
117	1.1733	404.07	369.53	6.3032	177	0.7724	466.72	414.24	6.7355
118	1.1632	405.12	370.28	6.3121	178	0.7680	467.76	414.99	6.7414
119	1.1532	406.17	371.02	6.3210	179	0.7637	468.80	415.73	6.7472
120	1.1435	407.21	371.77	6.3297	180	0.7594	469.85	416.48	6.7530

• PHASE CHANGE

## 0.40 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	0.7552	470.89	417.22	6.7588	241	0.5667	533.37	461.84	7.0569
182	0.7510	471.93	417.96	6.7645	242	0.5643	534.41	462.58	7.0612
183	0.7469	472.97	418.71	6.7702	243	0.5620	535.45	463.33	7.0655
184	0.7428	474.01	419.45	6.7759	244	0.5597	536.49	464.07	7.0698
185	0.7388	475.06	420.20	6.7816	245	0.5574	537.53	464.81	7.0740
186	0.7348	476.10	420.94	6.7872	246	0.5551	538.57	465.56	7.0783
187	0.7309	477.14	421.68	6.7928	247	0.5529	539.61	466.30	7.0825
188	0.7270	478.18	422.43	6.7983	248	0.5506	540.65	467.05	7.0867
189	0.7231	479.22	423.17	6.8038	249	0.5484	541.69	467.79	7.0909
190	0.7193	480.26	423.92	6.8093	250	0.5462	542.74	468.53	7.0951
191	0.7155	481.31	424.66	6.8148	251	0.5440	543.78	469.28	7.0992
192	0.7118	482.35	425.40	6.8203	252	0.5419	544.82	470.02	7.1034
193	0.7081	483.39	426.15	6.8257	253	0.5397	545.86	470.76	7.1075
194	0.7044	484.43	426.89	6.8310	254	0.5376	546.90	471.51	7.1116
195	0.7008	485.47	427.64	6.8364	255	0.5355	547.94	472.25	7.1157
196	0.6972	486.51	428.38	6.8417	256	0.5334	548.98	472.99	7.1197
197	0.6936	487.56	429.12	6.8470	257	0.5313	549.92	473.74	7.1238
198	0.6901	488.60	429.87	6.8523	258	0.5292	551.06	474.48	7.1278
199	0.6866	489.64	430.61	6.8575	259	0.5272	552.10	475.22	7.1319
200	0.6832	490.68	431.35	6.8628	260	0.5252	553.14	475.97	7.1359
201	0.6798	491.72	432.10	6.8680	261	0.5231	554.18	476.71	7.1399
202	0.6764	492.76	432.84	6.8731	262	0.5211	555.23	477.45	7.1439
203	0.6730	493.80	433.59	6.8783	263	0.5192	556.27	478.20	7.1478
204	0.6697	494.85	434.33	6.8834	264	0.5172	557.31	478.94	7.1518
205	0.6665	495.89	435.07	6.8885	265	0.5152	558.35	479.68	7.1557
206	0.6632	496.93	435.82	6.8935	266	0.5133	559.39	480.43	7.1596
207	0.6600	497.97	436.56	6.8986	267	0.5114	560.43	481.17	7.1635
208	0.6568	499.01	437.30	6.9036	268	0.5095	561.47	481.92	7.1674
209	0.6537	500.05	438.05	6.9086	269	0.5076	562.51	482.66	7.1713
210	0.6505	501.09	438.79	6.9136	270	0.5057	563.55	483.40	7.1752
211	0.6474	502.14	439.53	6.9185	271	0.5038	564.59	484.15	7.1790
212	0.6444	503.18	440.28	6.9234	272	0.5020	565.63	484.89	7.1828
213	0.6413	504.22	441.02	6.9283	273	0.5001	566.67	485.63	7.1867
214	0.6383	505.26	441.77	6.9332	274	0.4983	567.72	486.38	7.1905
215	0.6354	506.30	442.51	6.9381	275	0.4965	568.76	487.12	7.1943
216	0.6324	507.34	443.25	6.9429	276	0.4947	569.80	487.86	7.1980
217	0.6295	508.38	444.00	6.9477	277	0.4929	570.84	488.61	7.2018
218	0.6266	509.42	444.74	6.9525	278	0.4911	571.88	489.35	7.2056
219	0.6237	510.46	445.48	6.9573	279	0.4893	572.92	490.09	7.2093
220	0.6209	511.51	446.23	6.9620	280	0.4876	573.96	490.84	7.2130
221	0.6181	512.55	446.97	6.9667	281	0.4859	575.00	491.58	7.2167
222	0.6153	513.59	447.71	6.9714	282	0.4841	576.04	492.33	7.2204
223	0.6125	514.63	448.46	6.9761	283	0.4824	577.08	493.07	7.2241
224	0.6098	515.67	449.20	6.9808	284	0.4807	578.12	493.81	7.2278
225	0.6070	516.71	449.94	6.9854	285	0.4790	579.16	494.56	7.2314
226	0.6044	517.75	450.69	6.9900	286	0.4774	580.21	495.30	7.2351
227	0.6017	518.79	451.43	6.9946	287	0.4757	581.25	496.04	7.2387
228	0.5990	519.83	452.18	6.9992	288	0.4740	582.29	496.79	7.2423
229	0.5964	520.88	452.92	7.0037	289	0.4724	583.33	497.53	7.2459
230	0.5938	521.92	453.66	7.0083	290	0.4708	584.37	498.27	7.2495
231	0.5912	522.96	454.41	7.0128	291	0.4691	585.41	499.02	7.2531
232	0.5887	524.00	455.15	7.0173	292	0.4675	586.45	499.76	7.2567
233	0.5862	525.04	455.89	7.0218	293	0.4659	587.49	500.50	7.2602
234	0.5836	526.08	456.64	7.0262	294	0.4644	588.53	501.25	7.2638
235	0.5812	527.12	457.38	7.0307	295	0.4628	589.57	501.99	7.2673
236	0.5787	528.16	458.12	7.0351	296	0.4612	590.61	502.74	7.2708
237	0.5762	529.20	458.87	7.0395	297	0.4597	591.65	503.48	7.2744
238	0.5738	530.24	459.61	7.0439	298	0.4581	592.70	504.22	7.2779
239	0.5714	531.29	460.35	7.0482	299	0.4566	593.74	504.97	7.2813
240	0.5690	532.33	461.10	7.0526	300	0.4551	594.78	505.71	7.2848

## 0.50 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	1.4192	408.12	372.43	6.2714
					122	1.4073	409.17	373.17	6.2801
					123	1.3957	410.22	373.92	6.2886
					124	1.3842	411.27	374.67	6.2971
					125	1.3730	412.32	375.42	6.3055
					126	1.3619	413.36	376.16	6.3139
					127	1.3510	414.41	376.91	6.3222
					128	1.3402	415.46	377.66	6.3304
					129	1.3297	416.51	378.41	6.3385
70	835.86	124.43	124.37	2.6648	130	1.3193	417.55	379.15	6.3466
71	832.00	126.66	126.60	2.6964					
72	828.09	128.89	128.83	2.7276	131	1.3091	418.60	379.90	6.3546
73	824.14	131.11	131.05	2.7583	132	1.2990	419.65	380.65	6.3626
74	820.15	133.34	133.27	2.7886	133	1.2891	420.70	381.39	6.3705
75	816.12	135.56	135.49	2.8184	134	1.2793	421.74	382.14	6.3783
* 75.994	812.08	137.76	137.70	2.8476	135	1.2697	422.79	382.89	6.3861
* 75.994	2.2997	360.66	338.63	5.7806	136	1.2603	423.83	383.63	6.3938
76	2.2995	360.66	338.63	5.7807	137	1.2509	424.88	384.38	6.4015
77	2.2678	361.72	339.38	5.7946	138	1.2417	425.93	385.13	6.4091
78	2.2369	362.79	340.14	5.8083	139	1.2327	426.97	385.87	6.4166
79	2.2069	363.85	340.89	5.8218	140	1.2238	428.02	386.62	6.4241
80	2.1778	364.91	341.65	5.8352					
81	2.1494	365.97	342.40	5.8483	141	1.2150	429.06	387.37	6.4316
82	2.1218	367.03	343.15	5.8614	142	1.2063	430.11	388.11	6.4390
83	2.0949	368.09	343.91	5.8742	143	1.1978	431.16	388.86	6.4463
84	2.0687	369.15	344.66	5.8869	144	1.1894	432.20	389.60	6.4536
85	2.0431	370.21	345.41	5.8994	145	1.1811	433.25	390.35	6.4608
86	2.0182	371.27	346.16	5.9118	146	1.1729	434.29	391.10	6.4680
87	1.9939	372.33	346.92	5.9240	147	1.1648	435.34	391.84	6.4751
88	1.9703	373.38	347.67	5.9361	148	1.1569	436.38	392.59	6.4822
89	1.9472	374.44	348.42	5.9481	149	1.1490	437.43	393.33	6.4893
90	1.9246	375.50	349.18	5.9599	150	1.1413	438.47	394.08	6.4963
91	1.9026	376.56	349.93	5.9716	151	1.1336	439.52	394.82	6.5032
92	1.8811	377.61	350.68	5.9831	152	1.1261	440.56	395.57	6.5101
93	1.8601	378.67	351.43	5.9945	153	1.1187	441.60	396.32	6.5169
94	1.8395	379.73	352.18	6.0058	154	1.1113	442.65	397.06	6.5237
95	1.8194	380.78	352.94	6.0170	155	1.1041	443.69	397.81	6.5305
96	1.7998	381.84	353.69	6.0281	156	1.0970	444.74	398.55	6.5372
97	1.7806	382.89	354.44	6.0390	157	1.0899	445.78	399.30	6.5439
98	1.7618	383.95	355.19	6.0498	158	1.0829	446.83	400.04	6.5505
99	1.7434	385.00	355.94	6.0605	159	1.0761	447.87	400.79	6.5571
100	1.7254	386.05	356.69	6.0711	160	1.0693	448.91	401.53	6.5636
101	1.7078	387.11	357.44	6.0816	161	1.0626	449.96	402.28	6.5701
102	1.6906	388.16	358.19	6.0920	162	1.0560	451.00	403.02	6.5766
103	1.6737	389.21	358.94	6.1022	163	1.0494	452.04	403.77	6.5830
104	1.6571	390.27	359.69	6.1124	164	1.0430	453.09	404.51	6.5894
105	1.6409	391.32	360.44	6.1225	165	1.0366	454.13	405.26	6.5958
106	1.6250	392.37	361.19	6.1324	166	1.0303	455.18	406.00	6.6021
107	1.6094	393.42	361.94	6.1423	167	1.0241	456.22	406.75	6.6083
108	1.5941	394.47	362.69	6.1521	168	1.0180	457.26	407.49	6.6146
109	1.5791	395.53	363.44	6.1618	169	1.0119	458.31	408.24	6.6207
110	1.5644	396.58	364.19	6.1714	170	1.0059	459.35	408.98	6.6269
111	1.5499	397.63	364.94	6.1809	171	1.0000	460.39	409.73	6.6330
112	1.5358	398.68	365.69	6.1903	172	0.9941	461.44	410.47	6.6391
113	1.5219	399.73	366.44	6.1997	173	0.9883	462.48	411.22	6.6452
114	1.5082	400.78	367.19	6.2089	174	0.9826	463.52	411.96	6.6512
115	1.4948	401.83	367.94	6.2181	175	0.9769	464.56	412.71	6.6571
116	1.4816	402.88	368.69	6.2272	176	0.9714	465.61	413.45	6.6631
117	1.4687	403.93	369.43	6.2362	177	0.9658	466.65	414.20	6.6690
118	1.4560	404.98	370.18	6.2451	178	0.9604	467.69	414.94	6.6749
119	1.4435	406.03	370.93	6.2540	179	0.9550	468.74	415.68	6.6807
120	1.4313	407.08	371.68	6.2627	180	0.9496	469.78	416.43	6.6865

\* PHASE CHANGE

## 0.50 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	0.9444	470.82	417.17	6.6923	241	0.7084	533.33	461.81	6.9905
182	0.9391	471.86	417.92	6.6980	242	0.7055	534.37	462.55	6.9949
183	0.9340	472.91	418.66	6.7037	243	0.7025	535.41	463.30	6.9991
184	0.9289	473.95	419.41	6.7094	244	0.6997	536.45	464.04	7.0034
185	0.9238	474.99	420.15	6.7151	245	0.6968	537.49	464.79	7.0077
186	0.9188	476.03	420.90	6.7207	246	0.6940	538.53	465.53	7.0119
187	0.9139	477.08	421.64	6.7263	247	0.6911	539.58	466.27	7.0161
188	0.9090	478.12	422.38	6.7318	248	0.6883	540.62	467.02	7.0204
189	0.9042	479.16	423.13	6.7374	249	0.6856	541.66	467.76	7.0245
190	0.8994	480.20	423.87	6.7429	250	0.6828	542.70	468.50	7.0287
191	0.8946	481.25	424.62	6.7483	251	0.6801	543.74	469.25	7.0329
192	0.8900	482.29	425.36	6.7538	252	0.6774	544.78	469.99	7.0370
193	0.8853	483.33	426.11	6.7592	253	0.6747	545.82	470.74	7.0411
194	0.8807	484.37	426.85	6.7646	254	0.6721	546.86	471.48	7.0452
195	0.8762	485.41	427.59	6.7699	255	0.6694	547.91	472.22	7.0493
196	0.8717	486.46	428.34	6.7753	256	0.6668	548.95	472.97	7.0534
197	0.8673	487.50	429.08	6.7806	257	0.6642	549.99	473.71	7.0575
198	0.8629	488.54	429.83	6.7859	258	0.6616	551.03	474.45	7.0615
199	0.8585	489.58	430.57	6.7911	259	0.6590	552.07	475.20	7.0655
200	0.8542	490.63	431.31	6.7963	260	0.6565	553.11	475.94	7.0695
201	0.8499	491.67	432.06	6.8015	261	0.6540	554.15	476.68	7.0735
202	0.8457	492.71	432.80	6.8067	262	0.6515	555.19	477.43	7.0775
203	0.8415	493.75	433.55	6.8118	263	0.6490	556.23	478.17	7.0815
204	0.8374	494.79	434.29	6.8170	264	0.6465	557.28	478.92	7.0854
205	0.8333	495.83	435.03	6.8221	265	0.6441	558.32	479.66	7.0894
206	0.8292	496.88	435.78	6.8271	266	0.6417	559.36	480.40	7.0933
207	0.8252	497.92	436.52	6.8322	267	0.6393	560.40	481.15	7.0972
208	0.8212	498.96	437.27	6.8372	268	0.6369	561.44	481.89	7.1011
209	0.8172	500.00	438.01	6.8422	269	0.6345	562.48	482.63	7.1050
210	0.8133	501.04	438.75	6.8472	270	0.6321	563.52	483.38	7.1088
211	0.8095	502.09	439.50	6.8521	271	0.6298	564.56	484.12	7.1127
212	0.8056	503.13	440.24	6.8570	272	0.6275	565.60	484.86	7.1165
213	0.8018	504.17	440.99	6.8619	273	0.6252	566.64	485.61	7.1203
214	0.7981	505.21	441.73	6.8668	274	0.6229	567.69	486.35	7.1241
215	0.7943	506.25	442.47	6.8717	275	0.6206	568.73	487.10	7.1279
216	0.7907	507.29	443.22	6.8765	276	0.6184	569.77	487.84	7.1317
217	0.7870	508.34	443.96	6.8813	277	0.6161	570.81	488.58	7.1355
218	0.7834	509.38	444.70	6.8861	278	0.6139	571.85	489.33	7.1392
219	0.7798	510.42	445.45	6.8909	279	0.6117	572.89	490.07	7.1430
220	0.7762	511.46	446.19	6.8956	280	0.6095	573.93	490.81	7.1467
221	0.7727	512.50	446.94	6.9003	281	0.6074	574.97	491.56	7.1504
222	0.7692	513.54	447.68	6.9050	282	0.6052	576.01	492.30	7.1541
223	0.7658	514.58	448.42	6.9097	283	0.6031	577.06	493.05	7.1578
224	0.7623	515.63	449.17	6.9144	284	0.6009	578.10	493.79	7.1615
225	0.7589	516.67	449.91	6.9190	285	0.5988	579.14	494.53	7.1651
226	0.7556	517.71	450.66	6.9236	286	0.5967	580.18	495.28	7.1688
227	0.7522	518.75	451.40	6.9282	287	0.5946	581.22	496.02	7.1724
228	0.7489	519.79	452.14	6.9328	288	0.5926	582.26	496.76	7.1760
229	0.7456	520.83	452.89	6.9374	289	0.5905	583.30	497.51	7.1796
230	0.7424	521.87	453.63	6.9419	290	0.5885	584.34	498.25	7.1832
231	0.7391	522.92	454.37	6.9464	291	0.5865	585.38	499.00	7.1868
232	0.7360	523.96	455.12	6.9509	292	0.5844	586.42	499.74	7.1904
233	0.7328	525.00	455.86	6.9554	293	0.5824	587.47	500.48	7.1939
234	0.7296	526.04	456.60	6.9599	294	0.5805	588.51	501.23	7.1975
235	0.7265	527.08	457.35	6.9643	295	0.5785	589.55	501.97	7.2010
236	0.7234	528.12	458.09	6.9687	296	0.5765	590.59	502.71	7.2045
237	0.7204	529.16	458.84	6.9731	297	0.5746	591.63	503.46	7.2080
238	0.7173	530.21	459.58	6.9775	298	0.5727	592.67	504.20	7.2115
239	0.7143	531.25	460.32	6.9819	299	0.5707	593.71	504.95	7.2150
240	0.7114	532.29	461.07	6.9862	300	0.5688	594.75	505.69	7.2185

0.60 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	1.7052	407.99	372.34	6.2166
					122	1.6910	409.04	373.08	6.2252
					123	1.6769	410.09	373.83	6.2338
					124	1.6631	411.14	374.58	6.2423
					125	1.6495	412.19	375.33	6.2507
					126	1.6361	413.24	376.08	6.2591
					127	1.6230	414.29	376.83	6.2674
					128	1.6101	415.34	377.58	6.2756
					129	1.5973	416.39	378.32	6.2838
70	835.88	124.44	124.36	2.6647	130	1.5848	417.43	379.07	6.2919
71	832.01	126.67	126.60	2.6964					
72	828.10	128.90	128.82	2.7276	131	1.5725	418.48	379.82	6.2999
73	824.16	131.12	131.05	2.7583	132	1.5604	419.53	380.57	6.3079
74	820.17	133.34	133.27	2.7885	133	1.5484	420.58	381.32	6.3158
75	816.14	135.56	135.49	2.8183	134	1.5367	421.63	382.06	6.3236
76	812.08	137.78	137.71	2.8477	135	1.5251	422.68	382.81	6.3314
77	807.97	140.00	139.92	2.8767	136	1.5137	423.72	383.56	6.3392
* 77.388	806.37	140.86	140.78	2.8878	137	1.5025	424.77	384.31	6.3468
* 77.388	2.7198	361.86	339.50	5.7436	138	1.4914	425.82	385.05	6.3544
78	2.6969	362.51	339.97	5.7520	139	1.4805	426.87	385.80	6.3620
79	2.6603	363.58	340.72	5.7655	140	1.4698	427.91	386.55	6.3695
80	2.6247	364.64	341.48	5.7789					
81	2.5901	365.71	342.24	5.7922	141	1.4592	428.96	387.30	6.3770
82	2.5564	366.77	342.99	5.8052	142	1.4487	430.01	388.04	6.3844
83	2.5237	367.84	343.75	5.8182	143	1.4385	431.05	388.79	6.3917
84	2.4918	368.90	344.50	5.8309	144	1.4283	432.10	389.54	6.3990
85	2.4607	369.97	345.26	5.8435	145	1.4183	433.15	390.28	6.4062
86	2.4304	371.03	346.01	5.8559	146	1.4085	434.19	391.03	6.4134
87	2.4009	372.09	346.77	5.8682	147	1.3988	435.24	391.78	6.4206
88	2.3721	373.15	347.52	5.8803	148	1.3892	436.28	392.52	6.4277
89	2.3441	374.22	348.28	5.8923	149	1.3798	437.33	393.27	6.4347
90	2.3167	375.28	349.03	5.9042	150	1.3704	438.38	394.02	6.4417
91	2.2900	376.34	349.79	5.9159	151	1.3613	439.42	394.76	6.4487
92	2.2639	377.40	350.54	5.9275	152	1.3522	440.47	395.51	6.4556
93	2.2384	378.46	351.30	5.9390	153	1.3432	441.51	396.25	6.4624
94	2.2135	379.52	352.05	5.9503	154	1.3344	442.56	397.00	6.4692
95	2.1891	380.58	352.80	5.9615	155	1.3257	443.60	397.75	6.4760
96	2.1653	381.64	353.56	5.9726	156	1.3171	444.65	398.49	6.4827
97	2.1421	382.69	354.31	5.9836	157	1.3086	445.69	399.24	6.4894
98	2.1193	383.75	355.06	5.9944	158	1.3003	446.74	399.98	6.4960
99	2.0970	384.81	355.82	6.0051	159	1.2920	447.78	400.73	6.5026
100	2.0753	385.87	356.57	6.0158	160	1.2838	448.83	401.48	6.5092
101	2.0539	386.92	357.32	6.0263	161	1.2758	449.87	402.22	6.5157
102	2.0330	387.98	358.08	6.0367	162	1.2678	450.92	402.97	6.5221
103	2.0126	389.03	358.83	6.0470	163	1.2600	451.96	403.71	6.5286
104	1.9926	390.09	359.58	6.0572	164	1.2522	453.01	404.46	6.5350
105	1.9729	391.15	360.33	6.0673	165	1.2445	454.05	405.20	6.5413
106	1.9537	392.20	361.08	6.0773	166	1.2370	455.10	405.95	6.5476
107	1.9349	393.25	361.83	6.0872	167	1.2295	456.14	406.69	6.5539
108	1.9164	394.31	362.59	6.0970	168	1.2221	457.19	407.44	6.5601
109	1.8983	395.36	363.34	6.1067	169	1.2148	458.23	408.19	6.5663
110	1.8805	396.42	364.09	6.1163	170	1.2076	459.27	408.93	6.5725
111	1.8630	397.47	364.84	6.1258	171	1.2005	460.32	409.68	6.5786
112	1.8459	398.52	365.59	6.1353	172	1.1934	461.36	410.42	6.5847
113	1.8291	399.58	366.34	6.1446	173	1.1865	462.41	411.17	6.5907
114	1.8127	400.63	367.09	6.1539	174	1.1796	463.45	411.91	6.5968
115	1.7965	401.68	367.84	6.1631	175	1.1728	464.49	412.66	6.6027
116	1.7806	402.73	368.59	6.1722	176	1.1661	465.54	413.40	6.6087
117	1.7650	403.78	369.34	6.1812	177	1.1595	466.58	414.15	6.6146
118	1.7496	404.83	370.09	6.1902	178	1.1529	467.62	414.89	6.6205
119	1.7346	405.89	370.84	6.1991	179	1.1464	468.67	415.64	6.6263
120	1.7198	406.94	371.59	6.2078	180	1.1400	469.71	416.38	6.6321

\* PHASE CHANGE



## 0.60 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	1.1336	470.75	417.13	6.6379	241	0.8502	533.29	461.78	6.9363
182	1.1274	471.80	417.87	6.6437	242	0.8466	534.33	462.52	6.9406
183	1.1212	472.84	418.62	6.6494	243	0.8432	535.37	463.27	6.9449
184	1.1150	473.88	419.36	6.6551	244	0.8397	536.42	464.01	6.9492
185	1.1089	474.93	420.11	6.6607	245	0.8362	537.46	464.76	6.9534
186	1.1029	475.97	420.85	6.6663	246	0.8328	538.50	465.50	6.9577
187	1.0970	477.01	421.59	6.6719	247	0.8295	539.54	466.24	6.9619
188	1.0911	478.06	422.34	6.6775	248	0.8261	540.58	466.99	6.9661
189	1.0853	479.10	423.08	6.6830	249	0.8228	541.62	467.73	6.9703
190	1.0796	480.14	423.83	6.6885	250	0.8195	542.66	468.48	6.9745
191	1.0739	481.19	424.57	6.6940	251	0.8162	543.71	469.22	6.9786
192	1.0683	482.23	425.32	6.6994	252	0.8130	544.75	469.96	6.9828
193	1.0627	483.27	426.06	6.7049	253	0.8097	545.79	470.71	6.9869
194	1.0572	484.31	426.81	6.7102	254	0.8065	546.83	471.45	6.9910
195	1.0517	485.36	427.55	6.7156	255	0.8034	547.87	472.19	6.9951
196	1.0463	486.40	428.30	6.7209	256	0.8002	548.91	472.94	6.9992
197	1.0410	487.44	429.04	6.7262	257	0.7971	549.95	473.68	7.0032
198	1.0357	488.48	429.78	6.7315	258	0.7940	551.00	474.43	7.0073
199	1.0305	489.53	430.53	6.7368	259	0.7909	552.04	475.17	7.0113
200	1.0253	490.57	431.27	6.7420	260	0.7879	553.08	475.91	7.0153
201	1.0201	491.61	432.02	6.7472	261	0.7848	554.12	476.66	7.0193
202	1.0151	492.65	432.76	6.7524	262	0.7818	555.16	477.40	7.0233
203	1.0100	493.70	433.51	6.7575	263	0.7789	556.20	478.15	7.0273
204	1.0051	494.74	434.25	6.7626	264	0.7759	557.24	478.89	7.0312
205	1.0001	495.78	435.00	6.7677	265	0.7730	558.28	479.63	7.0352
206	0.9953	496.82	435.74	6.7728	266	0.7701	559.33	480.38	7.0391
207	0.9904	497.87	436.48	6.7779	267	0.7672	560.37	481.12	7.0430
208	0.9856	498.91	437.23	6.7829	268	0.7643	561.41	481.86	7.0469
209	0.9809	499.95	437.97	6.7879	269	0.7614	562.45	482.61	7.0508
210	0.9762	500.99	438.72	6.7929	270	0.7586	563.49	483.35	7.0546
211	0.9716	502.04	439.46	6.7978	271	0.7558	564.53	484.10	7.0585
212	0.9670	503.08	440.20	6.8027	272	0.7530	565.57	484.84	7.0623
213	0.9624	504.12	440.95	6.8076	273	0.7503	566.62	485.58	7.0661
214	0.9579	505.16	441.69	6.8125	274	0.7475	567.66	486.33	7.0699
215	0.9534	506.20	442.44	6.8174	275	0.7448	568.70	487.07	7.0737
216	0.9490	507.25	443.18	6.8222	276	0.7421	569.74	487.82	7.0775
217	0.9446	508.29	443.93	6.8270	277	0.7394	570.78	488.56	7.0813
218	0.9402	509.33	444.67	6.8318	278	0.7367	571.82	489.30	7.0850
219	0.9359	510.37	445.41	6.8366	279	0.7341	572.86	490.05	7.0888
220	0.9316	511.41	446.16	6.8413	280	0.7315	573.90	490.79	7.0925
221	0.9274	512.46	446.90	6.8461	281	0.7289	574.95	491.53	7.0962
222	0.9232	513.50	447.65	6.8508	282	0.7263	575.99	492.28	7.0999
223	0.9191	514.54	448.39	6.8554	283	0.7237	577.03	493.02	7.1036
224	0.9149	515.58	449.13	6.8601	284	0.7211	578.07	493.77	7.1073
225	0.9109	516.62	449.88	6.8647	285	0.7186	579.11	494.51	7.1109
226	0.9068	517.67	450.62	6.8694	286	0.7161	580.15	495.25	7.1146
227	0.9028	518.71	451.37	6.8740	287	0.7136	581.19	496.00	7.1182
228	0.8988	519.75	452.11	6.8785	288	0.7111	582.23	496.74	7.1218
229	0.8949	520.79	452.85	6.8831	289	0.7087	583.28	497.49	7.1254
230	0.8910	521.83	453.60	6.8876	290	0.7062	584.32	498.23	7.1290
231	0.8871	522.87	454.34	6.8922	291	0.7038	585.36	498.97	7.1326
232	0.8833	523.92	455.09	6.8967	292	0.7014	586.40	499.72	7.1362
233	0.8795	524.96	455.83	6.9011	293	0.6990	587.44	500.46	7.1397
234	0.8757	526.00	456.57	6.9056	294	0.6966	588.48	501.20	7.1433
235	0.8720	527.04	457.32	6.9100	295	0.6942	589.52	501.95	7.1468
236	0.8682	528.08	458.06	6.9145	296	0.6919	590.56	502.69	7.1503
237	0.8646	529.12	458.81	6.9189	297	0.6895	591.61	503.44	7.1539
238	0.8609	530.17	459.55	6.9232	298	0.6872	592.65	504.18	7.1574
239	0.8573	531.21	460.29	6.9276	299	0.6849	593.69	504.92	7.1608
240	0.8537	532.25	461.04	6.9320	300	0.6826	594.73	505.67	7.1643

0.70 ATMOSPHERE ISORAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	1.9920	407.85	372.25	6.1701
					122	1.9753	408.90	373.00	6.1787
					123	1.9588	409.96	373.75	6.1873
					124	1.9426	411.01	374.50	6.1958
					125	1.9267	412.06	375.25	6.2043
					126	1.9110	413.11	375.99	6.2126
					127	1.8956	414.16	376.74	6.2210
					128	1.8805	415.21	377.49	6.2292
					129	1.8656	416.26	378.24	6.2374
70	835.89	124.44	124.36	2.6647	130	1.8509	417.31	378.99	6.2455
71	832.03	126.68	126.59	2.6963					
72	828.12	128.90	128.82	2.7275	131	1.8365	418.36	379.74	6.2535
73	824.17	131.13	131.04	2.7582	132	1.8222	419.41	380.49	6.2615
74	820.19	133.35	133.26	2.7884	133	1.8083	420.46	381.24	6.2694
75	816.16	135.57	135.48	2.8182	134	1.7945	421.51	381.99	6.2773
76	812.10	137.79	137.70	2.8476	135	1.7809	422.56	382.74	6.2851
77	807.99	140.00	139.92	2.8766	136	1.7676	423.61	383.48	6.2928
78	803.85	142.22	142.13	2.9052	137	1.7544	424.66	384.23	6.3005
* 78.612	801.30	143.57	143.49	2.9225	138	1.7415	425.71	384.98	6.3082
* 78.612	3.1346	362.89	340.26	5.7123	139	1.7287	426.76	385.73	6.3157
79	3.1179	363.30	340.55	5.7176	140	1.7161	427.81	386.48	6.3232
80	3.0757	364.37	341.31	5.7311					
81	3.0346	365.44	342.07	5.7444	141	1.7038	428.85	387.22	6.3307
82	2.9948	366.51	342.83	5.7575	142	1.6915	429.90	387.97	6.3381
83	2.9560	367.58	343.59	5.7704	143	1.6795	430.95	388.72	6.3455
84	2.9182	368.65	344.35	5.7832	144	1.6677	432.00	389.47	6.3528
85	2.8814	369.72	345.10	5.7959	145	1.6560	433.05	390.21	6.3600
86	2.8456	370.79	345.86	5.8084	146	1.6444	434.09	390.96	6.3672
87	2.8108	371.85	346.62	5.8207	147	1.6331	435.14	391.71	6.3744
88	2.7768	372.92	347.38	5.8329	148	1.6219	436.19	392.46	6.3815
89	2.7436	373.99	348.13	5.8449	149	1.6108	437.24	393.20	6.3885
90	2.7113	375.05	348.89	5.8568	150	1.5999	438.28	393.95	6.3955
91	2.6797	376.12	349.65	5.8686	151	1.5892	439.33	394.70	6.4025
92	2.6489	377.18	350.41	5.8802	152	1.5786	440.38	395.44	6.4094
93	2.6188	378.25	351.16	5.8917	153	1.5681	441.42	396.19	6.4162
94	2.5895	379.31	351.92	5.9031	154	1.5578	442.47	396.94	6.4231
95	2.5608	380.37	352.67	5.9143	155	1.5476	443.52	397.69	6.4298
96	2.5328	381.43	353.43	5.9255	156	1.5375	444.56	398.43	6.4366
97	2.5053	382.49	354.18	5.9365	157	1.5276	445.61	399.18	6.4432
98	2.4785	383.56	354.94	5.9474	158	1.5178	446.65	399.92	6.4499
99	2.4523	384.62	355.69	5.9581	159	1.5082	447.70	400.67	6.4565
100	2.4267	385.68	356.45	5.9688	160	1.4986	448.75	401.42	6.4630
101	2.4016	386.74	357.20	5.9793	161	1.4892	449.79	402.16	6.4696
102	2.3770	387.80	357.96	5.9898	162	1.4799	450.84	402.91	6.4760
103	2.3530	388.85	358.71	6.0001	163	1.4707	451.88	403.66	6.4825
104	2.3294	389.91	359.46	6.0103	164	1.4616	452.93	404.40	6.4889
105	2.3063	390.97	360.22	6.0204	165	1.4527	453.97	405.15	6.4952
106	2.2837	392.03	360.97	6.0305	166	1.4438	455.02	405.89	6.5015
107	2.2616	393.09	361.72	6.0404	167	1.4351	456.06	406.64	6.5078
108	2.2399	394.14	362.48	6.0502	168	1.4265	457.11	407.39	6.5140
109	2.2186	395.20	363.23	6.0599	169	1.4179	458.15	408.13	6.5202
110	2.1977	396.26	363.98	6.0696	170	1.4095	459.20	408.88	6.5264
111	2.1772	397.31	364.73	6.0791	171	1.4012	460.24	409.62	6.5325
112	2.1571	398.37	365.49	6.0886	172	1.3929	461.29	410.37	6.5386
113	2.1374	399.42	366.24	6.0980	173	1.3848	462.33	411.12	6.5447
114	2.1181	400.48	366.99	6.1073	174	1.3768	463.38	411.86	6.5507
115	2.0991	401.53	367.74	6.1165	175	1.3688	464.42	412.61	6.5567
116	2.0804	402.58	368.49	6.1256	176	1.3610	465.47	413.35	6.5626
117	2.0621	403.64	369.24	6.1347	177	1.3532	466.51	414.10	6.5686
118	2.0441	404.69	369.99	6.1436	178	1.3455	467.56	414.84	6.5744
119	2.0265	405.75	370.74	6.1525	179	1.3380	468.60	415.59	6.5803
120	2.0091	406.80	371.49	6.1613	180	1.3305	469.64	416.33	6.5861

\* PHASE CHANGE

## 0.70 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	1.3230	470.69	417.08	6.5919	241	0.9920	533.25	461.75	6.8904
182	1.3157	471.73	417.82	6.5976	242	0.9879	534.29	462.50	6.8947
183	1.3085	472.78	418.57	6.6034	243	0.9838	535.34	463.24	6.8990
184	1.3013	473.82	419.31	6.6090	244	0.9797	536.38	463.98	6.9033
185	1.2942	474.86	420.06	6.6147	245	0.9757	537.42	464.73	6.9076
186	1.2872	475.91	420.80	6.6203	246	0.9717	538.46	465.47	6.9118
187	1.2802	476.95	421.55	6.6259	247	0.9678	539.50	466.22	6.9160
188	1.2734	477.99	422.29	6.6315	248	0.9639	540.54	466.96	6.9202
189	1.2666	479.04	423.04	6.6370	249	0.9600	541.59	467.70	6.9244
190	1.2599	480.08	423.78	6.6425	250	0.9561	542.63	468.45	6.9286
191	1.2532	481.13	424.53	6.6480	251	0.9523	543.67	469.19	6.9328
192	1.2467	482.17	425.27	6.6535	252	0.9485	544.71	469.94	6.9369
193	1.2402	483.21	426.02	6.6589	253	0.9448	545.75	470.68	6.9410
194	1.2337	484.26	426.76	6.6643	254	0.9410	546.80	471.42	6.9451
195	1.2273	485.30	427.51	6.6696	255	0.9373	547.84	472.17	6.9492
196	1.2210	486.34	428.25	6.6750	256	0.9337	548.88	472.91	6.9533
197	1.2148	487.39	429.00	6.6803	257	0.9300	549.92	473.66	6.9574
198	1.2086	488.43	429.74	6.6856	258	0.9264	550.96	474.40	6.9614
199	1.2025	489.47	430.49	6.6908	259	0.9228	552.00	475.14	6.9654
200	1.1965	490.51	431.23	6.6960	260	0.9193	553.05	475.89	6.9695
201	1.1905	491.56	431.98	6.7012	261	0.9157	554.09	476.63	6.9735
202	1.1845	492.60	432.72	6.7064	262	0.9122	555.13	477.38	6.9774
203	1.1787	493.64	433.47	6.7116	263	0.9087	556.17	478.12	6.9814
204	1.1728	494.69	434.21	6.7167	264	0.9053	557.21	478.86	6.9854
205	1.1671	495.73	434.96	6.7218	265	0.9019	558.25	479.61	6.9893
206	1.1614	496.77	435.70	6.7269	266	0.8985	559.29	480.35	6.9932
207	1.1557	497.82	436.45	6.7319	267	0.8951	560.34	481.10	6.9971
208	1.1502	498.86	437.19	6.7369	268	0.8917	561.38	481.84	7.0010
209	1.1446	499.90	437.93	6.7419	269	0.8884	562.42	482.58	7.0049
210	1.1391	500.94	438.68	6.7469	270	0.8851	563.46	483.33	7.0088
211	1.1337	501.99	439.42	6.7519	271	0.8818	564.50	484.07	7.0126
212	1.1283	503.03	440.17	6.7568	272	0.8786	565.54	484.82	7.0165
213	1.1230	504.07	440.91	6.7617	273	0.8754	566.59	485.56	7.0203
214	1.1177	505.11	441.66	6.7666	274	0.8722	567.63	486.30	7.0241
215	1.1125	506.16	442.40	6.7714	275	0.8690	568.67	487.05	7.0279
216	1.1073	507.20	443.15	6.7763	276	0.8658	569.71	487.79	7.0317
217	1.1022	508.24	443.89	6.7811	277	0.8627	570.75	488.54	7.0354
218	1.0971	509.28	444.63	6.7859	278	0.8596	571.79	489.28	7.0392
219	1.0921	510.33	445.38	6.7907	279	0.8565	572.83	490.02	7.0429
220	1.0871	511.37	446.12	6.7954	280	0.8534	573.88	490.77	7.0466
221	1.0822	512.41	446.87	6.8001	281	0.8504	574.92	491.51	7.0504
222	1.0773	513.45	447.61	6.8048	282	0.8474	575.96	492.25	7.0541
223	1.0724	514.50	448.36	6.8095	283	0.8444	577.00	493.00	7.0577
224	1.0676	515.54	449.10	6.8142	284	0.8414	578.04	493.74	7.0614
225	1.0628	516.58	449.84	6.8188	285	0.8384	579.08	494.49	7.0651
226	1.0581	517.62	450.59	6.8235	286	0.8355	580.13	495.23	7.0687
227	1.0534	518.66	451.33	6.8281	287	0.8326	581.17	495.97	7.0724
228	1.0488	519.71	452.08	6.8326	288	0.8297	582.21	496.72	7.0760
229	1.0442	520.75	452.82	6.8372	289	0.8268	583.25	497.46	7.0796
230	1.0396	521.79	453.57	6.8417	290	0.8239	584.29	498.21	7.0832
231	1.0351	522.83	454.31	6.8463	291	0.8211	585.33	498.95	7.0868
232	1.0306	523.87	455.05	6.8508	292	0.8183	586.37	499.69	7.0903
233	1.0262	524.92	455.80	6.8552	293	0.8155	587.42	500.44	7.0939
234	1.0218	525.96	456.54	6.8597	294	0.8127	588.46	501.18	7.0974
235	1.0174	527.00	457.29	6.8641	295	0.8099	589.50	501.93	7.1010
236	1.0131	528.04	458.03	6.8686	296	0.8072	590.54	502.67	7.1045
237	1.0088	529.08	458.77	6.8730	297	0.8045	591.58	503.41	7.1080
238	1.0045	530.13	459.52	6.8774	298	0.8018	592.62	504.16	7.1115
239	1.0003	531.17	460.26	6.8817	299	0.7991	593.66	504.90	7.1150
240	0.9961	532.21	461.01	6.8861	300	0.7964	594.71	505.65	7.1185

0.80 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	2.2796	407.71	372.15	6.1297
					122	2.2603	408.77	372.91	6.1383
					123	2.2414	409.82	373.66	6.1469
					124	2.2228	410.88	374.41	6.1555
					125	2.2045	411.93	375.16	6.1639
					126	2.1866	412.98	375.91	6.1723
					127	2.1689	414.03	376.66	6.1807
					128	2.1515	415.09	377.41	6.1889
					129	2.1344	416.14	378.16	6.1971
70	835.91	124.45	124.36	2.6646	130	2.1175	417.19	378.91	6.2052
71	832.04	126.68	126.59	2.6963					
72	828.14	128.91	128.81	2.7274	131	2.1010	418.24	379.66	6.2133
73	824.19	131.14	131.04	2.7581	132	2.0846	419.30	380.41	6.2213
74	820.20	133.36	133.26	2.7884	133	2.0686	420.35	381.16	6.2292
75	816.18	135.58	135.48	2.8182	134	2.0528	421.40	381.91	6.2371
76	812.12	137.80	137.70	2.8476	135	2.0372	422.45	382.66	6.2449
77	808.01	140.01	139.91	2.8765	136	2.0219	423.50	383.41	6.2526
78	803.87	142.23	142.13	2.9051	137	2.0068	424.55	384.16	6.2603
79	799.70	144.44	144.34	2.9333	138	1.9920	425.60	384.91	6.2680
* 79.707	796.72	146.01	145.90	2.9531	139	1.9774	426.65	385.66	6.2756
* 79.707	3.5450	363.79	340.92	5.6853	140	1.9629	427.70	386.40	6.2831
80	3.5308	364.10	341.14	5.6893					
81	3.4831	365.18	341.90	5.7026	141	1.9487	428.75	387.15	6.2906
82	3.4368	366.25	342.67	5.7158	142	1.9347	429.80	387.90	6.2980
83	3.3918	367.33	343.43	5.7288	143	1.9209	430.85	388.65	6.3053
84	3.3480	368.40	344.19	5.7417	144	1.9073	431.90	389.40	6.3126
85	3.3054	369.47	344.95	5.7544	145	1.8939	432.95	390.15	6.3199
86	3.2639	370.54	345.71	5.7669	146	1.8807	434.00	390.90	6.3271
87	3.2235	371.62	346.47	5.7793	147	1.8677	435.04	391.64	6.3343
88	3.1841	372.69	347.23	5.7915	148	1.8549	436.09	392.39	6.3414
89	3.1458	373.76	347.99	5.8036	149	1.8422	437.14	393.14	6.3484
90	3.1084	374.83	348.75	5.8156	150	1.8297	438.19	393.89	6.3554
91	3.0719	375.90	349.51	5.8274	151	1.8174	439.24	394.63	6.3624
92	3.0363	376.96	350.27	5.8391	152	1.8052	440.28	395.38	6.3693
93	3.0016	378.03	351.02	5.8506	153	1.7932	441.33	396.13	6.3762
94	2.9676	379.10	351.78	5.8620	154	1.7814	442.38	396.88	6.3830
95	2.9345	380.16	352.54	5.8733	155	1.7697	443.43	397.62	6.3898
96	2.9021	381.23	353.30	5.8845	156	1.7582	444.47	398.37	6.3965
97	2.8705	382.29	354.06	5.8955	157	1.7469	445.52	399.12	6.4032
98	2.8396	383.36	354.81	5.9064	158	1.7356	446.57	399.87	6.4099
99	2.8094	384.42	355.57	5.9172	159	1.7246	447.62	400.61	6.4165
100	2.7798	385.49	356.33	5.9279	160	1.7136	448.66	401.36	6.4230
101	2.7508	386.55	357.08	5.9385	161	1.7028	449.71	402.11	6.4296
102	2.7225	387.61	357.84	5.9489	162	1.6922	450.76	402.85	6.4360
103	2.6948	388.67	358.59	5.9593	163	1.6817	451.80	403.60	6.4425
104	2.6677	389.74	359.35	5.9696	164	1.6713	452.85	404.35	6.4489
105	2.6411	390.80	360.10	5.9797	165	1.6610	453.90	405.09	6.4552
106	2.6151	391.86	360.86	5.9898	166	1.6509	454.94	405.84	6.4616
107	2.5896	392.92	361.61	5.9997	167	1.6409	455.99	406.59	6.4678
108	2.5646	393.98	362.37	6.0096	168	1.6310	457.03	407.33	6.4741
109	2.5401	395.04	363.12	6.0193	169	1.6212	458.08	408.08	6.4803
110	2.5160	396.09	363.88	6.0290	170	1.6116	459.12	408.83	6.4865
111	2.4925	397.15	364.63	6.0386	171	1.6020	460.17	409.57	6.4926
112	2.4694	398.21	365.38	6.0481	172	1.5926	461.22	410.32	6.4987
113	2.4467	399.27	366.14	6.0575	173	1.5833	462.26	411.06	6.5047
114	2.4244	400.32	366.89	6.0668	174	1.5741	463.31	411.81	6.5108
115	2.4026	401.38	367.64	6.0760	175	1.5650	464.35	412.56	6.5168
116	2.3812	402.44	368.39	6.0851	176	1.5560	465.40	413.30	6.5227
117	2.3601	403.49	369.15	6.0942	177	1.5471	466.44	414.05	6.5286
118	2.3394	404.55	369.90	6.1032	178	1.5383	467.49	414.79	6.5345
119	2.3191	405.60	370.65	6.1121	179	1.5297	468.53	415.54	6.5404
120	2.2992	406.66	371.40	6.1209	180	1.5211	469.58	416.29	6.5462

\* PHASE CHANGE

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	1.5126	470.62	417.03	6.5520	241	1.1338	533.21	461.72	6.8506
182	1.5042	471.67	417.78	6.5577	242	1.1291	534.26	462.47	6.8550
183	1.4959	472.71	418.52	6.5635	243	1.1245	535.30	463.21	6.8593
184	1.4877	473.76	419.27	6.5692	244	1.1198	536.34	463.95	6.8635
185	1.4796	474.80	420.01	6.5748	245	1.1152	537.38	464.70	6.8678
186	1.4715	475.84	420.76	6.5804	246	1.1107	538.42	465.44	6.8720
187	1.4636	476.89	421.50	6.5860	247	1.1062	539.47	466.19	6.8763
188	1.4558	477.93	422.25	6.5916	248	1.1017	540.51	466.93	6.8805
189	1.4480	478.98	423.00	6.5972	249	1.0973	541.55	467.68	6.8847
190	1.4403	480.02	423.74	6.6027	250	1.0928	542.59	468.42	6.8889
191	1.4327	481.07	424.49	6.6081	251	1.0885	543.63	469.16	6.8930
192	1.4252	482.11	425.23	6.6136	252	1.0841	544.68	469.91	6.8972
193	1.4177	483.15	425.98	6.6190	253	1.0798	545.72	470.65	6.9013
194	1.4104	484.20	426.72	6.6244	254	1.0756	546.76	471.40	6.9054
195	1.4031	485.24	427.47	6.6298	255	1.0713	547.80	472.14	6.9095
196	1.3958	486.28	428.21	6.6351	256	1.0671	548.84	472.88	6.9136
197	1.3887	487.33	428.96	6.6404	257	1.0630	549.89	473.63	6.9176
198	1.3816	488.37	429.70	6.6457	258	1.0588	550.93	474.37	6.9217
199	1.3746	489.42	430.45	6.6510	259	1.0547	551.97	475.12	6.9257
200	1.3677	490.46	431.19	6.6562	260	1.0507	553.01	475.86	6.9297
201	1.3609	491.50	431.94	6.6614	261	1.0466	554.05	476.61	6.9337
202	1.3541	492.55	432.68	6.6666	262	1.0426	555.10	477.35	6.9377
203	1.3474	493.59	433.43	6.6717	263	1.0386	556.14	478.09	6.9417
204	1.3407	494.63	434.17	6.6769	264	1.0347	557.18	478.84	6.9456
205	1.3341	495.68	434.92	6.6820	265	1.0308	558.22	479.58	6.9496
206	1.3276	496.72	435.66	6.6870	266	1.0269	559.26	480.33	6.9535
207	1.3211	497.76	436.41	6.6921	267	1.0230	560.31	481.07	6.9574
208	1.3148	498.81	437.15	6.6971	268	1.0192	561.35	481.81	6.9613
209	1.3084	499.85	437.90	6.7021	269	1.0154	562.39	482.56	6.9652
210	1.3021	500.89	438.64	6.7071	270	1.0116	563.43	483.30	6.9690
211	1.2959	501.94	439.39	6.7121	271	1.0079	564.47	484.05	6.9729
212	1.2898	502.98	440.13	6.7170	272	1.0042	565.51	484.79	6.9767
213	1.2837	504.02	440.88	6.7219	273	1.0005	566.56	485.53	6.9805
214	1.2777	505.07	441.62	6.7268	274	0.9968	567.60	486.28	6.9844
215	1.2717	506.11	442.37	6.7316	275	0.9932	568.64	487.02	6.9881
216	1.2658	507.15	443.11	6.7365	276	0.9896	569.68	487.77	6.9919
217	1.2599	508.19	443.85	6.7413	277	0.9860	570.72	488.51	6.9957
218	1.2541	509.24	444.60	6.7461	278	0.9824	571.76	489.26	6.9994
219	1.2483	510.28	445.34	6.7509	279	0.9789	572.81	490.00	7.0032
220	1.2426	511.32	446.09	6.7556	280	0.9754	573.85	490.74	7.0069
221	1.2370	512.37	446.83	6.7603	281	0.9719	574.89	491.49	7.0106
222	1.2314	513.41	447.58	6.7651	282	0.9685	575.93	492.23	7.0143
223	1.2258	514.45	448.32	6.7697	283	0.9650	576.97	492.98	7.0180
224	1.2203	515.49	449.07	6.7744	284	0.9616	578.02	493.72	7.0217
225	1.2148	516.54	449.81	6.7790	285	0.9582	579.06	494.46	7.0254
226	1.2094	517.58	450.56	6.7837	286	0.9549	580.10	495.21	7.0290
227	1.2041	518.62	451.30	6.7883	287	0.9515	581.14	495.95	7.0326
228	1.1988	519.66	452.04	6.7929	288	0.9482	582.18	496.70	7.0363
229	1.1935	520.71	452.79	6.7974	289	0.9449	583.22	497.44	7.0399
230	1.1883	521.75	453.53	6.8020	290	0.9417	584.26	498.18	7.0435
231	1.1831	522.79	454.28	6.8065	291	0.9384	585.31	498.93	7.0471
232	1.1780	523.83	455.02	6.8110	292	0.9352	586.35	499.67	7.0506
233	1.1729	524.88	455.77	6.8155	293	0.9320	587.39	500.42	7.0542
234	1.1679	525.92	456.51	6.8199	294	0.9288	588.43	501.16	7.0577
235	1.1629	526.96	457.26	6.8244	295	0.9257	589.47	501.90	7.0613
236	1.1580	528.00	458.00	6.8288	296	0.9225	590.51	502.65	7.0648
237	1.1530	529.04	458.74	6.8332	297	0.9194	591.56	503.39	7.0683
238	1.1482	530.09	459.49	6.8376	298	0.9163	592.60	504.14	7.0718
239	1.1434	531.13	460.23	6.8420	299	0.9133	593.64	504.88	7.0753
240	1.1386	532.17	460.98	6.8463	300	0.9102	594.68	505.63	7.0788

0.90 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	2.5679	407.58	372.06	6.0939
					122	2.5461	408.63	372.82	6.1026
					123	2.5248	409.69	373.57	6.1113
					124	2.5037	410.74	374.32	6.1198
					125	2.4830	411.80	375.07	6.1283
					126	2.4627	412.85	375.82	6.1367
					127	2.4427	413.91	376.58	6.1450
					128	2.4231	414.96	377.33	6.1533
					129	2.4037	416.02	378.08	6.1615
70	835.93	124.46	124.35	2.6645	130	2.3847	417.07	378.83	6.1696
71	832.06	126.69	126.58	2.6962	131	2.3660	418.12	379.58	6.1777
72	828.15	128.92	128.81	2.7274	132	2.3476	419.18	380.33	6.1857
73	824.21	131.15	131.03	2.7581	133	2.3295	420.23	381.08	6.1937
74	820.22	133.37	133.26	2.7883	134	2.3116	421.28	381.83	6.2015
75	816.20	135.59	135.47	2.8181	135	2.2940	422.34	382.58	6.2094
76	812.13	137.80	137.69	2.8475	136	2.2768	423.39	383.33	6.2171
77	808.03	140.02	139.91	2.8765	137	2.2597	424.44	384.08	6.2248
78	803.89	142.23	142.12	2.9051	138	2.2429	425.49	384.83	6.2325
79	799.72	144.45	144.33	2.9333	139	2.2264	426.54	385.58	6.2401
80	795.50	146.66	146.55	2.9611	140	2.2102	427.59	386.33	6.2476
* 80.702	792.51	148.22	148.10	2.9805					
* 80.702	3.9517	364.58	341.51	5.6615	141	2.1941	428.64	387.08	6.2551
81	3.9357	364.91	341.74	5.6655	142	2.1783	429.70	387.83	6.2625
82	3.8827	365.99	342.50	5.6788	143	2.1628	430.75	388.58	6.2699
83	3.8313	367.07	343.26	5.6919	144	2.1474	431.80	389.33	6.2772
84	3.7813	368.14	344.03	5.7048	145	2.1323	432.85	390.08	6.2845
85	3.7326	369.22	344.79	5.7175	146	2.1174	433.90	390.83	6.2917
86	3.6853	370.30	345.55	5.7301	147	2.1027	434.95	391.58	6.2989
87	3.6393	371.38	346.32	5.7426	148	2.0882	436.00	392.33	6.3060
88	3.5944	372.45	347.08	5.7549	149	2.0739	437.05	393.07	6.3130
89	3.5507	373.53	347.84	5.7670	150	2.0598	438.10	393.82	6.3201
90	3.5081	374.60	348.60	5.7790					
91	3.4665	375.67	349.37	5.7908	151	2.0459	439.14	394.57	6.3270
92	3.4260	376.74	350.13	5.8026	152	2.0322	440.19	395.32	6.3339
93	3.3865	377.82	350.89	5.8141	153	2.0187	441.24	396.07	6.3408
94	3.3479	378.89	351.65	5.8256	154	2.0053	442.29	396.82	6.3477
95	3.3103	379.96	352.41	5.8369	155	1.9922	443.34	397.56	6.3544
96	3.2735	381.03	353.17	5.8481	156	1.9792	444.39	398.31	6.3612
97	3.2376	382.09	353.93	5.8592	157	1.9664	445.44	399.06	6.3679
98	3.2024	383.16	354.69	5.8701	158	1.9537	446.48	399.81	6.3745
99	3.1681	384.23	355.44	5.8810	159	1.9412	447.53	400.55	6.3811
100	3.1345	385.30	356.20	5.8917	160	1.9289	448.58	401.30	6.3877
101	3.1017	386.36	356.96	5.9023	161	1.9167	449.63	402.05	6.3942
102	3.0696	387.43	357.72	5.9128	162	1.9047	450.67	402.80	6.4007
103	3.0381	388.49	358.48	5.9232	163	1.8928	451.72	403.54	6.4072
104	3.0074	389.56	359.23	5.9335	164	1.8811	452.77	404.29	6.4136
105	2.9772	390.62	359.99	5.9436	165	1.8696	453.82	405.04	6.4199
106	2.9477	391.68	360.75	5.9537	166	1.8581	454.86	405.79	6.4263
107	2.9188	392.75	361.50	5.9637	167	1.8469	455.91	406.53	6.4326
108	2.8905	393.81	362.26	5.9736	168	1.8357	456.96	407.28	6.4388
109	2.8627	394.87	363.01	5.9834	169	1.8247	458.00	408.03	6.4450
110	2.8355	395.93	363.77	5.9931	170	1.8138	459.05	408.77	6.4512
111	2.8088	396.99	364.53	6.0027	171	1.8031	460.10	409.52	6.4573
112	2.7826	398.05	365.28	6.0122	172	1.7925	461.14	410.27	6.4634
113	2.7570	399.11	366.04	6.0216	173	1.7820	462.19	411.01	6.4695
114	2.7318	400.17	366.79	6.0309	174	1.7716	463.23	411.76	6.4755
115	2.7071	401.23	367.54	6.0402	175	1.7613	464.28	412.51	6.4815
116	2.6828	402.29	368.30	6.0493	176	1.7512	465.33	413.25	6.4875
117	2.6590	403.35	369.05	6.0584	177	1.7412	466.37	414.00	6.4934
118	2.6356	404.41	369.80	6.0674	178	1.7313	467.42	414.75	6.4993
119	2.6126	405.46	370.56	6.0763	179	1.7215	468.46	415.49	6.5051
120	2.5901	406.52	371.31	6.0852	180	1.7118	469.51	416.24	6.5110

\* PHASE CHANGE

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	1.7023	470.55	416.98	6.5168	241	1.2757	533.18	461.69	6.8156
182	1.6928	471.60	417.73	6.5225	242	1.2704	534.22	462.44	6.8199
183	1.6835	472.65	418.48	6.5282	243	1.2652	535.26	463.18	6.8242
184	1.6742	473.69	419.22	6.5339	244	1.2599	536.30	463.92	6.8285
185	1.6651	474.74	419.97	6.5396	245	1.2548	537.35	464.67	6.8327
186	1.6560	475.78	420.71	6.5452	246	1.2497	538.39	465.41	6.8370
187	1.6471	476.83	421.46	6.5508	247	1.2446	539.43	466.16	6.8412
188	1.6382	477.87	422.21	6.5564	248	1.2395	540.47	466.90	6.8454
189	1.6295	478.92	422.95	6.5620	249	1.2345	541.52	467.65	6.8496
190	1.6208	479.96	423.70	6.5675	250	1.2296	542.56	468.39	6.8538
191	1.6123	481.01	424.44	6.5730	251	1.2247	543.60	469.14	6.8579
192	1.6038	482.05	425.19	6.5784	252	1.2198	544.64	469.88	6.8621
193	1.5954	483.09	425.93	6.5838	253	1.2149	545.68	470.62	6.8662
194	1.5871	484.14	426.68	6.5892	254	1.2101	546.73	471.37	6.8703
195	1.5789	485.18	427.43	6.5946	255	1.2054	547.77	472.11	6.8744
196	1.5708	486.23	428.17	6.5999	256	1.2006	548.81	472.86	6.8785
197	1.5627	487.27	428.92	6.6053	257	1.1959	549.85	473.60	6.8826
198	1.5547	488.32	429.66	6.6105	258	1.1913	550.90	474.35	6.8866
199	1.5469	489.36	430.41	6.6158	259	1.1867	551.94	475.09	6.8906
200	1.5391	490.40	431.15	6.6210	260	1.1821	552.98	475.83	6.8947
201	1.5313	491.45	431.90	6.6262	261	1.1775	554.02	476.58	6.8987
202	1.5237	492.49	432.64	6.6314	262	1.1730	555.06	477.32	6.9026
203	1.5161	493.54	433.39	6.6366	263	1.1686	556.11	478.07	6.9066
204	1.5086	494.58	434.13	6.6417	264	1.1641	557.15	478.81	6.9106
205	1.5012	495.62	434.88	6.6468	265	1.1597	558.19	479.56	6.9145
206	1.4939	496.67	435.62	6.6519	266	1.1553	559.23	480.30	6.9184
207	1.4866	497.71	436.37	6.6569	267	1.1510	560.27	481.04	6.9223
208	1.4794	498.76	437.11	6.6620	268	1.1467	561.32	481.79	6.9262
209	1.4723	499.80	437.86	6.6670	269	1.1424	562.36	482.53	6.9301
210	1.4652	500.84	438.60	6.6720	270	1.1382	563.40	483.28	6.9340
211	1.4582	501.89	439.35	6.6769	271	1.1339	564.44	484.02	6.9378
212	1.4513	502.93	440.09	6.6819	272	1.1298	565.48	484.77	6.9417
213	1.4444	503.97	440.84	6.6868	273	1.1256	566.53	485.51	6.9455
214	1.4376	505.02	441.58	6.6916	274	1.1215	567.57	486.25	6.9493
215	1.4309	506.06	442.33	6.6965	275	1.1174	568.61	487.00	6.9531
216	1.4242	507.10	443.07	6.7014	276	1.1133	569.65	487.74	6.9569
217	1.4176	508.15	443.82	6.7062	277	1.1093	570.69	488.49	6.9606
218	1.4111	509.19	444.56	6.7110	278	1.1053	571.74	489.23	6.9644
219	1.4046	510.23	445.31	6.7157	279	1.1013	572.78	489.98	6.9681
220	1.3982	511.28	446.05	6.7205	280	1.0974	573.82	490.72	6.9719
221	1.3918	512.32	446.80	6.7252	281	1.0935	574.86	491.46	6.9756
222	1.3855	513.36	447.54	6.7299	282	1.0896	575.90	492.21	6.9793
223	1.3793	514.41	448.29	6.7346	283	1.0857	576.95	492.95	6.9830
224	1.3731	515.45	449.03	6.7393	284	1.0819	577.99	493.70	6.9866
225	1.3669	516.49	449.78	6.7439	285	1.0781	579.03	494.44	6.9903
226	1.3608	517.53	450.52	6.7486	286	1.0743	580.07	495.18	6.9940
227	1.3548	518.58	451.27	6.7532	287	1.0705	581.11	495.93	6.9976
228	1.3488	519.62	452.01	6.7577	288	1.0668	582.16	496.67	7.0012
229	1.3429	520.66	452.76	6.7623	289	1.0631	583.20	497.42	7.0048
230	1.3370	521.71	453.50	6.7669	290	1.0594	584.24	498.16	7.0084
231	1.3312	522.75	454.25	6.7714	291	1.0558	585.28	498.91	7.0120
232	1.3254	523.79	454.99	6.7759	292	1.0522	586.32	499.65	7.0156
233	1.3197	524.83	455.73	6.7804	293	1.0486	587.36	500.39	7.0191
234	1.3141	525.88	456.48	6.7848	294	1.0450	588.41	501.14	7.0227
235	1.3084	526.92	457.22	6.7893	295	1.0414	589.45	501.88	7.0262
236	1.3029	527.96	457.97	6.7937	296	1.0379	590.49	502.63	7.0298
237	1.2973	529.01	458.71	6.7981	297	1.0344	591.53	503.37	7.0333
238	1.2919	530.05	459.46	6.8025	298	1.0309	592.57	504.12	7.0368
239	1.2864	531.09	460.20	6.8069	299	1.0275	593.62	504.86	7.0403
240	1.2810	532.13	460.95	6.8112	300	1.0240	594.66	505.60	7.0437

## 1.00 ATMOSPHERE 150BAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	2.8570	407.44	371.97	6.0619
					122	2.8327	408.50	372.73	6.0706
					123	2.8088	409.55	373.48	6.0793
					124	2.7853	410.61	374.23	6.0878
					125	2.7622	411.67	374.99	6.0963
					126	2.7395	412.73	375.74	6.1047
					127	2.7172	413.78	376.49	6.1131
					128	2.6953	414.84	377.24	6.1214
					129	2.6737	415.89	378.00	6.1296
70	835.94	124.47	124.35	2.6645	130	2.6525	416.95	378.75	6.1377
71	832.08	126.70	126.58	2.6962	131	2.6316	418.00	379.50	6.1458
72	828.17	128.93	128.81	2.7273	132	2.6111	419.06	380.25	6.1538
73	824.23	131.15	131.03	2.7580	133	2.5908	420.11	381.00	6.1618
74	820.24	133.37	133.25	2.7883	134	2.5709	421.17	381.76	6.1697
75	816.22	135.59	135.47	2.8181	135	2.5513	422.22	382.51	6.1775
76	812.15	137.81	137.69	2.8474	136	2.5320	423.28	383.26	6.1853
77	808.05	140.03	139.90	2.8764	137	2.5131	424.33	384.01	6.1930
78	803.91	142.24	142.12	2.9050	138	2.4943	425.38	384.76	6.2007
79	799.74	144.46	144.33	2.9332	139	2.4759	426.43	385.51	6.2083
80	795.52	146.67	146.54	2.9611	140	2.4578	427.49	386.26	6.2158
81	791.27	148.88	148.75	2.9886					
* 81.616	788.62	150.25	150.12	3.0053	141	2.4399	428.54	387.01	6.2233
* 81.616	4.3553	365.30	342.04	5.6403	142	2.4223	429.59	387.76	6.2307
82	4.3326	365.72	342.33	5.6454	143	2.4049	430.64	388.51	6.2381
83	4.2745	366.80	343.10	5.6586	144	2.3878	431.70	389.26	6.2455
84	4.2181	367.89	343.87	5.6715	145	2.3710	432.75	390.01	6.2527
85	4.1633	368.97	344.63	5.6844	146	2.3544	433.80	390.76	6.2600
86	4.1099	370.05	345.40	5.6970	147	2.3380	434.85	391.51	6.2671
87	4.0580	371.13	346.16	5.7095	148	2.3218	435.90	392.26	6.2743
88	4.0075	372.21	346.93	5.7218	149	2.3059	436.95	393.01	6.2813
89	3.9583	373.29	347.69	5.7340	150	2.2902	438.00	393.76	6.2884
90	3.9104	374.37	348.46	5.7461					
91	3.8637	375.45	349.22	5.7580	151	2.2747	439.05	394.51	6.2953
92	3.8182	376.52	349.99	5.7697	152	2.2595	440.10	395.26	6.3023
93	3.7738	377.60	350.75	5.7814	153	2.2444	441.15	396.01	6.3091
94	3.7304	378.67	351.51	5.7929	154	2.2295	442.20	396.75	6.3160
95	3.6881	379.75	352.27	5.8042	155	2.2149	443.25	397.50	6.3228
96	3.6469	380.82	353.04	5.8155	156	2.2004	444.30	398.25	6.3295
97	3.6065	381.89	353.80	5.8266	157	2.1861	445.35	399.00	6.3362
98	3.5671	382.96	354.56	5.8375	158	2.1720	446.40	399.75	6.3429
99	3.5286	384.03	355.32	5.8484	159	2.1581	447.45	400.50	6.3495
100	3.4910	385.10	356.08	5.8592	160	2.1444	448.50	401.24	6.3561
101	3.4542	386.17	356.84	5.8698	161	2.1308	449.54	401.99	6.3626
102	3.4182	387.24	357.60	5.8803	162	2.1175	450.59	402.74	6.3691
103	3.3829	388.31	358.36	5.8908	163	2.1042	451.64	403.49	6.3756
104	3.3485	389.38	359.12	5.9011	164	2.0912	452.69	404.24	6.3820
105	3.3147	390.44	359.88	5.9113	165	2.0783	453.74	404.98	6.3883
106	3.2817	391.51	360.63	5.9214	166	2.0656	454.78	405.73	6.3947
107	3.2493	392.58	361.39	5.9314	167	2.0530	455.83	406.48	6.4010
108	3.2176	393.64	362.15	5.9413	168	2.0406	456.88	407.23	6.4072
109	3.1865	394.71	362.91	5.9511	169	2.0284	457.93	407.97	6.4134
110	3.1561	395.77	363.66	5.9608	170	2.0163	458.97	408.72	6.4196
111	3.1262	396.83	364.42	5.9704	171	2.0043	460.02	409.47	6.4257
112	3.0970	397.89	365.18	5.9800	172	1.9925	461.07	410.22	6.4318
113	3.0682	398.96	365.93	5.9894	173	1.9808	462.12	410.96	6.4379
114	3.0401	400.02	366.69	5.9988	174	1.9692	463.16	411.71	6.4440
115	3.0125	401.08	367.44	6.0080	175	1.9578	464.21	412.46	6.4499
116	2.9853	402.14	368.20	6.0172	176	1.9466	465.26	413.20	6.4559
117	2.9587	403.20	368.95	6.0263	177	1.9354	466.30	413.95	6.4618
118	2.9326	404.26	369.71	6.0353	178	1.9244	467.35	414.70	6.4677
119	2.9069	405.32	370.46	6.0443	179	1.9135	468.40	415.44	6.4736
120	2.8817	406.38	371.22	6.0531	180	1.9027	469.44	416.19	6.4794

\* PHASE CHANGE



## 1.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	1.8921	470.49	416.94	6.4852	241	1.4176	533.14	461.66	6.7842
182	1.8816	471.53	417.68	6.4910	242	1.4117	534.18	462.41	6.7885
183	1.8712	472.58	418.43	6.4967	243	1.4059	535.22	463.15	6.7928
184	1.8609	473.63	419.18	6.5024	244	1.4001	536.27	463.90	6.7971
185	1.8507	474.67	419.92	6.5081	245	1.3943	537.31	464.64	6.8013
186	1.8406	475.72	420.67	6.5137	246	1.3886	538.35	465.38	6.8056
187	1.8307	476.76	421.41	6.5193	247	1.3830	539.39	466.13	6.8098
188	1.8208	477.81	422.16	6.5249	248	1.3774	540.44	466.87	6.8140
189	1.8111	478.85	422.91	6.5304	249	1.3718	541.48	467.62	6.8182
190	1.8015	479.90	423.65	6.5360	250	1.3663	542.52	468.36	6.8224
191	1.7919	480.94	424.40	6.5415	251	1.3609	543.56	469.11	6.8266
192	1.7825	481.99	425.15	6.5469	252	1.3554	544.61	469.85	6.8307
193	1.7732	483.04	425.89	6.5523	253	1.3500	545.65	470.60	6.8348
194	1.7639	484.08	426.64	6.5577	254	1.3447	546.69	471.34	6.8389
195	1.7548	485.13	427.38	6.5631	255	1.3394	547.73	472.09	6.8430
196	1.7458	486.17	428.13	6.5685	256	1.3342	548.78	472.83	6.8471
197	1.7368	487.22	428.87	6.5738	257	1.3289	549.82	473.57	6.8512
198	1.7279	488.26	429.62	6.5791	258	1.3238	550.86	474.32	6.8552
199	1.7192	489.30	430.37	6.5843	259	1.3186	551.90	475.06	6.8593
200	1.7105	490.35	431.11	6.5896	260	1.3135	552.95	475.81	6.8633
201	1.7019	491.39	431.86	6.5948	261	1.3085	553.99	476.55	6.8673
202	1.6934	492.44	432.60	6.6000	262	1.3035	555.03	477.30	6.8713
203	1.6850	493.48	433.35	6.6051	263	1.2985	556.07	478.04	6.8752
204	1.6767	494.53	434.09	6.6102	264	1.2936	557.12	478.79	6.8792
205	1.6684	495.57	434.84	6.6153	265	1.2887	558.16	479.53	6.8831
206	1.6602	496.62	435.59	6.6204	266	1.2838	559.20	480.27	6.8871
207	1.6522	497.66	436.33	6.6255	267	1.2790	560.24	481.02	6.8910
208	1.6441	498.70	437.08	6.6305	268	1.2742	561.29	481.76	6.8949
209	1.6362	499.75	437.82	6.6355	269	1.2694	562.33	482.51	6.8987
210	1.6284	500.79	438.57	6.6405	270	1.2647	563.37	483.25	6.9026
211	1.6206	501.84	439.31	6.6455	271	1.2600	564.41	484.00	6.9065
212	1.6129	502.88	440.06	6.6504	272	1.2554	565.45	484.74	6.9103
213	1.6052	503.92	440.80	6.6553	273	1.2507	566.50	485.49	6.9141
214	1.5977	504.97	441.55	6.6602	274	1.2462	567.54	486.23	6.9179
215	1.5902	506.01	442.29	6.6651	275	1.2416	568.58	486.97	6.9217
216	1.5828	507.06	443.04	6.6699	276	1.2371	569.62	487.72	6.9255
217	1.5754	508.10	443.78	6.6747	277	1.2326	570.67	488.46	6.9293
218	1.5682	509.14	444.53	6.6795	278	1.2282	571.71	489.21	6.9330
219	1.5609	510.19	445.27	6.6843	279	1.2238	572.75	489.95	6.9368
220	1.5538	511.23	446.02	6.6891	280	1.2194	573.79	490.70	6.9405
221	1.5467	512.27	446.76	6.6938	281	1.2150	574.83	491.44	6.9442
222	1.5397	513.32	447.51	6.6985	282	1.2107	575.88	492.18	6.9479
223	1.5328	514.36	448.25	6.7032	283	1.2064	576.92	492.93	6.9516
224	1.5259	515.40	449.00	6.7079	284	1.2021	577.96	493.67	6.9553
225	1.5190	516.45	449.74	6.7125	285	1.1979	579.00	494.42	6.9590
226	1.5123	517.49	450.49	6.7171	286	1.1937	580.04	495.16	6.9626
227	1.5056	518.53	451.23	6.7217	287	1.1895	581.09	495.91	6.9662
228	1.4989	519.58	451.98	6.7263	288	1.1854	582.13	496.65	6.9699
229	1.4923	520.62	452.72	6.7309	289	1.1813	583.17	497.40	6.9735
230	1.4858	521.66	453.47	6.7354	290	1.1772	584.21	498.14	6.9771
231	1.4793	522.71	454.21	6.7400	291	1.1731	585.26	498.88	6.9807
232	1.4729	523.75	454.96	6.7445	292	1.1691	586.30	499.63	6.9842
233	1.4666	524.79	455.70	6.7490	293	1.1651	587.34	500.37	6.9878
234	1.4603	525.84	456.45	6.7534	294	1.1611	588.38	501.12	6.9913
235	1.4540	526.88	457.19	6.7579	295	1.1572	589.42	501.86	6.9949
236	1.4478	527.92	457.94	6.7623	296	1.1533	590.47	502.61	6.9984
237	1.4417	528.97	458.68	6.7667	297	1.1494	591.51	503.35	7.0019
238	1.4356	530.01	459.43	6.7711	298	1.1455	592.55	504.09	7.0054
239	1.4295	531.05	460.17	6.7755	299	1.1417	593.59	504.84	7.0089
240	1.4235	532.09	460.92	6.7798	300	1.1378	594.63	505.58	7.0124

1.50 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	4.3141	406.74	371.51	5.9377
					122	4.2766	407.81	372.27	5.9465
					123	4.2399	408.88	373.03	5.9552
					124	4.2038	409.95	373.79	5.9639
					125	4.1683	411.01	374.55	5.9724
					126	4.1335	412.08	375.31	5.9809
					127	4.0992	413.15	376.07	5.9894
					128	4.0656	414.21	376.83	5.9977
					129	4.0325	415.27	377.58	6.0060
70	836.02	124.51	124.33	2.6642	130	3.9999	416.34	378.34	6.0142
71	832.16	126.74	126.56	2.6959	131	3.9679	417.40	379.10	6.0224
72	828.25	128.97	128.79	2.7270	132	3.9365	418.46	379.85	6.0304
73	824.31	131.19	131.01	2.7577	133	3.9055	419.53	380.61	6.0385
74	820.33	133.41	133.23	2.7880	134	3.8751	420.59	381.37	6.0464
75	816.31	135.63	135.45	2.8178	135	3.8451	421.65	382.12	6.0543
76	812.25	137.85	137.66	2.8471	136	3.8156	422.71	382.88	6.0621
77	808.15	140.07	139.88	2.8761	137	3.7866	423.77	383.63	6.0699
78	804.01	142.28	142.09	2.9047	138	3.7580	424.83	384.39	6.0776
79	799.84	144.49	144.30	2.9329	139	3.7299	425.89	385.14	6.0853
80	795.63	146.71	146.51	2.9607	140	3.7022	426.95	385.90	6.0929
81	791.38	148.92	148.73	2.9882					
82	787.09	151.13	150.94	3.0154	141	3.6750	428.01	386.65	6.1004
83	782.75	153.34	153.15	3.0422	142	3.6481	429.07	387.41	6.1079
84	778.38	155.56	155.36	3.0687	143	3.6216	430.13	388.16	6.1153
85	773.96	157.77	157.58	3.0949	144	3.5956	431.19	388.92	6.1227
* 85.356	772.38	158.56	158.36	3.1042	145	3.5699	432.24	389.67	6.1300
* 85.356	6.3390	368.07	344.09	5.5587	146	3.5446	433.30	390.42	6.1373
86	6.2838	368.78	344.60	5.5671	147	3.5196	434.36	391.18	6.1445
87	6.2002	369.89	345.38	5.5799	148	3.4951	435.42	391.93	6.1517
88	6.1190	370.99	346.16	5.5925	149	3.4708	436.47	392.68	6.1588
89	6.0402	372.10	346.93	5.6049	150	3.4469	437.53	393.44	6.1658
90	5.9636	373.20	347.71	5.6173					
91	5.8890	374.30	348.49	5.6294	151	3.4234	438.58	394.19	6.1728
92	5.8165	375.40	349.27	5.6414	152	3.4002	439.64	394.94	6.1798
93	5.7459	376.49	350.04	5.6533	153	3.3773	440.70	395.69	6.1867
94	5.6772	377.59	350.82	5.6650	154	3.3547	441.75	396.44	6.1936
95	5.6102	378.68	351.59	5.6765	155	3.3324	442.81	397.20	6.2004
96	5.5449	379.78	352.36	5.6880	156	3.3104	443.86	397.95	6.2072
97	5.4812	380.87	353.14	5.6993	157	3.2887	444.91	398.70	6.2140
98	5.4191	381.96	353.91	5.7105	158	3.2673	445.97	399.45	6.2206
99	5.3585	383.04	354.68	5.7215	159	3.2462	447.02	400.20	6.2273
100	5.2994	384.13	355.45	5.7324	160	3.2254	448.08	400.95	6.2339
101	5.2416	385.22	356.22	5.7433	161	3.2048	449.13	401.70	6.2405
102	5.1852	386.30	356.99	5.7539	162	3.1845	450.18	402.46	6.2470
103	5.1301	387.39	357.76	5.7645	163	3.1645	451.24	403.21	6.2535
104	5.0762	388.47	358.53	5.7750	164	3.1447	452.29	403.96	6.2599
105	5.0235	389.55	359.30	5.7853	165	3.1252	453.34	404.71	6.2663
106	4.9719	390.63	360.06	5.7956	166	3.1059	454.39	405.46	6.2727
107	4.9215	391.71	360.83	5.8057	167	3.0869	455.44	406.21	6.2790
108	4.8721	392.79	361.60	5.8157	168	3.0681	456.50	406.96	6.2852
109	4.8238	393.87	362.36	5.8257	169	3.0495	457.55	407.71	6.2915
110	4.7765	394.95	363.13	5.8355	170	3.0311	458.60	408.46	6.2977
111	4.7302	396.02	363.89	5.8453	171	3.0130	459.65	409.21	6.3039
112	4.6848	397.10	364.66	5.8549	172	2.9951	460.70	409.96	6.3100
113	4.6403	398.17	365.42	5.8645	173	2.9774	461.75	410.71	6.3161
114	4.5967	399.25	366.18	5.8739	174	2.9600	462.80	411.46	6.3221
115	4.5539	400.32	366.95	5.8833	175	2.9427	463.85	412.21	6.3282
116	4.5120	401.39	367.71	5.8926	176	2.9256	464.90	412.95	6.3341
117	4.4709	402.46	368.47	5.9018	177	2.9088	465.96	413.70	6.3401
118	4.4306	403.54	369.23	5.9109	178	2.8921	467.01	414.45	6.3460
119	4.3910	404.61	369.99	5.9199	179	2.8756	468.06	415.20	6.3519
120	4.3522	405.67	370.75	5.9289	180	2.8594	469.10	415.95	6.3577

\* PHASE CHANGE

1.50 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	2.8433	470.15	416.70	6.3635	241	2.1277	532.95	461.51	6.6632
182	2.8273	471.20	417.45	6.3693	242	2.1188	533.99	462.26	6.6675
183	2.8116	472.25	418.20	6.3751	243	2.1100	535.03	463.00	6.6718
184	2.7961	473.30	418.94	6.3808	244	2.1013	536.08	463.75	6.6761
185	2.7807	474.35	419.69	6.3865	245	2.0926	537.12	464.49	6.6804
186	2.7655	475.40	420.44	6.3921	246	2.0841	538.17	465.24	6.6846
187	2.7504	476.45	421.19	6.3978	247	2.0756	539.21	465.98	6.6889
188	2.7356	477.50	421.94	6.4034	248	2.0671	540.26	466.73	6.6931
189	2.7208	478.55	422.69	6.4089	249	2.0588	541.30	467.48	6.6973
190	2.7063	479.60	423.43	6.4144	250	2.0505	542.34	468.22	6.7015
191	2.6919	480.64	424.18	6.4199	251	2.0423	543.39	468.97	6.7056
192	2.6776	481.69	424.93	6.4254	252	2.0341	544.43	469.71	6.7098
193	2.6636	482.74	425.68	6.4309	253	2.0260	545.48	470.46	6.7139
194	2.6496	483.79	426.43	6.4363	254	2.0180	546.52	471.20	6.7180
195	2.6358	484.84	427.17	6.4417	255	2.0100	547.56	471.95	6.7221
196	2.6222	485.88	427.92	6.4470	256	2.0021	548.61	472.69	6.7262
197	2.6087	486.93	428.67	6.4524	257	1.9943	549.65	473.44	6.7303
198	2.5953	487.98	429.42	6.4577	258	1.9865	550.70	474.18	6.7343
199	2.5821	489.03	430.16	6.4629	259	1.9788	551.74	474.93	6.7384
200	2.5690	490.07	430.91	6.4682	260	1.9711	552.78	475.67	6.7424
201	2.5560	491.12	431.66	6.4734	261	1.9635	553.83	476.42	6.7464
202	2.5432	492.17	432.40	6.4786	262	1.9560	554.87	477.17	6.7504
203	2.5305	493.21	433.15	6.4838	263	1.9485	555.91	477.91	6.7544
204	2.5179	494.26	433.90	6.4889	264	1.9410	556.96	478.66	6.7583
205	2.5055	495.31	434.65	6.4940	265	1.9337	558.00	479.40	6.7623
206	2.4932	496.35	435.39	6.4991	266	1.9264	559.05	480.15	6.7662
207	2.4810	497.40	436.14	6.5042	267	1.9191	560.09	480.89	6.7701
208	2.4689	498.45	436.89	6.5092	268	1.9119	561.13	481.64	6.7740
209	2.4569	499.49	437.63	6.5143	269	1.9048	562.18	482.38	6.7779
210	2.4451	500.54	438.38	6.5193	270	1.8977	563.22	483.13	6.7818
211	2.4334	501.59	439.13	6.5242	271	1.8906	564.26	483.87	6.7856
212	2.4217	502.63	439.87	6.5292	272	1.8836	565.31	484.62	6.7895
213	2.4102	503.68	440.62	6.5341	273	1.8767	566.35	485.36	6.7933
214	2.3988	504.73	441.37	6.5390	274	1.8698	567.39	486.11	6.7971
215	2.3876	505.77	442.11	6.5439	275	1.8630	568.44	486.85	6.8009
216	2.3764	506.82	442.86	6.5487	276	1.8562	569.48	487.60	6.8047
217	2.3653	507.86	443.61	6.5536	277	1.8494	570.52	488.34	6.8085
218	2.3543	508.91	444.35	6.5584	278	1.8428	571.57	489.09	6.8122
219	2.3435	509.96	445.10	6.5631	279	1.8361	572.61	489.83	6.8160
220	2.3327	511.00	445.85	6.5679	280	1.8295	573.65	490.58	6.8197
221	2.3220	512.05	446.59	6.5727	281	1.8230	574.70	491.32	6.8234
222	2.3115	513.09	447.34	6.5774	282	1.8165	575.74	492.07	6.8271
223	2.3010	514.14	448.08	6.5821	283	1.8100	576.78	492.81	6.8308
224	2.2906	515.18	448.83	6.5868	284	1.8036	577.82	493.56	6.8345
225	2.2803	516.23	449.58	6.5914	285	1.7973	578.87	494.30	6.8382
226	2.2702	517.27	450.32	6.5960	286	1.7910	579.91	495.05	6.8418
227	2.2601	518.32	451.07	6.6007	287	1.7847	580.95	495.79	6.8455
228	2.2501	519.36	451.82	6.6052	288	1.7785	582.00	496.54	6.8491
229	2.2401	520.41	452.56	6.6098	289	1.7723	583.04	497.28	6.8527
230	2.2303	521.45	453.31	6.6144	290	1.7661	584.08	498.03	6.8563
231	2.2206	522.50	454.05	6.6189	291	1.7601	585.13	498.77	6.8599
232	2.2109	523.54	454.80	6.6234	292	1.7540	586.17	499.52	6.8635
233	2.2013	524.59	455.55	6.6279	293	1.7480	587.21	500.26	6.8671
234	2.1918	525.63	456.29	6.6324	294	1.7420	588.26	501.01	6.8706
235	2.1824	526.68	457.04	6.6368	295	1.7361	589.30	501.75	6.8742
236	2.1731	527.72	457.78	6.6413	296	1.7302	590.34	502.50	6.8777
237	2.1639	528.77	458.53	6.6457	297	1.7243	591.38	503.24	6.8812
238	2.1547	529.81	459.27	6.6501	298	1.7185	592.43	503.99	6.8847
239	2.1456	530.86	460.02	6.6545	299	1.7128	593.47	504.73	6.8882
240	2.1366	531.90	460.77	6.6588	300	1.7070	594.51	505.48	6.8917

## 2.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	5.7911	406.04	371.05	5.8485
					122	5.7399	407.12	371.81	5.8573
					123	5.6896	408.20	372.58	5.8661
					124	5.6402	409.28	373.35	5.8749
					125	5.5917	410.35	374.11	5.8835
					126	5.5442	411.43	374.88	5.8921
					127	5.4974	412.50	375.64	5.9006
					128	5.4515	413.58	376.40	5.9090
					129	5.4064	414.65	377.17	5.9173
70	836.10	124.55	124.31	2.6639	130	5.3621	415.72	377.93	5.9256
71	832.24	126.78	126.54	2.6956	131	5.3185	416.79	378.69	5.9338
72	828.34	129.01	128.76	2.7267	132	5.2756	417.87	379.45	5.9420
73	824.40	131.23	130.99	2.7574	133	5.2335	418.94	380.21	5.9501
74	820.42	133.45	133.21	2.7877	134	5.1921	420.01	380.98	5.9581
75	816.40	135.67	135.42	2.8174	135	5.1514	421.08	381.74	5.9660
76	812.34	137.89	137.64	2.8468	136	5.1113	422.14	382.50	5.9739
77	808.25	140.10	139.85	2.8758	137	5.0719	423.21	383.26	5.9817
78	804.12	142.32	142.07	2.9043	138	5.0331	424.28	384.02	5.9895
79	799.94	144.53	144.28	2.9325	139	4.9949	425.35	384.78	5.9972
80	795.74	146.74	146.49	2.9604	140	4.9573	426.41	385.54	6.0049
81	791.49	148.95	148.70	2.9879					
82	787.20	151.17	150.91	3.0150	141	4.9204	427.48	386.29	6.0124
83	782.87	153.38	153.12	3.0418	142	4.8839	428.55	387.05	6.0200
84	778.50	155.59	155.33	3.0684	143	4.8481	429.61	387.81	6.0274
85	774.09	157.81	157.54	3.0946	144	4.8128	430.68	388.57	6.0349
86	769.63	160.02	159.76	3.1205	145	4.7780	431.74	389.33	6.0422
87	765.12	162.24	161.97	3.1461	146	4.7437	432.80	390.08	6.0495
88	760.57	164.45	164.19	3.1715	147	4.7099	433.87	390.84	6.0568
• 88.246	759.44	165.00	164.73	3.1776	148	4.6767	434.93	391.60	6.0640
• 88.246	8.2854	370.00	345.54	5.5007	149	4.6439	435.99	392.35	6.0712
89	8.2006	370.85	346.14	5.5104	150	4.6116	437.05	393.11	6.0783
90	8.0912	371.98	346.94	5.5230					
91	7.9851	373.11	347.73	5.5354	151	4.5797	438.12	393.87	6.0853
92	7.8821	374.23	348.52	5.5477	152	4.5483	439.18	394.62	6.0923
93	7.7820	375.35	349.31	5.5598	153	4.5174	440.24	395.38	6.0993
94	7.6848	376.47	350.10	5.5717	154	4.4869	441.30	396.13	6.1062
95	7.5902	377.59	350.89	5.5835	155	4.4568	442.36	396.89	6.1130
96	7.4982	378.70	351.67	5.5952	156	4.4271	443.42	397.64	6.1199
97	7.4087	379.81	352.46	5.6067	157	4.3978	444.48	398.40	6.1266
98	7.3215	380.92	353.24	5.6181	158	4.3690	445.54	399.15	6.1334
99	7.2366	382.03	354.03	5.6294	159	4.3405	446.60	399.91	6.1400
100	7.1538	383.13	354.81	5.6405	160	4.3124	447.65	400.66	6.1467
101	7.0731	384.24	355.59	5.6515	161	4.2846	448.71	401.42	6.1533
102	6.9943	385.34	356.37	5.6623	162	4.2572	449.77	402.17	6.1598
103	6.9175	386.44	357.15	5.6731	163	4.2302	450.83	402.92	6.1663
104	6.8425	387.54	357.93	5.6837	164	4.2036	451.89	403.68	6.1728
105	6.7692	388.64	358.70	5.6942	165	4.1773	452.94	404.43	6.1792
106	6.6976	389.74	359.48	5.7046	166	4.1513	454.00	405.18	6.1856
107	6.6277	390.83	360.26	5.7149	167	4.1256	455.06	405.94	6.1919
108	6.5593	391.93	361.03	5.7250	168	4.1003	456.11	406.69	6.1982
109	6.4925	393.02	361.81	5.7351	169	4.0753	457.17	407.44	6.2045
110	6.4271	394.11	362.58	5.7451	170	4.0506	458.22	408.19	6.2107
111	6.3631	395.20	363.35	5.7549	171	4.0262	459.28	408.95	6.2169
112	6.3005	396.29	364.13	5.7647	172	4.0021	460.33	409.70	6.2231
113	6.2392	397.38	364.90	5.7744	173	3.9783	461.39	410.45	6.2292
114	6.1791	398.46	365.67	5.7840	174	3.9548	462.44	411.20	6.2353
115	6.1203	399.55	366.44	5.7934	175	3.9316	463.50	411.95	6.2413
116	6.0627	400.63	367.21	5.8028	176	3.9086	464.55	412.71	6.2473
117	6.0062	401.72	367.98	5.8121	177	3.8859	465.61	413.46	6.2533
118	5.9508	402.80	368.75	5.8213	178	3.8635	466.66	414.21	6.2592
119	5.8966	403.88	369.51	5.8305	179	3.8414	467.71	414.96	6.2651
120	5.8433	404.96	370.28	5.8395	180	3.8195	468.77	415.71	6.2710

• PHASE CHANGE

## 2.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	3.7979	469.82	416.46	6.2768	241	2.8385	532.75	461.36	6.5772
182	3.7765	470.87	417.21	6.2826	242	2.8267	533.80	462.11	6.5815
183	3.7553	471.93	417.96	6.2884	243	2.8149	534.85	462.85	6.5858
184	3.7344	472.98	418.71	6.2941	244	2.8033	535.89	463.60	6.5901
185	3.7138	474.03	419.46	6.2998	245	2.7917	536.94	464.35	6.5944
186	3.6933	475.08	420.21	6.3055	246	2.7802	537.98	465.09	6.5986
187	3.6731	476.13	420.96	6.3112	247	2.7689	539.03	465.84	6.6029
188	3.6532	477.19	421.71	6.3168	248	2.7576	540.08	466.59	6.6071
189	3.6334	478.24	422.46	6.3223	249	2.7464	541.12	467.33	6.6113
190	3.6139	479.29	423.21	6.3279	250	2.7353	542.17	468.08	6.6155
191	3.5945	480.34	423.96	6.3334	251	2.7243	543.21	468.83	6.6197
192	3.5754	481.39	424.71	6.3389	252	2.7134	544.26	469.57	6.6238
193	3.5565	482.44	425.46	6.3444	253	2.7026	545.30	470.32	6.6280
194	3.5378	483.49	426.21	6.3498	254	2.6918	546.35	471.06	6.6321
195	3.5193	484.54	426.96	6.3552	255	2.6812	547.39	471.81	6.6362
196	3.5010	485.60	427.71	6.3606	256	2.6706	548.44	472.56	6.6403
197	3.4828	486.65	428.46	6.3659	257	2.6601	549.48	473.30	6.6444
198	3.4649	487.70	429.21	6.3712	258	2.6497	550.53	474.05	6.6484
199	3.4472	488.75	429.96	6.3765	259	2.6394	551.57	474.80	6.6525
200	3.4296	489.80	430.71	6.3818	260	2.6292	552.62	475.54	6.6565
201	3.4122	490.85	431.46	6.3870	261	2.6190	553.66	476.29	6.6605
202	3.3950	491.90	432.21	6.3922	262	2.6089	554.71	477.03	6.6645
203	3.3780	492.95	432.95	6.3974	263	2.5989	555.75	477.78	6.6685
204	3.3611	493.99	433.70	6.4026	264	2.5890	556.80	478.53	6.6724
205	3.3445	495.04	434.45	6.4077	265	2.5792	557.84	479.27	6.6764
206	3.3279	496.09	435.20	6.4128	266	2.5694	558.89	480.02	6.6803
207	3.3116	497.14	435.95	6.4179	267	2.5597	559.93	480.76	6.6843
208	3.2954	498.19	436.70	6.4229	268	2.5501	560.98	481.51	6.6882
209	3.2794	499.24	437.45	6.4280	269	2.5405	562.02	482.26	6.6920
210	3.2635	500.29	438.19	6.4330	270	2.5310	563.07	483.00	6.6959
211	3.2478	501.34	438.94	6.4380	271	2.5216	564.11	483.75	6.6998
212	3.2322	502.39	439.69	6.4429	272	2.5123	565.16	484.49	6.7036
213	3.2168	503.43	440.44	6.4478	273	2.5030	566.20	485.24	6.7075
214	3.2016	504.48	441.19	6.4528	274	2.4938	567.25	485.98	6.7113
215	3.1864	505.53	441.93	6.4576	275	2.4847	568.29	486.73	6.7151
216	3.1715	506.58	442.68	6.4625	276	2.4756	569.33	487.48	6.7189
217	3.1566	507.63	443.43	6.4673	277	2.4666	570.38	488.22	6.7227
218	3.1419	508.68	444.18	6.4722	278	2.4577	571.42	488.97	6.7264
219	3.1274	509.72	444.92	6.4770	279	2.4488	572.47	489.71	6.7302
220	3.1130	510.77	445.67	6.4817	280	2.4400	573.51	490.46	6.7339
221	3.0987	511.82	446.42	6.4865	281	2.4313	574.56	491.20	6.7376
222	3.0845	512.87	447.17	6.4912	282	2.4226	575.60	491.95	6.7413
223	3.0705	513.91	447.91	6.4959	283	2.4140	576.65	492.70	6.7450
224	3.0566	514.96	448.66	6.5006	284	2.4054	577.69	493.44	6.7487
225	3.0429	516.01	449.41	6.5053	285	2.3969	578.73	494.19	6.7524
226	3.0292	517.06	450.16	6.5099	286	2.3885	579.78	494.93	6.7560
227	3.0157	518.10	450.90	6.5145	287	2.3801	580.82	495.68	6.7597
228	3.0023	519.15	451.65	6.5191	288	2.3718	581.87	496.42	6.7633
229	2.9890	520.20	452.40	6.5237	289	2.3635	582.91	497.17	6.7669
230	2.9759	521.24	453.15	6.5283	290	2.3553	583.95	497.92	6.7705
231	2.9628	522.29	453.89	6.5328	291	2.3472	585.00	498.66	6.7741
232	2.9499	523.34	454.64	6.5373	292	2.3391	586.04	499.41	6.7777
233	2.9371	524.38	455.39	6.5418	293	2.3311	587.09	500.15	6.7813
234	2.9244	525.43	456.13	6.5463	294	2.3231	588.13	500.90	6.7848
235	2.9118	526.48	456.88	6.5508	295	2.3152	589.17	501.64	6.7884
236	2.8993	527.52	457.63	6.5552	296	2.3073	590.22	502.39	6.7919
237	2.8870	528.57	458.37	6.5597	297	2.2995	591.26	503.13	6.7954
238	2.8747	529.62	459.12	6.5641	298	2.2917	592.31	503.88	6.7989
239	2.8625	530.66	459.87	6.5684	299	2.2840	593.35	504.62	6.8024
240	2.8505	531.71	460.61	6.5728	300	2.2764	594.39	505.37	6.8059

## 3.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	8.8081	404.61	370.10	5.7202
					122	8.7269	405.71	370.88	5.7292
					123	8.6474	406.81	371.66	5.7382
					124	8.5695	407.91	372.44	5.7471
					125	8.4930	409.01	373.21	5.7559
					126	8.4180	410.10	373.99	5.7646
					127	8.3445	411.20	374.77	5.7733
					128	8.2723	412.29	375.54	5.7818
					129	8.2015	413.38	376.32	5.7903
70	836.26	124.63	124.27	2.6634	130	8.1320	414.47	377.09	5.7988
71	832.40	126.86	126.50	2.6950	131	8.0637	415.56	377.86	5.8071
72	828.51	129.09	128.72	2.7262	132	7.9967	416.65	378.64	5.8154
73	824.57	131.31	130.94	2.7568	133	7.9308	417.74	379.41	5.8236
74	820.60	133.53	133.16	2.7871	134	7.8661	418.82	380.18	5.8317
75	816.58	135.75	135.38	2.8168	135	7.8026	419.91	380.95	5.8398
76	812.53	137.97	137.59	2.8462	136	7.7401	421.00	381.72	5.8478
77	808.44	140.18	139.80	2.8751	137	7.6787	422.08	382.49	5.8558
78	804.32	142.39	142.01	2.9037	138	7.6183	423.16	383.26	5.8636
79	800.15	144.60	144.22	2.9319	139	7.5589	424.24	384.03	5.8714
80	795.95	146.82	146.43	2.9597	140	7.5005	425.33	384.80	5.8792
81	791.71	149.03	148.64	2.9872	141	7.4430	426.41	385.57	5.8869
82	787.43	151.24	150.85	3.0143	142	7.3865	427.49	386.33	5.8945
83	783.11	153.45	153.06	3.0411	143	7.3309	428.57	387.10	5.9021
84	778.75	155.66	155.27	3.0676	144	7.2762	429.64	387.87	5.9096
85	774.34	157.87	157.48	3.0938	145	7.2223	430.72	388.63	5.9171
86	769.89	160.09	159.69	3.1197	146	7.1693	431.80	389.40	5.9245
87	765.39	162.30	161.90	3.1453	147	7.1171	432.87	390.16	5.9318
88	760.85	164.52	164.12	3.1707	148	7.0656	433.95	390.93	5.9391
89	756.26	166.74	166.33	3.1957	149	7.0150	435.02	391.69	5.9463
90	751.61	168.96	168.55	3.2206	150	6.9651	436.10	392.46	5.9535
91	746.91	171.18	170.77	3.2451					
92	742.15	173.41	173.00	3.2695	151	6.9160	437.17	393.22	5.9607
• 92.696	738.80	174.96	174.55	3.2863	152	6.8676	438.24	393.98	5.9677
• 92.696	12.124	372.58	347.51	5.4182	153	6.8199	439.32	394.75	5.9748
93	12.073	372.94	347.76	5.4220	154	6.7729	440.39	395.51	5.9817
94	11.907	374.11	348.58	5.4346	155	6.7265	441.46	396.27	5.9887
95	11.746	375.28	349.40	5.4469	156	6.6809	442.53	397.03	5.9956
96	11.591	376.44	350.22	5.4591	157	6.6358	443.60	397.79	6.0024
97	11.440	377.60	351.03	5.4711	158	6.5915	444.67	398.55	6.0092
98	11.294	378.76	351.84	5.4830	159	6.5477	445.74	399.31	6.0159
99	11.152	379.91	352.65	5.4947	160	6.5045	446.81	400.07	6.0226
100	11.015	381.06	353.46	5.5063					
101	10.881	382.20	354.27	5.5177	161	6.4619	447.88	400.83	6.0293
102	10.751	383.35	355.07	5.5289	162	6.4199	448.94	401.59	6.0359
103	10.624	384.49	355.88	5.5400	163	6.3785	450.01	402.35	6.0425
104	10.501	385.62	356.68	5.5510	164	6.3376	451.08	403.11	6.0490
105	10.381	386.76	357.48	5.5619	165	6.2973	452.14	403.87	6.0555
106	10.264	387.89	358.28	5.5726	166	6.2575	453.21	404.63	6.0619
107	10.150	389.02	359.07	5.5832	167	6.2182	454.27	405.39	6.0683
108	10.039	390.15	359.87	5.5937	168	6.1794	455.34	406.15	6.0747
109	9.9310	391.27	360.66	5.6040	169	6.1411	456.40	406.91	6.0810
110	9.8253	392.39	361.45	5.6143	170	6.1034	457.47	407.66	6.0873
111	9.7220	393.51	362.25	5.6244	171	6.0661	458.53	408.42	6.0935
112	9.6212	394.63	363.04	5.6344	172	6.0292	459.59	409.18	6.0997
113	9.5226	395.75	363.82	5.6444	173	5.9928	460.66	409.93	6.1059
114	9.4263	396.86	364.61	5.6542	174	5.9569	461.72	410.69	6.1120
115	9.3322	397.97	365.40	5.6639	175	5.9215	462.78	411.45	6.1181
116	9.2401	399.08	366.18	5.6735	176	5.8864	463.84	412.20	6.1241
117	9.1500	400.19	366.97	5.6830	177	5.8518	464.91	412.96	6.1301
118	9.0618	401.30	367.75	5.6924	178	5.8176	465.97	413.72	6.1361
119	8.9754	402.40	368.54	5.7018	179	5.7838	467.03	414.47	6.1420
120	8.8909	403.51	369.32	5.7110	180	5.7504	468.09	415.23	6.1480

• PHASE CHANGE

## 3.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	5.7175	469.15	415.98	6.1538	241	4.2627	532.37	461.06	6.4556
182	5.6849	470.21	416.74	6.1597	242	4.2448	533.42	461.81	6.4599
183	5.6527	471.27	417.49	6.1655	243	4.2271	534.47	462.56	6.4642
184	5.6208	472.33	418.25	6.1712	244	4.2095	535.52	463.31	6.4685
185	5.5894	473.39	419.00	6.1770	245	4.1920	536.57	464.05	6.4728
186	5.5582	474.45	419.76	6.1827	246	4.1747	537.62	464.80	6.4771
187	5.5275	475.50	420.51	6.1884	247	4.1576	538.67	465.55	6.4813
188	5.4971	476.56	421.26	6.1940	248	4.1406	539.71	466.30	6.4856
189	5.4670	477.62	422.02	6.1996	249	4.1237	540.76	467.05	6.4898
190	5.4373	478.68	422.77	6.2052	250	4.1070	541.81	467.80	6.4940
191	5.4079	479.74	423.53	6.2108	251	4.0904	542.86	468.54	6.4982
192	5.3788	480.79	424.28	6.2163	252	4.0739	543.91	469.29	6.5024
193	5.3501	481.85	425.03	6.2218	253	4.0576	544.96	470.04	6.5065
194	5.3216	482.91	425.79	6.2272	254	4.0414	546.00	470.79	6.5106
195	5.2935	483.96	426.54	6.2327	255	4.0253	547.05	471.54	6.5148
196	5.2657	485.02	427.29	6.2381	256	4.0094	548.10	472.28	6.5189
197	5.2382	486.08	428.04	6.2434	257	3.9936	549.15	473.03	6.5230
198	5.2109	487.13	428.80	6.2488	258	3.9779	550.20	473.78	6.5270
199	5.1840	488.19	429.55	6.2541	259	3.9623	551.24	474.53	6.5311
200	5.1574	489.24	430.30	6.2594	260	3.9469	552.29	475.28	6.5351
201	5.1310	490.30	431.05	6.2647	261	3.9316	553.34	476.02	6.5391
202	5.1049	491.35	431.81	6.2699	262	3.9164	554.39	476.77	6.5431
203	5.0790	492.41	432.56	6.2751	263	3.9013	555.43	477.52	6.5471
204	5.0535	493.46	433.31	6.2803	264	3.8864	556.48	478.27	6.5511
205	5.0282	494.52	434.06	6.2854	265	3.8715	557.53	479.01	6.5551
206	5.0031	495.57	434.81	6.2906	266	3.8568	558.58	479.76	6.5590
207	4.9783	496.62	435.56	6.2957	267	3.8422	559.62	480.51	6.5629
208	4.9538	497.68	436.32	6.3007	268	3.8277	560.67	481.26	6.5668
209	4.9295	498.73	437.07	6.3058	269	3.8133	561.72	482.00	6.5707
210	4.9055	499.79	437.82	6.3108	270	3.7990	562.77	482.75	6.5746
211	4.8817	500.84	438.57	6.3158	271	3.7848	563.81	483.50	6.5785
212	4.8581	501.89	439.32	6.3208	272	3.7707	564.86	484.25	6.5824
213	4.8347	502.94	440.07	6.3258	273	3.7568	565.91	484.99	6.5862
214	4.8116	504.00	440.82	6.3307	274	3.7429	566.95	485.74	6.5900
215	4.7887	505.05	441.57	6.3356	275	3.7292	568.00	486.49	6.5938
216	4.7661	506.10	442.32	6.3405	276	3.7155	569.05	487.23	6.5976
217	4.7436	507.15	443.07	6.3453	277	3.7020	570.09	487.98	6.6014
218	4.7214	508.21	443.82	6.3502	278	3.6885	571.14	488.73	6.6052
219	4.6993	509.26	444.57	6.3550	279	3.6751	572.19	489.48	6.6090
220	4.6775	510.31	445.32	6.3598	280	3.6619	573.23	490.22	6.6127
221	4.6559	511.36	446.07	6.3646	281	3.6487	574.28	490.97	6.6164
222	4.6345	512.41	446.82	6.3693	282	3.6357	575.33	491.72	6.6201
223	4.6133	513.47	447.57	6.3740	283	3.6227	576.37	492.46	6.6238
224	4.5923	514.52	448.32	6.3787	284	3.6098	577.42	493.21	6.6275
225	4.5715	515.57	449.07	6.3834	285	3.5970	578.46	493.96	6.6312
226	4.5508	516.62	449.82	6.3881	286	3.5843	579.51	494.70	6.6349
227	4.5304	517.67	450.57	6.3927	287	3.5717	580.56	495.45	6.6385
228	4.5102	518.72	451.32	6.3973	288	3.5592	581.60	496.20	6.6422
229	4.4901	519.77	452.07	6.4019	289	3.5468	582.65	496.94	6.6458
230	4.4702	520.82	452.82	6.4065	290	3.5344	583.69	497.69	6.6494
231	4.4505	521.87	453.57	6.4111	291	3.5222	584.74	498.44	6.6530
232	4.4310	522.92	454.32	6.4156	292	3.5100	585.79	499.18	6.6566
233	4.4116	523.97	455.07	6.4201	293	3.4979	586.83	499.93	6.6602
234	4.3924	525.02	455.82	6.4246	294	3.4859	587.88	500.68	6.6637
235	4.3734	526.07	456.57	6.4291	295	3.4740	588.92	501.42	6.6673
236	4.3545	527.12	457.32	6.4336	296	3.4622	589.97	502.17	6.6708
237	4.3359	528.17	458.07	6.4380	297	3.4504	591.02	502.92	6.6744
238	4.3173	529.22	458.81	6.4424	298	3.4387	592.06	503.66	6.6779
239	4.2990	530.27	459.56	6.4468	299	3.4271	593.11	504.41	6.6814
240	4.2808	531.32	460.31	6.4512	300	3.4156	594.15	505.16	6.6849

## 4.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	11.914	403.14	369.12	5.6265
					122	11.890	404.27	369.92	5.6358
					123	11.688	405.39	370.71	5.6450
					124	11.578	406.51	371.50	5.6540
					125	11.471	407.63	372.30	5.6630
					126	11.366	408.75	373.09	5.6719
					127	11.263	409.86	373.88	5.6807
					128	11.162	410.98	374.66	5.6895
					129	11.063	412.09	375.45	5.6981
70	836.41	124.72	124.23	2.6628	130	10.966	413.20	376.24	5.7067
71	832.56	126.95	126.46	2.6945	131	10.871	414.31	377.02	5.7152
72	828.67	129.17	128.68	2.7256	132	10.777	415.41	377.81	5.7236
73	824.74	131.39	130.90	2.7563	133	10.686	416.52	378.59	5.7320
74	820.77	133.61	133.12	2.7865	134	10.596	417.62	379.37	5.7402
75	816.76	135.83	135.33	2.8162	135	10.507	418.73	380.15	5.7484
76	812.72	138.04	137.54	2.8456	136	10.421	419.83	380.94	5.7566
77	808.64	140.26	139.75	2.8745	137	10.336	420.93	381.72	5.7646
78	804.52	142.47	141.96	2.9031	138	10.252	422.03	382.49	5.7726
79	800.36	144.68	144.17	2.9312	139	10.170	423.13	383.27	5.7805
80	796.16	146.89	146.38	2.9590	140	10.089	424.22	384.05	5.7884
81	791.93	149.10	148.59	2.9865	141	10.010	425.32	384.83	5.7962
82	787.66	151.31	150.79	3.0136	142	9.9318	426.41	385.60	5.8039
83	783.34	153.52	153.00	3.0404	143	9.8551	427.51	386.38	5.8116
84	778.99	155.73	155.21	3.0669	144	9.7796	428.60	387.16	5.8192
85	774.59	157.94	157.42	3.0931	145	9.7055	429.69	387.93	5.8268
86	770.15	160.15	159.63	3.1189	146	9.6325	430.78	388.70	5.8343
87	765.67	162.37	161.84	3.1445	147	9.5606	431.87	389.48	5.8417
88	761.13	164.58	164.05	3.1699	148	9.4900	432.96	390.25	5.8491
89	756.55	166.80	166.26	3.1949	149	9.4204	434.05	391.02	5.8564
90	751.91	169.02	168.48	3.2197	150	9.3519	435.13	391.79	5.8637
91	747.22	171.24	170.70	3.2443					
92	742.47	173.46	172.92	3.2686	151	9.2845	436.22	392.56	5.8709
93	737.67	175.69	175.14	3.2927	152	9.2181	437.30	393.33	5.8780
94	732.79	177.93	177.37	3.3166	153	9.1528	438.39	394.10	5.8852
95	727.85	180.17	179.61	3.3403	154	9.0884	439.47	394.87	5.8922
96	722.84	182.41	181.85	3.3639	155	9.0250	440.55	395.64	5.8992
* 96.155	722.06	182.76	182.20	3.3675	156	8.9625	441.63	396.41	5.9062
* 96.155	15.939	374.21	348.78	5.3585	157	8.9009	442.71	397.18	5.9131
97	15.747	375.24	349.50	5.3692	158	8.8402	443.80	397.95	5.9199
98	15.526	376.45	350.35	5.3816	159	8.7804	444.87	398.71	5.9267
99	15.314	377.66	351.19	5.3938	160	8.7215	445.95	399.48	5.9335
100	15.108	378.86	352.03	5.4059					
101	14.909	380.05	352.87	5.4178	161	8.6633	447.03	400.25	5.9402
102	14.716	381.24	353.70	5.4295	162	8.6060	448.11	401.01	5.9469
103	14.530	382.43	354.53	5.4411	163	8.5495	449.19	401.78	5.9535
104	14.348	383.61	355.36	5.4525	164	8.4938	450.26	402.54	5.9601
105	14.173	384.78	356.19	5.4638	165	8.4388	451.34	403.31	5.9666
106	14.002	385.96	357.01	5.4749	166	8.3846	452.41	404.07	5.9731
107	13.836	387.12	357.83	5.4858	167	8.3311	453.49	404.84	5.9796
108	13.675	388.29	358.65	5.4967	168	8.2784	454.56	405.60	5.9860
109	13.518	389.45	359.47	5.5074	169	8.2263	455.63	406.37	5.9924
110	13.365	390.61	360.28	5.5179	170	8.1749	456.71	407.13	5.9987
111	13.217	391.76	361.09	5.5284	171	8.1242	457.78	407.89	6.0050
112	13.072	392.91	361.90	5.5387	172	8.0741	458.85	408.65	6.0112
113	12.930	394.06	362.71	5.5489	173	8.0247	459.92	409.42	6.0174
114	12.792	395.20	363.52	5.5590	174	7.9759	460.99	410.18	6.0236
115	12.658	396.34	364.32	5.5689	175	7.9278	462.06	410.94	6.0297
116	12.527	397.48	365.13	5.5788	176	7.8802	463.13	411.70	6.0358
117	12.399	398.62	365.93	5.5885	177	7.8333	464.20	412.46	6.0419
118	12.273	399.75	366.73	5.5982	178	7.7869	465.27	413.22	6.0479
119	12.151	400.88	367.53	5.6077	179	7.7411	466.34	413.98	6.0539
120	12.031	402.01	368.33	5.6172	180	7.6958	467.41	414.74	6.0599

\* PHASE CHANGE



## 4.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	7.6511	468.47	415.50	6.0658	241	5.6902	531.99	460.76	6.3689
182	7.6070	469.54	416.26	6.0716	242	5.6662	533.04	461.51	6.3733
183	7.5633	470.61	417.02	6.0775	243	5.6424	534.09	462.26	6.3776
184	7.5202	471.67	417.78	6.0833	244	5.6188	535.14	463.01	6.3819
185	7.4776	472.74	418.54	6.0891	245	5.5954	536.20	463.76	6.3862
186	7.4355	473.81	419.30	6.0948	246	5.5721	537.25	464.51	6.3905
187	7.3939	474.87	420.06	6.1005	247	5.5491	538.30	465.26	6.3948
188	7.3528	475.94	420.81	6.1062	248	5.5263	539.35	466.01	6.3990
189	7.3121	477.00	421.57	6.1119	249	5.5037	540.40	466.76	6.4033
190	7.2719	478.06	422.33	6.1175	250	5.4813	541.46	467.51	6.4075
191	7.2322	479.13	423.09	6.1231	251	5.4590	542.51	468.26	6.4117
192	7.1929	480.19	423.84	6.1286	252	5.4369	543.56	469.01	6.4159
193	7.1540	481.25	424.60	6.1341	253	5.4150	544.61	469.76	6.4200
194	7.1156	482.32	425.36	6.1396	254	5.3933	545.66	470.51	6.4242
195	7.0776	483.38	426.11	6.1451	255	5.3718	546.71	471.26	6.4283
196	7.0401	484.44	426.87	6.1505	256	5.3504	547.76	472.01	6.4324
197	7.0029	485.50	427.63	6.1559	257	5.3292	548.81	472.76	6.4365
198	6.9661	486.56	428.38	6.1613	258	5.3082	549.86	473.51	6.4406
199	6.9298	487.63	429.14	6.1666	259	5.2874	550.91	474.26	6.4446
200	6.8938	488.69	429.89	6.1720	260	5.2667	551.96	475.01	6.4487
201	6.8582	489.75	430.65	6.1772	261	5.2462	553.01	475.76	6.4527
202	6.8230	490.81	431.41	6.1825	262	5.2258	554.06	476.51	6.4567
203	6.7882	491.87	432.16	6.1877	263	5.2056	555.11	477.26	6.4607
204	6.7537	492.93	432.92	6.1929	264	5.1856	556.16	478.01	6.4647
205	6.7196	493.99	433.67	6.1981	265	5.1657	557.21	478.75	6.4687
206	6.6859	495.05	434.42	6.2033	266	5.1460	558.26	479.50	6.4726
207	6.6525	496.10	435.18	6.2084	267	5.1264	559.31	480.25	6.4766
208	6.6194	497.16	435.93	6.2135	268	5.1070	560.36	481.00	6.4805
209	6.5867	498.22	436.69	6.2186	269	5.0877	561.41	481.75	6.4844
210	6.5543	499.28	437.44	6.2236	270	5.0686	562.46	482.50	6.4883
211	6.5222	500.34	438.20	6.2287	271	5.0496	563.51	483.25	6.4922
212	6.4905	501.40	438.95	6.2337	272	5.0307	564.56	484.00	6.4961
213	6.4590	502.45	439.70	6.2386	273	5.0120	565.61	484.75	6.4999
214	6.4279	503.51	440.46	6.2436	274	4.9935	566.66	485.49	6.5037
215	6.3971	504.57	441.21	6.2485	275	4.9751	567.71	486.24	6.5076
216	6.3666	505.62	441.96	6.2534	276	4.9568	568.76	486.99	6.5114
217	6.3364	506.68	442.72	6.2583	277	4.9386	569.81	487.74	6.5152
218	6.3064	507.74	443.47	6.2632	278	4.9206	570.86	488.49	6.5189
219	6.2768	508.79	444.22	6.2680	279	4.9027	571.90	489.24	6.5227
220	6.2475	509.85	444.98	6.2728	280	4.8850	572.95	489.98	6.5265
221	6.2184	510.91	445.73	6.2776	281	4.8674	574.00	490.73	6.5302
222	6.1896	511.96	446.48	6.2824	282	4.8499	575.05	491.48	6.5339
223	6.1611	513.02	447.23	6.2871	283	4.8325	576.10	492.23	6.5376
224	6.1329	514.07	447.99	6.2918	284	4.8153	577.15	492.98	6.5413
225	6.1049	515.13	448.74	6.2965	285	4.7982	578.20	493.73	6.5450
226	6.0771	516.18	449.49	6.3012	286	4.7812	579.24	494.47	6.5487
227	6.0497	517.24	450.24	6.3059	287	4.7643	580.29	495.22	6.5523
228	6.0225	518.29	450.99	6.3105	288	4.7476	581.34	495.97	6.5560
229	5.9955	519.35	451.75	6.3151	289	4.7310	582.39	496.72	6.5596
230	5.9688	520.40	452.50	6.3197	290	4.7144	583.44	497.47	6.5632
231	5.9423	521.45	453.25	6.3243	291	4.6981	584.48	498.21	6.5668
232	5.9161	522.51	454.00	6.3288	292	4.6818	585.53	498.96	6.5704
233	5.8901	523.56	454.75	6.3334	293	4.6656	586.58	499.71	6.5740
234	5.8643	524.62	455.50	6.3379	294	4.6496	587.63	500.46	6.5776
235	5.8388	525.67	456.25	6.3424	295	4.6336	588.68	501.21	6.5812
236	5.8135	526.72	457.01	6.3468	296	4.6178	589.72	501.95	6.5847
237	5.7884	527.78	457.76	6.3513	297	4.6021	590.77	502.70	6.5882
238	5.7635	528.83	458.51	6.3557	298	4.5864	591.82	503.45	6.5917
239	5.7389	529.88	459.26	6.3601	299	4.5709	592.87	504.20	6.5953
240	5.7144	530.94	460.01	6.3645	300	4.5555	593.91	504.94	6.5988

## 5.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	15.118	401.63	368.12	5.5518
					122	14.966	402.78	368.93	5.5613
					123	14.818	403.93	369.74	5.5706
					124	14.673	405.08	370.55	5.5799
					125	14.531	406.22	371.35	5.5891
					126	14.393	407.36	372.16	5.5982
					127	14.257	408.50	372.96	5.6072
					128	14.125	409.63	373.76	5.6161
					129	13.995	410.77	374.57	5.6249
70	836.57	124.80	124.19	2.6623	130	13.868	411.90	375.36	5.6336
					131	13.743	413.03	376.16	5.6423
71	832.72	127.03	126.42	2.6939	132	13.621	414.15	376.96	5.6509
72	828.84	129.25	128.64	2.7250	133	13.501	415.28	377.75	5.6593
73	824.91	131.47	130.86	2.7557	134	13.384	416.40	378.55	5.6678
74	820.95	133.69	133.07	2.7859	135	13.269	417.52	379.34	5.6761
75	816.95	135.91	135.29	2.8156	136	13.156	418.64	380.13	5.6844
76	812.91	138.12	137.50	2.8449	137	13.045	419.76	380.92	5.6925
77	808.83	140.33	139.71	2.8739	138	12.937	420.88	381.71	5.7007
78	804.72	142.54	141.91	2.9024	139	12.830	421.99	382.50	5.7087
79	800.57	144.75	144.12	2.9306	140	12.725	423.10	383.29	5.7167
80	796.38	146.96	146.33	2.9584	141	12.623	424.21	384.08	5.7246
					142	12.522	425.32	384.86	5.7324
81	792.15	149.17	148.53	2.9858	143	12.422	426.43	385.65	5.7402
82	787.89	151.38	150.74	3.0129	144	12.325	427.54	386.43	5.7479
83	783.58	153.59	152.94	3.0397	145	12.229	428.65	387.22	5.7556
84	779.23	155.80	155.15	3.0662	146	12.135	429.75	388.00	5.7632
85	774.85	158.01	157.35	3.0923	147	12.042	430.85	388.78	5.7707
86	770.41	160.22	159.56	3.1182	148	11.951	431.95	389.56	5.7782
87	765.94	162.43	161.77	3.1438	149	11.861	433.06	390.34	5.7856
88	761.41	164.64	163.98	3.1691	150	11.773	434.15	391.12	5.7929
89	756.84	166.86	166.19	3.1941	151	11.686	435.25	391.90	5.8002
90	752.22	169.08	168.40	3.2189	152	11.601	436.35	392.68	5.8075
					153	11.517	437.45	393.46	5.8147
91	747.54	171.30	170.62	3.2434	154	11.434	438.54	394.23	5.8218
92	742.80	173.52	172.84	3.2677	155	11.353	439.64	395.01	5.8289
93	738.01	175.75	175.06	3.2918	156	11.273	440.73	395.79	5.8359
94	733.15	177.98	177.29	3.3157	157	11.194	441.82	396.56	5.8429
95	728.22	180.22	179.52	3.3394	158	11.116	442.91	397.34	5.8498
96	723.22	182.46	181.76	3.3629	159	11.039	444.00	398.11	5.8567
97	718.15	184.71	184.01	3.3862	160	10.964	445.09	398.88	5.8635
98	713.00	186.97	186.26	3.4094					
99	707.75	189.24	188.52	3.4324					
* 99.028	707.61	189.30	188.58	3.4331					
* 99.028	19.761	375.28	349.64	5.3111					
100	19.478	376.51	350.50	5.3234					
					161	10.889	446.18	399.66	5.8703
101	19.197	377.76	351.37	5.3359	162	10.816	447.27	400.43	5.8770
102	18.927	379.01	352.24	5.3482	163	10.744	448.36	401.20	5.8837
103	18.666	380.25	353.11	5.3603	164	10.673	449.44	401.97	5.8904
104	18.414	381.48	353.97	5.3722	165	10.602	450.53	402.74	5.8970
105	18.171	382.71	354.83	5.3839	166	10.533	451.61	403.51	5.9035
106	17.935	383.93	355.68	5.3955	167	10.465	452.69	404.28	5.9100
107	17.708	385.14	356.53	5.4069	168	10.398	453.78	405.05	5.9165
108	17.487	386.35	357.37	5.4181	169	10.331	454.86	405.82	5.9229
109	17.272	387.55	358.22	5.4292	170	10.266	455.94	406.59	5.9293
110	17.065	388.74	359.06	5.4401					
					171	10.201	457.02	407.36	5.9356
111	16.863	389.94	359.89	5.4509	172	10.137	458.10	408.13	5.9419
112	16.666	391.12	360.73	5.4615	173	10.074	459.18	408.89	5.9482
113	16.476	392.31	361.56	5.4721	174	10.012	460.26	409.66	5.9544
114	16.290	393.48	362.38	5.4824	175	9.9508	461.34	410.43	5.9606
115	16.109	394.66	363.21	5.4927	176	9.8903	462.42	411.19	5.9667
116	15.934	395.83	364.03	5.5028	177	9.8305	463.49	411.96	5.9728
117	15.762	397.00	364.86	5.5129	178	9.7715	464.57	412.72	5.9789
118	15.595	398.16	365.67	5.5228	179	9.7133	465.65	413.49	5.9849
119	15.432	399.32	366.49	5.5325	180	9.6558	466.72	414.25	5.9909
120	15.273	400.48	367.31	5.5422					

\* PHASE CHANGE

## 5.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	9.5990	467.80	415.02	5.9969	241	7.1209	531.60	460.46	6.3014
182	9.5429	468.87	415.78	6.0028	242	7.0907	532.66	461.21	6.3058
183	9.4875	469.94	416.55	6.0087	243	7.0608	533.72	461.96	6.3101
184	9.4327	471.02	417.31	6.0145	244	7.0311	534.77	462.72	6.3145
185	9.3787	472.09	418.07	6.0203	245	7.0016	535.83	463.47	6.3188
186	9.3252	473.16	418.83	6.0261	246	6.9725	536.88	464.22	6.3231
187	9.2725	474.23	419.60	6.0318	247	6.9435	537.94	464.97	6.3274
188	9.2203	475.31	420.36	6.0376	248	6.9148	538.99	465.72	6.3316
189	9.1687	476.38	421.12	6.0432	249	6.8864	540.05	466.48	6.3359
190	9.1178	477.45	421.88	6.0489	250	6.8582	541.10	467.23	6.3401
191	9.0674	478.52	422.64	6.0545	251	6.8302	542.15	467.98	6.3443
192	9.0176	479.59	423.41	6.0601	252	6.8025	543.21	468.73	6.3485
193	8.9684	480.66	424.17	6.0656	253	6.7749	544.26	469.48	6.3527
194	8.9198	481.72	424.93	6.0712	254	6.7477	545.32	470.23	6.3568
195	8.8717	482.79	425.69	6.0767	255	6.7206	546.37	470.99	6.3610
196	8.8241	483.86	426.45	6.0821	256	6.6938	547.42	471.74	6.3651
197	8.7771	484.93	427.21	6.0875	257	6.6671	548.48	472.49	6.3692
198	8.7306	486.00	427.97	6.0930	258	6.6407	549.53	473.24	6.3733
199	8.6846	487.06	428.73	6.0983	259	6.6145	550.58	473.99	6.3774
200	8.6391	488.13	429.49	6.1037	260	6.5885	551.64	474.74	6.3814
201	8.5941	489.19	430.24	6.1090	261	6.5628	552.69	475.49	6.3855
202	8.5495	490.26	431.00	6.1143	262	6.5372	553.74	476.24	6.3895
203	8.5055	491.33	431.76	6.1195	263	6.5118	554.80	476.99	6.3935
204	8.4619	492.39	432.52	6.1248	264	6.4867	555.85	477.75	6.3975
205	8.4188	493.46	433.28	6.1300	265	6.4617	556.90	478.50	6.4015
206	8.3762	494.52	434.04	6.1352	266	6.4369	557.95	479.25	6.4054
207	8.3340	495.58	434.79	6.1403	267	6.4123	559.00	480.00	6.4094
208	8.2922	496.65	435.55	6.1454	268	6.3879	560.06	480.75	6.4133
209	8.2508	497.71	436.31	6.1505	269	6.3637	561.11	481.50	6.4172
210	8.2099	498.77	437.06	6.1556	270	6.3397	562.16	482.25	6.4211
211	8.1694	499.84	437.82	6.1607	271	6.3159	563.21	483.00	6.4250
212	8.1294	500.90	438.58	6.1657	272	6.2922	564.26	483.75	6.4289
213	8.0897	501.96	439.34	6.1707	273	6.2688	565.32	484.50	6.4328
214	8.0504	503.02	440.09	6.1756	274	6.2455	566.37	485.25	6.4366
215	8.0115	504.08	440.85	6.1806	275	6.2224	567.42	486.00	6.4404
216	7.9730	505.15	441.60	6.1855	276	6.1994	568.47	486.75	6.4443
217	7.9349	506.21	442.36	6.1904	277	6.1766	569.52	487.50	6.4481
218	7.8972	507.27	443.12	6.1953	278	6.1540	570.57	488.25	6.4518
219	7.8598	508.33	443.87	6.2002	279	6.1316	571.62	489.00	6.4556
220	7.8228	509.39	444.63	6.2050	280	6.1093	572.67	489.75	6.4594
221	7.7862	510.45	445.38	6.2098	281	6.0872	573.72	490.50	6.4631
222	7.7499	511.51	446.14	6.2146	282	6.0653	574.78	491.25	6.4669
223	7.7139	512.57	446.89	6.2193	283	6.0435	575.83	492.00	6.4706
224	7.6783	513.63	447.65	6.2241	284	6.0219	576.88	492.75	6.4743
225	7.6431	514.69	448.40	6.2288	285	6.0004	577.93	493.50	6.4780
226	7.6081	515.75	449.16	6.2335	286	5.9791	578.98	494.24	6.4816
227	7.5735	516.80	449.91	6.2382	287	5.9579	580.03	494.99	6.4853
228	7.5392	517.86	450.66	6.2428	288	5.9369	581.08	495.74	6.4890
229	7.5053	518.92	451.42	6.2474	289	5.9161	582.13	496.49	6.4926
230	7.4716	519.98	452.17	6.2521	290	5.8954	583.18	497.24	6.4962
231	7.4383	521.04	452.93	6.2566	291	5.8748	584.23	497.99	6.4998
232	7.4052	522.09	453.68	6.2612	292	5.8544	585.28	498.74	6.5034
233	7.3725	523.15	454.43	6.2658	293	5.8341	586.33	499.49	6.5070
234	7.3401	524.21	455.19	6.2703	294	5.8140	587.38	500.24	6.5106
235	7.3079	525.27	455.94	6.2748	295	5.7940	588.43	500.99	6.5142
236	7.2761	526.32	456.69	6.2793	296	5.7742	589.48	501.74	6.5177
237	7.2445	527.38	457.45	6.2837	297	5.7544	590.53	502.48	6.5213
238	7.2132	528.44	458.20	6.2882	298	5.7349	591.57	503.23	6.5248
239	7.1822	529.49	458.95	6.2926	299	5.7154	592.62	503.98	6.5283
240	7.1514	530.55	459.71	6.2970	300	5.6961	593.67	504.73	6.5318

## 6.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	18.426	400.08	367.08	5.4889
					122	18.232	401.26	367.91	5.4986
					123	18.044	402.43	368.74	5.5082
					124	17.860	403.61	369.57	5.5177
					125	17.680	404.77	370.39	5.5270
					126	17.504	405.94	371.21	5.5363
					127	17.333	407.10	372.03	5.5455
					128	17.165	408.26	372.84	5.5546
					129	17.002	409.42	373.66	5.5636
70	836.73	124.88	124.15	2.6617	130	16.842	410.57	374.47	5.5725
71	832.89	127.11	126.38	2.6933	131	16.685	411.72	375.28	5.5813
72	829.00	129.33	128.60	2.7244	132	16.531	412.87	376.09	5.5900
73	825.08	131.55	130.82	2.7551	133	16.381	414.01	376.90	5.5987
74	821.13	133.77	133.03	2.7853	134	16.234	415.16	377.71	5.6072
75	817.13	135.98	135.24	2.8150	135	16.090	416.30	378.51	5.6157
76	813.10	138.20	137.45	2.8443	136	15.949	417.44	379.32	5.6241
77	809.03	140.41	139.66	2.8732	137	15.811	418.57	380.12	5.6324
78	804.92	142.62	141.86	2.9018	138	15.675	419.70	380.92	5.6407
79	800.77	144.83	144.07	2.9299	139	15.542	420.84	381.72	5.6489
80	796.59	147.04	146.27	2.9577	140	15.411	421.97	382.52	5.6570
81	792.37	149.24	148.48	2.9851	141	15.283	423.09	383.32	5.6650
82	788.11	151.45	150.68	3.0122	142	15.158	424.22	384.11	5.6729
83	783.82	153.66	152.88	3.0390	143	15.034	425.34	384.91	5.6808
84	779.48	155.87	155.09	3.0654	144	14.913	426.47	385.70	5.6887
85	775.10	158.07	157.29	3.0916	145	14.794	427.59	386.49	5.6964
86	770.68	160.28	159.50	3.1174	146	14.677	428.71	387.29	5.7041
87	766.21	162.49	161.70	3.1430	147	14.563	429.82	388.08	5.7117
88	761.69	164.71	163.91	3.1683	148	14.450	430.94	388.87	5.7193
89	757.13	166.92	166.12	3.1933	149	14.339	432.05	389.66	5.7268
90	752.52	169.14	168.33	3.2181	150	14.230	433.17	390.44	5.7342
91	747.85	171.35	170.54	3.2426	151	14.123	434.28	391.23	5.7416
92	743.13	173.58	172.76	3.2669	152	14.017	435.39	392.02	5.7489
93	738.34	175.80	174.98	3.2909	153	13.914	436.50	392.80	5.7562
94	733.50	178.03	177.20	3.3148	154	13.812	437.60	393.59	5.7634
95	728.59	180.27	179.43	3.3384	155	13.711	438.71	394.37	5.7706
96	723.61	182.51	181.67	3.3619	156	13.612	439.82	395.15	5.7777
97	718.55	184.75	183.91	3.3852	157	13.515	440.92	395.94	5.7847
98	713.41	187.01	186.16	3.4084	158	13.419	442.02	396.72	5.7917
99	708.19	189.28	188.42	3.4314	159	13.325	443.12	397.50	5.7987
100	702.88	191.55	190.69	3.4542	160	13.232	444.22	398.28	5.8056
101	697.46	193.84	192.97	3.4770					
* 101.509	694.67	195.01	194.13	3.4886	161	13.141	445.32	399.06	5.8124
* 101.509	23.611	375.98	350.23	5.2713	162	13.051	446.42	399.84	5.8192
102	23.431	376.62	350.68	5.2777	163	12.962	447.52	400.62	5.8260
103	23.077	377.93	351.58	5.2904	164	12.875	448.61	401.39	5.8327
104	22.738	379.22	352.49	5.3029	165	12.789	449.71	402.17	5.8393
105	22.411	380.51	353.38	5.3152	166	12.704	450.80	402.95	5.8460
106	22.096	381.78	354.27	5.3273	167	12.620	451.90	403.72	5.8525
107	21.793	383.05	355.15	5.3392	168	12.537	452.99	404.50	5.8590
108	21.501	384.31	356.03	5.3509	169	12.456	454.08	405.27	5.8655
109	21.218	385.56	356.90	5.3624	170	12.376	455.17	406.05	5.8720
110	20.945	386.80	357.77	5.3738					
111	20.680	388.03	358.64	5.3849	171	12.297	456.26	406.82	5.8783
112	20.424	389.26	359.50	5.3960	172	12.219	457.35	407.59	5.8847
113	20.175	390.48	360.35	5.4068	173	12.142	458.44	408.37	5.8910
114	19.934	391.70	361.20	5.4175	174	12.066	459.53	409.14	5.8973
115	19.700	392.91	362.05	5.4281	175	11.991	460.61	409.91	5.9035
116	19.473	394.12	362.90	5.4386	176	11.917	461.70	410.68	5.9097
117	19.252	395.32	363.74	5.4489	177	11.844	462.78	411.45	5.9158
118	19.037	396.52	364.58	5.4591	178	11.772	463.87	412.22	5.9219
119	18.828	397.71	365.42	5.4691	179	11.701	464.95	412.99	5.9280
120	18.624	398.90	366.25	5.4790	180	11.631	466.03	413.76	5.9340

\* PHASE CHANGE

## 6.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	11.561	467.12	414.53	5.9400	241	8.5549	531.22	460.16	6.2461
182	11.493	468.20	415.30	5.9460	242	8.5185	532.28	460.91	6.2504
183	11.425	469.28	416.07	5.9519	243	8.4823	533.34	461.67	6.2548
184	11.359	470.36	416.84	5.9578	244	8.4464	534.40	462.42	6.2592
185	11.293	471.44	417.60	5.9637	245	8.4109	535.46	463.17	6.2635
186	11.228	472.52	418.37	5.9695	246	8.3757	536.51	463.93	6.2678
187	11.163	473.60	419.14	5.9753	247	8.3407	537.57	464.68	6.2721
188	11.100	474.67	419.90	5.9810	248	8.3061	538.63	465.44	6.2764
189	11.037	475.75	420.67	5.9867	249	8.2718	539.69	466.19	6.2806
190	10.975	476.83	421.44	5.9924	250	8.2377	540.74	466.94	6.2848
191	10.914	477.91	422.20	5.9981	251	8.2040	541.80	467.70	6.2891
192	10.853	478.98	422.97	6.0037	252	8.1705	542.86	468.45	6.2933
193	10.793	480.06	423.73	6.0093	253	8.1373	543.92	469.20	6.2975
194	10.734	481.13	424.49	6.0148	254	8.1044	544.97	469.96	6.3016
195	10.676	482.21	425.26	6.0203	255	8.0717	546.03	470.71	6.3058
196	10.618	483.28	426.02	6.0258	256	8.0393	547.09	471.46	6.3099
197	10.561	484.35	426.79	6.0313	257	8.0072	548.14	472.22	6.3140
198	10.504	485.43	427.55	6.0367	258	7.9754	549.20	472.97	6.3181
199	10.448	486.50	428.31	6.0421	259	7.9438	550.25	473.72	6.3222
200	10.393	487.57	429.07	6.0475	260	7.9124	551.31	474.47	6.3263
201	10.338	488.64	429.84	6.0528	261	7.8814	552.37	475.23	6.3303
202	10.284	489.71	430.60	6.0582	262	7.8505	553.42	475.98	6.3344
203	10.231	490.78	431.36	6.0634	263	7.8199	554.48	476.73	6.3384
204	10.178	491.85	432.12	6.0687	264	7.7896	555.53	477.48	6.3424
205	10.126	492.92	432.88	6.0739	265	7.7595	556.59	478.24	6.3464
206	10.074	493.99	433.64	6.0791	266	7.7296	557.64	478.99	6.3504
207	10.023	495.06	434.41	6.0843	267	7.7000	558.70	479.74	6.3543
208	9.9722	496.13	435.17	6.0895	268	7.6706	559.75	480.49	6.3583
209	9.9221	497.20	435.93	6.0946	269	7.6414	560.80	481.24	6.3622
210	9.8725	498.27	436.69	6.0997	270	7.6125	561.86	482.00	6.3661
211	9.8234	499.33	437.45	6.1048	271	7.5837	562.91	482.75	6.3700
212	9.7748	500.40	438.21	6.1098	272	7.5552	563.97	483.50	6.3739
213	9.7268	501.47	438.97	6.1148	273	7.5270	565.02	484.25	6.3777
214	9.6792	502.53	439.72	6.1198	274	7.4989	566.07	485.00	6.3816
215	9.6321	503.60	440.48	6.1248	275	7.4710	567.13	485.75	6.3854
216	9.5855	504.67	441.24	6.1297	276	7.4434	568.18	486.51	6.3893
217	9.5393	505.73	442.00	6.1347	277	7.4160	569.24	487.26	6.3931
218	9.4936	506.80	442.76	6.1395	278	7.3887	570.29	488.01	6.3969
219	9.4484	507.86	443.52	6.1444	279	7.3617	571.34	488.76	6.4006
220	9.4036	508.93	444.28	6.1493	280	7.3349	572.39	489.51	6.4044
221	9.3592	509.99	445.03	6.1541	281	7.3082	573.45	490.26	6.4082
222	9.3153	511.06	445.79	6.1589	282	7.2818	574.50	491.01	6.4119
223	9.2718	512.12	446.55	6.1637	283	7.2556	575.55	491.76	6.4156
224	9.2287	513.18	447.31	6.1684	284	7.2295	576.61	492.51	6.4193
225	9.1860	514.25	448.06	6.1732	285	7.2037	577.66	493.26	6.4230
226	9.1438	515.31	448.82	6.1779	286	7.1780	578.71	494.01	6.4267
227	9.1019	516.37	449.58	6.1826	287	7.1525	579.76	494.77	6.4304
228	9.0605	517.43	450.33	6.1872	288	7.1273	580.82	495.52	6.4341
229	9.0194	518.50	451.09	6.1919	289	7.1021	581.87	496.27	6.4377
230	8.9787	519.56	451.85	6.1965	290	7.0772	582.92	497.02	6.4413
231	8.9384	520.62	452.60	6.2011	291	7.0525	583.97	497.77	6.4450
232	8.8985	521.68	453.36	6.2057	292	7.0279	585.02	498.52	6.4486
233	8.8589	522.74	454.11	6.2103	293	7.0035	586.07	499.27	6.4522
234	8.8197	523.80	454.87	6.2148	294	6.9792	587.13	500.02	6.4557
235	8.7808	524.86	455.63	6.2193	295	6.9552	588.18	500.77	6.4593
236	8.7423	525.92	456.38	6.2238	296	6.9313	589.23	501.52	6.4629
237	8.7042	526.98	457.14	6.2283	297	6.9075	590.28	502.27	6.4664
238	8.6664	528.04	457.89	6.2328	298	6.8840	591.33	503.02	6.4700
239	8.6289	529.10	458.65	6.2372	299	6.8606	592.38	503.77	6.4735
240	8.5918	530.16	459.40	6.2416	300	6.8373	593.43	504.52	6.4770

## 7.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	21.849	398.48	366.02	5.4339
					122	21.608	399.69	366.87	5.4439
					123	21.374	400.89	367.71	5.4538
					124	21.146	402.10	368.55	5.4635
					125	20.924	403.29	369.39	5.4731
					126	20.707	404.48	370.23	5.4826
					127	20.496	405.67	371.07	5.4920
					128	20.290	406.86	371.90	5.5013
					129	20.089	408.04	372.73	5.5104
70	836.88	124.96	124.12	2.6612	130	19.892	409.21	373.56	5.5195
71	833.05	127.19	126.34	2.6928	131	19.700	410.39	374.38	5.5285
72	829.17	129.41	128.56	2.7239	132	19.513	411.56	375.21	5.5374
73	825.26	131.63	130.77	2.7545	133	19.329	412.72	376.03	5.5462
74	821.30	133.85	132.99	2.7847	134	19.150	413.89	376.85	5.5549
75	817.31	136.06	135.20	2.8144	135	18.974	415.05	377.67	5.5636
76	813.28	138.28	137.40	2.8437	136	18.802	416.21	378.48	5.5721
77	809.22	140.49	139.61	2.8726	137	18.634	417.36	379.30	5.5806
78	805.12	142.69	141.81	2.9011	138	18.469	418.51	380.11	5.5890
79	800.98	144.90	144.02	2.9292	139	18.308	419.66	380.92	5.5973
80	796.80	147.11	146.22	2.9570	140	18.150	420.81	381.73	5.6055
81	792.59	149.32	148.42	2.9844	141	17.995	421.96	382.54	5.6136
82	788.34	151.52	150.62	3.0115	142	17.842	423.10	383.35	5.6217
83	784.05	153.73	152.82	3.0383	143	17.693	424.24	384.15	5.6297
84	779.72	155.94	155.03	3.0647	144	17.547	425.38	384.96	5.6377
85	775.35	158.14	157.23	3.0908	145	17.403	426.52	385.76	5.6455
86	770.94	160.35	159.43	3.1167	146	17.262	427.65	386.56	5.6533
87	766.48	162.56	161.63	3.1422	147	17.124	428.78	387.36	5.6610
88	761.97	164.77	163.84	3.1675	148	16.988	429.91	388.16	5.6687
89	757.42	166.98	166.05	3.1925	149	16.855	431.04	388.96	5.6763
90	752.82	169.20	168.25	3.2172	150	16.724	432.17	389.76	5.6838
91	748.16	171.41	170.46	3.2417	151	16.595	433.29	390.55	5.6913
92	743.45	173.63	172.68	3.2660	152	16.468	434.42	391.35	5.6987
93	738.68	175.86	174.90	3.2900	153	16.344	435.54	392.14	5.7061
94	733.85	178.08	177.12	3.3139	154	16.221	436.66	392.93	5.7134
95	728.95	180.32	179.34	3.3375	155	16.101	437.78	393.72	5.7206
96	723.99	182.55	181.57	3.3609	156	15.982	438.89	394.52	5.7278
97	718.95	184.80	183.81	3.3842	157	15.866	440.01	395.31	5.7349
98	713.83	187.05	186.06	3.4073	158	15.751	441.12	396.09	5.7420
99	708.63	189.31	188.31	3.4303	159	15.639	442.24	396.88	5.7490
100	703.33	191.59	190.58	3.4531	160	15.528	443.35	397.67	5.7560
101	697.94	193.87	192.85	3.4759					
102	692.45	196.17	195.14	3.4985	161	15.418	444.46	398.46	5.7629
103	686.84	198.48	197.45	3.5211	162	15.311	445.57	399.24	5.7698
* 103.706	682.81	200.12	199.09	3.5370	163	15.205	446.67	400.03	5.7766
* 103.706	27.501	376.41	350.61	5.2368	164	15.100	447.78	400.81	5.7834
104	27.371	376.81	350.89	5.2407	165	14.998	448.89	401.59	5.7901
105	26.939	378.16	351.83	5.2537	166	14.896	449.99	402.38	5.7967
106	26.526	379.51	352.77	5.2664	167	14.797	451.09	403.16	5.8034
107	26.130	380.83	353.69	5.2789	168	14.698	452.20	403.94	5.8099
108	25.750	382.15	354.61	5.2911	169	14.601	453.30	404.72	5.8165
109	25.384	383.46	355.52	5.3031	170	14.506	454.40	405.50	5.8230
110	25.032	384.75	356.42	5.3150					
111	24.693	386.04	357.31	5.3266	171	14.412	455.49	406.28	5.8294
112	24.365	387.32	358.21	5.3381	172	14.319	456.59	407.06	5.8358
113	24.049	388.58	359.09	5.3493	173	14.227	457.69	407.84	5.8422
114	23.743	389.84	359.97	5.3604	174	14.137	458.79	408.61	5.8485
115	23.447	391.10	360.85	5.3714	175	14.048	459.88	409.39	5.8548
116	23.160	392.34	361.72	5.3822	176	13.960	460.97	410.17	5.8610
117	22.882	393.58	362.59	5.3928	177	13.874	462.07	410.94	5.8672
118	22.612	394.82	363.45	5.4033	178	13.788	463.16	411.72	5.8733
119	22.351	396.04	364.31	5.4136	179	13.704	464.25	412.49	5.8795
120	22.096	397.26	365.16	5.4239	180	13.620	465.34	413.27	5.8855

\* PHASE CHANGE

## 7.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	13.538	466.43	414.04	5.8916	241	9.9922	530.84	459.85	6.1990
182	13.457	467.52	414.81	5.8976	242	9.9494	531.90	460.61	6.2034
183	13.377	468.61	415.59	5.9035	243	9.9069	532.96	461.37	6.2078
184	13.298	469.70	416.36	5.9095	244	9.8648	534.02	462.12	6.2122
185	13.220	470.78	417.13	5.9154	245	9.8231	535.08	462.88	6.2165
186	13.143	471.87	417.90	5.9212	246	9.7817	536.15	463.64	6.2208
187	13.067	472.96	418.67	5.9270	247	9.7407	537.21	464.39	6.2252
188	12.991	474.04	419.45	5.9328	248	9.7001	538.27	465.15	6.2294
189	12.917	475.12	420.22	5.9386	249	9.6598	539.33	465.90	6.2337
190	12.844	476.21	420.99	5.9443	250	9.6199	540.39	466.66	6.2380
191	12.771	477.29	421.75	5.9500	251	9.5802	541.45	467.41	6.2422
192	12.700	478.37	422.52	5.9556	252	9.5410	542.51	468.17	6.2464
193	12.629	479.45	423.29	5.9612	253	9.5020	543.57	468.92	6.2506
194	12.559	480.54	424.06	5.9668	254	9.4634	544.63	469.68	6.2548
195	12.490	481.62	424.83	5.9724	255	9.4251	545.69	470.43	6.2589
196	12.422	482.70	425.60	5.9779	256	9.3872	546.75	471.19	6.2631
197	12.354	483.78	426.36	5.9834	257	9.3495	547.81	471.94	6.2672
198	12.287	484.85	427.13	5.9888	258	9.3121	548.87	472.70	6.2713
199	12.221	485.93	427.90	5.9943	259	9.2751	549.92	473.45	6.2754
200	12.156	487.01	428.66	5.9997	260	9.2384	550.98	474.21	6.2795
201	12.092	488.09	429.43	6.0050	261	9.2019	552.04	474.96	6.2836
202	12.028	489.16	430.19	6.0104	262	9.1658	553.10	475.72	6.2876
203	11.965	490.24	430.96	6.0157	263	9.1299	554.16	476.47	6.2916
204	11.902	491.31	431.72	6.0210	264	9.0943	555.21	477.22	6.2957
205	11.841	492.39	432.49	6.0262	265	9.0591	556.27	477.98	6.2996
206	11.780	493.46	433.25	6.0315	266	9.0240	557.33	478.73	6.3036
207	11.719	494.54	434.02	6.0367	267	8.9893	558.39	479.48	6.3076
208	11.660	495.61	434.78	6.0419	268	8.9549	559.44	480.24	6.3115
209	11.600	496.69	435.54	6.0470	269	8.9207	560.50	480.99	6.3155
210	11.542	497.76	436.31	6.0521	270	8.8868	561.56	481.74	6.3194
211	11.484	498.83	437.07	6.0572	271	8.8531	562.61	482.50	6.3233
212	11.427	499.90	437.83	6.0623	272	8.8197	563.67	483.25	6.3272
213	11.370	500.97	438.59	6.0673	273	8.7866	564.73	484.00	6.3311
214	11.314	502.05	439.36	6.0723	274	8.7537	565.78	484.76	6.3349
215	11.259	503.12	440.12	6.0773	275	8.7211	566.84	485.51	6.3388
216	11.204	504.19	440.88	6.0823	276	8.6887	567.89	486.26	6.3426
217	11.150	505.26	441.64	6.0872	277	8.6566	568.95	487.01	6.3464
218	11.096	506.33	442.40	6.0922	278	8.6247	570.01	487.77	6.3502
219	11.042	507.40	443.16	6.0971	279	8.5930	571.06	488.52	6.3540
220	10.990	508.46	443.92	6.1019	280	8.5616	572.12	489.27	6.3578
221	10.938	509.53	444.69	6.1068	281	8.5304	573.17	490.02	6.3616
222	10.886	510.60	445.45	6.1116	282	8.4995	574.23	490.78	6.3653
223	10.835	511.67	446.21	6.1164	283	8.4688	575.28	491.53	6.3690
224	10.784	512.74	446.97	6.1212	284	8.4383	576.34	492.28	6.3728
225	10.734	513.80	447.72	6.1259	285	8.4080	577.39	493.03	6.3765
226	10.684	514.87	448.48	6.1306	286	8.3779	578.44	493.79	6.3802
227	10.635	515.94	449.24	6.1354	287	8.3481	579.50	494.54	6.3838
228	10.586	517.00	450.00	6.1400	288	8.3185	580.55	495.29	6.3875
229	10.538	518.07	450.76	6.1447	289	8.2891	581.61	496.04	6.3912
230	10.490	519.13	451.52	6.1493	290	8.2599	582.66	496.79	6.3948
231	10.443	520.20	452.28	6.1540	291	8.2309	583.72	497.54	6.3984
232	10.396	521.26	453.04	6.1586	292	8.2022	584.77	498.30	6.4020
233	10.349	522.33	453.80	6.1631	293	8.1736	585.82	499.05	6.4057
234	10.303	523.39	454.55	6.1677	294	8.1452	586.88	499.80	6.4092
235	10.257	524.46	455.31	6.1722	295	8.1171	587.93	500.55	6.4128
236	10.212	525.52	456.07	6.1768	296	8.0891	588.98	501.30	6.4164
237	10.167	526.59	456.83	6.1813	297	8.0614	590.04	502.05	6.4199
238	10.123	527.65	457.58	6.1857	298	8.0338	591.09	502.80	6.4235
239	10.079	528.71	458.34	6.1902	299	8.0064	592.14	503.55	6.4270
240	10.035	529.77	459.10	6.1946	300	7.9792	593.20	504.30	6.4305

## 8.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	25.398	396.83	364.91	5.3848
					122	25.104	398.07	365.78	5.3950
					123	24.819	399.31	366.65	5.4051
					124	24.541	400.54	367.51	5.4151
					125	24.272	401.77	368.37	5.4250
					126	24.009	402.99	369.23	5.4347
					127	23.754	404.21	370.08	5.4443
					128	23.505	405.42	370.93	5.4538
					129	23.262	406.62	371.78	5.4632
70	837.04	125.05	124.08	2.6606	130	23.026	407.83	372.62	5.4725
71	833.21	127.27	126.30	2.6922	131	22.795	409.03	373.46	5.4817
72	829.34	129.49	128.52	2.7233	132	22.570	410.22	374.30	5.4907
73	825.43	131.71	130.73	2.7539	133	22.350	411.41	375.14	5.4997
74	821.48	133.93	132.94	2.7841	134	22.135	412.59	375.97	5.5086
75	817.49	136.14	135.15	2.8138	135	21.925	413.78	376.81	5.5174
76	813.47	138.35	137.36	2.8431	136	21.720	414.96	377.64	5.5261
77	809.41	140.56	139.56	2.8720	137	21.519	416.13	378.46	5.5347
78	805.32	142.77	141.76	2.9005	138	21.323	417.30	379.29	5.5432
79	801.19	144.98	143.97	2.9286	139	21.131	418.47	380.11	5.5517
80	797.02	147.18	146.17	2.9564	140	20.943	419.64	380.93	5.5600
81	792.81	149.39	148.37	2.9838	141	20.758	420.80	381.75	5.5683
82	788.57	151.59	150.57	3.0108	142	20.578	421.96	382.57	5.5765
83	784.28	153.80	152.77	3.0376	143	20.401	423.12	383.39	5.5846
84	779.96	156.00	154.97	3.0640	144	20.228	424.28	384.20	5.5927
85	775.60	158.21	157.17	3.0901	145	20.058	425.43	385.02	5.6007
86	771.19	160.42	159.37	3.1159	146	19.891	426.58	385.83	5.6086
87	766.75	162.62	161.57	3.1414	147	19.728	427.73	386.64	5.6164
88	762.25	164.83	163.77	3.1667	148	19.567	428.87	387.45	5.6242
89	757.71	167.04	165.97	3.1917	149	19.410	430.02	388.25	5.6319
90	753.12	169.26	168.18	3.2164	150	19.255	431.16	389.06	5.6395
91	748.47	171.47	170.39	3.2409	151	19.103	432.30	389.86	5.6471
92	743.77	173.69	172.60	3.2651	152	18.954	433.43	390.67	5.6546
93	739.02	175.91	174.81	3.2891	153	18.808	434.57	391.47	5.6620
94	734.20	178.14	177.03	3.3130	154	18.664	435.70	392.27	5.6694
95	729.32	180.37	179.25	3.3366	155	18.523	436.83	393.07	5.6767
96	724.37	182.60	181.48	3.3600	156	18.384	437.96	393.87	5.6840
97	719.34	184.84	183.72	3.3832	157	18.247	439.09	394.67	5.6912
98	714.24	187.09	185.96	3.4063	158	18.112	440.22	395.46	5.6983
99	709.06	189.35	188.21	3.4292	159	17.980	441.34	396.26	5.7054
100	703.79	191.62	190.47	3.4520	160	17.850	442.46	397.05	5.7125
101	698.42	193.90	192.74	3.4747					
102	692.95	196.19	195.02	3.4973	161	17.722	443.59	397.85	5.7195
103	687.36	198.50	197.32	3.5199	162	17.596	444.71	398.64	5.7264
104	681.66	200.83	199.64	3.5424	163	17.472	445.82	399.43	5.7333
105	675.83	203.18	201.98	3.5648	164	17.350	446.94	400.22	5.7401
* 105.687	671.74	204.80	203.59	3.5803	165	17.230	448.06	401.01	5.7469
* 105.687	31.445	376.62	350.85	5.2060	166	17.112	449.17	401.80	5.7536
106	31.279	377.07	351.15	5.2102	167	16.995	450.28	402.59	5.7603
107	30.766	378.47	352.13	5.2234	168	16.881	451.40	403.38	5.7669
108	30.277	379.86	353.09	5.2363	169	16.768	452.51	404.16	5.7735
109	29.809	381.24	354.04	5.2490	170	16.656	453.62	404.95	5.7801
110	29.360	382.59	354.99	5.2614					
111	28.931	383.94	355.92	5.2736	171	16.546	454.72	405.73	5.7866
112	28.518	385.27	356.85	5.2855	172	16.438	455.83	406.52	5.7930
113	28.120	386.59	357.77	5.2973	173	16.332	456.94	407.30	5.7994
114	27.738	387.90	358.68	5.3088	174	16.226	458.04	408.09	5.8058
115	27.369	389.20	359.59	5.3202	175	16.123	459.14	408.87	5.8121
116	27.013	390.49	360.49	5.3313	176	16.021	460.25	409.65	5.8184
117	26.669	391.78	361.38	5.3423	177	15.920	461.35	410.43	5.8246
118	26.336	393.05	362.27	5.3532	178	15.820	462.45	411.21	5.8308
119	26.013	394.32	363.16	5.3639	179	15.722	463.55	411.99	5.8370
120	25.701	395.57	364.04	5.3744	180	15.625	464.65	412.77	5.8431

\* PHASE CHANGE



## 8.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	15.530	465.75	413.55	5.8492	241	11.433	530.45	459.55	6.1582
182	15.436	466.84	414.33	5.8552	242	11.383	531.52	460.31	6.1626
183	15.343	467.94	415.10	5.8613	243	11.335	532.58	461.07	6.1670
184	15.251	469.03	415.88	5.8672	244	11.286	533.65	461.83	6.1713
185	15.160	470.13	416.66	5.8731	245	11.238	534.71	462.59	6.1757
186	15.071	471.22	417.43	5.8790	246	11.191	535.78	463.34	6.1800
187	14.983	472.31	418.21	5.8849	247	11.144	536.84	464.10	6.1843
188	14.895	473.40	418.98	5.8907	248	11.097	537.91	464.86	6.1886
189	14.809	474.50	419.76	5.8965	249	11.050	538.97	465.62	6.1929
190	14.724	475.59	420.53	5.9023	250	11.005	540.03	466.37	6.1972
191	14.640	476.67	421.31	5.9080	251	10.959	541.10	467.13	6.2014
192	14.557	477.76	422.08	5.9137	252	10.914	542.16	467.89	6.2057
193	14.475	478.85	422.85	5.9193	253	10.869	543.22	468.64	6.2099
194	14.394	479.94	423.62	5.9249	254	10.825	544.29	469.40	6.2141
195	14.314	481.02	424.40	5.9305	255	10.781	545.35	470.16	6.2182
196	14.235	482.11	425.17	5.9361	256	10.737	546.41	470.91	6.2224
197	14.157	483.20	425.94	5.9416	257	10.694	547.47	471.67	6.2265
198	14.080	484.28	426.71	5.9471	258	10.651	548.53	472.43	6.2306
199	14.003	485.36	427.48	5.9525	259	10.608	549.59	473.18	6.2347
200	13.928	486.45	428.25	5.9580	260	10.566	550.66	473.94	6.2388
201	13.853	487.53	429.02	5.9634	261	10.524	551.72	474.70	6.2429
202	13.780	488.61	429.79	5.9687	262	10.483	552.78	475.45	6.2470
203	13.707	489.69	430.56	5.9741	263	10.442	553.84	476.21	6.2510
204	13.635	490.78	431.32	5.9794	264	10.401	554.90	476.96	6.2550
205	13.563	491.86	432.09	5.9847	265	10.360	555.96	477.72	6.2590
206	13.493	492.94	432.86	5.9899	266	10.320	557.02	478.47	6.2630
207	13.423	494.01	433.63	5.9952	267	10.280	558.08	479.23	6.2670
208	13.354	495.09	434.39	6.0004	268	10.241	559.14	479.98	6.2710
209	13.286	496.17	435.16	6.0055	269	10.202	560.20	480.74	6.2749
210	13.218	497.25	435.93	6.0107	270	10.163	561.26	481.49	6.2788
211	13.152	498.33	436.69	6.0158	271	10.124	562.31	482.25	6.2828
212	13.086	499.40	437.46	6.0209	272	10.086	563.37	483.00	6.2867
213	13.020	500.48	438.22	6.0259	273	10.048	564.43	483.76	6.2905
214	12.956	501.56	438.99	6.0310	274	10.010	565.49	484.51	6.2944
215	12.892	502.63	439.75	6.0360	275	9.9725	566.55	485.26	6.2983
216	12.828	503.71	440.52	6.0410	276	9.9353	567.61	486.02	6.3021
217	12.766	504.78	441.28	6.0459	277	9.8984	568.66	486.77	6.3059
218	12.703	505.85	442.05	6.0509	278	9.8618	569.72	487.53	6.3097
219	12.642	506.93	442.81	6.0558	279	9.8255	570.78	488.28	6.3135
220	12.581	508.00	443.57	6.0607	280	9.7895	571.84	489.03	6.3173
221	12.521	509.07	444.34	6.0656	281	9.7537	572.90	489.79	6.3211
222	12.462	510.15	445.10	6.0704	282	9.7182	573.95	490.54	6.3248
223	12.403	511.22	445.86	6.0752	283	9.6830	575.01	491.30	6.3286
224	12.344	512.29	446.62	6.0800	284	9.6480	576.07	492.05	6.3323
225	12.286	513.36	447.39	6.0848	285	9.6133	577.12	492.80	6.3360
226	12.229	514.43	448.15	6.0895	286	9.5788	578.18	493.56	6.3397
227	12.172	515.50	448.91	6.0942	287	9.5446	579.24	494.31	6.3434
228	12.116	516.57	449.67	6.0990	288	9.5107	580.29	495.06	6.3471
229	12.061	517.64	450.43	6.1036	289	9.4770	581.35	495.81	6.3508
230	12.006	518.71	451.19	6.1083	290	9.4435	582.40	496.57	6.3544
231	11.951	519.78	451.95	6.1129	291	9.4103	583.46	497.32	6.3580
232	11.897	520.85	452.71	6.1175	292	9.3773	584.52	498.07	6.3617
233	11.843	521.92	453.48	6.1221	293	9.3445	585.57	498.83	6.3653
234	11.790	522.99	454.24	6.1267	294	9.3120	586.63	499.58	6.3689
235	11.738	524.05	455.00	6.1313	295	9.2797	587.68	500.33	6.3724
236	11.686	525.12	455.76	6.1358	296	9.2477	588.74	501.08	6.3760
237	11.634	526.19	456.51	6.1403	297	9.2158	589.79	501.84	6.3796
238	11.583	527.25	457.27	6.1448	298	9.1842	590.85	502.59	6.3831
239	11.533	528.32	458.03	6.1493	299	9.1529	591.90	503.34	6.3866
240	11.482	529.39	458.79	6.1537	300	9.1217	592.96	504.09	6.3902

9.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	29.086	395.12	363.76	5.3399
					122	28.732	396.40	364.66	5.3504
					123	28.388	397.67	365.55	5.3608
					124	28.055	398.94	366.44	5.3711
					125	27.732	400.20	367.32	5.3812
					126	27.418	401.45	368.19	5.3912
					127	27.113	402.70	369.07	5.4010
					128	26.816	403.94	369.94	5.4108
					129	26.528	405.18	370.80	5.4204
70	837.19	125.13	124.04	2.6601	130	26.247	406.41	371.66	5.4299
71	833.37	127.35	126.26	2.6916	131	25.974	407.63	372.52	5.4393
72	829.50	129.57	128.48	2.7227	132	25.707	408.85	373.38	5.4485
73	825.60	131.79	130.69	2.7533	133	25.447	410.07	374.23	5.4577
74	821.65	134.01	132.90	2.7835	134	25.194	411.28	375.08	5.4668
75	817.67	136.22	135.10	2.8132	135	24.947	412.48	375.93	5.4757
76	813.66	138.43	137.31	2.8425	136	24.705	413.68	376.77	5.4846
77	809.60	140.64	139.51	2.8713	137	24.469	414.88	377.61	5.4934
78	805.52	142.85	141.71	2.8998	138	24.239	416.07	378.45	5.5020
79	801.39	145.05	143.91	2.9279	139	24.013	417.26	379.29	5.5106
80	797.23	147.26	146.11	2.9557	140	23.793	418.45	380.12	5.5191
81	793.03	149.46	148.31	2.9831	141	23.578	419.63	380.95	5.5275
82	788.79	151.67	150.51	3.0101	142	23.367	420.81	381.78	5.5359
83	784.52	153.87	152.71	3.0369	143	23.160	421.98	382.61	5.5441
84	780.20	156.07	154.90	3.0633	144	22.958	423.16	383.44	5.5523
85	775.85	158.28	157.10	3.0894	145	22.760	424.33	384.26	5.5604
86	771.45	160.48	159.30	3.1152	146	22.566	425.49	385.08	5.5684
87	767.01	162.69	161.50	3.1407	147	22.375	426.66	385.90	5.5763
88	762.53	164.90	163.70	3.1659	148	22.189	427.82	386.72	5.5842
89	758.00	167.11	165.90	3.1909	149	22.006	428.98	387.54	5.5920
90	753.41	169.32	168.11	3.2156	150	21.827	430.13	388.35	5.5998
91	748.78	171.53	170.31	3.2400	151	21.650	431.29	389.17	5.6074
92	744.09	173.75	172.52	3.2643	152	21.478	432.44	389.98	5.6150
93	739.35	175.96	174.73	3.2883	153	21.308	433.59	390.79	5.6226
94	734.55	178.19	176.95	3.3120	154	21.141	434.74	391.60	5.6300
95	729.68	180.42	179.17	3.3356	155	20.978	435.88	392.41	5.6374
96	724.74	182.65	181.39	3.3590	156	20.817	437.02	393.22	5.6448
97	719.74	184.89	183.62	3.3822	157	20.659	438.16	394.02	5.6521
98	714.65	187.14	185.86	3.4053	158	20.504	439.30	394.83	5.6593
99	709.49	189.39	188.11	3.4282	159	20.351	440.44	395.63	5.6665
100	704.24	191.66	190.36	3.4510	160	20.201	441.57	396.43	5.6736
101	698.89	193.93	192.63	3.4736	161	20.054	442.71	397.23	5.6806
102	693.44	196.22	194.91	3.4962	162	19.908	443.84	398.03	5.6876
103	687.89	198.53	197.20	3.5187	163	19.766	444.97	398.83	5.6946
104	682.21	200.85	199.51	3.5411	164	19.625	446.10	399.63	5.7015
105	676.41	203.19	201.84	3.5635	165	19.487	447.22	400.43	5.7083
106	670.47	205.55	204.19	3.5859	166	19.351	448.35	401.22	5.7151
107	664.37	207.94	206.57	3.6084	167	19.217	449.47	402.02	5.7219
* 107.497	661.28	209.14	207.76	3.6195	168	19.085	450.59	402.81	5.7286
* 107.497	35.451	376.67	350.95	5.1780	169	18.955	451.71	403.60	5.7352
108	35.139	377.41	351.46	5.1849	170	18.827	452.83	404.39	5.7418
109	34.542	378.87	352.47	5.1983					
110	33.974	380.30	353.46	5.2114					
111	33.433	381.72	354.44	5.2242	171	18.701	453.95	405.19	5.7484
112	32.916	383.12	355.41	5.2368	172	18.577	455.06	405.98	5.7549
113	32.421	384.50	356.37	5.2490	173	18.455	456.18	406.77	5.7613
114	31.946	385.87	357.32	5.2611	174	18.334	457.29	407.55	5.7678
115	31.491	387.22	358.26	5.2729	175	18.215	458.41	408.34	5.7741
116	31.053	388.56	359.20	5.2846	176	18.098	459.52	409.13	5.7805
117	30.631	389.90	360.12	5.2960	177	17.983	460.63	409.92	5.7868
118	30.224	391.22	361.04	5.3072	178	17.869	461.74	410.70	5.7930
119	29.832	392.52	361.96	5.3183	179	17.757	462.84	411.49	5.7992
120	29.453	393.82	362.86	5.3291	180	17.646	463.95	412.27	5.8054

\* PHASE CHANGE

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	17.537	465.06	413.05	5.8115	241	12.876	530.07	459.25	6.1219
182	17.429	466.16	413.84	5.8176	242	12.821	531.14	460.01	6.1264
183	17.323	467.26	414.62	5.8236	243	12.765	532.21	460.77	6.1308
184	17.218	468.37	415.40	5.8296	244	12.711	533.28	461.53	6.1352
185	17.114	469.47	416.18	5.8356	245	12.656	534.34	462.29	6.1395
186	17.012	470.57	416.96	5.8415	246	12.602	535.41	463.05	6.1439
187	16.911	471.67	417.74	5.8474	247	12.549	536.48	463.81	6.1482
188	16.812	472.77	418.52	5.8533	248	12.496	537.55	464.57	6.1525
189	16.713	473.86	419.30	5.8591	249	12.444	538.61	465.33	6.1568
190	16.616	474.96	420.08	5.8649	250	12.392	539.68	466.09	6.1611
191	16.520	476.06	420.86	5.8707	251	12.340	540.74	466.85	6.1653
192	16.426	477.15	421.63	5.8764	252	12.289	541.81	467.61	6.1696
193	16.332	478.25	422.41	5.8821	253	12.239	542.88	468.36	6.1738
194	16.240	479.34	423.19	5.8877	254	12.189	543.94	469.12	6.1780
195	16.149	480.43	423.96	5.8933	255	12.139	545.01	469.88	6.1822
196	16.059	481.52	424.74	5.8989	256	12.089	546.07	470.64	6.1864
197	15.970	482.62	425.51	5.9045	257	12.041	547.14	471.40	6.1905
198	15.882	483.71	426.29	5.9100	258	11.992	548.20	472.16	6.1946
199	15.795	484.80	427.06	5.9155	259	11.944	549.26	472.91	6.1988
200	15.709	485.88	427.83	5.9209	260	11.896	550.33	473.67	6.2028
201	15.624	486.97	428.61	5.9264	261	11.849	551.39	474.43	6.2069
202	15.540	488.06	429.38	5.9318	262	11.802	552.46	475.19	6.2110
203	15.457	489.15	430.15	5.9371	263	11.755	553.52	475.94	6.2150
204	15.375	490.23	430.92	5.9425	264	11.709	554.58	476.70	6.2191
205	15.294	491.32	431.69	5.9478	265	11.663	555.64	477.46	6.2231
206	15.214	492.41	432.46	5.9531	266	11.618	556.71	478.21	6.2271
207	15.134	493.49	433.23	5.9583	267	11.573	557.77	478.97	6.2311
208	15.056	494.57	434.00	5.9635	268	11.528	558.83	479.73	6.2351
209	14.978	495.66	434.77	5.9687	269	11.484	559.89	480.48	6.2390
210	14.902	496.74	435.54	5.9739	270	11.440	560.95	481.24	6.2429
211	14.826	497.82	436.31	5.9790	271	11.396	562.02	482.00	6.2469
212	14.751	498.90	437.08	5.9841	272	11.353	563.08	482.75	6.2508
213	14.677	499.98	437.85	5.9892	273	11.310	564.14	483.51	6.2547
214	14.603	501.07	438.62	5.9943	274	11.267	565.20	484.26	6.2586
215	14.530	502.15	439.39	5.9993	275	11.225	566.26	485.02	6.2624
216	14.459	503.22	440.15	6.0043	276	11.183	567.32	485.78	6.2663
217	14.387	504.30	440.92	6.0093	277	11.142	568.38	486.53	6.2701
218	14.317	505.38	441.69	6.0143	278	11.100	569.44	487.29	6.2739
219	14.247	506.46	442.45	6.0192	279	11.059	570.50	488.04	6.2777
220	14.178	507.54	443.22	6.0241	280	11.019	571.56	488.80	6.2815
221	14.110	508.61	443.99	6.0290	281	10.978	572.62	489.55	6.2853
222	14.042	509.69	444.75	6.0339	282	10.938	573.68	490.31	6.2891
223	13.976	510.77	445.52	6.0387	283	10.898	574.74	491.06	6.2928
224	13.909	511.84	446.28	6.0435	284	10.859	575.80	491.82	6.2965
225	13.844	512.92	447.05	6.0483	285	10.820	576.86	492.57	6.3003
226	13.779	513.99	447.81	6.0531	286	10.781	577.91	493.33	6.3040
227	13.714	515.07	448.57	6.0578	287	10.742	578.97	494.08	6.3077
228	13.651	516.14	449.34	6.0625	288	10.704	580.03	494.83	6.3113
229	13.588	517.22	450.10	6.0672	289	10.666	581.09	495.59	6.3150
230	13.525	518.29	450.87	6.0719	290	10.628	582.15	496.34	6.3187
231	13.464	519.36	451.63	6.0766	291	10.590	583.20	497.10	6.3223
232	13.402	520.43	452.39	6.0812	292	10.553	584.26	497.85	6.3259
233	13.342	521.51	453.15	6.0858	293	10.516	585.32	498.60	6.3295
234	13.282	522.58	453.92	6.0904	294	10.480	586.38	499.36	6.3332
235	13.222	523.65	454.68	6.0950	295	10.443	587.43	500.11	6.3367
236	13.163	524.72	455.44	6.0995	296	10.407	588.49	500.86	6.3403
237	13.105	525.79	456.20	6.1040	297	10.371	589.55	501.62	6.3439
238	13.047	526.86	456.96	6.1085	298	10.335	590.61	502.37	6.3474
239	12.989	527.93	457.73	6.1130	299	10.300	591.66	503.13	6.3510
240	12.933	529.00	458.49	6.1175	300	10.265	592.72	503.88	6.3545

10.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	32.929	393.34	362.57	5.2981
					122	32.505	394.67	363.50	5.3091
					123	32.095	395.98	364.41	5.3198
					124	31.698	397.29	365.32	5.3304
					125	31.315	398.59	366.23	5.3408
					126	30.943	399.87	367.13	5.3510
					127	30.583	401.15	368.02	5.3612
					128	30.233	402.43	368.91	5.3711
					129	29.893	403.69	369.80	5.3810
70	837.35	125.21	124.00	2.6595	130	29.564	404.95	370.68	5.3907
71	833.53	127.44	126.22	2.6911	131	29.243	406.20	371.56	5.4003
72	829.67	129.66	128.43	2.7221	132	28.931	407.45	372.43	5.4098
73	825.77	131.87	130.65	2.7527	133	28.627	408.69	373.30	5.4192
74	821.83	134.09	132.85	2.7829	134	28.331	409.93	374.16	5.4284
75	817.85	136.30	135.06	2.8126	135	28.043	411.16	375.03	5.4376
76	813.84	138.51	137.26	2.8418	136	27.762	412.38	375.89	5.4466
77	809.80	140.72	139.46	2.8707	137	27.488	413.60	376.74	5.4555
78	805.71	142.92	141.66	2.8992	138	27.220	414.82	377.59	5.4644
79	801.60	145.13	143.86	2.9273	139	26.959	416.03	378.44	5.4731
80	797.44	147.33	146.06	2.9550	140	26.704	417.24	379.29	5.4818
81	793.25	149.53	148.26	2.9824	141	26.455	418.44	380.14	5.4903
82	789.02	151.74	150.45	3.0094	142	26.211	419.64	380.98	5.4988
83	784.75	153.94	152.65	3.0361	143	25.973	420.83	381.82	5.5072
84	780.45	156.14	154.84	3.0625	144	25.739	422.02	382.66	5.5155
85	776.10	158.35	157.04	3.0886	145	25.511	423.21	383.49	5.5237
86	771.71	160.55	159.24	3.1144	146	25.288	424.39	384.33	5.5318
87	767.28	162.75	161.43	3.1399	147	25.069	425.58	385.16	5.5399
88	762.80	164.96	163.63	3.1651	148	24.855	426.75	385.99	5.5479
89	758.28	167.17	165.83	3.1901	149	24.645	427.93	386.81	5.5558
90	753.71	169.38	168.03	3.2148	150	24.439	429.10	387.64	5.5636
91	749.09	171.59	170.24	3.2392	151	24.237	430.27	388.46	5.5714
92	744.41	173.80	172.44	3.2634	152	24.039	431.43	389.28	5.5791
93	739.68	176.02	174.65	3.2874	153	23.845	432.60	390.10	5.5867
94	734.89	178.24	176.86	3.3111	154	23.654	433.76	390.92	5.5943
95	730.04	180.47	179.08	3.3347	155	23.467	434.92	391.74	5.6018
96	725.12	182.70	181.30	3.3581	156	23.284	436.07	392.56	5.6092
97	720.13	184.93	183.53	3.3812	157	23.103	437.23	393.37	5.6166
98	715.06	187.18	185.76	3.4043	158	22.926	438.38	394.18	5.6239
99	709.92	189.43	188.00	3.4271	159	22.752	439.53	394.99	5.6311
100	704.68	191.69	190.25	3.4499	160	22.581	440.68	395.80	5.6383
101	699.36	193.96	192.52	3.4725					
102	693.93	196.25	194.79	3.4950	161	22.413	441.82	396.61	5.6455
103	688.40	198.55	197.08	3.5175	162	22.248	442.96	397.42	5.6525
104	682.76	200.87	199.38	3.5399	163	22.085	444.10	398.23	5.6596
105	676.99	203.20	201.71	3.5622	164	21.925	445.24	399.03	5.6665
106	671.08	205.56	204.05	3.5846	165	21.768	446.38	399.83	5.6734
107	665.02	207.94	206.42	3.6069	166	21.614	447.52	400.64	5.6803
108	658.79	210.35	208.81	3.6294	167	21.462	448.65	401.44	5.6871
109	652.39	212.80	211.24	3.6519	168	21.312	449.78	402.24	5.6939
* 109.167	651.29	213.21	211.65	3.6557	169	21.164	450.91	403.04	5.7006
* 109.167	39.529	376.58	350.94	5.1522	170	21.019	452.04	403.84	5.7072
110	38.932	377.85	351.82	5.1638					
111	38.250	379.35	352.86	5.1774	171	20.877	453.17	404.63	5.7138
112	37.604	380.83	353.88	5.1906	172	20.736	454.29	405.43	5.7204
113	36.989	382.28	354.89	5.2036	173	20.597	455.42	406.22	5.7269
114	36.402	383.72	355.89	5.2162	174	20.461	456.54	407.02	5.7334
115	35.842	385.14	356.87	5.2286	175	20.326	457.66	407.81	5.7398
116	35.307	386.54	357.84	5.2407	176	20.194	458.78	408.60	5.7462
117	34.793	387.93	358.81	5.2526	177	20.063	459.90	409.40	5.7525
118	34.300	389.30	359.76	5.2643	178	19.934	461.02	410.19	5.7588
119	33.826	390.66	360.70	5.2758	179	19.807	462.13	410.98	5.7651
120	33.369	392.01	361.64	5.2871	180	19.682	463.25	411.77	5.7713

\* PHASE CHANGE

## 10.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	19.559	464.36	412.56	5.7775	241	14.323	529.69	458.94	6.0894
182	19.437	465.47	413.34	5.7836	242	14.261	530.76	459.71	6.0939
183	19.317	466.59	414.13	5.7897	243	14.199	531.83	460.47	6.0983
184	19.199	467.70	414.92	5.7957	244	14.138	532.90	461.23	6.1027
185	19.082	468.80	415.70	5.8017	245	14.077	533.97	461.99	6.1071
186	18.966	469.91	416.49	5.8077	246	14.017	535.04	462.76	6.1114
187	18.853	471.02	417.27	5.8136	247	13.957	536.11	463.52	6.1158
188	18.740	472.12	418.06	5.8195	248	13.898	537.18	464.28	6.1201
189	18.630	473.23	418.84	5.8254	249	13.840	538.25	465.04	6.1244
190	18.520	474.33	419.62	5.8312	250	13.782	539.32	465.80	6.1287
191	18.412	475.44	420.40	5.8370	251	13.724	540.39	466.56	6.1329
192	18.306	476.54	421.19	5.8428	252	13.667	541.46	467.32	6.1372
193	18.200	477.64	421.97	5.8485	253	13.611	542.53	468.08	6.1414
194	18.096	478.74	422.75	5.8542	254	13.555	543.60	468.84	6.1456
195	17.994	479.84	423.53	5.8598	255	13.499	544.67	469.60	6.1498
196	17.892	480.94	424.31	5.8654	256	13.444	545.73	470.36	6.1540
197	17.792	482.03	425.08	5.8710	257	13.389	546.80	471.12	6.1582
198	17.693	483.13	425.86	5.8766	258	13.335	547.87	471.88	6.1623
199	17.595	484.23	426.64	5.8821	259	13.281	548.94	472.64	6.1664
200	17.499	485.32	427.42	5.8876	260	13.228	550.00	473.40	6.1705
201	17.403	486.41	428.19	5.8930	261	13.175	551.07	474.16	6.1746
202	17.309	487.51	428.97	5.8985	262	13.123	552.13	474.92	6.1787
203	17.216	488.60	429.74	5.9039	263	13.071	553.20	475.68	6.1828
204	17.124	489.69	430.52	5.9092	264	13.019	554.27	476.44	6.1868
205	17.032	490.78	431.29	5.9146	265	12.968	555.33	477.20	6.1908
206	16.942	491.87	432.07	5.9199	266	12.918	556.40	477.96	6.1949
207	16.853	492.96	432.84	5.9251	267	12.867	557.46	478.71	6.1989
208	16.765	494.05	433.62	5.9304	268	12.817	558.52	479.47	6.2028
209	16.678	495.14	434.39	5.9356	269	12.768	559.59	480.23	6.2068
210	16.592	496.23	435.16	5.9408	270	12.719	560.65	480.99	6.2107
211	16.507	497.32	435.93	5.9460	271	12.670	561.72	481.75	6.2147
212	16.423	498.40	436.70	5.9511	272	12.622	562.78	482.50	6.2186
213	16.339	499.49	437.48	5.9562	273	12.574	563.84	483.26	6.2225
214	16.257	500.57	438.25	5.9613	274	12.526	564.91	484.02	6.2264
215	16.176	501.66	439.02	5.9664	275	12.479	565.97	484.77	6.2303
216	16.095	502.74	439.79	5.9714	276	12.432	567.03	485.53	6.2341
217	16.015	503.83	440.56	5.9764	277	12.386	568.10	486.29	6.2380
218	15.936	504.91	441.33	5.9814	278	12.340	569.16	487.05	6.2418
219	15.858	505.99	442.10	5.9863	279	12.294	570.22	487.80	6.2456
220	15.781	507.07	442.87	5.9912	280	12.249	571.28	488.56	6.2494
221	15.704	508.16	443.63	5.9962	281	12.204	572.34	489.31	6.2532
222	15.628	509.24	444.40	6.0010	282	12.159	573.40	490.07	6.2570
223	15.553	510.32	445.17	6.0059	283	12.115	574.47	490.83	6.2607
224	15.479	511.40	445.94	6.0107	284	12.071	575.53	491.58	6.2644
225	15.406	512.48	446.71	6.0155	285	12.027	576.59	492.34	6.2682
226	15.333	513.55	447.47	6.0203	286	11.984	577.65	493.10	6.2719
227	15.261	514.63	448.24	6.0251	287	11.940	578.71	493.85	6.2756
228	15.190	515.71	449.01	6.0298	288	11.898	579.77	494.61	6.2793
229	15.119	516.79	449.77	6.0345	289	11.855	580.83	495.36	6.2830
230	15.049	517.87	450.54	6.0392	290	11.813	581.89	496.12	6.2866
231	14.980	518.94	451.30	6.0439	291	11.771	582.95	496.87	6.2903
232	14.912	520.02	452.07	6.0485	292	11.730	584.01	497.63	6.2939
233	14.844	521.09	452.83	6.0532	293	11.689	585.07	498.38	6.2975
234	14.776	522.17	453.60	6.0578	294	11.648	586.13	499.14	6.3011
235	14.710	523.24	454.36	6.0623	295	11.607	587.19	499.89	6.3047
236	14.644	524.32	455.13	6.0669	296	11.567	588.25	500.65	6.3083
237	14.579	525.39	455.89	6.0715	297	11.527	589.31	501.40	6.3119
238	14.514	526.47	456.65	6.0760	298	11.487	590.36	502.16	6.3154
239	14.450	527.54	457.42	6.0805	299	11.448	591.42	502.91	6.3190
240	14.386	528.61	458.18	6.0850	300	11.408	592.48	503.67	6.3225

15.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	55.278	383.20	355.70	5.1161
					122	54.276	384.84	356.84	5.1297
					123	53.329	386.45	357.95	5.1428
					124	52.432	388.03	359.05	5.1556
					125	51.581	389.59	360.12	5.1681
					126	50.770	391.12	361.18	5.1803
					127	49.997	392.63	362.23	5.1923
					128	49.257	394.12	363.26	5.2039
					129	48.549	395.59	364.28	5.2154
70	838.13	125.62	123.81	2.6568	130	47.870	397.04	365.29	5.2266
71	834.33	127.84	126.02	2.6883	131	47.218	398.48	366.29	5.2376
72	830.49	130.06	128.23	2.7193	132	46.591	399.90	367.28	5.2484
73	826.61	132.27	130.44	2.7498	133	45.986	401.31	368.26	5.2590
74	822.70	134.48	132.64	2.7799	134	45.404	402.70	369.23	5.2695
75	818.75	136.69	134.84	2.8096	135	44.841	404.08	370.19	5.2798
76	814.77	138.90	137.03	2.8388	136	44.297	405.45	371.14	5.2899
77	810.75	141.10	139.23	2.8676	137	43.771	406.81	372.09	5.2998
78	806.70	143.30	141.42	2.8960	138	43.262	408.16	373.03	5.3096
79	802.61	145.50	143.61	2.9240	139	42.769	409.50	373.97	5.3193
80	798.49	147.70	145.80	2.9517	140	42.290	410.83	374.89	5.3289
81	794.33	149.90	147.99	2.9790	141	41.826	412.16	375.82	5.3383
82	790.14	152.10	150.17	3.0060	142	41.374	413.47	376.74	5.3475
83	785.91	154.29	152.36	3.0326	143	40.936	414.78	377.65	5.3567
84	781.64	156.49	154.55	3.0590	144	40.509	416.07	378.55	5.3658
85	777.33	158.69	156.73	3.0850	145	40.094	417.37	379.46	5.3747
86	772.99	160.89	158.92	3.1107	146	39.690	418.65	380.36	5.3835
87	768.60	163.08	161.11	3.1361	147	39.296	419.93	381.25	5.3922
88	764.17	165.28	163.29	3.1612	148	38.912	421.20	382.14	5.4009
89	759.70	167.48	165.48	3.1861	149	38.538	422.47	383.03	5.4094
90	755.18	169.68	167.67	3.2107	150	38.173	423.73	383.91	5.4178
91	750.61	171.89	169.86	3.2350	151	37.816	424.98	384.79	5.4262
92	746.00	174.09	172.05	3.2591	152	37.468	426.23	385.66	5.4344
93	741.33	176.30	174.25	3.2830	153	37.127	427.47	386.54	5.4426
94	736.60	178.51	176.44	3.3067	154	36.794	428.71	387.41	5.4506
95	731.82	180.72	178.65	3.3301	155	36.469	429.95	388.27	5.4586
96	726.97	182.94	180.85	3.3533	156	36.151	431.18	389.14	5.4665
97	722.06	185.16	183.06	3.3764	157	35.839	432.40	390.00	5.4744
98	717.08	187.39	185.28	3.3993	158	35.534	433.63	390.85	5.4821
99	712.02	189.63	187.50	3.4220	159	35.236	434.84	391.71	5.4898
100	706.88	191.88	189.73	3.4446	160	34.943	436.06	392.56	5.4974
101	701.66	194.13	191.97	3.4670	161	34.657	437.27	393.41	5.5050
102	696.35	196.40	194.22	3.4894	162	34.376	438.48	394.26	5.5124
103	690.94	198.68	196.48	3.5116	163	34.100	439.68	395.11	5.5198
104	685.43	200.97	198.76	3.5338	164	33.830	440.88	395.95	5.5272
105	679.80	203.28	201.05	3.5559	165	33.565	442.07	396.79	5.5344
106	674.05	205.61	203.36	3.5780	166	33.305	443.27	397.63	5.5417
107	668.16	207.96	205.69	3.6001	167	33.049	444.46	398.47	5.5488
108	662.13	210.34	208.05	3.6222	168	32.799	445.65	399.31	5.5559
109	655.94	212.75	210.43	3.6443	169	32.552	446.83	400.14	5.5629
110	649.56	215.18	212.84	3.6666	170	32.311	448.01	400.97	5.5699
111	643.00	217.66	215.29	3.6890					
112	636.21	220.17	217.78	3.7115	171	32.073	449.19	401.80	5.5768
113	629.17	222.73	220.32	3.7343	172	31.839	450.37	402.63	5.5837
114	621.86	225.35	222.91	3.7574	173	31.610	451.54	403.46	5.5905
115	614.22	228.04	225.56	3.7809	174	31.384	452.71	404.28	5.5972
116	606.21	230.80	228.29	3.8048	175	31.162	453.88	405.11	5.6039
* 116.076	605.58	231.01	228.50	3.8066	176	30.944	455.05	405.93	5.6106
* 116.076	61.314	374.47	349.68	5.0425	177	30.729	456.21	406.75	5.6172
117	60.007	376.21	350.88	5.0574	178	30.518	457.37	407.57	5.6237
118	58.697	378.03	352.13	5.0729	179	30.310	458.53	408.39	5.6302
119	57.479	379.79	353.35	5.0878	180	30.105	459.69	409.21	5.6366
120	56.343	381.52	354.54	5.1022					

\* PHASE CHANGE

## 15.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	29.904	460.85	410.02	5.6430	241	21.605	527.77	457.42	5.9628
182	29.706	462.00	410.84	5.6494	242	21.509	528.85	458.19	5.9673
183	29.510	463.15	411.65	5.6557	243	21.413	529.94	458.96	5.9718
184	29.318	464.30	412.46	5.6620	244	21.318	531.03	459.74	5.9762
185	29.128	465.45	413.27	5.6682	245	21.225	532.12	460.51	5.9807
186	28.942	466.60	414.08	5.6744	246	21.132	533.21	461.28	5.9851
187	28.758	467.74	414.89	5.6805	247	21.040	534.29	462.05	5.9895
188	28.576	468.88	415.70	5.6866	248	20.948	535.38	462.82	5.9939
189	28.397	470.02	416.50	5.6927	249	20.858	536.46	463.60	5.9983
190	28.221	471.16	417.31	5.6987	250	20.769	537.55	464.37	6.0026
191	28.047	472.30	418.11	5.7046	251	20.680	538.63	465.14	6.0070
192	27.876	473.44	418.91	5.7106	252	20.592	539.72	465.91	6.0113
193	27.707	474.57	419.72	5.7165	253	20.505	540.80	466.68	6.0155
194	27.540	475.71	420.52	5.7223	254	20.418	541.88	467.45	6.0198
195	27.376	476.84	421.32	5.7281	255	20.333	542.97	468.22	6.0241
196	27.214	477.97	422.12	5.7339	256	20.248	544.05	468.98	6.0283
197	27.054	479.10	422.92	5.7397	257	20.164	545.13	469.75	6.0325
198	26.896	480.22	423.71	5.7454	258	20.081	546.21	470.52	6.0367
199	26.740	481.35	424.51	5.7511	259	19.998	547.29	471.29	6.0409
200	26.586	482.48	425.31	5.7567	260	19.916	548.37	472.06	6.0451
201	26.434	483.60	426.10	5.7623	261	19.835	549.45	472.83	6.0492
202	26.284	484.72	426.90	5.7679	262	19.755	550.53	473.59	6.0533
203	26.136	485.84	427.69	5.7734	263	19.675	551.61	474.36	6.0574
204	25.990	486.96	428.48	5.7789	264	19.596	552.69	475.13	6.0615
205	25.845	488.08	429.28	5.7844	265	19.517	553.77	475.89	6.0656
206	25.703	489.20	430.07	5.7898	266	19.440	554.84	476.66	6.0697
207	25.562	490.32	430.86	5.7952	267	19.363	555.92	477.43	6.0737
208	25.423	491.43	431.65	5.8006	268	19.286	557.00	478.19	6.0777
209	25.285	492.55	432.44	5.8060	269	19.210	558.08	478.96	6.0818
210	25.149	493.66	433.23	5.8113	270	19.135	559.15	479.72	6.0858
211	25.015	494.77	434.02	5.8166	271	19.061	560.23	480.49	6.0897
212	24.882	495.89	434.80	5.8218	272	18.987	561.30	481.25	6.0937
213	24.751	497.00	435.59	5.8270	273	18.913	562.38	482.02	6.0976
214	24.621	498.11	436.38	5.8322	274	18.841	563.45	482.78	6.1016
215	24.493	499.22	437.16	5.8374	275	18.768	564.53	483.55	6.1055
216	24.367	500.32	437.95	5.8425	276	18.697	565.60	484.31	6.1094
217	24.241	501.43	438.73	5.8477	277	18.626	566.68	485.08	6.1133
218	24.117	502.54	439.52	5.8527	278	18.555	567.75	485.84	6.1171
219	23.995	503.64	440.30	5.8578	279	18.485	568.82	486.60	6.1210
220	23.874	504.75	441.08	5.8628	280	18.416	569.90	487.37	6.1248
221	23.754	505.85	441.87	5.8678	281	18.347	570.97	488.13	6.1286
222	23.636	506.95	442.65	5.8728	282	18.279	572.04	488.89	6.1325
223	23.518	508.05	443.43	5.8778	283	18.211	573.11	489.66	6.1363
224	23.402	509.16	444.21	5.8827	284	18.144	574.19	490.42	6.1400
225	23.288	510.26	444.99	5.8876	285	18.077	575.26	491.18	6.1438
226	23.174	511.35	445.77	5.8925	286	18.011	576.33	491.94	6.1475
227	23.062	512.45	446.55	5.8973	287	17.945	577.40	492.70	6.1513
228	22.951	513.55	447.33	5.9021	288	17.880	578.47	493.47	6.1550
229	22.841	514.65	448.11	5.9069	289	17.816	579.54	494.23	6.1587
230	22.732	515.75	448.89	5.9117	290	17.751	580.61	494.99	6.1624
231	22.624	516.84	449.66	5.9165	291	17.688	581.68	495.75	6.1661
232	22.518	517.94	450.44	5.9212	292	17.624	582.75	496.51	6.1698
233	22.412	519.03	451.22	5.9259	293	17.562	583.82	497.27	6.1734
234	22.308	520.13	451.99	5.9306	294	17.499	584.89	498.03	6.1771
235	22.205	521.22	452.77	5.9353	295	17.438	585.96	498.80	6.1807
236	22.102	522.31	453.55	5.9399	296	17.376	587.02	499.56	6.1843
237	22.001	523.40	454.32	5.9445	297	17.315	588.09	500.32	6.1879
238	21.900	524.50	455.10	5.9491	298	17.255	589.16	501.08	6.1915
239	21.801	525.59	455.87	5.9537	299	17.195	590.23	501.84	6.1951
240	21.703	526.68	456.64	5.9582	300	17.135	591.30	502.60	6.1986

20.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	567.40	244.77	241.20	3.9155
					* 121.475	562.30	246.31	242.71	3.9282
					* 121.475	86.447	370.17	346.73	4.9478
					122	85.003	371.46	347.62	4.9584
					123	82.501	373.81	349.24	4.9776
					124	80.266	376.03	350.78	4.9955
					125	78.246	378.14	352.24	5.0125
					126	76.401	380.17	353.64	5.0286
					127	74.704	382.12	354.99	5.0441
					128	73.133	384.01	356.30	5.0589
70	838.90	126.04	123.62	2.6541	129	71.670	385.85	357.57	5.0732
					130	70.301	387.63	358.81	5.0870
71	835.12	128.25	125.83	2.6855	131	69.015	389.38	360.02	5.1004
72	831.31	130.47	128.03	2.7165	132	67.803	391.09	361.20	5.1133
73	827.45	132.68	130.23	2.7470	133	66.656	392.76	362.36	5.1260
74	823.57	134.88	132.42	2.7770	134	65.569	394.40	363.49	5.1383
75	819.65	137.09	134.61	2.8066	135	64.536	396.01	364.61	5.1503
76	815.69	139.29	136.80	2.8357	136	63.551	397.60	365.72	5.1620
77	811.70	141.49	138.99	2.8645	137	62.611	399.17	366.80	5.1734
78	807.68	143.68	141.17	2.8928	138	61.711	400.71	367.87	5.1847
79	803.62	145.88	143.36	2.9208	139	60.849	402.23	368.93	5.1957
80	799.53	148.07	145.54	2.9484	140	60.022	403.74	369.97	5.2064
81	795.40	150.27	147.72	2.9757	141	59.227	405.22	371.01	5.2170
82	791.24	152.46	149.90	3.0026	142	58.461	406.69	372.03	5.2274
83	787.05	154.65	152.08	3.0292	143	57.724	408.15	373.04	5.2376
84	782.82	156.84	154.25	3.0554	144	57.012	409.59	374.04	5.2476
85	778.55	159.03	156.43	3.0814	145	56.325	411.01	375.03	5.2575
86	774.25	161.22	158.61	3.1070	146	55.661	412.43	376.02	5.2672
87	769.91	163.42	160.78	3.1323	147	55.018	413.83	377.00	5.2768
88	765.52	165.61	162.96	3.1574	148	54.395	415.22	377.97	5.2862
89	761.10	167.80	165.14	3.1822	149	53.792	416.60	378.93	5.2955
90	756.63	169.99	167.31	3.2067	150	53.206	417.97	379.88	5.3047
91	752.11	172.19	169.49	3.2309	151	52.637	419.33	380.83	5.3137
92	747.55	174.38	171.67	3.2549	152	52.085	420.69	381.78	5.3227
93	742.94	176.58	173.85	3.2787	153	51.548	422.03	382.72	5.3315
94	738.28	178.78	176.04	3.3023	154	51.025	423.36	383.65	5.3402
95	733.56	180.98	178.22	3.3256	155	50.517	424.69	384.57	5.3487
96	728.78	183.19	180.41	3.3487	156	50.021	426.01	385.50	5.3572
97	723.94	185.40	182.60	3.3716	157	49.539	427.32	386.41	5.3656
98	719.04	187.62	184.80	3.3944	158	49.068	428.63	387.33	5.3739
99	714.07	189.84	187.01	3.4170	159	48.609	429.93	388.24	5.3821
100	709.02	192.08	189.22	3.4394	160	48.160	431.22	389.14	5.3902
101	703.90	194.31	191.44	3.4617	161	47.723	432.51	390.04	5.3982
102	698.69	196.56	193.66	3.4838	162	47.295	433.79	390.94	5.4061
103	693.40	198.82	195.90	3.5059	163	46.877	435.06	391.83	5.4140
104	688.00	201.10	198.15	3.5279	164	46.468	436.33	392.72	5.4218
105	682.51	203.38	200.41	3.5497	165	46.069	437.59	393.61	5.4294
106	676.90	205.69	202.69	3.5716	166	45.678	438.85	394.49	5.4370
107	671.17	208.01	204.99	3.5934	167	45.295	440.11	395.37	5.4446
108	665.31	210.36	207.31	3.6152	168	44.920	441.36	396.25	5.4520
109	659.31	212.73	209.65	3.6371	169	44.553	442.60	397.12	5.4594
110	653.15	215.13	212.02	3.6590	170	44.194	443.85	397.99	5.4668
111	646.82	217.56	214.42	3.6810	171	43.841	445.08	398.86	5.4740
112	640.30	220.02	216.86	3.7031	172	43.495	446.32	399.72	5.4812
113	633.57	222.53	219.33	3.7254	173	43.156	447.54	400.59	5.4883
114	626.60	225.09	221.85	3.7480	174	42.824	448.77	401.45	5.4954
115	619.37	227.70	224.43	3.7708	175	42.498	449.99	402.31	5.5024
116	611.83	230.37	227.06	3.7939	176	42.177	451.21	403.16	5.5093
117	603.93	233.12	229.76	3.8175	177	41.863	452.42	404.02	5.5162
118	595.63	235.86	232.46	3.8408	178	41.554	453.63	404.87	5.5230
119	586.85	238.70	235.25	3.8649	179	41.251	454.84	405.72	5.5298
120	577.48	241.68	238.17	3.8897	180	40.953	456.05	406.56	5.5365

\* PHASE CHANGE



## 20.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	40.660	457.25	407.41	5.5432	241	28.964	525.85	455.88	5.8711
182	40.373	458.45	408.25	5.5498	242	28.832	526.95	456.67	5.8757
183	40.090	459.64	409.09	5.5563	243	28.700	528.06	457.45	5.8802
184	39.811	460.84	409.93	5.5628	244	28.570	529.16	458.23	5.8848
185	39.538	462.03	410.77	5.5693	245	28.441	530.27	459.02	5.8893
186	39.269	463.21	411.61	5.5757	246	28.314	531.37	459.80	5.8938
187	39.004	464.40	412.44	5.5820	247	28.188	532.47	460.58	5.8982
188	38.743	465.58	413.28	5.5883	248	28.063	533.57	461.36	5.9027
189	38.487	466.76	414.11	5.5946	249	27.939	534.68	462.14	5.9071
190	38.234	467.94	414.94	5.6008	250	27.816	535.78	462.92	5.9115
191	37.985	469.11	415.77	5.6070	251	27.695	536.88	463.70	5.9159
192	37.740	470.29	416.59	5.6131	252	27.574	537.98	464.48	5.9203
193	37.499	471.46	417.42	5.6192	253	27.455	539.07	465.26	5.9246
194	37.262	472.63	418.24	5.6252	254	27.337	540.17	466.04	5.9290
195	37.027	473.79	419.06	5.6312	255	27.220	541.27	466.82	5.9333
196	36.797	474.96	419.89	5.6372	256	27.104	542.37	467.60	5.9376
197	36.569	476.12	420.71	5.6431	257	26.989	543.46	468.38	5.9418
198	36.345	477.28	421.53	5.6490	258	26.875	544.56	469.15	5.9461
199	36.124	478.44	422.34	5.6548	259	26.763	545.65	469.93	5.9503
200	35.906	479.60	423.16	5.6606	260	26.651	546.75	470.71	5.9545
201	35.692	480.75	423.98	5.6664	261	26.540	547.84	471.48	5.9587
202	35.480	481.91	424.79	5.6721	262	26.430	548.93	472.26	5.9629
203	35.271	483.06	425.60	5.6778	263	26.322	550.02	473.03	5.9671
204	35.064	484.21	426.41	5.6834	264	26.214	551.12	473.81	5.9712
205	34.861	485.36	427.23	5.6890	265	26.107	552.21	474.58	5.9754
206	34.660	486.50	428.04	5.6946	266	26.001	553.30	475.36	5.9795
207	34.462	487.65	428.84	5.7002	267	25.896	554.39	476.13	5.9836
208	34.266	488.79	429.65	5.7057	268	25.792	555.48	476.91	5.9876
209	34.073	489.93	430.46	5.7112	269	25.689	556.57	477.68	5.9917
210	33.883	491.08	431.27	5.7166	270	25.586	557.66	478.45	5.9957
211	33.695	492.21	432.07	5.7220	271	25.485	558.75	479.23	5.9997
212	33.509	493.35	432.88	5.7274	272	25.384	559.83	480.00	6.0038
213	33.325	494.49	433.68	5.7327	273	25.284	560.92	480.77	6.0077
214	33.144	495.62	434.48	5.7381	274	25.185	562.01	481.54	6.0117
215	32.965	496.76	435.28	5.7433	275	25.087	563.09	482.32	6.0157
216	32.788	497.89	436.08	5.7486	276	24.990	564.18	483.09	6.0196
217	32.614	499.02	436.88	5.7538	277	24.894	565.27	483.86	6.0235
218	32.441	500.15	437.68	5.7590	278	24.798	566.35	484.63	6.0275
219	32.270	501.28	438.48	5.7642	279	24.703	567.44	485.40	6.0313
220	32.102	502.41	439.28	5.7693	280	24.609	568.52	486.17	6.0352
221	31.935	503.53	440.08	5.7744	281	24.516	569.60	486.94	6.0391
222	31.771	504.66	440.87	5.7795	282	24.423	570.69	487.71	6.0429
223	31.608	505.78	441.67	5.7846	283	24.331	571.77	488.48	6.0468
224	31.447	506.91	442.46	5.7896	284	24.240	572.85	489.25	6.0506
225	31.288	508.03	443.26	5.7946	285	24.149	573.93	490.02	6.0544
226	31.130	509.15	444.05	5.7995	286	24.060	575.02	490.79	6.0582
227	30.975	510.27	444.84	5.8045	287	23.971	576.10	491.56	6.0620
228	30.821	511.39	445.64	5.8094	288	23.882	577.18	492.32	6.0657
229	30.669	512.51	446.43	5.8143	289	23.795	578.26	493.09	6.0695
230	30.518	513.62	447.22	5.8192	290	23.708	579.34	493.86	6.0732
231	30.369	514.74	448.01	5.8240	291	23.622	580.42	494.63	6.0769
232	30.222	515.85	448.80	5.8288	292	23.536	581.50	495.40	6.0806
233	30.076	516.97	449.59	5.8336	293	23.451	582.58	496.16	6.0843
234	29.932	518.08	450.38	5.8384	294	23.367	583.66	496.93	6.0880
235	29.790	519.19	451.16	5.8431	295	23.283	584.73	497.70	6.0916
236	29.649	520.30	451.95	5.8478	296	23.200	585.81	498.46	6.0953
237	29.509	521.41	452.74	5.8525	297	23.118	586.89	499.23	6.0989
238	29.371	522.52	453.53	5.8572	298	23.036	587.97	500.00	6.1025
239	29.234	523.63	454.31	5.8618	299	22.955	589.04	500.76	6.1061
240	29.098	524.74	455.10	5.8665	300	22.874	590.12	501.53	6.1097

25.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	575.92	243.79	239.39	3.9001
					122	566.16	246.87	242.39	3.9254
					123	555.61	250.08	245.52	3.9518
					124	544.03	253.52	248.87	3.9796
					125	531.06	257.26	252.49	4.0096
					* 125.967	516.65	261.24	256.34	4.0414
					* 125.967	117.18	363.60	341.99	4.8540
					126	116.98	363.72	342.07	4.8550
					127	111.74	367.13	344.46	4.8819
					128	107.43	370.15	346.57	4.9056
70	839.66	126.45	123.44	2.6514	129	103.77	372.91	348.50	4.9271
					130	100.58	375.46	350.28	4.9468
71	835.91	128.67	125.64	2.6828	131	97.744	377.87	351.95	4.9652
72	832.12	130.88	127.83	2.7137	132	95.195	380.14	353.53	4.9825
73	828.29	133.08	130.02	2.7441	133	92.879	382.32	355.05	4.9989
74	824.43	135.28	132.21	2.7741	134	90.756	384.41	356.50	5.0146
75	820.53	137.48	134.40	2.8036	135	88.796	386.42	357.90	5.0296
76	816.60	139.68	136.58	2.8327	136	86.977	388.37	359.25	5.0440
77	812.64	141.87	138.76	2.8614	137	85.280	390.27	360.57	5.0579
78	808.64	144.07	140.93	2.8897	138	83.689	392.12	361.85	5.0713
79	804.62	146.26	143.11	2.9176	139	82.192	393.92	363.10	5.0843
80	800.56	148.45	145.28	2.9452	140	80.780	395.68	364.32	5.0969
81	796.46	150.64	147.46	2.9724	141	79.442	397.41	365.52	5.1092
82	792.34	152.82	149.63	2.9992	142	78.173	399.10	366.70	5.1212
83	788.18	155.01	151.80	3.0258	143	76.965	400.77	367.85	5.1329
84	783.99	157.20	153.96	3.0519	144	75.814	402.40	368.99	5.1443
85	779.76	159.38	156.13	3.0778	145	74.713	404.02	370.11	5.1554
86	775.49	161.57	158.30	3.1034	146	73.660	405.61	371.22	5.1663
87	771.19	163.75	160.47	3.1286	147	72.651	407.17	372.31	5.1771
88	766.85	165.94	162.63	3.1536	148	71.681	408.72	373.38	5.1875
89	762.47	168.12	164.80	3.1783	149	70.749	410.25	374.45	5.1978
90	758.05	170.31	166.96	3.2027	150	69.852	411.76	375.50	5.2080
91	753.59	172.49	169.13	3.2269	151	68.986	413.26	376.54	5.2179
92	749.08	174.68	171.30	3.2508	152	68.152	414.74	377.57	5.2277
93	744.52	176.87	173.47	3.2745	153	67.345	416.21	378.59	5.2373
94	739.92	179.06	175.64	3.2979	154	66.565	417.66	379.60	5.2467
95	735.26	181.25	177.81	3.3212	155	65.810	419.10	380.61	5.2561
96	730.55	183.45	179.98	3.3442	156	65.078	420.53	381.60	5.2653
97	725.79	185.65	182.16	3.3670	157	64.369	421.94	382.59	5.2743
98	720.96	187.86	184.34	3.3896	158	63.681	423.35	383.57	5.2832
99	716.07	190.07	186.53	3.4120	159	63.013	424.75	384.55	5.2920
100	711.11	192.28	188.72	3.4343	160	62.363	426.13	385.51	5.3007
101	706.07	194.51	190.92	3.4565	161	61.732	427.51	386.47	5.3093
102	700.96	196.74	193.12	3.4785	162	61.117	428.87	387.43	5.3178
103	695.77	198.98	195.34	3.5003	163	60.519	430.23	388.38	5.3261
104	690.49	201.23	197.57	3.5221	164	59.936	431.58	389.32	5.3344
105	685.12	203.50	199.80	3.5438	165	59.368	432.93	390.26	5.3425
106	679.65	205.78	202.05	3.5654	166	58.815	434.26	391.19	5.3506
107	674.06	208.08	204.32	3.5870	167	58.274	435.59	392.12	5.3586
108	668.36	210.40	206.61	3.6086	168	57.747	436.91	393.04	5.3665
109	662.54	212.74	208.91	3.6302	169	57.231	438.23	393.96	5.3743
110	656.57	215.10	211.24	3.6518	170	56.728	439.53	394.88	5.3820
111	650.45	217.49	213.60	3.6734	171	56.236	440.84	395.79	5.3896
112	644.17	219.92	215.99	3.6952	172	55.755	442.13	396.70	5.3972
113	637.70	222.38	218.41	3.7170	173	55.284	443.42	397.60	5.4047
114	631.03	224.88	220.87	3.7391	174	54.824	444.71	398.50	5.4121
115	624.13	227.43	223.37	3.7613	175	54.373	445.99	399.40	5.4194
116	616.98	230.03	225.92	3.7839	176	53.932	447.26	400.29	5.4267
117	609.54	232.69	228.54	3.8067	177	53.499	448.53	401.18	5.4339
118	601.78	235.33	231.12	3.8292	178	53.076	449.80	402.07	5.4410
119	593.63	238.06	233.79	3.8522	179	52.660	451.06	402.96	5.4481
120	585.04	240.89	236.56	3.8759	180	52.253	452.32	403.84	5.4550

\* PHASE CHANGE

## 25.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	51.853	453.57	404.72	5.4620	241	36.398	523.93	454.33	5.7985
182	51.462	454.81	405.59	5.4689	242	36.227	525.05	455.13	5.8032
183	51.077	456.06	406.46	5.4757	243	36.058	526.18	455.92	5.8078
184	50.699	457.30	407.33	5.4824	244	35.891	527.30	456.72	5.8124
185	50.329	458.53	408.20	5.4891	245	35.725	528.42	457.51	5.8170
186	49.965	459.77	409.07	5.4958	246	35.561	529.54	458.31	5.8216
187	49.607	461.00	409.93	5.5024	247	35.399	530.66	459.10	5.8261
188	49.256	462.22	410.79	5.5089	248	35.238	531.78	459.89	5.8306
189	48.910	463.44	411.65	5.5154	249	35.079	532.89	460.68	5.8351
190	48.571	464.66	412.51	5.5218	250	34.921	534.01	461.47	5.8396
191	48.237	465.88	413.36	5.5282	251	34.766	535.12	462.26	5.8440
192	47.909	467.09	414.22	5.5345	252	34.611	536.24	463.05	5.8485
193	47.586	468.30	415.07	5.5408	253	34.458	537.35	463.84	5.8529
194	47.268	469.51	415.92	5.5470	254	34.307	538.47	464.63	5.8573
195	46.956	470.71	416.76	5.5532	255	34.157	539.58	465.42	5.8616
196	46.648	471.91	417.61	5.5594	256	34.009	540.69	466.20	5.8660
197	46.345	473.11	418.45	5.5655	257	33.862	541.80	466.99	5.8703
198	46.047	474.30	419.29	5.5715	258	33.716	542.91	467.78	5.8746
199	45.754	475.50	420.13	5.5775	259	33.572	544.02	468.56	5.8789
200	45.464	476.69	420.97	5.5835	260	33.429	545.13	469.35	5.8832
201	45.180	477.88	421.81	5.5894	261	33.287	546.23	470.14	5.8874
202	44.899	479.06	422.64	5.5953	262	33.147	547.34	470.92	5.8917
203	44.622	480.25	423.48	5.6011	263	33.008	548.45	471.70	5.8959
204	44.350	481.43	424.31	5.6070	264	32.870	549.55	472.49	5.9001
205	44.081	482.61	425.14	5.6127	265	32.734	550.66	473.27	5.9043
206	43.816	483.78	425.97	5.6184	266	32.598	551.76	474.05	5.9084
207	43.555	484.96	426.80	5.6241	267	32.464	552.86	474.84	5.9126
208	43.298	486.13	427.63	5.6298	268	32.331	553.97	475.62	5.9167
209	43.044	487.30	428.45	5.6354	269	32.200	555.07	476.40	5.9208
210	42.793	488.47	429.28	5.6410	270	32.069	556.17	477.18	5.9249
211	42.546	489.64	430.10	5.6465	271	31.940	557.27	477.96	5.9289
212	42.303	490.80	430.92	5.6520	272	31.812	558.37	478.74	5.9330
213	42.062	491.97	431.74	5.6575	273	31.685	559.47	479.52	5.9370
214	41.825	493.13	432.56	5.6629	274	31.559	560.57	480.30	5.9410
215	41.590	494.29	433.38	5.6683	275	31.434	561.67	481.08	5.9450
216	41.359	495.44	434.20	5.6737	276	31.310	562.77	481.86	5.9490
217	41.131	496.60	435.01	5.6791	277	31.187	563.86	482.64	5.9530
218	40.905	497.76	435.83	5.6844	278	31.065	564.96	483.42	5.9569
219	40.683	498.91	436.64	5.6896	279	30.945	566.06	484.20	5.9609
220	40.463	500.06	437.46	5.6949	280	30.825	567.15	484.97	5.9648
221	40.246	501.21	438.27	5.7001	281	30.706	568.25	485.75	5.9687
222	40.031	502.36	439.08	5.7053	282	30.588	569.34	486.53	5.9726
223	39.820	503.51	439.89	5.7104	283	30.472	570.43	487.30	5.9765
224	39.610	504.65	440.70	5.7156	284	30.356	571.53	488.08	5.9803
225	39.403	505.79	441.51	5.7207	285	30.241	572.62	488.86	5.9842
226	39.199	506.94	442.32	5.7257	286	30.127	573.71	489.63	5.9880
227	38.997	508.08	443.12	5.7308	287	30.014	574.80	490.41	5.9918
228	38.798	509.22	443.93	5.7358	288	29.902	575.90	491.18	5.9956
229	38.600	510.36	444.73	5.7408	289	29.791	576.99	491.96	5.9994
230	38.405	511.50	445.54	5.7457	290	29.680	578.08	492.73	6.0031
231	38.212	512.63	446.34	5.7506	291	29.571	579.17	493.50	6.0069
232	38.022	513.77	447.14	5.7556	292	29.462	580.26	494.28	6.0106
233	37.833	514.90	447.95	5.7604	293	29.355	581.35	495.05	6.0143
234	37.647	516.03	448.75	5.7653	294	29.248	582.43	495.83	6.0181
235	37.463	517.16	449.55	5.7701	295	29.142	583.52	496.60	6.0218
236	37.280	518.29	450.35	5.7749	296	29.036	584.61	497.37	6.0254
237	37.100	519.42	451.15	5.7797	297	28.932	585.70	498.14	6.0291
238	36.922	520.55	451.94	5.7844	298	28.828	586.78	498.92	6.0328
239	36.745	521.68	452.74	5.7891	299	28.726	587.87	499.69	6.0364
240	36.571	522.80	453.54	5.7939	300	28.623	588.96	500.46	6.0400

## 30.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	583.35	243.02	237.81	3.8865
					122	574.47	245.93	240.64	3.9104
					123	565.03	248.93	243.55	3.9351
					124	554.90	252.10	246.62	3.9607
					125	543.90	255.45	249.86	3.9876
					126	531.79	259.02	253.30	4.0162
					127	518.16	262.90	257.04	4.0469
					128	502.33	267.24	261.19	4.0810
					129	482.94	272.27	265.98	4.1202
					* 129.843	461.32	277.56	270.97	4.1611
70	840.42	126.87	123.25	2.6487	* 129.843	158.88	353.65	334.51	4.7471
					130	156.53	354.70	335.28	4.7552
71	836.69	129.08	125.45	2.6800	131	145.20	360.12	339.19	4.7968
72	832.92	131.28	127.63	2.7109	132	137.25	364.36	342.22	4.8290
73	829.12	133.49	129.82	2.7413	133	131.05	367.97	344.78	4.8563
74	825.28	135.68	132.00	2.7712	134	125.94	371.18	347.04	4.8803
75	821.41	137.88	134.18	2.8007	135	121.59	374.09	349.10	4.9020
76	817.50	140.07	136.35	2.8297	136	117.80	376.80	350.99	4.9219
77	813.57	142.26	138.53	2.8584	137	114.44	379.34	352.77	4.9405
78	809.60	144.45	140.70	2.8866	138	111.41	381.74	354.45	4.9579
79	805.60	146.64	142.86	2.9145	139	108.67	384.03	356.05	4.9745
80	801.57	148.82	145.03	2.9420	140	106.15	386.22	357.59	4.9902
81	797.51	151.01	147.20	2.9691	141	103.84	388.34	359.06	5.0053
82	793.42	153.19	149.36	2.9959	142	101.69	390.38	360.49	5.0197
83	789.29	155.37	151.52	3.0224	143	99.682	392.36	361.87	5.0336
84	785.14	157.55	153.68	3.0485	144	97.806	394.29	363.21	5.0471
85	780.94	159.73	155.84	3.0743	145	96.042	396.17	364.52	5.0601
86	776.72	161.91	158.00	3.0998	146	94.378	398.01	365.80	5.0727
87	772.46	164.09	160.15	3.1250	147	92.804	399.81	367.05	5.0850
88	768.16	166.27	162.31	3.1499	148	91.311	401.57	368.28	5.0969
89	763.83	168.45	164.47	3.1745	149	89.892	403.30	369.48	5.1086
90	759.45	170.62	166.62	3.1989	150	88.540	405.00	370.67	5.1199
91	755.04	172.80	168.78	3.2229	151	87.248	406.67	371.83	5.1310
92	750.58	174.98	170.93	3.2468	152	86.013	408.32	372.98	5.1419
93	746.08	177.16	173.09	3.2703	153	84.829	409.94	374.11	5.1526
94	741.53	179.35	175.25	3.2937	154	83.693	411.54	375.22	5.1630
95	736.94	181.53	177.40	3.3168	155	82.602	413.12	376.32	5.1732
96	732.29	183.72	179.56	3.3397	156	81.551	414.69	377.41	5.1833
97	727.59	185.90	181.73	3.3624	157	80.539	416.23	378.49	5.1931
98	722.83	188.10	183.89	3.3849	158	79.563	417.76	379.55	5.2028
99	718.02	190.30	186.06	3.4072	159	78.620	419.27	380.61	5.2124
100	713.14	192.50	188.24	3.4294	160	77.709	420.77	381.65	5.2217
101	708.19	194.71	190.42	3.4514	161	76.827	422.25	382.68	5.2310
102	703.17	196.93	192.60	3.4732	162	75.973	423.72	383.71	5.2401
103	698.08	199.15	194.80	3.4949	163	75.145	425.18	384.72	5.2491
104	692.91	201.39	197.00	3.5165	164	74.342	426.62	385.73	5.2579
105	687.65	203.63	199.21	3.5380	165	73.563	428.05	386.73	5.2666
106	682.30	205.89	201.44	3.5595	166	72.806	429.48	387.73	5.2752
107	676.85	208.17	203.68	3.5808	167	72.070	430.89	388.71	5.2837
108	671.29	210.46	205.93	3.6022	168	71.354	432.29	389.69	5.2921
109	665.62	212.77	208.21	3.6235	169	70.657	433.69	390.67	5.3003
110	659.83	215.11	210.50	3.6448	170	69.978	435.07	391.63	5.3085
111	653.90	217.46	212.82	3.6661	171	69.317	436.45	392.59	5.3166
112	647.82	219.85	215.16	3.6876	172	68.672	437.81	393.55	5.3245
113	641.59	222.27	217.53	3.7091	173	68.043	439.17	394.50	5.3324
114	635.18	224.72	219.94	3.7307	174	67.430	440.53	395.45	5.3402
115	628.57	227.22	222.38	3.7525	175	66.830	441.87	396.39	5.3479
116	621.75	229.76	224.87	3.7745	176	66.245	443.21	397.32	5.3555
117	614.69	232.35	227.41	3.7967	177	65.673	444.54	398.25	5.3631
118	607.36	234.91	229.91	3.8185	178	65.114	445.87	399.18	5.3705
119	599.73	237.54	232.47	3.8407	179	64.567	447.18	400.10	5.3779
120	591.74	240.26	235.12	3.8634	180	64.032	448.50	401.02	5.3852

\* PHASE CHANGE

## 30.00 ATMOSPHERE IS08AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	63.508	449.80	401.94	5.3925	241	43.902	522.02	452.78	5.7381
182	62.995	451.10	402.85	5.3996	242	43.691	523.16	453.58	5.7428
183	62.493	452.40	403.76	5.4067	243	43.482	524.30	454.39	5.7475
184	62.001	453.69	404.66	5.4138	244	43.276	525.44	455.20	5.7522
185	61.518	454.98	405.56	5.4207	245	43.071	526.58	456.00	5.7568
186	61.045	456.26	406.46	5.4276	246	42.869	527.71	456.81	5.7615
187	60.582	457.53	407.36	5.4345	247	42.669	528.85	457.61	5.7661
188	60.127	458.80	408.25	5.4413	248	42.471	529.98	458.41	5.7707
189	59.680	460.07	409.14	5.4480	249	42.275	531.12	459.21	5.7752
190	59.242	461.33	410.02	5.4547	250	42.081	532.25	460.01	5.7798
191	58.812	462.59	410.91	5.4613	251	41.889	533.38	460.81	5.7843
192	58.390	463.85	411.79	5.4678	252	41.699	534.51	461.61	5.7888
193	57.975	465.10	412.66	5.4743	253	41.511	535.64	462.41	5.7932
194	57.567	466.34	413.54	5.4807	254	41.325	536.77	463.21	5.7977
195	57.167	467.59	414.41	5.4871	255	41.141	537.90	464.01	5.8021
196	56.773	468.83	415.28	5.4935	256	40.959	539.02	464.81	5.8065
197	56.386	470.06	416.15	5.4998	257	40.778	540.15	465.60	5.8109
198	56.006	471.29	417.02	5.5060	258	40.599	541.27	466.40	5.8153
199	55.631	472.52	417.88	5.5122	259	40.422	542.39	467.19	5.8196
200	55.263	473.75	418.74	5.5183	260	40.247	543.52	467.99	5.8240
201	54.901	474.97	419.60	5.5244	261	40.073	544.64	468.78	5.8283
202	54.544	476.19	420.46	5.5305	262	39.901	545.76	469.58	5.8325
203	54.193	477.41	421.32	5.5365	263	39.731	546.88	470.37	5.8368
204	53.847	478.62	422.17	5.5425	264	39.562	548.00	471.16	5.8411
205	53.507	479.83	423.02	5.5484	265	39.395	549.12	471.95	5.8453
206	53.172	481.04	423.87	5.5543	266	39.229	550.23	472.75	5.8495
207	52.842	482.25	424.72	5.5601	267	39.065	551.35	473.54	5.8537
208	52.517	483.45	425.57	5.5659	268	38.902	552.46	474.33	5.8579
209	52.196	484.65	426.42	5.5717	269	38.741	553.58	475.12	5.8620
210	51.880	485.85	427.26	5.5774	270	38.581	554.69	475.91	5.8661
211	51.569	487.05	428.10	5.5831	271	38.423	555.81	476.69	5.8703
212	51.262	488.24	428.94	5.5887	272	38.266	556.92	477.48	5.8744
213	50.960	489.43	429.78	5.5943	273	38.111	558.03	478.27	5.8784
214	50.661	490.62	430.62	5.5999	274	37.957	559.14	479.06	5.8825
215	50.367	491.81	431.45	5.6054	275	37.804	560.25	479.84	5.8865
216	50.077	492.99	432.29	5.6109	276	37.653	561.36	480.63	5.8906
217	49.791	494.17	433.12	5.6164	277	37.503	562.47	481.42	5.8946
218	49.509	495.35	433.95	5.6218	278	37.355	563.58	482.20	5.8986
219	49.230	496.53	434.78	5.6272	279	37.207	564.69	482.99	5.9025
220	48.955	497.71	435.61	5.6325	280	37.061	565.79	483.77	5.9065
221	48.683	498.88	436.44	5.6379	281	36.916	566.90	484.56	5.9104
222	48.416	500.05	437.27	5.6432	282	36.773	568.00	485.34	5.9144
223	48.151	501.22	438.09	5.6484	283	36.630	569.11	486.12	5.9183
224	47.890	502.39	438.92	5.6536	284	36.489	570.21	486.91	5.9222
225	47.632	503.56	439.74	5.6588	285	36.349	571.32	487.69	5.9261
226	47.378	504.72	440.56	5.6640	286	36.210	572.42	488.47	5.9299
227	47.126	505.89	441.39	5.6691	287	36.073	573.52	489.26	5.9338
228	46.878	507.05	442.21	5.6742	288	35.936	574.62	490.04	5.9376
229	46.632	508.21	443.02	5.6793	289	35.801	575.73	490.82	5.9414
230	46.390	509.37	443.84	5.6844	290	35.666	576.83	491.60	5.9452
231	46.150	510.53	444.66	5.6894	291	35.533	577.93	492.38	5.9490
232	45.914	511.68	445.48	5.6944	292	35.401	579.03	493.16	5.9528
233	45.680	512.84	446.29	5.6993	293	35.270	580.12	493.94	5.9565
234	45.449	513.99	447.10	5.7043	294	35.140	581.22	494.72	5.9603
235	45.220	515.14	447.92	5.7092	295	35.011	582.32	495.50	5.9640
236	44.994	516.29	448.73	5.7141	296	34.883	583.42	496.28	5.9677
237	44.771	517.44	449.54	5.7189	297	34.756	584.52	497.06	5.9714
238	44.550	518.58	450.35	5.7238	298	34.630	585.61	497.83	5.9751
239	44.332	519.73	451.16	5.7286	299	34.505	586.71	498.61	5.9788
240	44.116	520.87	451.97	5.7333	300	34.381	587.80	499.39	5.9824

## 35.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	589.96	242.41	236.40	3.8743
					122	581.76	245.19	239.09	3.8972
					123	573.14	248.04	241.85	3.9205
					124	564.00	251.01	244.72	3.9446
					125	554.27	254.12	247.72	3.9696
					126	543.81	257.37	250.85	3.9956
					127	532.42	260.81	254.15	4.0228
					128	519.86	264.50	257.68	4.0519
					129	505.71	268.49	261.48	4.0830
70	841.17	127.29	123.07	2.6460	130	489.27	272.92	265.67	4.1173
71	837.46	129.49	125.26	2.6773	131	469.21	278.03	270.47	4.1565
72	833.72	131.69	127.44	2.7082	132	442.21	284.38	276.36	4.2049
73	829.94	133.89	129.62	2.7385	133	393.10	296.08	287.05	4.2932
74	826.12	136.09	131.79	2.7684	134	197.93	346.90	328.99	4.6744
75	822.28	138.28	133.97	2.7978	135	178.44	354.55	334.68	4.7313
76	818.40	140.47	136.13	2.8268	136	166.34	359.93	338.61	4.7710
77	814.49	142.65	138.30	2.8554	137	157.44	364.29	341.77	4.8029
78	810.55	144.84	140.46	2.8836	138	150.37	368.05	344.47	4.8303
79	806.58	147.02	142.62	2.9114	139	144.50	371.40	346.86	4.8545
80	802.58	149.20	144.78	2.9388	140	139.48	374.46	349.04	4.8764
81	798.55	151.38	146.94	2.9659	141	135.09	377.30	351.05	4.8966
82	794.49	153.56	149.09	2.9926	142	131.19	379.96	352.93	4.9154
83	790.40	155.73	151.25	3.0190	143	127.68	382.48	354.70	4.9330
84	786.27	157.91	153.40	3.0451	144	124.50	384.88	356.39	4.9497
85	782.12	160.08	155.55	3.0708	145	121.58	387.17	358.00	4.9656
86	777.93	162.26	157.70	3.0962	146	118.90	389.38	359.55	4.9808
87	773.71	164.43	159.85	3.1214	147	116.40	391.51	361.05	4.9954
88	769.45	166.60	161.99	3.1462	148	114.08	393.58	362.50	5.0094
89	765.16	168.77	164.14	3.1708	149	111.91	395.59	363.90	5.0229
90	760.83	170.95	166.28	3.1950	150	109.87	397.55	365.27	5.0360
91	756.46	173.12	168.43	3.2190	151	107.95	399.46	366.60	5.0487
92	752.06	175.29	170.57	3.2428	152	106.13	401.32	367.91	5.0610
93	747.61	177.46	172.72	3.2663	153	104.41	403.15	369.18	5.0730
94	743.11	179.63	174.86	3.2895	154	102.77	404.94	370.44	5.0847
95	738.58	181.81	177.01	3.3125	155	101.21	406.70	371.66	5.0961
96	733.99	183.99	179.15	3.3353	156	99.725	408.43	372.87	5.1072
97	729.35	186.17	181.30	3.3579	157	98.302	410.14	374.06	5.1181
98	724.67	188.35	183.45	3.3803	158	96.940	411.81	375.23	5.1287
99	719.92	190.53	185.61	3.4025	159	95.633	413.47	376.38	5.1391
100	715.12	192.72	187.77	3.4245	160	94.378	415.10	377.52	5.1494
101	710.25	194.92	189.93	3.4464	161	93.171	416.71	378.65	5.1594
102	705.32	197.12	192.09	3.4681	162	92.009	418.30	379.76	5.1693
103	700.32	199.33	194.27	3.4897	163	90.888	419.87	380.85	5.1789
104	695.25	201.55	196.45	3.5111	164	89.806	421.43	381.94	5.1884
105	690.10	203.78	198.64	3.5324	165	88.760	422.97	383.01	5.1978
106	684.86	206.02	200.84	3.5537	166	87.749	424.49	384.08	5.2070
107	679.53	208.27	203.06	3.5748	167	86.770	426.00	385.13	5.2161
108	674.11	210.54	205.28	3.5960	168	85.822	427.50	386.17	5.2250
109	668.58	212.83	207.53	3.6170	169	84.902	428.98	387.21	5.2338
110	662.94	215.14	209.79	3.6381	170	84.010	430.45	388.24	5.2425
111	657.19	217.46	212.07	3.6592	171	83.143	431.91	389.26	5.2510
112	651.30	219.82	214.37	3.6803	172	82.301	433.36	390.27	5.2595
113	645.27	222.20	216.70	3.7015	173	81.482	434.79	391.27	5.2678
114	639.09	224.61	219.06	3.7227	174	80.685	436.22	392.27	5.2760
115	632.74	227.06	221.45	3.7441	175	79.910	437.64	393.26	5.2842
116	626.21	229.55	223.88	3.7657	176	79.154	439.05	394.24	5.2922
117	619.47	232.08	226.35	3.7874	177	78.417	440.45	395.22	5.3001
118	612.51	234.57	228.78	3.8086	178	77.699	441.84	396.19	5.3079
119	605.29	237.12	231.26	3.8302	179	76.998	443.22	397.16	5.3157
120	597.79	239.75	233.82	3.8521	180	76.314	444.59	398.12	5.3233

## 35.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	75.646	445.96	399.08	5.3309	241	51.474	520.11	451.21	5.6860
182	74.993	447.32	400.03	5.3384	242	51.220	521.27	452.03	5.6908
183	74.355	448.67	400.97	5.3458	243	50.970	522.43	452.85	5.6956
184	73.731	450.01	401.92	5.3531	244	50.722	523.58	453.67	5.7003
185	73.121	451.35	402.85	5.3604	245	50.477	524.74	454.48	5.7051
186	72.524	452.69	403.79	5.3676	246	50.235	525.89	455.30	5.7098
187	71.939	454.01	404.72	5.3747	247	49.995	527.05	456.11	5.7144
188	71.367	455.33	405.64	5.3817	248	49.758	528.20	456.93	5.7191
189	70.806	456.65	406.56	5.3887	249	49.524	529.35	457.74	5.7237
190	70.256	457.96	407.48	5.3956	250	49.292	530.50	458.55	5.7283
191	69.718	459.26	408.39	5.4024	251	49.062	531.64	459.36	5.7329
192	69.189	460.56	409.30	5.4092	252	48.835	532.79	460.17	5.7375
193	68.671	461.85	410.21	5.4159	253	48.611	533.93	460.98	5.7420
194	68.163	463.14	411.12	5.4226	254	48.388	535.08	461.79	5.7465
195	67.664	464.43	412.02	5.4292	255	48.168	536.22	462.60	5.7510
196	67.175	465.71	412.92	5.4358	256	47.950	537.36	463.40	5.7555
197	66.694	466.98	413.81	5.4423	257	47.735	538.50	464.21	5.7599
198	66.222	468.26	414.70	5.4487	258	47.522	539.64	465.01	5.7643
199	65.758	469.52	415.59	5.4551	259	47.310	540.78	465.82	5.7687
200	65.303	470.79	416.48	5.4614	260	47.101	541.92	466.62	5.7731
201	64.855	472.04	417.36	5.4677	261	46.894	543.05	467.43	5.7775
202	64.414	473.30	418.24	5.4739	262	46.689	544.19	468.23	5.7818
203	63.982	474.55	419.12	5.4801	263	46.486	545.32	469.03	5.7861
204	63.556	475.80	420.00	5.4862	264	46.285	546.45	469.83	5.7904
205	63.137	477.04	420.88	5.4923	265	46.086	547.58	470.63	5.7947
206	62.725	478.29	421.75	5.4984	266	45.889	548.71	471.43	5.7990
207	62.320	479.52	422.62	5.5043	267	45.694	549.84	472.23	5.8032
208	61.921	480.76	423.49	5.5103	268	45.501	550.97	473.03	5.8074
209	61.528	481.99	424.35	5.5162	269	45.309	552.10	473.83	5.8116
210	61.141	483.22	425.22	5.5221	270	45.119	553.23	474.63	5.8158
211	60.760	484.44	426.08	5.5279	271	44.931	554.35	475.42	5.8200
212	60.385	485.67	426.94	5.5337	272	44.745	555.48	476.22	5.8241
213	60.015	486.89	427.79	5.5394	273	44.561	556.60	477.02	5.8282
214	59.651	488.10	428.65	5.5451	274	44.378	557.72	477.81	5.8323
215	59.292	489.32	429.51	5.5508	275	44.197	558.85	478.61	5.8364
216	58.939	490.53	430.36	5.5564	276	44.017	559.97	479.40	5.8405
217	58.590	491.74	431.21	5.5620	277	43.839	561.09	480.19	5.8445
218	58.247	492.94	432.06	5.5675	278	43.663	562.21	480.99	5.8486
219	57.908	494.15	432.91	5.5730	279	43.488	563.33	481.78	5.8526
220	57.574	495.35	433.75	5.5785	280	43.315	564.45	482.57	5.8566
221	57.244	496.55	434.60	5.5839	281	43.143	565.56	483.36	5.8606
222	56.919	497.75	435.44	5.5893	282	42.973	566.68	484.15	5.8645
223	56.598	498.94	436.28	5.5947	283	42.804	567.80	484.95	5.8685
224	56.282	500.13	437.12	5.6000	284	42.637	568.91	485.74	5.8724
225	55.970	501.32	437.96	5.6053	285	42.471	570.03	486.52	5.8763
226	55.662	502.51	438.80	5.6106	286	42.307	571.14	487.31	5.8802
227	55.357	503.70	439.63	5.6158	287	42.144	572.25	488.10	5.8841
228	55.057	504.88	440.47	5.6211	288	41.982	573.36	488.89	5.8880
229	54.761	506.06	441.30	5.6262	289	41.822	574.48	489.68	5.8918
230	54.468	507.24	442.13	5.6314	290	41.663	575.59	490.47	5.8957
231	54.179	508.42	442.97	5.6365	291	41.506	576.70	491.25	5.8995
232	53.894	509.60	443.80	5.6416	292	41.349	577.81	492.04	5.9033
233	53.612	510.77	444.62	5.6466	293	41.194	578.92	492.83	5.9071
234	53.333	511.95	445.45	5.6516	294	41.041	580.02	493.61	5.9109
235	53.058	513.12	446.28	5.6566	295	40.888	581.13	494.40	5.9146
236	52.786	514.29	447.10	5.6616	296	40.737	582.24	495.18	5.9184
237	52.517	515.45	447.93	5.6665	297	40.587	583.34	495.97	5.9221
238	52.252	516.62	448.75	5.6714	298	40.438	584.45	496.75	5.9258
239	51.989	517.78	449.57	5.6763	299	40.291	585.55	497.53	5.9295
240	51.730	518.95	450.39	5.6812	300	40.144	586.66	498.32	5.9332

## 40.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENS(ITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	595.94	241.91	235.11	3.8631
					122	588.28	244.59	237.70	3.8852
					123	580.28	247.32	240.33	3.9076
					124	571.89	250.15	243.06	3.9305
					125	563.06	253.09	245.89	3.9541
					126	553.70	256.12	248.80	3.9784
					127	543.72	259.29	251.84	4.0035
					128	532.99	262.62	255.02	4.0297
					129	521.32	266.13	258.35	4.0570
70	841.92	127.70	122.89	2.6434	130	508.45	269.84	261.87	4.0858
71	838.23	129.91	125.07	2.6747	131	494.01	273.82	265.62	4.1163
72	834.51	132.10	127.25	2.7054	132	477.35	278.06	269.57	4.1487
73	830.75	134.30	129.42	2.7357	133	457.38	283.61	274.75	4.1907
74	826.96	136.49	131.59	2.7655	134	431.83	290.18	280.79	4.2399
75	823.14	138.68	133.75	2.7949	135	394.87	299.23	288.97	4.3071
76	819.29	140.86	135.92	2.8239	136	327.73	315.44	303.07	4.4266
77	815.40	143.05	138.08	2.8524	137	254.40	335.20	319.26	4.5714
78	811.49	145.23	140.23	2.8805	138	221.54	345.84	327.54	4.6488
79	807.55	147.40	142.39	2.9083	139	202.60	352.87	332.86	4.6996
80	803.58	149.58	144.54	2.9357	140	189.43	358.30	336.90	4.7385
81	799.58	151.76	146.69	2.9627	141	179.37	362.83	340.23	4.7707
82	795.55	153.93	148.83	2.9894	142	171.25	366.77	343.10	4.7986
83	791.49	156.10	150.98	3.0157	143	164.45	370.31	345.66	4.8234
84	787.40	158.27	153.12	3.0417	144	158.62	373.54	347.99	4.8459
85	783.28	160.44	155.26	3.0674	145	153.51	376.53	350.13	4.8667
86	779.13	162.61	157.41	3.0928	146	148.97	379.34	352.13	4.8859
87	774.94	164.77	159.54	3.1178	147	144.89	381.99	354.02	4.9040
88	770.72	166.94	161.68	3.1426	148	141.19	384.51	355.81	4.9211
89	766.47	169.11	163.82	3.1671	149	137.81	386.93	357.52	4.9374
90	762.19	171.27	165.95	3.1912	150	134.69	389.24	359.15	4.9529
91	757.87	173.44	168.09	3.2152	151	131.81	391.48	360.73	4.9677
92	753.51	175.60	170.22	3.2388	152	129.12	393.64	362.25	4.9820
93	749.11	177.76	172.35	3.2622	153	126.61	395.74	363.73	4.9958
94	744.67	179.93	174.49	3.2854	154	124.25	397.78	365.16	5.0091
95	740.19	182.10	176.62	3.3083	155	122.04	399.77	366.56	5.0219
96	735.66	184.26	178.75	3.3310	156	119.94	401.72	367.92	5.0344
97	731.08	186.43	180.89	3.3535	157	117.96	403.62	369.26	5.0466
98	726.46	188.60	183.03	3.3758	158	116.08	405.48	370.56	5.0584
99	721.78	190.78	185.16	3.3979	159	114.29	407.30	371.84	5.0699
100	717.05	192.96	187.31	3.4198	160	112.58	409.10	373.10	5.0812
101	712.26	195.14	189.45	3.4415	161	110.95	410.86	374.33	5.0922
102	707.42	197.33	191.60	3.4631	162	109.39	412.60	375.55	5.1029
103	702.50	199.53	193.76	3.4845	163	107.89	414.31	376.74	5.1134
104	697.52	201.73	195.92	3.5058	164	106.45	415.99	377.92	5.1237
105	692.47	203.94	198.09	3.5270	165	105.07	417.65	379.08	5.1338
106	687.34	206.16	200.27	3.5481	166	103.75	419.30	380.23	5.1437
107	682.12	208.40	202.46	3.5690	167	102.47	420.92	381.36	5.1535
108	676.82	210.64	204.66	3.5900	168	101.23	422.52	382.48	5.1631
109	671.43	212.91	206.87	3.6108	169	100.04	424.10	383.59	5.1725
110	665.94	215.19	209.10	3.6317	170	98.888	425.67	384.69	5.1817
111	660.33	217.49	211.35	3.6525	171	97.773	427.23	385.77	5.1908
112	654.62	219.81	213.62	3.6733	172	96.694	428.76	386.85	5.1998
113	648.78	222.16	215.91	3.6942	173	95.648	430.29	387.91	5.2086
114	642.80	224.54	218.23	3.7151	174	94.633	431.80	388.97	5.2173
115	636.67	226.94	220.58	3.7362	175	93.648	433.29	390.01	5.2259
116	630.39	229.39	222.96	3.7573	176	92.692	434.78	391.05	5.2343
117	623.93	231.87	225.37	3.7786	177	91.762	436.25	392.08	5.2427
118	617.28	234.30	227.74	3.7993	178	90.858	437.71	393.10	5.2509
119	610.41	236.79	230.15	3.8204	179	89.978	439.16	394.12	5.2590
120	603.31	239.34	232.62	3.8417	180	89.121	440.60	395.13	5.2671



## 40.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	88.286	442.04	396.13	5.2750	241	59.107	518.21	449.64	5.6401
182	87.472	443.46	397.12	5.2828	242	58.810	519.39	450.47	5.6449
183	86.678	444.87	398.11	5.2906	243	58.515	520.56	451.30	5.6498
184	85.904	446.28	399.09	5.2982	244	58.225	521.74	452.13	5.6546
185	85.147	447.67	400.07	5.3058	245	57.937	522.91	452.96	5.6594
186	84.409	449.06	401.04	5.3133	246	57.653	524.08	453.78	5.6642
187	83.687	450.44	402.01	5.3207	247	57.372	525.25	454.61	5.6689
188	82.982	451.81	402.97	5.3280	248	57.095	526.42	455.43	5.6736
189	82.292	453.18	403.93	5.3353	249	56.820	527.59	456.26	5.6783
190	81.617	454.54	404.88	5.3424	250	56.548	528.75	457.08	5.6830
191	80.957	455.89	405.83	5.3495	251	56.280	529.92	457.90	5.6876
192	80.310	457.24	406.77	5.3566	252	56.014	531.08	458.72	5.6923
193	79.677	458.58	407.71	5.3635	253	55.751	532.24	459.54	5.6969
194	79.057	459.91	408.64	5.3704	254	55.492	533.40	460.36	5.7014
195	78.449	461.24	409.58	5.3772	255	55.234	534.56	461.18	5.7060
196	77.853	462.56	410.50	5.3840	256	54.980	535.71	462.00	5.7105
197	77.269	463.88	411.43	5.3907	257	54.728	536.87	462.81	5.7150
198	76.696	465.19	412.35	5.3973	258	54.479	538.02	463.63	5.7195
199	76.133	466.50	413.26	5.4039	259	54.233	539.17	464.44	5.7240
200	75.582	467.80	414.18	5.4105	260	53.989	540.33	465.25	5.7284
201	75.040	469.10	415.09	5.4169	261	53.747	541.48	466.07	5.7328
202	74.508	470.39	415.99	5.4233	262	53.508	542.62	466.88	5.7372
203	73.985	471.68	416.90	5.4297	263	53.272	543.77	467.69	5.7416
204	73.472	472.96	417.80	5.4360	264	53.037	544.92	468.50	5.7459
205	72.968	474.24	418.70	5.4423	265	52.806	546.06	469.31	5.7502
206	72.472	475.52	419.59	5.4485	266	52.576	547.21	470.12	5.7546
207	71.985	476.79	420.48	5.4546	267	52.349	548.35	470.93	5.7588
208	71.506	478.05	421.37	5.4607	268	52.124	549.49	471.73	5.7631
209	71.035	479.32	422.26	5.4668	269	51.901	550.63	472.54	5.7674
210	70.571	480.58	423.15	5.4728	270	51.680	551.77	473.35	5.7716
211	70.115	481.83	424.03	5.4788	271	51.461	552.91	474.15	5.7758
212	69.666	483.09	424.91	5.4847	272	51.245	554.05	474.96	5.7800
213	69.224	484.34	425.79	5.4906	273	51.030	555.18	475.76	5.7841
214	68.789	485.58	426.66	5.4964	274	50.818	556.32	476.56	5.7883
215	68.361	486.82	427.54	5.5022	275	50.607	557.45	477.37	5.7924
216	67.940	488.06	428.41	5.5079	276	50.399	558.59	478.17	5.7965
217	67.524	489.30	429.28	5.5137	277	50.192	559.72	478.97	5.8006
218	67.115	490.53	430.15	5.5193	278	49.987	560.85	479.77	5.8047
219	66.712	491.76	431.01	5.5250	279	49.784	561.98	480.57	5.8088
220	66.315	492.99	431.87	5.5306	280	49.583	563.11	481.37	5.8128
221	65.923	494.22	432.74	5.5361	281	49.384	564.24	482.17	5.8168
222	65.537	495.44	433.60	5.5416	282	49.187	565.37	482.97	5.8208
223	65.157	496.66	434.45	5.5471	283	48.991	566.49	483.76	5.8248
224	64.781	497.88	435.31	5.5525	284	48.797	567.62	484.56	5.8288
225	64.411	499.09	436.17	5.5580	285	48.605	568.75	485.36	5.8328
226	64.046	500.30	437.02	5.5633	286	48.414	569.87	486.15	5.8367
227	63.686	501.51	437.87	5.5687	287	48.225	570.99	486.95	5.8406
228	63.331	502.72	438.72	5.5740	288	48.038	572.12	487.75	5.8445
229	62.981	503.92	439.57	5.5792	289	47.853	573.24	488.54	5.8484
230	62.635	505.12	440.42	5.5845	290	47.669	574.36	489.33	5.8523
231	62.293	506.32	441.26	5.5897	291	47.486	575.48	490.13	5.8561
232	61.956	507.52	442.10	5.5949	292	47.305	576.60	490.92	5.8600
233	61.624	508.72	442.95	5.6000	293	47.126	577.72	491.71	5.8638
234	61.295	509.91	443.79	5.6051	294	46.948	578.84	492.51	5.8676
235	60.971	511.10	444.63	5.6102	295	46.771	579.95	493.30	5.8714
236	60.651	512.29	445.47	5.6152	296	46.596	581.07	494.09	5.8752
237	60.335	513.48	446.30	5.6203	297	46.423	582.19	494.88	5.8790
238	60.022	514.66	447.14	5.6253	298	46.251	583.30	495.67	5.8827
239	59.714	515.85	447.97	5.6302	299	46.080	584.41	496.46	5.8864
240	59.409	517.03	448.81	5.6351	300	45.911	585.53	497.25	5.8902

## 45.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	601.43	241.51	233.93	3.8528
					122	594.20	244.11	236.43	3.8742
					123	586.70	246.74	238.97	3.8958
					124	578.89	249.46	241.58	3.9178
					125	570.74	252.27	244.28	3.9404
					126	562.19	255.15	247.04	3.9634
					127	553.19	258.13	249.88	3.9870
					128	543.66	261.23	252.84	4.0114
					129	533.49	264.43	255.88	4.0364
70	842.67	128.12	122.71	2.6408	130	522.58	267.76	259.04	4.0622
71	839.00	130.32	124.89	2.6720	131	510.74	271.22	262.29	4.0888
72	835.30	132.52	127.06	2.7027	132	497.76	274.71	265.55	4.1155
73	831.56	134.71	129.22	2.7329	133	483.29	279.15	269.71	4.1490
74	827.79	136.89	131.39	2.7627	134	466.85	283.82	274.05	4.1840
75	823.99	139.08	133.55	2.7920	135	447.69	289.05	278.87	4.2229
76	820.17	141.26	135.70	2.8209	136	424.58	295.14	284.40	4.2678
77	816.31	143.44	137.85	2.8494	137	395.59	302.55	291.02	4.3221
78	812.42	145.62	140.00	2.8775	138	358.60	311.91	299.19	4.3901
79	808.51	147.79	142.15	2.9052	139	316.03	323.02	308.59	4.4704
80	804.56	149.96	144.29	2.9326	140	278.57	333.61	317.24	4.5463
81	800.59	152.13	146.44	2.9595	141	251.25	342.17	324.02	4.6072
82	796.59	154.30	148.58	2.9862	142	231.57	348.98	329.29	4.6553
83	792.56	156.47	150.71	3.0124	143	216.73	354.59	333.55	4.6947
84	788.51	158.63	152.85	3.0384	144	205.01	359.39	337.15	4.7281
85	784.42	160.80	154.98	3.0640	145	195.42	363.61	340.28	4.7573
86	780.31	162.96	157.12	3.0893	146	187.35	367.41	343.07	4.7834
87	776.16	165.12	159.25	3.1143	147	180.40	370.88	345.60	4.8071
88	771.98	167.28	161.38	3.1390	148	174.33	374.09	347.93	4.8289
89	767.77	169.44	163.50	3.1634	149	168.94	377.09	350.10	4.8491
90	763.53	171.60	165.63	3.1875	150	164.10	379.92	352.14	4.8680
91	759.25	173.76	167.75	3.2114	151	159.73	382.61	354.06	4.8859
92	754.94	175.91	169.87	3.2350	152	155.73	385.17	355.90	4.9028
93	750.58	178.07	172.00	3.2583	153	152.06	387.63	357.65	4.9189
94	746.19	180.23	174.12	3.2814	154	148.67	390.00	359.33	4.9343
95	741.76	182.39	176.24	3.3042	155	145.53	392.28	360.95	4.9491
96	737.29	184.55	178.36	3.3268	156	142.59	394.49	362.51	4.9633
97	732.78	186.71	180.48	3.3492	157	139.84	396.64	364.03	4.9770
98	728.21	188.87	182.61	3.3714	158	137.26	398.73	365.51	4.9903
99	723.60	191.03	184.73	3.3934	159	134.82	400.76	366.95	5.0031
100	718.94	193.20	186.86	3.4152	160	132.52	402.75	368.35	5.0156
101	714.23	195.37	188.99	3.4368	161	130.34	404.70	369.72	5.0277
102	709.46	197.55	191.12	3.4582	162	128.27	406.61	371.06	5.0395
103	704.62	199.73	193.26	3.4795	163	126.29	408.48	372.37	5.0510
104	699.73	201.92	195.40	3.5007	164	124.41	410.31	373.66	5.0623
105	694.77	204.11	197.55	3.5217	165	122.61	412.12	374.93	5.0732
106	689.74	206.32	199.71	3.5426	166	120.89	413.89	376.18	5.0840
107	684.63	208.53	201.87	3.5634	167	119.24	415.64	377.40	5.0945
108	679.45	210.76	204.05	3.5841	168	117.66	417.36	378.61	5.1047
109	674.17	213.01	206.24	3.6048	169	116.13	419.06	379.80	5.1148
110	668.81	215.26	208.45	3.6254	170	114.67	420.74	380.98	5.1247
111	663.35	217.54	210.66	3.6460	171	113.25	422.40	382.14	5.1344
112	657.79	219.83	212.90	3.6666	172	111.89	424.04	383.29	5.1440
113	652.12	222.15	215.16	3.6872	173	110.58	425.65	384.42	5.1534
114	646.32	224.49	217.44	3.7079	174	109.30	427.26	385.54	5.1626
115	640.40	226.87	219.75	3.7286	175	108.07	428.84	386.65	5.1717
116	634.34	229.27	222.08	3.7494	176	106.88	430.41	387.75	5.1806
117	628.12	231.71	224.45	3.7703	177	105.73	431.96	388.84	5.1894
118	621.74	234.09	226.76	3.7906	178	104.61	433.50	389.92	5.1981
119	615.17	236.52	229.11	3.8112	179	103.52	435.03	390.98	5.2067
120	608.41	239.01	231.51	3.8320	180	102.46	436.54	392.04	5.2151

## 45.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	101.44	438.04	393.09	5.2234	241	66.798	516.32	448.06	5.5988
182	100.44	439.53	394.14	5.2316	242	66.454	517.52	448.90	5.6037
183	99.469	441.01	395.17	5.2397	243	66.114	518.71	449.75	5.6087
184	98.524	442.48	396.20	5.2477	244	65.779	519.91	450.59	5.6136
185	97.602	443.94	397.22	5.2556	245	65.447	521.10	451.43	5.6184
186	96.704	445.38	398.23	5.2634	246	65.120	522.28	452.27	5.6233
187	95.828	446.82	399.24	5.2711	247	64.796	523.47	453.10	5.6281
188	94.974	448.25	400.24	5.2787	248	64.476	524.66	453.94	5.6329
189	94.139	449.67	401.24	5.2863	249	64.159	525.84	454.77	5.6376
190	93.325	451.08	402.23	5.2937	250	63.847	527.02	455.61	5.6424
191	92.529	452.49	403.21	5.3011	251	63.538	528.20	456.44	5.6471
192	91.750	453.88	404.19	5.3084	252	63.232	529.38	457.27	5.6518
193	90.990	455.27	405.16	5.3156	253	62.930	530.56	458.10	5.6564
194	90.245	456.65	406.13	5.3227	254	62.631	531.73	458.93	5.6611
195	89.517	458.03	407.09	5.3298	255	62.335	532.90	459.76	5.6657
196	88.804	459.39	408.05	5.3368	256	62.043	534.08	460.58	5.6703
197	88.106	460.75	409.00	5.3437	257	61.754	535.25	461.41	5.6748
198	87.422	462.11	409.95	5.3506	258	61.468	536.42	462.24	5.6794
199	86.752	463.46	410.90	5.3573	259	61.185	537.58	463.06	5.6839
200	86.095	464.80	411.84	5.3641	260	60.905	538.75	463.88	5.6884
201	85.451	466.14	412.78	5.3707	261	60.628	539.91	464.71	5.6928
202	84.819	467.47	413.71	5.3773	262	60.354	541.08	465.53	5.6973
203	84.199	468.79	414.64	5.3839	263	60.082	542.24	466.35	5.7017
204	83.591	470.11	415.57	5.3904	264	59.814	543.40	467.17	5.7061
205	82.994	471.43	416.49	5.3968	265	59.548	544.56	467.98	5.7105
206	82.407	472.74	417.41	5.4032	266	59.285	545.71	468.80	5.7148
207	81.832	474.04	418.32	5.4095	267	59.025	546.87	469.62	5.7192
208	81.266	475.35	419.24	5.4158	268	58.767	548.02	470.44	5.7235
209	80.710	476.64	420.15	5.4220	269	58.512	549.18	471.25	5.7278
210	80.164	477.93	421.06	5.4282	270	58.259	550.33	472.06	5.7321
211	79.627	479.22	421.96	5.4343	271	58.009	551.48	472.88	5.7363
212	79.099	480.51	422.86	5.4403	272	57.761	552.63	473.69	5.7406
213	78.580	481.78	423.76	5.4464	273	57.516	553.78	474.50	5.7448
214	78.070	483.06	424.66	5.4523	274	57.273	554.93	475.31	5.7490
215	77.567	484.33	425.55	5.4583	275	57.033	556.07	476.13	5.7532
216	77.073	485.60	426.44	5.4644	276	56.794	557.22	476.93	5.7573
217	76.586	486.87	427.33	5.4700	277	56.558	558.36	477.74	5.7614
218	76.107	488.13	428.22	5.4758	278	56.324	559.51	478.55	5.7656
219	75.636	489.38	429.10	5.4815	279	56.093	560.65	479.36	5.7697
220	75.171	490.64	429.98	5.4873	280	55.863	561.79	480.17	5.7737
221	74.714	491.89	430.86	5.4929	281	55.636	562.93	480.97	5.7778
222	74.263	493.14	431.74	5.4986	282	55.410	564.07	481.78	5.7819
223	73.819	494.38	432.61	5.5042	283	55.187	565.21	482.58	5.7859
224	73.382	495.62	433.49	5.5097	284	54.966	566.34	483.39	5.7899
225	72.950	496.86	434.36	5.5152	285	54.747	567.48	484.19	5.7939
226	72.525	498.10	435.23	5.5207	286	54.529	568.61	485.00	5.7979
227	72.106	499.33	436.09	5.5262	287	54.314	569.75	485.80	5.8018
228	71.693	500.56	436.96	5.5316	288	54.101	570.88	486.60	5.8058
229	71.286	501.79	437.82	5.5369	289	53.889	572.01	487.40	5.8097
230	70.884	503.01	438.69	5.5423	290	53.679	573.14	488.20	5.8136
231	70.488	504.23	439.55	5.5476	291	53.471	574.27	489.00	5.8175
232	70.097	505.45	440.40	5.5528	292	53.265	575.40	489.80	5.8214
233	69.711	506.67	441.26	5.5581	293	53.061	576.53	490.60	5.8252
234	69.330	507.88	442.12	5.5633	294	52.858	577.66	491.40	5.8291
235	68.954	509.10	442.97	5.5684	295	52.658	578.79	492.20	5.8329
236	68.583	510.31	443.82	5.5736	296	52.458	579.91	492.99	5.8367
237	68.217	511.51	444.67	5.5787	297	52.261	581.04	493.79	5.8405
238	67.856	512.72	445.52	5.5837	298	52.065	582.16	494.59	5.8443
239	67.499	513.92	446.37	5.5888	299	51.871	583.29	495.38	5.8480
240	67.146	515.12	447.22	5.5938	300	51.678	584.41	496.18	5.8518

## 50.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	606.50	241.18	232.83	3.8432
					122	599.63	243.71	235.26	3.8640
					123	592.55	246.27	237.72	3.8850
					124	585.21	248.90	240.24	3.9063
					125	577.59	251.61	242.83	3.9280
					126	569.67	254.36	245.47	3.9501
					127	561.40	257.20	248.18	3.9726
					128	552.72	260.13	250.97	3.9957
					129	543.60	263.14	253.82	4.0191
70	843.40	128.54	122.53	2.6382	130	533.95	266.22	256.73	4.0430
71	839.76	130.74	124.70	2.6694	131	523.68	269.37	259.69	4.0672
72	836.08	132.93	126.87	2.7000	132	512.70	272.46	262.58	4.0909
73	832.36	135.12	129.03	2.7302	133	500.84	276.36	266.25	4.1204
74	828.62	137.30	131.19	2.7599	134	487.93	280.31	269.93	4.1500
75	824.84	139.48	133.34	2.7892	135	473.72	284.52	273.83	4.1812
76	821.04	141.66	135.49	2.8181	136	457.88	289.07	278.00	4.2148
77	817.21	143.83	137.63	2.8465	137	439.98	294.05	282.53	4.2513
78	813.35	146.01	139.78	2.8745	138	419.51	299.60	287.53	4.2916
79	809.46	148.18	141.92	2.9022	139	395.97	305.88	293.08	4.3369
80	805.54	150.34	144.05	2.9295	140	369.30	312.96	299.24	4.3877
81	801.60	152.51	146.19	2.9564	141	340.73	320.68	305.81	4.4426
82	797.63	154.67	148.32	2.9830	142	312.86	328.52	312.33	4.4980
83	793.63	156.84	150.45	3.0092	143	288.18	335.90	318.32	4.5498
84	789.61	159.00	152.58	3.0351	144	267.58	342.50	323.56	4.5958
85	785.55	161.16	154.71	3.0606	145	250.67	348.32	328.11	4.6360
86	781.47	163.31	156.83	3.0859	146	236.75	353.46	332.06	4.6714
87	777.36	165.47	158.95	3.1108	147	225.10	358.06	335.55	4.7028
88	773.22	167.63	161.07	3.1354	148	215.21	362.21	338.67	4.7309
89	769.05	169.78	163.19	3.1598	149	206.68	366.01	341.50	4.7565
90	764.85	171.93	165.31	3.1838	150	199.21	369.53	344.10	4.7800
91	760.61	174.08	167.42	3.2076	151	192.61	372.81	346.50	4.8018
92	756.34	176.23	169.54	3.2311	152	186.70	375.89	348.75	4.8222
93	752.04	178.38	171.65	3.2544	153	181.37	378.80	350.87	4.8413
94	747.70	180.53	173.76	3.2774	154	176.53	381.57	352.87	4.8593
95	743.32	182.68	175.87	3.3001	155	172.10	384.22	354.78	4.8764
96	738.90	184.83	177.98	3.3227	156	168.02	386.76	356.61	4.8928
97	734.44	186.98	180.09	3.3450	157	164.24	389.21	358.36	4.9084
98	729.94	189.14	182.20	3.3670	158	160.73	391.57	360.05	4.9234
99	725.39	191.29	184.31	3.3889	159	157.45	393.85	361.68	4.9378
100	720.79	193.45	186.42	3.4106	160	154.38	396.07	363.26	4.9517
101	716.14	195.61	188.53	3.4321	161	151.50	398.23	364.79	4.9652
102	711.45	197.77	190.65	3.4534	162	148.78	400.34	366.28	4.9782
103	706.69	199.94	192.77	3.4746	163	146.21	402.39	367.74	4.9908
104	701.88	202.12	194.90	3.4956	164	143.77	404.40	369.16	5.0031
105	697.01	204.30	197.03	3.5165	165	141.45	406.37	370.55	5.0151
106	692.07	206.49	199.17	3.5373	166	139.25	408.29	371.91	5.0267
107	687.06	208.69	201.31	3.5579	167	137.15	410.19	373.25	5.0381
108	681.98	210.90	203.47	3.5785	168	135.14	412.04	374.56	5.0492
109	676.82	213.12	205.63	3.5990	169	133.23	413.87	375.84	5.0600
110	671.58	215.36	207.81	3.6194	170	131.39	415.67	377.11	5.0706
111	666.26	217.61	210.00	3.6398	171	129.62	417.44	378.36	5.0810
112	660.83	219.88	212.21	3.6602	172	127.92	419.19	379.59	5.0912
113	655.31	222.17	214.44	3.6805	173	126.29	420.91	380.80	5.1012
114	649.69	224.48	216.68	3.7009	174	124.72	422.61	381.99	5.1110
115	643.94	226.82	218.95	3.7214	175	123.20	424.29	383.17	5.1206
116	638.07	229.19	221.25	3.7418	176	121.74	425.95	384.34	5.1301
117	632.07	231.59	223.57	3.7624	177	120.32	427.60	385.49	5.1394
118	625.93	233.93	225.84	3.7823	178	118.96	429.22	386.63	5.1485
119	619.63	236.31	228.13	3.8025	179	117.63	430.83	387.76	5.1575
120	613.15	238.74	230.48	3.8228	180	116.35	432.42	388.87	5.1664

## 50.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	115.11	433.99	389.98	5.1751	241	74.540	514.44	446.48	5.5612
182	113.90	435.55	391.07	5.1837	242	74.148	515.66	447.33	5.5663
183	112.73	437.10	392.16	5.1922	243	73.761	516.87	448.19	5.5713
184	111.59	438.64	393.24	5.2006	244	73.379	518.08	449.04	5.5762
185	110.48	440.16	394.30	5.2088	245	73.001	519.29	449.89	5.5812
186	109.41	441.67	395.36	5.2170	246	72.628	520.50	450.74	5.5861
187	108.36	443.17	396.41	5.2250	247	72.260	521.70	451.59	5.5910
188	107.34	444.66	397.46	5.2329	248	71.896	522.91	452.44	5.5958
189	106.34	446.13	398.49	5.2408	249	71.537	524.11	453.29	5.6007
190	105.37	447.60	399.52	5.2485	250	71.181	525.30	454.13	5.6055
191	104.43	449.06	400.54	5.2562	251	70.830	526.50	454.97	5.6102
192	103.50	450.50	401.56	5.2637	252	70.483	527.69	455.82	5.6150
193	102.60	451.94	402.56	5.2712	253	70.140	528.89	456.66	5.6197
194	101.72	453.37	403.57	5.2786	254	69.801	530.08	457.50	5.6244
195	100.86	454.79	404.56	5.2859	255	69.466	531.27	458.34	5.6291
196	100.02	456.21	405.56	5.2931	256	69.135	532.45	459.17	5.6337
197	99.197	457.61	406.54	5.3003	257	68.807	533.64	460.01	5.6383
198	98.392	459.01	407.52	5.3073	258	68.483	534.82	460.84	5.6429
199	97.605	460.40	408.50	5.3144	259	68.162	536.00	461.68	5.6475
200	96.834	461.79	409.47	5.3213	260	67.845	537.18	462.51	5.6521
201	96.078	463.16	410.43	5.3282	261	67.531	538.36	463.34	5.6566
202	95.339	464.54	411.40	5.3350	262	67.221	539.54	464.17	5.6611
203	94.613	465.90	412.35	5.3417	263	66.914	540.72	465.00	5.6656
204	93.903	467.26	413.31	5.3484	264	66.611	541.89	465.83	5.6700
205	93.206	468.61	414.26	5.3550	265	66.310	543.06	466.66	5.6745
206	92.522	469.96	415.20	5.3615	266	66.013	544.23	467.49	5.6789
207	91.851	471.30	416.14	5.3680	267	65.718	545.40	468.31	5.6832
208	91.193	472.63	417.08	5.3745	268	65.427	546.57	469.14	5.6876
209	90.547	473.96	418.01	5.3809	269	65.139	547.74	469.96	5.6920
210	89.912	475.29	418.94	5.3872	270	64.854	548.90	470.78	5.6963
211	89.289	476.61	419.87	5.3934	271	64.571	550.06	471.60	5.7006
212	88.676	477.93	420.79	5.3997	272	64.292	551.23	472.43	5.7049
213	88.075	479.24	421.71	5.4058	273	64.015	552.39	473.25	5.7091
214	87.483	480.54	422.63	5.4120	274	63.741	553.55	474.07	5.7134
215	86.902	481.84	423.55	5.4180	275	63.469	554.71	474.88	5.7176
216	86.330	483.14	424.46	5.4240	276	63.200	555.86	475.70	5.7218
217	85.768	484.44	425.37	5.4300	277	62.934	557.02	476.52	5.7260
218	85.215	485.72	426.27	5.4359	278	62.671	558.17	477.33	5.7301
219	84.671	487.01	427.17	5.4418	279	62.409	559.33	478.15	5.7343
220	84.135	488.29	428.08	5.4477	280	62.151	560.48	478.96	5.7384
221	83.608	489.57	428.97	5.4534	281	61.895	561.63	479.78	5.7425
222	83.089	490.84	429.87	5.4592	282	61.641	562.78	480.59	5.7466
223	82.579	492.11	430.76	5.4649	283	61.389	563.93	481.40	5.7506
224	82.075	493.38	431.65	5.4706	284	61.140	565.08	482.22	5.7547
225	81.580	494.64	432.54	5.4762	285	60.894	566.22	483.03	5.7587
226	81.092	495.90	433.43	5.4818	286	60.649	567.37	483.84	5.7627
227	80.611	497.16	434.31	5.4873	287	60.407	568.52	484.65	5.7667
228	80.137	498.41	435.19	5.4928	288	60.167	569.66	485.46	5.7707
229	79.669	499.66	436.07	5.4983	289	59.929	570.80	486.26	5.7747
230	79.209	500.91	436.95	5.5037	290	59.693	571.94	487.07	5.7786
231	78.755	502.15	437.82	5.5091	291	59.459	573.08	487.88	5.7825
232	78.307	503.39	438.70	5.5145	292	59.227	574.22	488.68	5.7864
233	77.866	504.63	439.57	5.5198	293	58.998	575.36	489.49	5.7903
234	77.430	505.87	440.44	5.5251	294	58.770	576.50	490.29	5.7942
235	77.001	507.10	441.31	5.5304	295	58.544	577.64	491.10	5.7981
236	76.577	508.33	442.17	5.5356	296	58.321	578.77	491.90	5.8019
237	76.159	509.56	443.04	5.5408	297	58.099	579.91	492.71	5.8057
238	75.746	510.78	443.90	5.5460	298	57.879	581.04	493.51	5.8096
239	75.339	512.01	444.76	5.5511	299	57.661	582.17	494.31	5.8134
240	74.936	513.23	445.62	5.5562	300	57.445	583.31	495.11	5.8171

## 60.00 ATMOSPHERE IS08AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	615.65	240.72	230.84	3.8256
					122	609.36	243.14	233.16	3.8456
					123	602.92	245.57	235.49	3.8656
					124	596.30	248.07	237.87	3.8858
					125	589.49	250.62	240.31	3.9063
					126	582.48	253.21	242.77	3.9270
					127	575.23	255.85	245.28	3.9479
					128	567.74	258.55	247.84	3.9692
					129	559.98	261.29	250.44	3.9906
70	844.87	129.38	122.19	2.6331	130	551.91	264.06	253.05	4.0121
71	841.26	131.57	124.35	2.6641	131	543.51	266.84	255.66	4.0334
72	837.62	133.76	126.50	2.6947	132	534.73	269.50	258.13	4.0538
73	833.95	135.94	128.65	2.7248	133	525.54	272.87	261.30	4.0793
74	830.25	138.11	130.79	2.7544	134	515.87	276.16	264.38	4.1039
75	826.52	140.29	132.93	2.7836	135	505.68	279.55	267.53	4.1291
76	822.76	142.46	135.07	2.8124	136	494.89	283.05	270.76	4.1549
77	818.98	144.63	137.20	2.8407	137	483.42	286.68	274.10	4.1815
78	815.17	146.79	139.33	2.8687	138	471.19	290.47	277.56	4.2091
79	811.33	148.95	141.46	2.8962	139	458.12	294.43	281.16	4.2377
80	807.47	151.11	143.59	2.9234	140	444.12	298.60	284.91	4.2676
81	803.58	153.27	145.71	2.9502	141	429.13	302.99	288.83	4.2988
82	799.67	155.43	147.83	2.9767	142	413.15	307.63	292.91	4.3316
83	795.73	157.58	149.94	3.0028	143	396.29	312.50	297.16	4.3658
84	791.77	159.73	152.06	3.0286	144	378.79	317.57	301.52	4.4011
85	787.78	161.88	154.17	3.0540	145	361.02	322.78	305.94	4.4372
86	783.76	164.03	156.27	3.0792	146	343.48	328.03	310.34	4.4733
87	779.72	166.18	158.38	3.1040	147	326.63	333.23	314.62	4.5087
88	775.65	168.32	160.48	3.1285	148	310.84	338.27	318.72	4.5429
89	771.55	170.46	162.58	3.1527	149	296.32	343.11	322.59	4.5754
90	767.43	172.60	164.68	3.1766	150	283.13	347.69	326.22	4.6061
91	763.27	174.74	166.78	3.2003	151	271.23	352.02	329.61	4.6349
92	759.09	176.88	168.87	3.2236	152	260.52	356.11	332.77	4.6618
93	754.87	179.02	170.96	3.2468	153	250.88	359.96	335.72	4.6871
94	750.62	181.15	173.05	3.2696	154	242.17	363.59	338.49	4.7108
95	746.34	183.29	175.14	3.2922	155	234.28	367.04	341.09	4.7330
96	742.02	185.42	177.23	3.3146	156	227.11	370.31	343.54	4.7541
97	737.67	187.56	179.32	3.3367	157	220.56	373.43	345.86	4.7740
98	733.28	189.69	181.40	3.3586	158	214.54	376.40	348.07	4.7929
99	728.84	191.83	183.49	3.3803	159	209.01	379.26	350.17	4.8109
100	724.37	193.97	185.57	3.4018	160	203.89	382.00	352.18	4.8281
101	719.85	196.11	187.66	3.4231	161	199.13	384.65	354.12	4.8446
102	715.29	198.25	189.75	3.4442	162	194.70	387.20	355.98	4.8604
103	710.68	200.39	191.84	3.4651	163	190.57	389.67	357.77	4.8756
104	706.02	202.54	193.93	3.4859	164	186.69	392.07	359.51	4.8903
105	701.31	204.70	196.03	3.5065	165	183.04	394.40	361.19	4.9045
106	696.54	206.86	198.13	3.5270	166	179.60	396.67	362.82	4.9182
107	691.71	209.03	200.24	3.5474	167	176.36	398.89	364.41	4.9315
108	686.82	211.20	202.35	3.5676	168	173.28	401.05	365.96	4.9444
109	681.87	213.39	204.48	3.5878	169	170.36	403.16	367.47	4.9569
110	676.85	215.59	206.61	3.6079	170	167.59	405.23	368.95	4.9691
111	671.75	217.80	208.75	3.6279	171	164.95	407.26	370.40	4.9810
112	666.58	220.03	210.91	3.6479	172	162.43	409.24	371.82	4.9926
113	661.33	222.27	213.08	3.6678	173	160.02	411.20	373.20	5.0039
114	655.99	224.54	215.27	3.6878	174	157.71	413.12	374.57	5.0150
115	650.56	226.82	217.47	3.7077	175	155.50	415.01	375.91	5.0258
116	645.03	229.13	219.70	3.7277	176	153.38	416.86	377.23	5.0364
117	639.39	231.46	221.95	3.7477	177	151.34	418.70	378.53	5.0467
118	633.64	233.73	224.13	3.7670	178	149.38	420.50	379.80	5.0569
119	627.78	236.03	226.34	3.7865	179	147.49	422.28	381.06	5.0669
120	621.78	238.37	228.60	3.8061	180	145.67	424.04	382.31	5.0767

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	143.91	425.78	383.53	5.0863	241	90.150	510.74	443.30	5.4946
182	142.22	427.49	384.75	5.0958	242	89.657	511.99	444.18	5.4998
183	140.58	429.19	385.94	5.1051	243	89.170	513.24	445.06	5.5050
184	138.99	430.87	387.13	5.1142	244	88.691	514.49	445.94	5.5101
185	137.45	432.53	388.30	5.1232	245	88.217	515.73	446.82	5.5152
186	135.96	434.17	389.45	5.1320	246	87.749	516.97	447.69	5.5203
187	134.51	435.80	390.60	5.1408	247	87.288	518.21	448.56	5.5253
188	133.11	437.41	391.74	5.1494	248	86.832	519.45	449.44	5.5303
189	131.75	439.01	392.86	5.1578	249	86.382	520.68	450.30	5.5352
190	130.42	440.59	393.98	5.1662	250	85.938	521.92	451.17	5.5402
191	129.13	442.16	395.08	5.1744	251	85.499	523.14	452.04	5.5451
192	127.88	443.72	396.18	5.1826	252	85.066	524.37	452.90	5.5500
193	126.66	445.26	397.26	5.1906	253	84.638	525.60	453.77	5.5548
194	125.47	446.79	398.34	5.1985	254	84.215	526.82	454.63	5.5596
195	124.31	448.31	399.41	5.2063	255	83.797	528.04	455.49	5.5644
196	123.19	449.82	400.47	5.2140	256	83.384	529.25	456.34	5.5692
197	122.08	451.32	401.53	5.2217	257	82.976	530.47	457.20	5.5739
198	121.01	452.81	402.57	5.2292	258	82.572	531.68	458.06	5.5786
199	119.96	454.29	403.61	5.2367	259	82.173	532.89	458.91	5.5833
200	118.93	455.77	404.65	5.2440	260	81.779	534.10	459.76	5.5880
201	117.93	457.23	405.68	5.2513	261	81.390	535.31	460.62	5.5926
202	116.95	458.68	406.70	5.2586	262	81.005	536.52	461.47	5.5972
203	115.99	460.13	407.71	5.2657	263	80.624	537.72	462.31	5.6018
204	115.05	461.56	408.72	5.2727	264	80.247	538.92	463.16	5.6064
205	114.14	462.99	409.73	5.2797	265	79.874	540.12	464.01	5.6109
206	113.24	464.41	410.72	5.2866	266	79.506	541.32	464.85	5.6154
207	112.36	465.83	411.72	5.2935	267	79.141	542.51	465.70	5.6199
208	111.50	467.23	412.71	5.3003	268	78.781	543.71	466.54	5.6244
209	110.65	468.63	413.69	5.3070	269	78.424	544.90	467.38	5.6288
210	109.82	470.03	414.67	5.3136	270	78.071	546.09	468.22	5.6332
211	109.01	471.41	415.64	5.3202	271	77.722	547.28	469.06	5.6376
212	108.22	472.79	416.61	5.3267	272	77.377	548.47	469.90	5.6420
213	107.44	474.17	417.58	5.3332	273	77.035	549.65	470.73	5.6463
214	106.67	475.54	418.54	5.3396	274	76.696	550.84	471.57	5.6507
215	105.92	476.90	419.50	5.3460	275	76.361	552.02	472.40	5.6550
216	105.18	478.26	420.45	5.3523	276	76.030	553.20	473.24	5.6593
217	104.45	479.61	421.40	5.3585	277	75.702	554.38	474.07	5.6635
218	103.74	480.95	422.35	5.3647	278	75.377	555.56	474.90	5.6678
219	103.04	482.29	423.29	5.3708	279	75.055	556.73	475.73	5.6720
220	102.35	483.63	424.23	5.3769	280	74.737	557.91	476.56	5.6762
221	101.67	484.96	425.17	5.3830	281	74.421	559.08	477.39	5.6804
222	101.01	486.29	426.10	5.3890	282	74.109	560.26	478.22	5.6845
223	100.35	487.61	427.03	5.3949	283	73.800	561.43	479.05	5.6887
224	99.703	488.93	427.96	5.4008	284	73.494	562.60	479.87	5.6928
225	99.075	490.24	428.88	5.4066	285	73.190	563.76	480.70	5.6969
226	98.451	491.55	429.80	5.4124	286	72.890	564.93	481.52	5.7010
227	97.838	492.86	430.72	5.4182	287	72.592	566.10	482.35	5.7051
228	97.234	494.16	431.63	5.4239	288	72.297	567.26	483.17	5.7091
229	96.639	495.45	432.54	5.4296	289	72.005	568.42	483.99	5.7132
230	96.054	496.75	433.45	5.4352	290	71.716	569.58	484.81	5.7172
231	95.477	498.04	434.36	5.4408	291	71.429	570.75	485.63	5.7212
232	94.909	499.32	435.26	5.4464	292	71.145	571.90	486.45	5.7251
233	94.349	500.60	436.17	5.4519	293	70.864	573.06	487.27	5.7291
234	93.798	501.88	437.07	5.4574	294	70.585	574.22	488.09	5.7330
235	93.254	503.16	437.96	5.4628	295	70.308	575.38	488.91	5.7370
236	92.719	504.43	438.86	5.4682	296	70.034	576.53	489.72	5.7409
237	92.190	505.70	439.75	5.4736	297	69.763	577.68	490.54	5.7448
238	91.670	506.96	440.64	5.4789	298	69.494	578.84	491.35	5.7486
239	91.156	508.22	441.53	5.4842	299	69.227	579.99	492.17	5.7525
240	90.649	509.48	442.42	5.4894	300	68.962	581.14	492.98	5.7563

## 70.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	623.77	240.44	229.07	3.8099
					122	617.93	242.78	231.30	3.8291
					123	611.97	245.13	233.54	3.8484
					124	605.88	247.52	235.81	3.8678
					125	599.65	249.97	238.14	3.8874
					126	593.28	252.43	240.47	3.9071
					127	586.74	254.94	242.85	3.9270
					128	580.04	257.49	245.26	3.9471
					129	573.15	260.06	247.68	3.9672
70	846.31	130.23	121.85	2.6280	130	566.06	262.64	250.11	3.9872
71	842.75	132.41	123.99	2.6590	131	558.76	265.20	252.51	4.0069
72	839.15	134.59	126.14	2.6895	132	551.22	267.62	254.75	4.0254
73	835.52	136.76	128.27	2.7195	133	543.44	270.71	257.65	4.0488
74	831.86	138.93	130.41	2.7490	134	535.38	273.68	260.43	4.0710
75	828.17	141.10	132.54	2.7781	135	527.03	276.69	263.24	4.0935
76	824.46	143.26	134.66	2.8068	136	518.37	279.76	266.08	4.1161
77	820.72	145.42	136.78	2.8350	137	509.35	282.89	268.96	4.1390
78	816.96	147.58	138.90	2.8629	138	499.97	286.08	271.90	4.1622
79	813.17	149.74	141.02	2.8904	139	490.19	289.36	274.89	4.1859
80	809.36	151.89	143.13	2.9174	140	479.98	292.71	277.93	4.2099
81	805.52	154.04	145.24	2.9442	141	469.33	296.16	281.05	4.2345
82	801.67	156.19	147.34	2.9705	142	458.21	299.71	284.23	4.2595
83	797.78	158.33	149.44	2.9965	143	446.63	303.37	287.49	4.2852
84	793.88	160.48	151.54	3.0222	144	434.60	307.13	290.81	4.3114
85	789.95	162.62	153.64	3.0476	145	422.16	311.00	294.20	4.3382
86	786.00	164.76	155.73	3.0726	146	409.38	314.97	297.65	4.3655
87	782.02	166.89	157.82	3.0973	147	396.35	319.03	301.13	4.3931
88	778.02	169.03	159.91	3.1217	148	383.22	323.14	304.63	4.4210
89	773.99	171.16	162.00	3.1458	149	370.12	327.29	308.13	4.4490
90	769.94	173.29	164.08	3.1696	150	357.22	331.44	311.58	4.4767
91	765.86	175.42	166.16	3.1931	151	344.67	335.56	314.98	4.5041
92	761.75	177.54	168.23	3.2164	152	332.59	339.62	318.30	4.5309
93	757.62	179.67	170.31	3.2393	153	321.08	343.60	321.51	4.5570
94	753.46	181.79	172.38	3.2620	154	310.20	347.47	324.61	4.5822
95	749.26	183.91	174.45	3.2845	155	299.97	351.23	327.58	4.6065
96	745.04	186.03	176.51	3.3067	156	290.40	354.86	330.44	4.6299
97	740.78	188.15	178.58	3.3287	157	281.47	358.37	333.17	4.6523
98	736.49	190.27	180.64	3.3504	158	273.14	361.76	335.79	4.6738
99	732.17	192.39	182.70	3.3719	159	265.38	365.03	338.30	4.6944
100	727.81	194.51	184.76	3.3932	160	258.15	368.18	340.70	4.7142
101	723.41	196.63	186.82	3.4143	161	251.41	371.22	343.01	4.7331
102	718.97	198.75	188.89	3.4353	162	245.11	374.16	345.23	4.7513
103	714.49	200.88	190.95	3.4560	163	239.23	377.01	347.36	4.7689
104	709.96	203.00	193.01	3.4765	164	233.71	379.76	349.42	4.7857
105	705.39	205.13	195.08	3.4970	165	228.53	382.44	351.40	4.8020
106	700.77	207.27	197.15	3.5172	166	223.66	385.03	353.32	4.8176
107	696.11	209.41	199.22	3.5373	167	219.08	387.56	355.18	4.8328
108	691.39	211.56	201.30	3.5573	168	214.75	390.01	356.98	4.8475
109	686.61	213.72	203.39	3.5772	169	210.65	392.41	358.74	4.8617
110	681.78	215.89	205.48	3.5970	170	206.78	394.74	360.44	4.8755
111	676.89	218.06	207.58	3.6167	171	203.10	397.03	362.11	4.8888
112	671.93	220.25	209.70	3.6364	172	199.60	399.26	363.73	4.9019
113	666.91	222.46	211.82	3.6560	173	196.27	401.45	365.31	4.9145
114	661.81	224.68	213.96	3.6755	174	193.10	403.59	366.86	4.9269
115	656.64	226.91	216.11	3.6951	175	190.07	405.69	368.37	4.9389
116	651.39	229.17	218.28	3.7146	176	187.17	407.75	369.86	4.9507
117	646.05	231.45	220.47	3.7342	177	184.40	409.78	371.32	4.9622
118	640.63	233.66	222.59	3.7530	178	181.74	411.77	372.75	4.9734
119	635.11	235.90	224.73	3.7719	179	179.19	413.73	374.15	4.9844
120	629.49	238.17	226.91	3.7909	180	176.74	415.66	375.53	4.9951



## 70.00 ATMOSPHERE 1S08AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	174.38	417.56	376.89	5.0056	241	105.88	507.11	440.12	5.4366
182	172.11	419.44	378.23	5.0160	242	105.28	508.40	441.03	5.4420
183	169.92	421.29	379.55	5.0261	243	104.69	509.68	441.93	5.4473
184	167.81	423.11	380.85	5.0360	244	104.11	510.97	442.84	5.4525
185	165.78	424.91	382.13	5.0458	245	103.53	512.25	443.74	5.4578
186	163.81	426.69	383.40	5.0554	246	102.96	513.52	444.64	5.4630
187	161.91	428.45	384.65	5.0648	247	102.40	514.80	445.54	5.4681
188	160.06	430.19	385.88	5.0741	248	101.85	516.07	446.43	5.4733
189	158.28	431.91	387.10	5.0832	249	101.31	517.34	447.32	5.4784
190	156.55	433.62	388.31	5.0922	250	100.77	518.60	448.22	5.4834
191	154.87	435.30	389.50	5.1011	251	100.24	519.86	449.10	5.4885
192	153.24	436.97	390.68	5.1098	252	99.714	521.12	449.99	5.4935
193	151.66	438.62	391.85	5.1184	253	99.197	522.38	450.88	5.4984
194	150.12	440.26	393.01	5.1268	254	98.686	523.63	451.76	5.5034
195	148.62	441.88	394.16	5.1352	255	98.182	524.88	452.64	5.5083
196	147.17	443.49	395.30	5.1434	256	97.684	526.13	453.52	5.5132
197	145.75	445.09	396.43	5.1515	257	97.192	527.38	454.40	5.5180
198	144.37	446.67	397.55	5.1595	258	96.706	528.62	455.27	5.5229
199	143.03	448.24	398.66	5.1675	259	96.226	529.86	456.15	5.5277
200	141.72	449.80	399.76	5.1753	260	95.751	531.10	457.02	5.5324
201	140.44	451.35	400.85	5.1830	261	95.283	532.33	457.89	5.5372
202	139.19	452.89	401.93	5.1906	262	94.819	533.57	458.76	5.5419
203	137.98	454.41	403.01	5.1981	263	94.362	534.80	459.63	5.5466
204	136.79	455.93	404.08	5.2056	264	93.909	536.02	460.50	5.5512
205	135.63	457.44	405.14	5.2130	265	93.462	537.25	461.36	5.5559
206	134.49	458.93	406.20	5.2202	266	93.020	538.48	462.23	5.5605
207	133.38	460.42	407.24	5.2275	267	92.582	539.70	463.09	5.5651
208	132.29	461.90	408.29	5.2346	268	92.150	540.92	463.95	5.5696
209	131.23	463.37	409.32	5.2416	269	91.722	542.14	464.81	5.5742
210	130.19	464.83	410.35	5.2486	270	91.300	543.35	465.66	5.5787
211	129.17	466.29	411.38	5.2555	271	90.881	544.56	466.52	5.5832
212	128.17	467.73	412.40	5.2623	272	90.468	545.78	467.38	5.5876
213	127.20	469.17	413.41	5.2691	273	90.059	546.99	468.23	5.5921
214	126.24	470.60	414.42	5.2758	274	89.654	548.19	469.08	5.5965
215	125.30	472.03	415.42	5.2825	275	89.253	549.40	469.93	5.6009
216	124.38	473.44	416.42	5.2890	276	88.857	550.61	470.78	5.6053
217	123.47	474.85	417.41	5.2955	277	88.465	551.81	471.63	5.6096
218	122.59	476.26	418.40	5.3020	278	88.077	553.01	472.48	5.6139
219	121.72	477.66	419.38	5.3084	279	87.693	554.21	473.33	5.6182
220	120.86	479.05	420.36	5.3147	280	87.313	555.41	474.17	5.6225
221	120.02	480.43	421.34	5.3210	281	86.937	556.60	475.02	5.6268
222	119.20	481.81	422.31	5.3273	282	86.564	557.79	475.86	5.6310
223	118.39	483.19	423.28	5.3334	283	86.195	558.99	476.70	5.6352
224	117.60	484.56	424.24	5.3396	284	85.830	560.18	477.54	5.6394
225	116.81	485.92	425.20	5.3456	285	85.469	561.37	478.38	5.6436
226	116.04	487.28	426.16	5.3516	286	85.111	562.56	479.22	5.6478
227	115.29	488.63	427.11	5.3576	287	84.757	563.74	480.06	5.6519
228	114.55	489.98	428.06	5.3635	288	84.406	564.93	480.89	5.6560
229	113.82	491.32	429.00	5.3694	289	84.058	566.11	481.73	5.6601
230	113.10	492.66	429.95	5.3753	290	83.714	567.29	482.56	5.6642
231	112.39	494.00	430.89	5.3810	291	83.373	568.47	483.40	5.6683
232	111.69	495.32	431.82	5.3868	292	83.035	569.65	484.23	5.6723
233	111.01	496.65	432.76	5.3925	293	82.701	570.83	485.06	5.6764
234	110.33	497.97	433.69	5.3981	294	82.369	572.00	485.89	5.6804
235	109.67	499.29	434.61	5.4038	295	82.041	573.18	486.72	5.6844
236	109.01	500.60	435.54	5.4093	296	81.716	574.35	487.55	5.6883
237	108.37	501.91	436.46	5.4149	297	81.393	575.52	488.38	5.6923
238	107.73	503.21	437.38	5.4204	298	81.074	576.69	489.21	5.6962
239	107.11	504.52	438.29	5.4258	299	80.757	577.86	490.04	5.7001
240	106.49	505.81	439.21	5.4312	300	80.444	579.03	490.86	5.7040

## 80.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	631.10	240.31	227.47	3.7954
					122	625.62	242.59	229.63	3.8141
					123	620.04	244.86	231.79	3.8328
					124	614.36	247.18	233.98	3.8516
					125	608.58	249.54	236.22	3.8706
					126	602.68	251.91	238.46	3.8896
					127	596.67	254.32	240.74	3.9087
					128	590.53	256.77	243.04	3.9280
					129	584.26	259.22	245.34	3.9471
70	847.74	131.07	121.51	2.6230	130	577.86	261.67	247.64	3.9661
71	844.21	133.25	123.65	2.6539	131	571.30	264.09	249.90	3.9847
72	840.65	135.42	125.78	2.6843	132	564.58	266.34	251.98	4.0020
73	837.06	137.59	127.91	2.7142	133	557.70	269.25	254.72	4.0240
74	833.44	139.75	130.03	2.7437	134	550.63	272.03	257.30	4.0448
75	829.80	141.92	132.15	2.7727	135	543.38	274.82	259.90	4.0656
76	826.13	144.07	134.26	2.8013	136	535.93	277.64	262.52	4.0864
77	822.43	146.23	136.37	2.8294	137	528.27	280.50	265.15	4.1073
78	818.72	148.38	138.48	2.8572	138	520.39	283.39	267.81	4.1283
79	814.98	150.53	140.58	2.8846	139	512.27	286.31	270.49	4.1494
80	811.21	152.67	142.68	2.9116	140	503.91	289.28	273.20	4.1707
81	807.43	154.81	144.78	2.9382	141	495.29	292.30	275.94	4.1922
82	803.62	156.96	146.87	2.9645	142	486.42	295.37	278.71	4.2139
83	799.80	159.09	148.96	2.9904	143	477.28	298.50	281.51	4.2358
84	795.95	161.23	151.04	3.0160	144	467.87	301.68	284.35	4.2580
85	792.08	163.36	153.13	3.0412	145	458.21	304.92	287.23	4.2804
86	788.18	165.49	155.21	3.0662	146	448.31	308.22	290.14	4.3031
87	784.27	167.62	157.28	3.0908	147	438.18	311.58	293.08	4.3260
88	780.33	169.74	159.36	3.1150	148	427.87	314.99	296.04	4.3491
89	776.37	171.87	161.42	3.1390	149	417.41	318.44	299.02	4.3724
90	772.39	173.99	163.49	3.1627	150	406.86	321.94	302.02	4.3958
91	768.38	176.10	165.55	3.1861	151	396.28	325.47	305.01	4.4192
92	764.35	178.22	167.61	3.2093	152	385.74	329.01	308.00	4.4426
93	760.29	180.33	169.67	3.2321	153	375.30	332.56	310.96	4.4659
94	756.21	182.44	171.72	3.2547	154	365.04	336.09	313.89	4.4889
95	752.10	184.55	173.77	3.2770	155	355.01	339.60	316.77	4.5116
96	747.96	186.66	175.82	3.2991	156	345.28	343.08	319.60	4.5340
97	743.79	188.76	177.86	3.3209	157	335.87	346.51	322.37	4.5558
98	739.60	190.87	179.91	3.3425	158	326.83	349.88	325.07	4.5772
99	735.37	192.97	181.95	3.3639	159	318.18	353.18	327.70	4.5981
100	731.11	195.07	183.99	3.3850	160	309.91	356.42	330.26	4.6184
101	726.82	197.18	186.02	3.4059	161	302.05	359.58	332.74	4.6381
102	722.49	199.28	188.06	3.4267	162	294.57	362.67	335.15	4.6572
103	718.13	201.39	190.10	3.4472	163	287.47	365.69	337.49	4.6758
104	713.73	203.49	192.14	3.4676	164	280.74	368.63	339.75	4.6938
105	709.29	205.60	194.18	3.4878	165	274.35	371.50	341.95	4.7112
106	704.81	207.72	196.22	3.5078	166	268.30	374.29	344.08	4.7281
107	700.28	209.84	198.26	3.5277	167	262.56	377.02	346.15	4.7445
108	695.71	211.96	200.31	3.5475	168	257.12	379.69	348.16	4.7604
109	691.10	214.09	202.36	3.5671	169	251.94	382.29	350.11	4.7758
110	686.43	216.23	204.42	3.5867	170	247.03	384.83	352.01	4.7908
111	681.72	218.38	206.49	3.6061	171	242.36	387.31	353.87	4.8054
112	676.95	220.53	208.56	3.6255	172	237.91	389.74	355.67	4.8195
113	672.12	222.70	210.64	3.6448	173	233.67	392.12	357.43	4.8333
114	667.23	224.89	212.74	3.6640	174	229.63	394.45	359.15	4.8467
115	662.29	227.08	214.85	3.6832	175	225.77	396.73	360.83	4.8598
116	657.27	229.30	216.97	3.7024	176	222.08	398.97	362.47	4.8726
117	652.19	231.53	219.10	3.7215	177	218.55	401.17	364.08	4.8850
118	647.04	233.70	221.17	3.7399	178	215.17	403.33	365.66	4.8972
119	641.81	235.88	223.25	3.7585	179	211.92	405.45	367.20	4.9091
120	636.49	238.10	225.37	3.7770	180	208.81	407.54	368.72	4.9207

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	205.82	409.59	370.21	4.9321	241	121.67	503.57	436.95	5.3849
182	202.95	411.61	371.67	4.9432	242	120.95	504.90	437.88	5.3904
183	200.18	413.61	373.11	4.9541	243	120.25	506.22	438.81	5.3959
184	197.52	415.57	374.53	4.9648	244	119.56	507.54	439.74	5.4013
185	194.95	417.50	375.92	4.9753	245	118.88	508.86	440.67	5.4067
186	192.47	419.41	377.30	4.9856	246	118.21	510.17	441.60	5.4120
187	190.08	421.30	378.65	4.9957	247	117.55	511.47	442.52	5.4173
188	187.77	423.16	379.99	5.0056	248	116.90	512.78	443.44	5.4226
189	185.53	425.00	381.31	5.0154	249	116.26	514.08	444.35	5.4278
190	183.36	426.81	382.61	5.0250	250	115.62	515.38	445.27	5.4330
191	181.27	428.61	383.89	5.0344	251	115.00	516.67	446.18	5.4382
192	179.24	430.39	385.16	5.0437	252	114.38	517.96	447.09	5.4433
193	177.27	432.14	386.42	5.0528	253	113.77	519.25	448.00	5.4484
194	175.36	433.88	387.66	5.0618	254	113.17	520.53	448.90	5.4535
195	173.50	435.60	388.88	5.0706	255	112.57	521.81	449.81	5.4585
196	171.70	437.31	390.10	5.0794	256	111.99	523.09	450.71	5.4635
197	169.94	439.00	391.30	5.0880	257	111.41	524.37	451.61	5.4685
198	168.24	440.67	392.49	5.0964	258	110.84	525.64	452.50	5.4734
199	166.58	442.33	393.67	5.1048	259	110.28	526.91	453.40	5.4783
200	164.96	443.98	394.84	5.1131	260	109.72	528.17	454.29	5.4832
201	163.39	445.61	396.00	5.1212	261	109.17	529.44	455.18	5.4881
202	161.86	447.23	397.15	5.1292	262	108.62	530.70	456.07	5.4929
203	160.36	448.84	398.29	5.1372	263	108.09	531.95	456.96	5.4977
204	158.91	450.43	399.42	5.1450	264	107.56	533.21	457.85	5.5024
205	157.48	452.01	400.54	5.1527	265	107.03	534.46	458.73	5.5072
206	156.09	453.58	401.65	5.1604	266	106.52	535.71	459.61	5.5119
207	154.74	455.14	402.76	5.1679	267	106.00	536.96	460.49	5.5166
208	153.41	456.69	403.86	5.1754	268	105.50	538.21	461.37	5.5212
209	152.12	458.23	404.94	5.1828	269	105.00	539.45	462.25	5.5258
210	150.85	459.76	406.03	5.1901	270	104.50	540.69	463.12	5.5305
211	149.61	461.28	407.10	5.1973	271	104.01	541.93	464.00	5.5350
212	148.40	462.79	408.17	5.2044	272	103.53	543.16	464.87	5.5396
213	147.21	464.29	409.23	5.2115	273	103.05	544.40	465.74	5.5441
214	146.05	465.79	410.29	5.2185	274	102.58	545.63	466.61	5.5486
215	144.92	467.27	411.34	5.2254	275	102.11	546.86	467.48	5.5531
216	143.80	468.75	412.38	5.2323	276	101.65	548.09	468.34	5.5575
217	142.71	470.22	413.42	5.2390	277	101.19	549.31	469.21	5.5620
218	141.64	471.68	414.45	5.2458	278	100.74	550.53	470.07	5.5664
219	140.59	473.13	415.47	5.2524	279	100.29	551.76	470.93	5.5708
220	139.56	474.58	416.49	5.2590	280	99.850	552.97	471.79	5.5751
221	138.55	476.02	417.51	5.2655	281	99.411	554.19	472.65	5.5795
222	137.56	477.45	418.52	5.2720	282	98.977	555.41	473.51	5.5838
223	136.59	478.87	419.53	5.2784	283	98.548	556.62	474.37	5.5881
224	135.64	480.29	420.53	5.2847	284	98.123	557.83	475.22	5.5924
225	134.70	481.70	421.53	5.2910	285	97.703	559.04	476.08	5.5966
226	133.78	483.11	422.52	5.2973	286	97.286	560.25	476.93	5.6008
227	132.87	484.51	423.51	5.3034	287	96.874	561.46	477.78	5.6050
228	131.98	485.91	424.49	5.3096	288	96.466	562.66	478.63	5.6092
229	131.11	487.30	425.47	5.3157	289	96.062	563.86	479.48	5.6134
230	130.25	488.68	426.45	5.3217	290	95.662	565.07	480.33	5.6176
231	129.41	490.06	427.42	5.3277	291	95.266	566.27	481.18	5.6217
232	128.57	491.43	428.39	5.3336	292	94.874	567.46	482.02	5.6258
233	127.76	492.80	429.35	5.3395	293	94.486	568.66	482.87	5.6299
234	126.95	494.16	430.31	5.3453	294	94.101	569.85	483.71	5.6340
235	126.16	495.52	431.27	5.3511	295	93.720	571.05	484.56	5.6380
236	125.38	496.87	432.22	5.3569	296	93.342	572.24	485.40	5.6420
237	124.62	498.22	433.17	5.3626	297	92.968	573.43	486.24	5.6461
238	123.86	499.57	434.12	5.3682	298	92.598	574.62	487.08	5.6500
239	123.12	500.90	435.07	5.3738	299	92.231	575.81	487.92	5.6540
240	122.39	502.24	436.01	5.3794	300	91.867	576.99	488.76	5.6580

90.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	637.80	240.30	226.00	3.7821
					122	632.60	242.52	228.10	3.8004
					123	627.34	244.74	230.20	3.8186
					124	621.99	246.99	232.33	3.8369
					125	616.56	249.29	234.50	3.8553
					126	611.05	251.59	236.67	3.8738
					127	605.44	253.92	238.86	3.8923
					128	599.74	256.28	241.08	3.9109
					129	593.94	258.65	243.29	3.9293
					130	588.04	261.00	245.49	3.9476
71	845.66	134.09	123.31	2.6489	131	582.02	263.31	247.64	3.9654
72	842.13	136.26	125.43	2.6792	132	575.90	265.45	249.62	3.9818
73	838.58	138.42	127.55	2.7090	133	569.65	268.24	252.23	4.0027
74	835.00	140.58	129.66	2.7384	134	563.27	270.88	254.69	4.0229
75	831.40	142.73	131.77	2.7673	135	556.77	273.53	257.15	4.0424
76	827.77	144.89	133.87	2.7958	136	550.12	276.19	259.61	4.0620
77	824.12	147.03	135.97	2.8239	137	543.34	278.87	262.08	4.0816
78	820.45	149.18	138.06	2.8516	138	536.40	281.56	264.56	4.1012
79	816.75	151.32	140.15	2.8789	139	529.31	284.28	267.05	4.1208
80	813.04	153.46	142.24	2.9058	140	522.06	287.02	269.55	4.1405
81	809.30	155.59	144.33	2.9324	141	514.65	289.79	272.07	4.1602
82	805.55	157.73	146.41	2.9585	142	507.08	292.58	274.60	4.1799
83	801.77	159.86	148.48	2.9844	143	499.33	295.41	277.15	4.1998
84	797.97	161.99	150.56	3.0099	144	491.41	298.27	279.71	4.2197
85	794.16	164.11	152.63	3.0350	145	483.33	301.17	282.30	4.2397
86	790.32	166.23	154.69	3.0598	146	475.09	304.10	284.90	4.2599
87	786.46	168.35	156.76	3.0844	147	466.69	307.06	287.52	4.2801
88	782.59	170.47	158.82	3.1085	148	458.15	310.06	290.16	4.3005
89	778.69	172.58	160.87	3.1324	149	449.48	313.10	292.81	4.3209
90	774.77	174.69	162.92	3.1560	150	440.70	316.17	295.47	4.3414
91	770.83	176.80	164.97	3.1793	151	431.84	319.26	298.15	4.3620
92	766.87	178.90	167.01	3.2023	152	422.91	322.38	300.82	4.3826
93	762.88	181.01	169.05	3.2251	153	413.97	325.52	303.49	4.4031
94	758.88	183.11	171.09	3.2475	154	405.03	328.68	306.16	4.4237
95	754.85	185.20	173.12	3.2697	155	396.13	331.84	308.82	4.4441
96	750.79	187.30	175.15	3.2917	156	387.32	335.00	311.45	4.4645
97	746.71	189.39	177.18	3.3134	157	378.62	338.15	314.07	4.4846
98	742.60	191.48	179.20	3.3348	158	370.07	341.29	316.65	4.5045
99	738.46	193.57	181.22	3.3560	159	361.71	344.41	319.20	4.5242
100	734.30	195.66	183.24	3.3770	160	353.54	347.50	321.70	4.5436
101	730.11	197.75	185.26	3.3978	161	345.61	350.56	324.17	4.5626
102	725.88	199.83	187.27	3.4184	162	337.92	353.58	326.59	4.5813
103	721.63	201.92	189.29	3.4388	163	330.48	356.55	328.96	4.5997
104	717.34	204.01	191.30	3.4590	164	323.30	359.49	331.28	4.6176
105	713.02	206.10	193.31	3.4790	165	316.40	362.37	333.55	4.6351
106	708.66	208.20	195.33	3.4988	166	309.75	365.21	335.77	4.6523
107	704.26	210.30	197.35	3.5185	167	303.38	368.00	337.94	4.6690
108	699.83	212.40	199.37	3.5381	168	297.26	370.74	340.06	4.6854
109	695.36	214.50	201.39	3.5575	169	291.39	373.42	342.13	4.7013
110	690.84	216.62	203.42	3.5768	170	285.77	376.06	344.15	4.7169
111	686.28	218.74	205.45	3.5960	171	280.38	378.65	346.12	4.7320
112	681.67	220.87	207.49	3.6151	172	275.21	381.19	348.05	4.7468
113	677.02	223.01	209.54	3.6341	173	270.27	383.68	349.94	4.7613
114	672.32	225.16	211.59	3.6531	174	265.52	386.13	351.79	4.7754
115	667.56	227.32	213.66	3.6720	175	260.98	388.54	353.59	4.7892
116	662.75	229.50	215.74	3.6909	176	256.61	390.90	355.36	4.8026
117	657.89	231.70	217.84	3.7097	177	252.43	393.22	357.09	4.8158
118	652.96	233.82	219.85	3.7278	178	248.41	395.50	358.79	4.8286
119	647.97	235.96	221.89	3.7459	179	244.55	397.74	360.45	4.8412
120	642.92	238.14	223.95	3.7641	180	240.83	399.95	362.08	4.8535

90.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	237.26	402.12	363.69	4.8655	241	137.44	500.15	433.80	5.3383
182	233.82	404.26	365.26	4.8773	242	136.61	501.51	434.76	5.3439
183	230.51	406.37	366.81	4.8889	243	135.80	502.87	435.72	5.3495
184	227.32	408.44	368.33	4.9002	244	135.00	504.22	436.67	5.3551
185	224.24	410.49	369.82	4.9113	245	134.21	505.57	437.63	5.3606
186	221.27	412.51	371.30	4.9221	246	133.44	506.92	438.58	5.3660
187	218.40	414.50	372.75	4.9328	247	132.67	508.26	439.52	5.3715
188	215.63	416.47	374.18	4.9433	248	131.92	509.59	440.47	5.3769
189	212.95	418.41	375.58	4.9536	249	131.17	510.93	441.41	5.3822
190	210.36	420.33	376.97	4.9637	250	130.44	512.25	442.34	5.3876
191	207.85	422.22	378.34	4.9737	251	129.72	513.58	443.28	5.3929
192	205.41	424.09	379.70	4.9834	252	129.01	514.90	444.21	5.3981
193	203.06	425.94	381.03	4.9930	253	128.30	516.22	445.14	5.4033
194	200.77	427.77	382.35	5.0025	254	127.61	517.53	446.07	5.4085
195	198.55	429.59	383.66	5.0118	255	126.93	518.84	446.99	5.4137
196	196.40	431.38	384.95	5.0210	256	126.25	520.15	447.92	5.4188
197	194.30	433.15	386.22	5.0300	257	125.58	521.45	448.84	5.4239
198	192.27	434.91	387.48	5.0389	258	124.93	522.75	449.75	5.4289
199	190.29	436.65	388.73	5.0477	259	124.28	524.05	450.67	5.4339
200	188.37	438.38	389.97	5.0563	260	123.64	525.34	451.58	5.4389
201	186.49	440.09	391.19	5.0649	261	123.00	526.63	452.49	5.4439
202	184.67	441.78	392.40	5.0733	262	122.38	527.92	453.40	5.4488
203	182.89	443.46	393.60	5.0816	263	121.76	529.20	454.31	5.4537
204	181.16	445.13	394.79	5.0898	264	121.15	530.49	455.21	5.4585
205	179.47	446.78	395.97	5.0979	265	120.55	531.76	456.12	5.4634
206	177.83	448.42	397.14	5.1058	266	119.95	533.04	457.02	5.4682
207	176.22	450.05	398.30	5.1137	267	119.37	534.31	457.92	5.4729
208	174.65	451.67	399.45	5.1215	268	118.79	535.58	458.81	5.4777
209	173.12	453.27	400.60	5.1292	269	118.21	536.85	459.71	5.4824
210	171.62	454.87	401.73	5.1368	270	117.65	538.11	460.60	5.4871
211	170.15	456.45	402.85	5.1443	271	117.09	539.38	461.49	5.4918
212	168.72	458.02	403.97	5.1518	272	116.53	540.64	462.38	5.4964
213	167.32	459.58	405.08	5.1591	273	115.98	541.89	463.27	5.5010
214	165.95	461.13	406.18	5.1664	274	115.44	543.15	464.15	5.5056
215	164.61	462.68	407.28	5.1736	275	114.91	544.40	465.04	5.5102
216	163.30	464.21	408.37	5.1807	276	114.38	545.65	465.92	5.5147
217	162.02	465.73	409.45	5.1877	277	113.85	546.90	466.80	5.5192
218	160.76	467.25	410.52	5.1947	278	113.34	548.14	467.68	5.5237
219	159.53	468.75	411.59	5.2016	279	112.82	549.38	468.56	5.5282
220	158.32	470.25	412.65	5.2084	280	112.32	550.62	469.43	5.5326
221	157.13	471.74	413.71	5.2151	281	111.82	551.86	470.31	5.5370
222	155.97	473.22	414.76	5.2218	282	111.32	553.10	471.18	5.5414
223	154.83	474.70	415.80	5.2285	283	110.83	554.33	472.05	5.5458
224	153.71	476.17	416.84	5.2350	284	110.35	555.57	472.92	5.5501
225	152.62	477.63	417.87	5.2415	285	109.86	556.80	473.79	5.5544
226	151.54	479.08	418.90	5.2480	286	109.39	558.02	474.66	5.5587
227	150.48	480.52	419.92	5.2544	287	108.92	559.25	475.52	5.5630
228	149.44	481.96	420.94	5.2607	288	108.45	560.47	476.39	5.5673
229	148.42	483.40	421.96	5.2670	289	107.99	561.70	477.25	5.5715
230	147.42	484.82	422.97	5.2732	290	107.54	562.92	478.11	5.5757
231	146.44	486.25	423.97	5.2793	291	107.08	564.13	478.98	5.5799
232	145.47	487.66	424.97	5.2854	292	106.64	565.35	479.83	5.5841
233	144.52	489.07	425.97	5.2915	293	106.19	566.57	480.69	5.5882
234	143.58	490.47	426.96	5.2975	294	105.76	567.78	481.55	5.5924
235	142.66	491.87	427.95	5.3035	295	105.32	568.99	482.41	5.5965
236	141.75	493.26	428.93	5.3094	296	104.89	570.20	483.26	5.6006
237	140.86	494.65	429.91	5.3153	297	104.47	571.41	484.11	5.6047
238	139.98	496.03	430.89	5.3211	298	104.04	572.61	484.97	5.6087
239	139.12	497.41	431.86	5.3268	299	103.63	573.82	485.82	5.6127
240	138.27	498.78	432.83	5.3326	300	103.21	575.02	486.67	5.6168

## 100.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	643.98	240.37	224.64	3.7697
					122	639.03	242.55	226.69	3.7876
					123	634.02	244.72	228.74	3.8054
					124	628.95	246.93	230.82	3.8233
					125	623.81	249.17	232.93	3.8413
					126	618.61	251.42	235.04	3.8593
					127	613.33	253.69	237.17	3.8773
					128	607.98	255.98	239.32	3.8954
					129	602.55	258.27	241.46	3.9133
					130	597.04	260.55	243.58	3.9310
71	847.08	134.94	122.98	2.6440	131	591.44	262.79	245.65	3.9482
72	843.60	137.10	125.09	2.6742	132	585.76	264.84	247.54	3.9639
73	840.08	139.26	127.20	2.7039	133	579.99	267.53	250.06	3.9843
74	836.54	141.41	129.30	2.7332	134	574.13	270.07	252.42	4.0034
75	832.98	143.56	131.39	2.7621	135	568.17	272.61	254.78	4.0222
76	829.39	145.70	133.49	2.7905	136	562.11	275.16	257.13	4.0410
77	825.78	147.84	135.57	2.8185	137	555.94	277.71	259.49	4.0597
78	822.15	149.98	137.66	2.8461	138	549.67	280.27	261.84	4.0784
79	818.50	152.12	139.74	2.8733	139	543.29	282.85	264.20	4.0969
80	814.83	154.25	141.82	2.9002	140	536.80	285.43	266.56	4.1155
81	811.14	156.38	143.89	2.9266	141	530.20	288.03	268.92	4.1340
82	807.43	158.51	145.96	2.9527	142	523.48	290.65	271.30	4.1525
83	803.71	160.63	148.02	2.9785	143	516.65	293.29	273.68	4.1710
84	799.96	162.75	150.08	3.0039	144	509.70	295.94	276.06	4.1895
85	796.20	164.87	152.14	3.0289	145	502.63	298.62	278.46	4.2080
86	792.41	166.98	154.19	3.0537	146	495.45	301.32	280.87	4.2266
87	788.61	169.09	156.24	3.0781	147	488.16	304.04	283.29	4.2451
88	784.79	171.20	158.29	3.1022	148	480.77	306.79	285.71	4.2637
89	780.96	173.31	160.33	3.1260	149	473.28	309.56	288.15	4.2824
90	777.10	175.41	162.37	3.1495	150	465.70	312.35	290.59	4.3010
91	773.22	177.51	164.40	3.1727	151	458.05	315.16	293.04	4.3197
92	769.33	179.60	166.43	3.1956	152	450.32	317.99	295.49	4.3384
93	765.41	181.69	168.45	3.2182	153	442.55	320.84	297.94	4.3571
94	761.47	183.78	170.48	3.2405	154	434.75	323.70	300.40	4.3757
95	757.51	185.87	172.49	3.2626	155	426.94	326.58	302.85	4.3944
96	753.53	187.95	174.50	3.2844	156	419.13	329.47	305.29	4.4129
97	749.53	190.03	176.51	3.3060	157	411.34	332.36	307.73	4.4314
98	745.50	192.11	178.52	3.3273	158	403.61	335.25	310.15	4.4498
99	741.45	194.19	180.52	3.3484	159	395.94	338.15	312.55	4.4680
100	737.38	196.26	182.52	3.3693	160	388.37	341.03	314.94	4.4861
101	733.27	198.34	184.52	3.3899	161	380.90	343.91	317.30	4.5040
102	729.15	200.41	186.51	3.4104	162	373.56	346.77	319.64	4.5217
103	724.99	202.48	188.51	3.4306	163	366.37	349.61	321.95	4.5392
104	720.81	204.56	190.50	3.4506	164	359.33	352.43	324.23	4.5565
105	716.59	206.63	192.49	3.4705	165	352.47	355.22	326.47	4.5734
106	712.34	208.71	194.48	3.4902	166	345.78	357.99	328.69	4.5902
107	708.07	210.78	196.47	3.5097	167	339.28	360.73	330.86	4.6066
108	703.76	212.87	198.47	3.5291	168	332.97	363.43	333.00	4.6227
109	699.41	214.95	200.46	3.5483	169	326.85	366.10	335.10	4.6386
110	695.03	217.04	202.46	3.5674	170	320.92	368.74	337.16	4.6541
111	690.61	219.14	204.47	3.5864	171	315.19	371.34	339.19	4.6694
112	686.15	221.24	206.48	3.6053	172	309.65	373.90	341.18	4.6843
113	681.65	223.36	208.49	3.6241	173	304.29	376.43	343.13	4.6990
114	677.11	225.48	210.52	3.6428	174	299.12	378.92	345.04	4.7133
115	672.52	227.62	212.55	3.6614	175	294.14	381.37	346.92	4.7274
116	667.89	229.76	214.59	3.6800	176	289.32	383.79	348.77	4.7412
117	663.21	231.93	216.65	3.6986	177	284.67	386.17	350.58	4.7547
118	658.48	234.02	218.63	3.7163	178	280.19	388.52	352.36	4.7679
119	653.70	236.12	220.62	3.7342	179	275.86	390.84	354.11	4.7809
120	648.87	238.26	222.64	3.7520	180	271.69	393.12	355.82	4.7936

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	267.66	395.36	357.51	4.8060	241	153.12	496.85	430.68	5.2956
182	263.76	397.58	359.17	4.8182	242	152.18	498.25	431.67	5.3014
183	260.00	399.77	360.80	4.8302	243	151.26	499.64	432.65	5.3071
184	256.37	401.92	362.40	4.8419	244	150.35	501.03	433.63	5.3128
185	252.86	404.05	363.98	4.8535	245	149.45	502.41	434.61	5.3185
186	249.47	406.15	365.53	4.8648	246	148.57	503.79	435.59	5.3241
187	246.18	408.22	367.06	4.8759	247	147.70	505.16	436.56	5.3297
188	243.00	410.27	368.57	4.8868	248	146.85	506.53	437.52	5.3352
189	239.93	412.29	370.06	4.8975	249	146.00	507.89	438.49	5.3407
190	236.95	414.28	371.52	4.9081	250	145.17	509.25	439.45	5.3461
191	234.06	416.26	372.97	4.9184	251	144.35	510.60	440.41	5.3515
192	231.26	418.21	374.39	4.9286	252	143.54	511.95	441.36	5.3569
193	228.54	420.13	375.80	4.9386	253	142.74	513.30	442.32	5.3622
194	225.91	422.04	377.19	4.9485	254	141.96	514.64	443.26	5.3675
195	223.35	423.93	378.56	4.9582	255	141.18	515.98	444.21	5.3728
196	220.86	425.79	379.92	4.9677	256	140.42	517.31	445.15	5.3780
197	218.45	427.64	381.26	4.9771	257	139.66	518.64	446.10	5.3832
198	216.10	429.47	382.58	4.9864	258	138.92	519.97	447.03	5.3883
199	213.82	431.28	383.90	4.9955	259	138.18	521.30	447.97	5.3935
200	211.60	433.08	385.19	5.0045	260	137.46	522.61	448.90	5.3985
201	209.44	434.86	386.48	5.0134	261	136.74	523.93	449.83	5.4036
202	207.33	436.62	387.75	5.0221	262	136.04	525.24	450.76	5.4086
203	205.28	438.36	389.01	5.0307	263	135.34	526.55	451.69	5.4136
204	203.28	440.10	390.25	5.0392	264	134.65	527.86	452.61	5.4186
205	201.33	441.81	391.49	5.0476	265	133.97	529.16	453.53	5.4235
206	199.44	443.52	392.71	5.0559	266	133.30	530.46	454.45	5.4284
207	197.58	445.20	393.92	5.0641	267	132.63	531.76	455.37	5.4332
208	195.77	446.88	395.12	5.0722	268	131.98	533.05	456.28	5.4381
209	194.01	448.54	396.32	5.0801	269	131.33	534.34	457.19	5.4429
210	192.28	450.20	397.50	5.0880	270	130.69	535.63	458.10	5.4477
211	190.60	451.83	398.67	5.0958	271	130.06	536.92	459.01	5.4524
212	188.95	453.46	399.84	5.1035	272	129.44	538.20	459.92	5.4571
213	187.34	455.08	400.99	5.1111	273	128.82	539.48	460.82	5.4618
214	185.76	456.68	402.14	5.1186	274	128.21	540.75	461.72	5.4665
215	184.22	458.28	403.28	5.1261	275	127.60	542.03	462.62	5.4711
216	182.71	459.86	404.41	5.1334	276	127.01	543.30	463.52	5.4758
217	181.24	461.44	405.53	5.1407	277	126.42	544.57	464.42	5.4803
218	179.79	463.00	406.65	5.1479	278	125.83	545.83	465.31	5.4849
219	178.38	464.56	407.76	5.1550	279	125.26	547.10	466.21	5.4894
220	176.99	466.11	408.86	5.1621	280	124.69	548.36	467.10	5.4940
221	175.63	467.64	409.95	5.1690	281	124.12	549.62	467.99	5.4984
222	174.30	469.17	411.04	5.1759	282	123.57	550.87	468.87	5.5029
223	172.99	470.69	412.12	5.1828	283	123.01	552.13	469.76	5.5073
224	171.71	472.21	413.20	5.1895	284	122.47	553.38	470.64	5.5118
225	170.45	473.71	414.27	5.1962	285	121.93	554.63	471.53	5.5161
226	169.22	475.21	415.33	5.2029	286	121.39	555.88	472.41	5.5205
227	168.01	476.70	416.39	5.2094	287	120.87	557.12	473.29	5.5249
228	166.82	478.18	417.44	5.2160	288	120.34	558.36	474.17	5.5292
229	165.65	479.65	418.49	5.2224	289	119.82	559.61	475.04	5.5335
230	164.51	481.12	419.53	5.2288	290	119.31	560.84	475.92	5.5378
231	163.38	482.58	420.57	5.2351	291	118.81	562.08	476.79	5.5420
232	162.28	484.04	421.60	5.2414	292	118.30	563.32	477.67	5.5463
233	161.19	485.48	422.62	5.2477	293	117.81	564.55	478.54	5.5505
234	160.12	486.93	423.65	5.2538	294	117.31	565.78	479.41	5.5547
235	159.07	488.36	424.66	5.2599	295	116.83	567.01	480.28	5.5588
236	158.04	489.79	425.68	5.2660	296	116.34	568.23	481.14	5.5630
237	157.02	491.22	426.69	5.2720	297	115.87	569.46	482.01	5.5671
238	156.02	492.63	427.69	5.2780	298	115.39	570.68	482.87	5.5712
239	155.04	494.05	428.69	5.2839	299	114.93	571.90	483.74	5.5753
240	154.07	495.45	429.69	5.2898	300	114.46	573.12	484.60	5.5794

## 120.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	655.11	240.75	222.19	3.7470
					122	650.55	242.86	224.17	3.7644
					123	645.95	244.96	226.13	3.7816
					124	641.31	247.08	228.12	3.7988
					125	636.63	249.24	230.14	3.8162
					126	631.90	251.40	232.16	3.8335
					127	627.12	253.58	234.19	3.8508
					128	622.29	255.78	236.24	3.8681
					129	617.42	257.96	238.27	3.8852
					130	612.49	260.13	240.28	3.9020
					131	607.51	262.25	242.24	3.9183
					132	602.48	264.18	244.00	3.9331
					133	597.39	266.74	246.39	3.9525
					134	592.25	269.14	248.61	3.9705
					135	587.04	271.54	250.82	3.9883
					136	581.78	273.92	253.03	4.0059
					137	576.46	276.31	255.22	4.0234
					138	571.08	278.70	257.40	4.0407
					139	565.63	281.08	259.58	4.0580
					140	560.12	283.47	261.76	4.0751
72	846.47	138.79	124.43	2.6644	141	554.55	285.86	263.93	4.0921
73	843.02	140.94	126.51	2.6940	142	548.92	288.25	266.10	4.1090
74	839.56	143.08	128.59	2.7231	143	543.22	290.66	268.27	4.1259
75	836.07	145.21	130.67	2.7518	144	537.46	293.06	270.44	4.1426
76	832.56	147.35	132.74	2.7801	145	531.63	295.48	272.61	4.1594
77	829.03	149.48	134.81	2.8079	146	525.75	297.90	274.77	4.1760
78	825.48	151.60	136.87	2.8354	147	519.80	300.33	276.94	4.1926
79	821.91	153.73	138.93	2.8624	148	513.80	302.78	279.11	4.2092
80	818.32	155.85	140.99	2.8891	149	507.74	305.23	281.28	4.2257
					150	501.63	307.69	283.45	4.2422
81	814.72	157.97	143.04	2.9154	151	495.47	310.17	285.63	4.2586
82	811.10	160.08	145.09	2.9414	152	489.26	312.65	287.80	4.2750
83	807.47	162.19	147.13	2.9669	153	483.02	315.15	289.97	4.2913
84	803.82	164.30	149.17	2.9922	154	476.74	317.65	292.15	4.3077
85	800.15	166.40	151.20	3.0171	155	470.43	320.16	294.32	4.3239
86	796.47	168.50	153.23	3.0417	156	464.10	322.69	296.49	4.3401
87	792.78	170.60	155.26	3.0659	157	457.76	325.22	298.65	4.3563
88	789.06	172.69	157.28	3.0898	158	451.41	327.75	300.82	4.3724
89	785.34	174.78	159.30	3.1135	159	445.07	330.29	302.97	4.3884
90	781.59	176.86	161.31	3.1368	160	438.73	332.84	305.12	4.4044
91	777.83	178.95	163.31	3.1598	161	432.42	335.39	307.27	4.4203
92	774.06	181.02	165.32	3.1825	162	426.14	337.93	309.40	4.4360
93	770.27	183.10	167.31	3.2049	163	419.89	340.48	311.52	4.4517
94	766.46	185.17	169.30	3.2271	164	413.70	343.03	313.63	4.4673
95	762.64	187.23	171.29	3.2489	165	407.56	345.57	315.73	4.4827
96	758.79	189.30	173.27	3.2706	166	401.49	348.10	317.81	4.4980
97	754.93	191.36	175.25	3.2919	167	395.50	350.62	319.88	4.5132
98	751.05	193.41	177.22	3.3130	168	389.58	353.14	321.93	4.5282
99	747.16	195.47	179.19	3.3339	169	383.76	355.64	323.96	4.5431
100	743.24	197.52	181.16	3.3545	170	378.03	358.14	325.97	4.5578
101	739.30	199.57	183.12	3.3749	171	372.40	360.61	327.96	4.5723
102	735.34	201.61	185.08	3.3950	172	366.87	363.07	329.93	4.5866
103	731.36	203.66	187.03	3.4150	173	361.45	365.52	331.88	4.6008
104	727.36	205.70	188.99	3.4348	174	356.15	367.94	333.80	4.6148
105	723.34	207.75	190.94	3.4543	175	350.96	370.35	335.70	4.6286
106	719.29	209.79	192.89	3.4737	176	345.89	372.74	337.58	4.6422
107	715.22	211.84	194.84	3.4929	177	340.93	375.10	339.44	4.6556
108	711.12	213.89	196.79	3.5120	178	336.09	377.45	341.27	4.6688
109	706.99	215.94	198.74	3.5309	179	331.38	379.77	343.08	4.6818
110	702.84	217.99	200.69	3.5496	180	326.77	382.07	344.86	4.6946
111	698.66	220.05	202.64	3.5683					
112	694.46	222.11	204.60	3.5868					
113	690.22	224.18	206.56	3.6052					
114	685.95	226.26	208.53	3.6235					
115	681.65	228.34	210.51	3.6417					
116	677.31	230.44	212.49	3.6599					
117	672.95	232.55	214.48	3.6780					
118	668.54	234.58	216.39	3.6953					
119	664.10	236.63	218.32	3.7126					
120	659.63	238.70	220.27	3.7299					



## 120.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	322.29	384.35	346.63	4.7072	241	183.94	490.70	424.60	5.2201
182	317.92	386.61	348.36	4.7197	242	182.78	492.16	425.64	5.2261
183	313.66	388.84	350.08	4.7319	243	181.64	493.61	426.67	5.2321
184	309.51	391.06	351.77	4.7440	244	180.52	495.06	427.70	5.2381
185	305.48	393.25	353.44	4.7558	245	179.41	496.50	428.73	5.2440
186	301.55	395.42	355.09	4.7675	246	178.32	497.93	429.75	5.2498
187	297.72	397.56	356.72	4.7790	247	177.25	499.36	430.77	5.2556
188	294.00	399.69	358.33	4.7904	248	176.20	500.79	431.78	5.2614
189	290.37	401.79	359.92	4.8015	249	175.16	502.21	432.79	5.2671
190	286.85	403.87	361.48	4.8125	250	174.13	503.62	433.79	5.2727
191	283.41	405.93	363.03	4.8233	251	173.12	505.03	434.79	5.2784
192	280.07	407.97	364.56	4.8340	252	172.13	506.43	435.79	5.2839
193	276.81	409.99	366.07	4.8445	253	171.15	507.83	436.79	5.2895
194	273.64	412.00	367.56	4.8548	254	170.18	509.23	437.78	5.2950
195	270.55	413.98	369.04	4.8650	255	169.23	510.62	438.76	5.3004
196	267.55	415.94	370.49	4.8750	256	168.29	512.00	439.75	5.3059
197	264.61	417.89	371.94	4.8849	257	167.36	513.38	440.73	5.3112
198	261.76	419.81	373.36	4.8947	258	166.44	514.76	441.71	5.3166
199	258.97	421.72	374.77	4.9043	259	165.54	516.13	442.68	5.3219
200	256.26	423.61	376.17	4.9138	260	164.65	517.50	443.65	5.3272
201	253.61	425.49	377.55	4.9232	261	163.77	518.86	444.62	5.3324
202	251.03	427.35	378.91	4.9324	262	162.91	520.22	445.59	5.3376
203	248.51	429.19	380.27	4.9415	263	162.05	521.58	446.55	5.3428
204	246.06	431.02	381.61	4.9505	264	161.21	522.93	447.51	5.3479
205	243.66	432.83	382.93	4.9593	265	160.37	524.28	448.46	5.3530
206	241.31	434.63	384.25	4.9681	266	159.55	525.63	449.42	5.3581
207	239.03	436.42	385.55	4.9767	267	158.74	526.97	450.37	5.3631
208	236.79	438.19	386.84	4.9852	268	157.93	528.31	451.32	5.3681
209	234.61	439.94	388.12	4.9937	269	157.14	529.64	452.26	5.3731
210	232.47	441.69	389.38	5.0020	270	156.36	530.97	453.21	5.3780
211	230.39	443.42	390.64	5.0102	271	155.59	532.30	454.15	5.3829
212	228.35	445.13	391.89	5.0183	272	154.82	533.62	455.09	5.3878
213	226.35	446.84	393.12	5.0264	273	154.07	534.94	456.02	5.3926
214	224.40	448.53	394.35	5.0343	274	153.32	536.26	456.96	5.3975
215	222.49	450.22	395.57	5.0421	275	152.58	537.57	457.89	5.4022
216	220.62	451.89	396.77	5.0499	276	151.86	538.89	458.82	5.4070
217	218.79	453.55	397.97	5.0576	277	151.14	540.19	459.74	5.4117
218	217.00	455.20	399.16	5.0651	278	150.42	541.50	460.67	5.4164
219	215.24	456.83	400.34	5.0726	279	149.72	542.80	461.59	5.4211
220	213.52	458.46	401.52	5.0801	280	149.03	544.10	462.51	5.4258
221	211.83	460.08	402.68	5.0874	281	148.34	545.40	463.43	5.4304
222	210.18	461.69	403.84	5.0947	282	147.66	546.69	464.35	5.4350
223	208.56	463.29	404.99	5.1018	283	146.99	547.98	465.26	5.4396
224	206.97	464.88	406.13	5.1090	284	146.32	549.27	466.17	5.4441
225	205.41	466.46	407.27	5.1160	285	145.66	550.56	467.09	5.4486
226	203.88	468.03	408.40	5.1230	286	145.01	551.84	467.99	5.4531
227	202.38	469.60	409.52	5.1299	287	144.37	553.12	468.90	5.4576
228	200.90	471.15	410.63	5.1367	288	143.73	554.40	469.81	5.4620
229	199.46	472.70	411.74	5.1435	289	143.10	555.68	470.71	5.4664
230	198.04	474.24	412.84	5.1502	290	142.48	556.95	471.61	5.4708
231	196.64	475.77	413.94	5.1568	291	141.86	558.22	472.51	5.4752
232	195.27	477.30	415.03	5.1634	292	141.25	559.49	473.41	5.4796
233	193.92	478.81	416.11	5.1699	293	140.65	560.75	474.31	5.4839
234	192.60	480.32	417.19	5.1764	294	140.05	562.02	475.20	5.4882
235	191.30	481.83	418.27	5.1828	295	139.46	563.28	476.09	5.4925
236	190.02	483.32	419.34	5.1892	296	138.87	564.54	476.99	5.4967
237	188.76	484.81	420.40	5.1955	297	138.29	565.80	477.88	5.5010
238	187.53	486.29	421.46	5.2017	298	137.72	567.05	478.76	5.5052
239	186.31	487.77	422.51	5.2079	299	137.15	568.30	479.65	5.5094
240	185.12	489.24	423.56	5.2140	300	136.59	569.55	480.54	5.5136

## 140.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	664.96	241.36	220.02	3.7267
					122	660.71	243.41	221.94	3.7435
					123	656.42	245.45	223.84	3.7603
					124	652.11	247.52	225.77	3.7771
					125	647.77	249.62	227.72	3.7940
					126	643.39	251.71	229.66	3.8107
					127	638.98	253.82	231.62	3.8275
					128	634.54	255.95	233.59	3.8443
					129	630.06	258.06	235.55	3.8608
					130	625.55	260.16	237.48	3.8770
					131	621.01	262.19	239.35	3.8927
					132	616.43	264.03	241.02	3.9068
					133	611.81	266.51	243.32	3.9256
					134	607.15	268.81	245.45	3.9428
					135	602.46	271.11	247.56	3.9599
					136	597.73	273.39	249.66	3.9768
					137	592.96	275.67	251.75	3.9935
					138	588.16	277.94	253.83	4.0100
					139	583.31	280.21	255.89	4.0264
					140	578.43	282.47	257.95	4.0426
72	849.27	140.49	123.79	2.6548	141	573.50	284.73	260.00	4.0587
73	845.89	142.63	125.86	2.6842	142	568.54	286.99	262.04	4.0746
74	842.49	144.76	127.92	2.7132	143	563.54	289.25	264.08	4.0905
75	839.07	146.88	129.98	2.7418	144	558.50	291.51	266.11	4.1062
76	835.63	149.01	132.03	2.7699	145	553.42	293.77	268.14	4.1219
77	832.18	151.13	134.08	2.7976	146	548.30	296.04	270.16	4.1374
78	828.70	153.24	136.12	2.8249	147	543.15	298.30	272.18	4.1529
79	825.21	155.35	138.16	2.8519	148	537.96	300.57	274.20	4.1683
80	821.71	157.46	140.20	2.8784	149	532.74	302.84	276.22	4.1836
					150	527.49	305.12	278.23	4.1988
81	818.19	159.57	142.23	2.9046	151	522.20	307.40	280.24	4.2140
82	814.65	161.67	144.26	2.9304	152	516.89	309.69	282.25	4.2290
83	811.10	163.77	146.28	2.9558	153	511.55	311.98	284.25	4.2441
84	807.54	165.86	148.30	2.9809	154	506.19	314.28	286.25	4.2590
85	803.96	167.96	150.31	3.0057	155	500.81	316.58	288.26	4.2739
86	800.38	170.04	152.32	3.0301	156	495.41	318.89	290.25	4.2888
87	796.77	172.13	154.32	3.0542	157	489.99	321.20	292.25	4.3035
88	793.16	174.21	156.32	3.0780	158	484.56	323.52	294.24	4.3182
89	789.53	176.28	158.31	3.1014	159	479.13	325.84	296.23	4.3329
90	785.89	178.35	160.30	3.1246	160	473.70	328.16	298.21	4.3475
91	782.24	180.42	162.28	3.1474	161	468.26	330.49	300.19	4.3620
92	778.57	182.48	164.26	3.1700	162	462.84	332.82	302.17	4.3764
93	774.90	184.54	166.23	3.1922	163	457.42	335.15	304.14	4.3907
94	771.20	186.59	168.20	3.2142	164	452.02	337.48	306.10	4.4050
95	767.50	188.64	170.16	3.2359	165	446.64	339.82	308.06	4.4192
96	763.78	190.69	172.12	3.2573	166	441.29	342.15	310.00	4.4333
97	760.04	192.73	174.07	3.2785	167	435.97	344.48	311.94	4.4473
98	756.30	194.77	176.01	3.2994	168	430.68	346.81	313.87	4.4612
99	752.53	196.80	177.95	3.3200	169	425.43	349.13	315.79	4.4750
100	748.75	198.83	179.89	3.3404	170	420.23	351.46	317.70	4.4887
101	744.96	200.86	181.82	3.3606	171	415.08	353.77	319.60	4.5022
102	741.15	202.88	183.74	3.3806	172	409.98	356.08	321.48	4.5157
103	737.32	204.91	185.67	3.4003	173	404.94	358.38	323.35	4.5291
104	733.48	206.93	187.59	3.4198	174	399.96	360.68	325.21	4.5423
105	729.62	208.94	189.50	3.4392	175	395.04	362.97	327.06	4.5554
106	725.74	210.96	191.42	3.4583	176	390.19	365.24	328.89	4.5684
107	721.84	212.98	193.33	3.4773	177	385.41	367.51	330.71	4.5812
108	717.92	215.00	195.24	3.4960	178	380.70	369.77	332.51	4.5939
109	713.99	217.02	197.15	3.5147	179	376.07	372.01	334.29	4.6065
110	710.03	219.04	199.06	3.5331	180	371.52	374.24	336.06	4.6189
111	706.05	221.07	200.98	3.5515					
112	702.05	223.10	202.89	3.5697					
113	698.03	225.13	204.81	3.5878					
114	693.98	227.17	206.73	3.6058					
115	689.91	229.22	208.66	3.6236					
116	685.82	231.28	210.59	3.6415					
117	681.70	233.34	212.53	3.6592					
118	677.56	235.33	214.39	3.6761					
119	673.39	237.33	216.26	3.6930					
120	669.19	239.35	218.16	3.7100					

## 140.00 ATMOSPHERE 1508AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	367.04	376.46	337.82	4.6312	241	213.61	485.20	418.79	5.1549
182	362.64	378.67	339.55	4.6434	242	212.25	486.71	419.87	5.1612
183	358.33	380.86	341.28	4.6554	243	210.92	488.21	420.95	5.1674
184	354.09	383.04	342.98	4.6673	244	209.60	489.70	422.02	5.1735
185	349.93	385.21	344.67	4.6790	245	208.30	491.19	423.09	5.1796
186	345.86	387.36	346.34	4.6906	246	207.03	492.67	424.15	5.1856
187	341.87	389.49	348.00	4.7020	247	205.77	494.15	425.21	5.1916
188	337.95	391.61	349.63	4.7133	248	204.53	495.62	426.27	5.1976
189	334.12	393.71	351.26	4.7245	249	203.31	497.09	427.32	5.2035
190	330.37	395.80	352.86	4.7355	250	202.11	498.55	428.36	5.2093
191	326.69	397.87	354.45	4.7464	251	200.92	500.00	429.40	5.2151
192	323.09	399.93	356.03	4.7571	252	199.76	501.45	430.44	5.2209
193	319.57	401.97	357.58	4.7677	253	198.60	502.90	431.47	5.2266
194	316.13	404.00	359.13	4.7782	254	197.47	504.34	432.50	5.2323
195	312.75	406.01	360.65	4.7885	255	196.35	505.77	433.53	5.2379
196	309.45	408.01	362.17	4.7987	256	195.25	507.20	434.55	5.2435
197	306.22	409.99	363.66	4.8088	257	194.16	508.62	435.56	5.2491
198	303.06	411.95	365.15	4.8188	258	193.09	510.04	436.58	5.2546
199	299.97	413.90	366.62	4.8286	259	192.03	511.46	437.59	5.2601
200	296.95	415.84	368.07	4.8383	260	190.98	512.87	438.59	5.2655
201	293.99	417.76	369.51	4.8479	261	189.95	514.28	439.60	5.2709
202	291.09	419.67	370.94	4.8574	262	188.93	515.68	440.60	5.2762
203	288.26	421.56	372.35	4.8667	263	187.93	517.07	441.59	5.2816
204	285.49	423.44	373.75	4.8759	264	186.94	518.47	442.58	5.2868
205	282.77	425.31	375.14	4.8851	265	185.96	519.86	443.57	5.2921
206	280.11	427.16	376.52	4.8941	266	185.00	521.24	444.56	5.2973
207	277.51	429.00	377.88	4.9030	267	184.04	522.62	445.54	5.3025
208	274.97	430.82	379.23	4.9118	268	183.10	524.00	446.52	5.3076
209	272.47	432.64	380.57	4.9205	269	182.17	525.37	447.50	5.3127
210	270.03	434.44	381.90	4.9290	270	181.26	526.74	448.48	5.3178
211	267.64	436.22	383.22	4.9375	271	180.35	528.10	449.45	5.3229
212	265.30	438.00	384.53	4.9459	272	179.45	529.46	450.42	5.3279
213	263.00	439.76	385.83	4.9542	273	178.57	530.82	451.38	5.3329
214	260.75	441.52	387.12	4.9624	274	177.70	532.18	452.35	5.3378
215	258.55	443.26	388.39	4.9706	275	176.83	533.53	453.31	5.3427
216	256.39	444.99	389.66	4.9786	276	175.98	534.87	454.27	5.3476
217	254.27	446.71	390.92	4.9865	277	175.13	536.22	455.22	5.3525
218	252.20	448.41	392.17	4.9944	278	174.30	537.56	456.17	5.3573
219	250.16	450.11	393.41	5.0021	279	173.48	538.90	457.12	5.3621
220	248.16	451.80	394.64	5.0098	280	172.66	540.23	458.07	5.3669
221	246.20	453.48	395.86	5.0174	281	171.86	541.56	459.02	5.3716
222	244.28	455.14	397.07	5.0250	282	171.06	542.89	459.96	5.3763
223	242.40	456.80	398.28	5.0324	283	170.27	544.21	460.90	5.3810
224	240.54	458.45	399.48	5.0398	284	169.50	545.53	461.84	5.3857
225	238.73	460.09	400.67	5.0471	285	168.73	546.85	462.78	5.3903
226	236.94	461.72	401.85	5.0543	286	167.97	548.17	463.71	5.3949
227	235.19	463.34	403.03	5.0615	287	167.21	549.48	464.65	5.3995
228	233.47	464.95	404.19	5.0686	288	166.47	550.79	465.58	5.4041
229	231.78	466.56	405.35	5.0756	289	165.73	552.10	466.50	5.4086
230	230.12	468.15	406.51	5.0825	290	165.00	553.40	467.43	5.4131
231	228.49	469.74	407.65	5.0894	291	164.28	554.70	468.35	5.4176
232	226.89	471.32	408.80	5.0962	292	163.57	556.00	469.28	5.4220
233	225.31	472.89	409.93	5.1030	293	162.86	557.30	470.20	5.4265
234	223.76	474.45	411.06	5.1097	294	162.16	558.59	471.12	5.4309
235	222.24	476.01	412.18	5.1163	295	161.47	559.88	472.03	5.4353
236	220.74	477.56	413.30	5.1229	296	160.79	561.17	472.95	5.4396
237	219.27	479.10	414.41	5.1294	297	160.11	562.46	473.86	5.4440
238	217.82	480.63	415.51	5.1359	298	159.44	563.74	474.77	5.4483
239	216.40	482.16	416.61	5.1423	299	158.77	565.02	475.68	5.4526
240	214.99	483.68	417.70	5.1486	300	158.12	566.30	476.59	5.4568

## 160.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	673.84	242.13	218.07	3.7080
					122	669.82	244.14	219.94	3.7246
					123	665.79	246.14	221.79	3.7410
					124	661.74	248.16	223.66	3.7574
					125	657.66	250.21	225.56	3.7739
					126	653.56	252.26	227.45	3.7903
					127	649.44	254.32	229.36	3.8066
					128	645.29	256.39	231.27	3.8230
					129	641.12	258.45	233.16	3.8391
					130	636.93	260.48	235.03	3.8548
					131	632.71	262.46	236.83	3.8700
					132	628.47	264.24	238.44	3.8837
					133	624.20	266.65	240.67	3.9020
73	848.69	144.33	125.22	2.6748	134	619.91	268.88	242.73	3.9187
74	845.35	146.45	127.27	2.7036	135	615.59	271.11	244.77	3.9353
75	842.00	148.56	129.31	2.7320	136	611.24	273.32	246.80	3.9516
76	838.63	150.68	131.34	2.7600	137	606.88	275.52	248.81	3.9677
77	835.24	152.79	133.38	2.7876	138	602.48	277.71	250.80	3.9837
78	831.84	154.89	135.40	2.8148	139	598.06	279.90	252.79	3.9994
79	828.42	156.99	137.42	2.8416	140	593.61	282.07	254.76	4.0150
80	824.99	159.09	139.44	2.8680	141	589.14	284.24	256.73	4.0305
81	821.54	161.19	141.45	2.8940	142	584.64	286.41	258.68	4.0458
82	818.08	163.28	143.46	2.9197	143	580.12	288.57	260.63	4.0610
83	814.61	165.37	145.47	2.9450	144	575.57	290.73	262.57	4.0760
84	811.13	167.45	147.46	2.9700	145	571.00	292.89	264.50	4.0909
85	807.64	169.53	149.46	2.9946	146	566.40	295.05	266.42	4.1057
86	804.14	171.61	151.45	3.0189	147	561.78	297.20	268.34	4.1205
87	800.62	173.68	153.43	3.0429	148	557.14	299.36	270.26	4.1351
88	797.10	175.75	155.41	3.0665	149	552.47	301.51	272.17	4.1496
89	793.56	177.81	157.38	3.0898	150	547.79	303.67	274.07	4.1640
90	790.02	179.87	159.35	3.1128	151	543.09	305.83	275.97	4.1783
91	786.46	181.92	161.31	3.1355	152	538.36	307.99	277.87	4.1926
92	782.89	183.97	163.26	3.1579	153	533.62	310.15	279.77	4.2068
93	779.32	186.01	165.21	3.1800	154	528.87	312.31	281.66	4.2209
94	775.73	188.05	167.15	3.2018	155	524.10	314.48	283.54	4.2349
95	772.13	190.09	169.09	3.2234	156	519.32	316.64	285.43	4.2488
96	768.52	192.12	171.02	3.2446	157	514.52	318.81	287.31	4.2627
97	764.90	194.14	172.95	3.2656	158	509.72	320.99	289.18	4.2765
98	761.27	196.16	174.87	3.2864	159	504.92	323.16	291.05	4.2902
99	757.63	198.18	176.78	3.3068	160	500.11	325.34	292.92	4.3038
100	753.97	200.19	178.69	3.3271	161	495.30	327.52	294.79	4.3174
101	750.30	202.20	180.59	3.3471	162	490.49	329.70	296.65	4.3309
102	746.62	204.21	182.49	3.3668	163	485.68	331.88	298.50	4.3444
103	742.93	206.21	184.39	3.3864	164	480.88	334.07	300.36	4.3577
104	739.23	208.21	186.28	3.4057	165	476.09	336.25	302.20	4.3710
105	735.51	210.21	188.16	3.4248	166	471.31	338.44	304.04	4.3842
106	731.77	212.20	190.05	3.4438	167	466.55	340.63	305.88	4.3973
107	728.03	214.20	191.93	3.4625	168	461.80	342.81	307.71	4.4104
108	724.26	216.19	193.81	3.4811	169	457.07	345.00	309.53	4.4234
109	720.49	218.19	195.68	3.4994	170	452.37	347.18	311.34	4.4362
110	716.69	220.18	197.56	3.5177	171	447.70	349.36	313.15	4.4490
111	712.89	222.18	199.44	3.5358	172	443.05	351.54	314.95	4.4617
112	709.06	224.18	201.32	3.5537	173	438.44	353.72	316.74	4.4744
113	705.22	226.19	203.20	3.5716	174	433.86	355.89	318.53	4.4869
114	701.36	228.20	205.08	3.5893	175	429.32	358.06	320.30	4.4993
115	697.49	230.21	206.97	3.6069	176	424.82	360.23	322.07	4.5117
116	693.59	232.24	208.86	3.6244	177	420.36	362.39	323.82	4.5239
117	689.68	234.27	210.76	3.6419	178	415.94	364.54	325.57	4.5360
118	685.75	236.22	212.58	3.6585	179	411.58	366.69	327.30	4.5481
119	681.80	238.18	214.41	3.6751	180	407.26	368.83	329.03	4.5600
120	677.83	240.17	216.25	3.6917					

## 160.00 ATMOSPHERE 1SDBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	402.99	370.97	330.74	4.5718	241	241.75	480.37	413.31	5.0980
182	398.77	373.10	332.44	4.5835	242	240.22	481.92	414.43	5.1044
183	394.61	375.21	334.13	4.5951	243	238.72	483.46	415.55	5.1107
184	390.51	377.33	335.81	4.6066	244	237.23	484.99	416.65	5.1170
185	386.46	379.43	337.48	4.6180	245	235.77	486.52	417.76	5.1233
186	382.46	381.52	339.13	4.6293	246	234.34	488.04	418.86	5.1295
187	378.53	383.60	340.77	4.6405	247	232.92	489.56	419.95	5.1356
188	374.65	385.68	342.40	4.6515	248	231.52	491.07	421.04	5.1417
189	370.84	387.74	344.02	4.6625	249	230.14	492.57	422.13	5.1477
190	367.08	389.79	345.63	4.6733	250	228.78	494.07	423.21	5.1537
191	363.38	391.83	347.22	4.6840	251	227.45	495.56	424.28	5.1597
192	359.75	393.86	348.80	4.6946	252	226.13	497.04	425.35	5.1656
193	356.17	395.88	350.37	4.7051	253	224.83	498.53	426.42	5.1715
194	352.65	397.89	351.92	4.7155	254	223.54	500.00	427.48	5.1773
195	349.20	399.89	353.46	4.7258	255	222.28	501.47	428.54	5.1831
196	345.80	401.88	354.99	4.7359	256	221.03	502.94	429.59	5.1888
197	342.46	403.85	356.51	4.7460	257	219.80	504.40	430.64	5.1945
198	339.18	405.81	358.02	4.7559	258	218.58	505.85	431.68	5.2002
199	335.96	407.76	359.51	4.7657	259	217.39	507.30	432.73	5.2058
200	332.80	409.70	360.99	4.7755	260	216.20	508.75	433.76	5.2113
201	329.69	411.63	362.46	4.7851	261	215.04	510.19	434.80	5.2169
202	326.64	413.55	363.92	4.7946	262	213.89	511.62	435.83	5.2224
203	323.64	415.45	365.36	4.8040	263	212.75	513.06	436.85	5.2278
204	320.70	417.35	366.80	4.8133	264	211.63	514.48	437.88	5.2332
205	317.81	419.23	368.22	4.8225	265	210.52	515.90	438.89	5.2386
206	314.97	421.10	369.63	4.8316	266	209.42	517.32	439.91	5.2439
207	312.19	422.96	371.03	4.8406	267	208.34	518.74	440.92	5.2492
208	309.45	424.81	372.42	4.8495	268	207.28	520.15	441.93	5.2545
209	306.77	426.65	373.80	4.8583	269	206.22	521.55	442.94	5.2597
210	304.14	428.47	375.17	4.8670	270	205.18	522.95	443.94	5.2649
211	301.55	430.29	376.52	4.8757	271	204.16	524.35	444.94	5.2701
212	299.01	432.09	377.87	4.8842	272	203.14	525.74	445.94	5.2752
213	296.51	433.89	379.21	4.8926	273	202.14	527.13	446.93	5.2803
214	294.06	435.67	380.54	4.9010	274	201.15	528.52	447.92	5.2854
215	291.66	437.44	381.86	4.9093	275	200.17	529.90	448.91	5.2904
216	289.30	439.20	383.17	4.9174	276	199.20	531.28	449.89	5.2954
217	286.98	440.96	384.47	4.9255	277	198.24	532.65	450.87	5.3004
218	284.70	442.70	385.76	4.9335	278	197.30	534.02	451.85	5.3053
219	282.46	444.43	387.04	4.9415	279	196.36	535.39	452.83	5.3102
220	280.26	446.16	388.31	4.9493	280	195.44	536.75	453.80	5.3151
221	278.10	447.87	389.57	4.9571	281	194.53	538.11	454.77	5.3200
222	275.98	449.57	390.83	4.9648	282	193.62	539.47	455.74	5.3248
223	273.89	451.27	392.08	4.9724	283	192.73	540.82	456.71	5.3296
224	271.84	452.96	393.32	4.9799	284	191.85	542.17	457.67	5.3344
225	269.82	454.63	394.55	4.9874	285	190.97	543.52	458.63	5.3391
226	267.84	456.30	395.77	4.9948	286	190.11	544.87	459.59	5.3438
227	265.90	457.96	396.99	5.0021	287	189.25	546.21	460.54	5.3485
228	263.98	459.61	398.20	5.0094	288	188.41	547.54	461.50	5.3531
229	262.10	461.26	399.40	5.0166	289	187.57	548.88	462.45	5.3578
230	260.25	462.89	400.60	5.0237	290	186.75	550.21	463.40	5.3624
231	258.43	464.52	401.78	5.0308	291	185.93	551.54	464.34	5.3669
232	256.64	466.14	402.97	5.0378	292	185.12	552.87	465.29	5.3715
233	254.88	467.75	404.14	5.0447	293	184.32	554.19	466.23	5.3760
234	253.14	469.35	405.31	5.0516	294	183.52	555.51	467.17	5.3805
235	251.44	470.95	406.47	5.0584	295	182.74	556.83	468.11	5.3850
236	249.76	472.54	407.62	5.0651	296	181.96	558.14	469.05	5.3894
237	248.11	474.12	408.77	5.0718	297	181.19	559.45	469.98	5.3938
238	246.48	475.69	409.92	5.0784	298	180.43	560.76	470.91	5.3982
239	244.88	477.26	411.05	5.0850	299	179.68	562.07	471.84	5.4026
240	243.30	478.82	412.18	5.0915	300	178.93	563.37	472.77	5.4070

## 180.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	681.93	243.04	216.29	3.6908
					122	678.12	245.02	218.12	3.7071
					123	674.29	246.98	219.93	3.7233
					124	670.45	248.97	221.76	3.7394
					125	666.59	250.98	223.62	3.7555
					126	662.72	252.98	225.46	3.7716
					127	658.82	255.00	227.32	3.7876
					128	654.91	257.03	229.18	3.8037
					129	650.99	259.05	231.03	3.8194
					130	647.05	261.04	232.85	3.8348
					131	643.09	262.96	234.60	3.8497
					132	639.11	264.69	236.16	3.8630
					133	635.12	267.05	238.34	3.8808
					134	631.10	269.24	240.34	3.8972
					135	627.07	271.41	242.32	3.9133
					136	623.03	273.56	244.29	3.9292
					137	618.96	275.71	246.24	3.9449
					138	614.88	277.84	248.18	3.9604
					139	610.78	279.96	250.10	3.9758
					140	606.66	282.07	252.01	3.9909
					141	602.52	284.18	253.91	4.0059
					142	598.37	286.28	255.80	4.0207
					143	594.20	288.37	257.67	4.0354
					144	590.02	290.46	259.54	4.0499
					145	585.81	292.54	261.41	4.0644
					146	581.60	294.62	263.26	4.0786
					147	577.36	296.69	265.11	4.0928
					148	573.11	298.77	266.94	4.1069
					149	568.85	300.84	268.78	4.1208
					150	564.58	302.91	270.61	4.1347
					151	560.29	304.98	272.43	4.1484
					152	555.99	307.05	274.25	4.1621
					153	551.68	309.12	276.06	4.1757
					154	547.36	311.19	277.87	4.1891
					155	543.03	313.26	279.67	4.2025
					156	538.69	315.33	281.47	4.2159
					157	534.34	317.40	283.27	4.2291
					158	529.99	319.47	285.06	4.2422
					159	525.64	321.55	286.85	4.2553
					160	521.28	323.62	288.63	4.2683
					161	516.92	325.70	290.41	4.2813
					162	512.56	327.77	292.19	4.2941
					163	508.21	329.85	293.96	4.3069
					164	503.86	331.93	295.73	4.3196
					165	499.51	334.01	297.49	4.3322
					166	495.17	336.09	299.25	4.3448
					167	490.84	338.17	301.01	4.3573
					168	486.52	340.25	302.76	4.3697
					169	482.21	342.33	304.50	4.3820
					170	477.92	344.40	306.24	4.3943
					171	473.64	346.48	307.98	4.4065
					172	469.38	348.56	309.70	4.4186
					173	465.14	350.64	311.43	4.4306
					174	460.93	352.71	313.14	4.4426
					175	456.74	354.78	314.85	4.4545
					176	452.57	356.85	316.55	4.4663
					177	448.43	358.92	318.25	4.4780
					178	444.32	360.99	319.94	4.4896
					179	440.25	363.05	321.62	4.5012
					180	436.20	365.10	323.29	4.5126
73	851.42	146.04	124.61	2.6655					
74	848.15	148.15	126.64	2.6943					
75	844.85	150.25	128.67	2.7226					
76	841.55	152.36	130.69	2.7504					
77	838.22	154.46	132.70	2.7779					
78	834.88	156.55	134.71	2.8050					
79	831.53	158.65	136.71	2.8316					
80	828.17	160.74	138.71	2.8579					
81	824.80	162.82	140.71	2.8838					
82	821.41	164.90	142.70	2.9094					
83	818.01	166.98	144.69	2.9346					
84	814.61	169.06	146.67	2.9594					
85	811.19	171.13	148.64	2.9839					
86	807.77	173.19	150.61	3.0081					
87	804.33	175.25	152.58	3.0319					
88	800.89	177.31	154.53	3.0554					
89	797.44	179.36	156.49	3.0786					
90	793.98	181.41	158.43	3.1015					
91	790.51	183.45	160.38	3.1241					
92	787.04	185.48	162.31	3.1463					
93	783.55	187.52	164.24	3.1683					
94	780.06	189.54	166.16	3.1900					
95	776.56	191.56	168.08	3.2114					
96	773.05	193.58	169.99	3.2325					
97	769.53	195.59	171.89	3.2533					
98	766.00	197.60	173.79	3.2739					
99	762.47	199.60	175.68	3.2942					
100	758.92	201.59	177.56	3.3143					
101	755.37	203.59	179.44	3.3342					
102	751.80	205.58	181.32	3.3538					
103	748.23	207.56	183.19	3.3731					
104	744.65	209.54	185.05	3.3923					
105	741.05	211.52	186.91	3.4112					
106	737.45	213.50	188.77	3.4300					
107	733.83	215.47	190.62	3.4485					
108	730.21	217.45	192.47	3.4669					
109	726.57	219.42	194.32	3.4851					
110	722.92	221.39	196.17	3.5031					
111	719.26	223.37	198.01	3.5210					
112	715.59	225.35	199.86	3.5387					
113	711.90	227.33	201.71	3.5563					
114	708.20	229.31	203.56	3.5738					
115	704.49	231.30	205.41	3.5912					
116	700.77	233.30	207.27	3.6085					
117	697.03	235.30	209.14	3.6257					
118	693.28	237.22	210.92	3.6421					
119	689.51	239.16	212.71	3.6584					
120	685.73	241.11	214.51	3.6748					

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	432.19	367.16	324.96	4.5240	241	268.11	476.22	408.19	5.0477
182	428.22	369.21	326.61	4.5353	242	266.45	477.79	409.34	5.0543
183	424.28	371.25	328.26	4.5465	243	264.81	479.36	410.49	5.0607
184	420.38	373.29	329.90	4.5576	244	263.19	480.92	411.63	5.0671
185	416.52	375.32	331.53	4.5686	245	261.60	482.48	412.76	5.0735
186	412.70	377.35	333.16	4.5795	246	260.03	484.03	413.89	5.0798
187	408.92	379.37	334.77	4.5904	247	258.48	485.57	415.01	5.0861
188	405.18	381.39	336.37	4.6011	248	256.95	487.11	416.13	5.0923
189	401.49	383.40	337.97	4.6118	249	255.44	488.64	417.24	5.0985
190	397.84	385.40	339.55	4.6223	250	253.96	490.17	418.35	5.1046
191	394.24	387.39	341.13	4.6328	251	252.49	491.69	419.45	5.1106
192	390.68	389.38	342.69	4.6432	252	251.05	493.20	420.55	5.1167
193	387.17	391.36	344.25	4.6534	253	249.62	494.71	421.65	5.1226
194	383.70	393.33	345.79	4.6636	254	248.21	496.22	422.74	5.1286
195	380.28	395.29	347.33	4.6737	255	246.82	497.72	423.82	5.1345
196	376.91	397.25	348.86	4.6837	256	245.45	499.21	424.90	5.1403
197	373.58	399.19	350.37	4.6936	257	244.10	500.70	425.98	5.1461
198	370.30	401.13	351.88	4.7034	258	242.77	502.18	427.05	5.1519
199	367.07	403.06	353.37	4.7132	259	241.45	503.66	428.12	5.1576
200	363.89	404.98	354.86	4.7228	260	240.15	505.13	429.19	5.1633
201	360.75	406.89	356.33	4.7323	261	238.86	506.60	430.25	5.1689
202	357.66	408.79	357.80	4.7418	262	237.60	508.06	431.30	5.1745
203	354.61	410.69	359.26	4.7511	263	236.34	509.52	432.35	5.1801
204	351.61	412.57	360.70	4.7604	264	235.11	510.98	433.40	5.1856
205	348.66	414.45	362.14	4.7695	265	233.89	512.43	434.45	5.1911
206	345.75	416.31	363.56	4.7786	266	232.68	513.87	435.49	5.1965
207	342.89	418.17	364.98	4.7876	267	231.49	515.31	436.53	5.2019
208	340.07	420.02	366.39	4.7965	268	230.32	516.75	437.56	5.2073
209	337.30	421.86	367.79	4.8053	269	229.15	518.18	438.59	5.2126
210	334.56	423.69	369.17	4.8141	270	228.01	519.61	439.62	5.2179
211	331.88	425.51	370.55	4.8227	271	226.87	521.03	440.64	5.2232
212	329.23	427.32	371.92	4.8313	272	225.75	522.45	441.66	5.2284
213	326.63	429.12	373.28	4.8398	273	224.64	523.87	442.68	5.2336
214	324.06	430.92	374.64	4.8482	274	223.55	525.28	443.69	5.2388
215	321.54	432.70	375.98	4.8565	275	222.47	526.69	444.71	5.2439
216	319.06	434.48	377.31	4.8647	276	221.40	528.09	445.71	5.2490
217	316.61	436.24	378.64	4.8729	277	220.34	529.49	446.72	5.2540
218	314.21	438.00	379.96	4.8810	278	219.29	530.89	447.72	5.2591
219	311.84	439.75	381.26	4.8890	279	218.26	532.28	448.72	5.2641
220	309.51	441.49	382.56	4.8969	280	217.24	533.67	449.72	5.2690
221	307.22	443.22	383.86	4.9047	281	216.23	535.06	450.71	5.2740
222	304.96	444.95	385.14	4.9125	282	215.23	536.44	451.70	5.2789
223	302.74	446.66	386.42	4.9202	283	214.24	537.82	452.69	5.2838
224	300.56	448.37	387.69	4.9279	284	213.26	539.19	453.67	5.2886
225	298.40	450.07	388.95	4.9354	285	212.30	540.56	454.65	5.2934
226	296.29	451.76	390.20	4.9429	286	211.34	541.93	455.63	5.2982
227	294.20	453.44	391.45	4.9504	287	210.40	543.30	456.61	5.3030
228	292.15	455.12	392.69	4.9577	288	209.46	544.66	457.59	5.3077
229	290.12	456.78	393.92	4.9650	289	208.53	546.02	458.56	5.3124
230	288.13	458.44	395.14	4.9722	290	207.62	547.37	459.53	5.3171
231	286.17	460.09	396.36	4.9794	291	206.71	548.73	460.49	5.3218
232	284.24	461.74	397.57	4.9865	292	205.81	550.08	461.46	5.3264
233	282.34	463.38	398.78	4.9936	293	204.93	551.42	462.42	5.3310
234	280.47	465.01	399.98	5.0005	294	204.05	552.77	463.38	5.3356
235	278.62	466.63	401.17	5.0074	295	203.18	554.11	464.34	5.3401
236	276.81	468.24	402.35	5.0143	296	202.32	555.44	465.30	5.3447
237	275.01	469.85	403.53	5.0211	297	201.47	556.78	466.25	5.3492
238	273.25	471.45	404.71	5.0279	298	200.62	558.11	467.20	5.3536
239	271.51	473.05	405.87	5.0345	299	199.79	559.44	468.15	5.3581
240	269.80	474.64	407.04	5.0412	300	198.96	560.77	469.10	5.3625

## 200.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	689.39	244.05	214.66	3.6748
					122	685.75	246.00	216.45	3.6909
					123	682.09	247.94	218.23	3.7068
					124	678.43	249.89	220.02	3.7226
					125	674.75	251.88	221.84	3.7385
					126	671.06	253.85	223.65	3.7544
					127	667.36	255.83	225.47	3.7701
					128	663.65	257.83	227.29	3.7859
					129	659.93	259.81	229.10	3.8013
					130	656.19	261.76	230.88	3.8165
					131	652.44	263.65	232.59	3.8310
					132	648.68	265.34	234.10	3.8440
73	854.09	147.75	124.03	2.6565	133	644.90	267.66	236.24	3.8616
74	850.87	149.86	126.04	2.6851	134	641.12	269.80	238.20	3.8777
75	847.64	151.95	128.05	2.7133	135	637.32	271.93	240.13	3.8935
76	844.39	154.05	130.05	2.7411	136	633.51	274.04	242.05	3.9091
77	841.13	156.14	132.05	2.7684	137	629.69	276.14	243.96	3.9244
78	837.85	158.23	134.04	2.7954	138	625.85	278.23	245.85	3.9396
79	834.56	160.31	136.03	2.8219	139	622.00	280.30	247.72	3.9546
80	831.26	162.39	138.02	2.8481	140	618.14	282.36	249.58	3.9694
					141	614.27	284.42	251.43	3.9840
81	827.96	164.47	139.99	2.8739	142	610.39	286.46	253.26	3.9984
82	824.64	166.54	141.97	2.8993	143	606.49	288.50	255.09	4.0127
83	821.31	168.61	143.94	2.9244	144	602.59	290.53	256.90	4.0269
84	817.97	170.68	145.90	2.9492	145	598.67	292.56	258.71	4.0409
85	814.63	172.74	147.86	2.9736	146	594.75	294.58	260.51	4.0548
86	811.28	174.79	149.81	2.9976	147	590.81	296.60	262.30	4.0686
87	807.92	176.84	151.76	3.0213	148	586.86	298.61	264.08	4.0822
88	804.55	178.89	153.70	3.0447	149	582.91	300.62	265.85	4.0957
89	801.18	180.93	155.64	3.0678	150	578.94	302.63	267.62	4.1092
90	797.80	182.97	157.57	3.0905					
					151	574.97	304.63	269.38	4.1225
91	794.41	185.00	159.49	3.1130	152	570.99	306.63	271.14	4.1357
92	791.02	187.02	161.40	3.1351	153	567.00	308.63	272.89	4.1488
93	787.62	189.04	163.31	3.1570	154	563.01	310.63	274.64	4.1618
94	784.21	191.06	165.22	3.1785	155	559.01	312.63	276.38	4.1748
95	780.80	193.07	167.11	3.1998	156	555.00	314.63	278.12	4.1876
96	777.38	195.07	169.00	3.2208	157	551.00	316.63	279.85	4.2004
97	773.96	197.07	170.89	3.2415	158	546.99	318.63	281.58	4.2131
98	770.53	199.06	172.76	3.2620	159	542.97	320.62	283.30	4.2257
99	767.09	201.05	174.63	3.2822	160	538.96	322.62	285.02	4.2382
100	763.64	203.03	176.50	3.3021					
					161	534.94	324.62	286.74	4.2506
101	760.19	205.01	178.35	3.3218	162	530.93	326.62	288.45	4.2630
102	756.73	206.99	180.21	3.3412	163	526.92	328.62	290.16	4.2753
103	753.26	208.95	182.05	3.3605	164	522.91	330.62	291.86	4.2875
104	749.79	210.92	183.89	3.3795	165	518.90	332.61	293.56	4.2997
105	746.31	212.88	185.73	3.3982	166	514.90	334.61	295.26	4.3118
106	742.82	214.84	187.56	3.4168	167	510.91	336.61	296.95	4.3238
107	739.32	216.80	189.39	3.4352	168	506.93	338.61	298.64	4.3357
108	735.81	218.76	191.22	3.4534	169	502.95	340.61	300.32	4.3476
109	732.30	220.71	193.04	3.4714	170	498.99	342.61	302.00	4.3594
110	728.77	222.67	194.86	3.4893					
					171	495.03	344.61	303.67	4.3711
111	725.24	224.62	196.68	3.5070	172	491.09	346.60	305.34	4.3827
112	721.70	226.58	198.50	3.5246	173	487.17	348.60	307.00	4.3943
113	718.15	228.54	200.32	3.5420	174	483.26	350.60	308.66	4.4058
114	714.59	230.50	202.14	3.5593	175	479.36	352.59	310.32	4.4172
115	711.02	232.47	203.97	3.5765	176	475.49	354.59	311.97	4.4286
116	707.44	234.44	205.80	3.5936	177	471.63	356.58	313.61	4.4399
117	703.85	236.42	207.63	3.6106	178	467.79	358.57	315.25	4.4511
118	700.25	238.32	209.38	3.6267	179	463.98	360.56	316.88	4.4622
119	696.64	240.23	211.14	3.6429	180	460.19	362.54	318.51	4.4733
120	693.02	242.15	212.91	3.6590					



## 200.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	456.43	364.53	320.13	4.4843	241	292.59	472.70	403.44	5.0032
182	452.69	366.51	321.74	4.4952	242	290.83	474.29	404.61	5.0098
183	448.97	368.48	323.35	4.5060	243	289.09	475.88	405.78	5.0163
184	445.29	370.46	324.95	4.5168	244	287.37	477.46	406.94	5.0228
185	441.63	372.43	326.54	4.5274	245	285.67	479.04	408.10	5.0292
186	438.00	374.39	328.13	4.5380	246	284.00	480.61	409.25	5.0356
187	434.41	376.36	329.71	4.5486	247	282.35	482.17	410.40	5.0420
188	430.84	378.31	331.28	4.5590	248	280.72	483.73	411.54	5.0483
189	427.31	380.27	332.84	4.5694	249	279.11	485.28	412.68	5.0545
190	423.81	382.22	334.40	4.5797	250	277.53	486.83	413.81	5.0607
191	420.35	384.16	335.95	4.5899	251	275.96	488.37	414.94	5.0669
192	416.92	386.10	337.49	4.6000	252	274.41	489.91	416.06	5.0730
193	413.52	388.03	339.03	4.6100	253	272.89	491.44	417.18	5.0790
194	410.16	389.96	340.55	4.6200	254	271.38	492.96	418.29	5.0851
195	406.84	391.88	342.07	4.6299	255	269.89	494.48	419.40	5.0910
196	403.55	393.80	343.58	4.6397	256	268.42	496.00	420.50	5.0970
197	400.30	395.71	345.09	4.6494	257	266.97	497.51	421.60	5.1028
198	397.09	397.61	346.58	4.6590	258	265.54	499.01	422.69	5.1087
199	393.92	399.51	348.07	4.6686	259	264.12	500.51	423.78	5.1145
200	390.78	401.40	349.54	4.6781	260	262.72	502.01	424.87	5.1202
201	387.68	403.29	351.01	4.6875	261	261.34	503.50	425.95	5.1260
202	384.62	405.16	352.47	4.6968	262	259.98	504.98	427.03	5.1316
203	381.60	407.03	353.93	4.7060	263	258.63	506.46	428.11	5.1373
204	378.62	408.90	355.37	4.7152	264	257.30	507.94	429.18	5.1429
205	375.67	410.75	356.81	4.7242	265	255.98	509.41	430.24	5.1484
206	372.76	412.60	358.24	4.7332	266	254.69	510.88	431.31	5.1540
207	369.89	414.44	359.66	4.7421	267	253.40	512.34	432.37	5.1595
208	367.06	416.28	361.07	4.7510	268	252.13	513.80	433.42	5.1649
209	364.26	418.10	362.47	4.7597	269	250.88	515.25	434.47	5.1703
210	361.51	419.92	363.87	4.7684	270	249.64	516.70	435.52	5.1757
211	358.79	421.74	365.25	4.7770	271	248.41	518.15	436.57	5.1810
212	356.10	423.54	366.63	4.7856	272	247.20	519.59	437.61	5.1863
213	353.46	425.34	368.00	4.7940	273	246.01	521.02	438.65	5.1916
214	350.85	427.13	369.37	4.8024	274	244.82	522.46	439.68	5.1969
215	348.27	428.91	370.72	4.8107	275	243.65	523.89	440.71	5.2021
216	345.73	430.68	372.07	4.8189	276	242.49	525.31	441.74	5.2072
217	343.23	432.45	373.41	4.8271	277	241.35	526.73	442.77	5.2124
218	340.76	434.21	374.74	4.8352	278	240.22	528.15	443.79	5.2175
219	338.33	435.96	376.06	4.8432	279	239.10	529.56	444.81	5.2226
220	335.93	437.71	377.38	4.8512	280	237.99	530.97	445.82	5.2276
221	333.56	439.44	378.69	4.8590	281	236.90	532.38	446.84	5.2326
222	331.23	441.17	379.99	4.8668	282	235.82	533.78	447.85	5.2376
223	328.93	442.90	381.29	4.8746	283	234.74	535.18	448.85	5.2426
224	326.66	444.61	382.57	4.8823	284	233.68	536.58	449.86	5.2475
225	324.42	446.32	383.85	4.8899	285	232.64	537.97	450.86	5.2524
226	322.22	448.02	385.13	4.8974	286	231.60	539.36	451.86	5.2572
227	320.04	449.71	386.39	4.9049	287	230.57	540.74	452.85	5.2621
228	317.90	451.40	387.65	4.9123	288	229.56	542.13	453.85	5.2669
229	315.79	453.08	388.90	4.9196	289	228.55	543.51	454.84	5.2717
230	313.70	454.75	390.15	4.9269	290	227.56	544.88	455.83	5.2764
231	311.65	456.42	391.39	4.9341	291	226.57	546.25	456.81	5.2811
232	309.62	458.07	392.62	4.9413	292	225.60	547.62	457.80	5.2858
233	307.62	459.73	393.85	4.9484	293	224.63	548.99	458.78	5.2905
234	305.65	461.37	395.07	4.9555	294	223.68	550.35	459.75	5.2951
235	303.71	463.01	396.28	4.9624	295	222.73	551.71	460.73	5.2998
236	301.79	464.64	397.49	4.9694	296	221.80	553.07	461.70	5.3044
237	299.90	466.26	398.69	4.9762	297	220.87	554.42	462.67	5.3089
238	298.04	467.88	399.89	4.9831	298	219.95	555.78	463.64	5.3135
239	296.20	469.50	401.08	4.9898	299	219.05	557.12	464.61	5.3180
240	294.38	471.10	402.26	4.9965	300	218.15	558.47	465.57	5.3225

220.00 ATMOSPHERE ISOBAR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	696.32	245.16	213.15	3.6598
					122	692.82	247.08	214.91	3.6756
					123	689.32	248.99	216.65	3.6913
					124	685.80	250.92	218.42	3.7070
					125	682.28	252.88	220.21	3.7227
					126	678.75	254.83	221.98	3.7383
					127	675.21	256.78	223.77	3.7538
					128	671.67	258.75	225.56	3.7694
					129	668.11	260.70	227.34	3.7846
					130	664.54	262.62	229.08	3.7995
					131	660.97	264.48	230.76	3.8138
					132	657.39	266.14	232.23	3.8266
					133	653.80	268.43	234.33	3.8439
74	853.54	151.57	125.46	2.6762	134	650.20	270.54	236.25	3.8597
75	850.36	153.66	127.45	2.7043	135	646.59	272.63	238.15	3.8753
76	847.17	155.75	129.44	2.7319	136	642.98	274.70	240.04	3.8906
77	843.96	157.83	131.42	2.7592	137	639.35	276.77	241.90	3.9057
78	840.74	159.91	133.40	2.7860	138	635.72	278.81	243.75	3.9206
79	837.51	161.99	135.37	2.8125	139	632.08	280.85	245.58	3.9353
80	834.28	164.06	137.34	2.8385	140	628.43	282.87	247.40	3.9498
					141	624.77	284.88	249.20	3.9641
81	831.03	166.13	139.31	2.8642	142	621.11	286.89	251.00	3.9783
82	827.77	168.19	141.27	2.8896	143	617.43	288.88	252.78	3.9923
83	824.51	170.25	143.22	2.9146	144	613.75	290.87	254.55	4.0061
84	821.24	172.31	145.17	2.9392	145	610.07	292.85	256.31	4.0198
85	817.96	174.36	147.11	2.9635	146	606.37	294.83	258.07	4.0334
86	814.68	176.41	149.05	2.9874	147	602.67	296.80	259.81	4.0468
87	811.39	178.45	150.98	3.0110	148	598.96	298.76	261.55	4.0601
88	808.09	180.49	152.90	3.0343	149	595.25	300.72	263.27	4.0733
89	804.79	182.52	154.82	3.0573	150	591.53	302.68	265.00	4.0864
90	801.48	184.55	156.73	3.0799					
					151	587.81	304.63	266.71	4.0994
91	798.17	186.57	158.64	3.1023	152	584.08	306.58	268.42	4.1123
92	794.86	188.58	160.54	3.1243	153	580.35	308.53	270.12	4.1251
93	791.54	190.59	162.43	3.1461	154	576.61	310.48	271.82	4.1377
94	788.21	192.60	164.32	3.1675	155	572.87	312.42	273.51	4.1503
95	784.88	194.60	166.19	3.1887	156	569.13	314.36	275.20	4.1628
96	781.54	196.59	168.07	3.2095	157	565.39	316.31	276.88	4.1752
97	778.20	198.58	169.93	3.2301	158	561.65	318.25	278.56	4.1875
98	774.86	200.56	171.79	3.2505	159	557.90	320.19	280.23	4.1998
99	771.51	202.53	173.64	3.2705	160	554.16	322.12	281.90	4.2119
100	768.15	204.50	175.48	3.2903					
					161	550.41	324.06	283.56	4.2240
101	764.79	206.47	177.32	3.3099	162	546.67	326.00	285.22	4.2360
102	761.42	208.43	179.15	3.3292	163	542.93	327.94	286.88	4.2479
103	758.05	210.39	180.98	3.3483	164	539.19	329.87	288.53	4.2598
104	754.68	212.34	182.80	3.3672	165	535.46	331.81	290.18	4.2715
105	751.30	214.29	184.62	3.3858	166	531.73	333.75	291.83	4.2832
106	747.91	216.23	186.43	3.4043	167	528.01	335.68	293.47	4.2949
107	744.52	218.17	188.23	3.4225	168	524.29	337.62	295.10	4.3064
108	741.12	220.11	190.04	3.4406	169	520.58	339.56	296.74	4.3179
109	737.71	222.05	191.84	3.4585	170	516.88	341.49	298.37	4.3293
110	734.30	223.99	193.63	3.4762					
					171	513.19	343.43	299.99	4.3407
111	730.88	225.93	195.43	3.4937	172	509.51	345.36	301.61	4.3520
112	727.46	227.87	197.23	3.5111	173	505.84	347.30	303.23	4.3632
113	724.03	229.81	199.02	3.5284	174	502.18	349.23	304.84	4.3743
114	720.59	231.76	200.82	3.5455	175	498.53	351.16	306.45	4.3854
115	717.14	233.70	202.62	3.5625	176	494.90	353.09	308.05	4.3964
116	713.69	235.66	204.42	3.5795	177	491.29	355.02	309.65	4.4073
117	710.23	237.62	206.23	3.5963	178	487.68	356.95	311.24	4.4182
118	706.77	239.49	207.95	3.6122	179	484.10	358.88	312.83	4.4290
119	703.29	241.38	209.68	3.6282	180	480.54	360.81	314.42	4.4397
120	699.81	243.28	211.43	3.6441					

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	476.99	362.73	316.00	4.4504	241	315.21	469.77	399.05	4.9634
182	473.46	364.65	317.57	4.4610	242	313.38	471.38	400.24	4.9700
183	469.95	366.58	319.14	4.4715	243	311.56	472.97	401.43	4.9766
184	466.47	368.49	320.71	4.4820	244	309.77	474.57	402.61	4.9831
185	463.00	370.41	322.26	4.4923	245	308.00	476.16	403.78	4.9896
186	459.56	372.32	323.82	4.5026	246	306.25	477.74	404.95	4.9961
187	456.14	374.23	325.36	4.5129	247	304.53	479.31	406.11	5.0025
188	452.75	376.14	326.90	4.5231	248	302.82	480.89	407.27	5.0088
189	449.38	378.04	328.44	4.5332	249	301.14	482.45	408.43	5.0151
190	446.04	379.95	329.97	4.5432	250	299.48	484.01	409.58	5.0214
191	442.73	381.84	331.49	4.5531	251	297.83	485.57	410.72	5.0276
192	439.44	383.74	333.01	4.5630	252	296.21	487.12	411.86	5.0337
193	436.18	385.63	334.52	4.5728	253	294.61	488.66	413.00	5.0399
194	432.94	387.51	336.02	4.5826	254	293.02	490.20	414.13	5.0459
195	429.74	389.39	337.52	4.5923	255	291.46	491.74	415.25	5.0520
196	426.56	391.27	339.01	4.6019	256	289.91	493.27	416.38	5.0579
197	423.42	393.14	340.49	4.6114	257	288.38	494.79	417.49	5.0639
198	420.30	395.01	341.97	4.6208	258	286.87	496.31	418.61	5.0698
199	417.22	396.87	343.44	4.6302	259	285.38	497.83	419.72	5.0757
200	414.16	398.73	344.91	4.6395	260	283.90	499.34	420.82	5.0815
201	411.14	400.58	346.36	4.6488	261	282.45	500.85	421.92	5.0873
202	408.15	402.43	347.81	4.6579	262	281.00	502.35	423.02	5.0930
203	405.19	404.27	349.26	4.6670	263	279.58	503.84	424.11	5.0987
204	402.26	406.11	350.69	4.6761	264	278.17	505.34	425.20	5.1044
205	399.36	407.94	352.12	4.6850	265	276.78	506.82	426.29	5.1100
206	396.49	409.76	353.54	4.6939	266	275.40	508.31	427.37	5.1156
207	393.66	411.58	354.96	4.7027	267	274.04	509.79	428.44	5.1211
208	390.86	413.40	356.37	4.7114	268	272.70	511.26	429.52	5.1266
209	388.08	415.21	357.77	4.7201	269	271.37	512.73	430.59	5.1321
210	385.35	417.01	359.16	4.7287	270	270.05	514.20	431.65	5.1376
211	382.64	418.80	360.55	4.7372	271	268.75	515.66	432.72	5.1430
212	379.96	420.59	361.93	4.7457	272	267.47	517.12	433.78	5.1483
213	377.32	422.38	363.30	4.7541	273	266.20	518.57	434.83	5.1537
214	374.71	424.15	364.66	4.7624	274	264.94	520.02	435.88	5.1590
215	372.13	425.93	366.02	4.7707	275	263.69	521.47	436.93	5.1642
216	369.58	427.69	367.37	4.7789	276	262.46	522.91	437.98	5.1695
217	367.06	429.45	368.72	4.7870	277	261.25	524.35	439.02	5.1747
218	364.57	431.20	370.06	4.7950	278	260.04	525.78	440.06	5.1798
219	362.11	432.95	371.39	4.8030	279	258.85	527.21	441.10	5.1850
220	359.69	434.69	372.71	4.8110	280	257.67	528.64	442.13	5.1901
221	357.29	436.42	374.03	4.8188	281	256.50	530.06	443.16	5.1952
222	354.92	438.15	375.34	4.8266	282	255.35	531.48	444.19	5.2002
223	352.59	439.87	376.64	4.8343	283	254.21	532.90	445.21	5.2052
224	350.28	441.58	377.94	4.8420	284	253.08	534.31	446.23	5.2102
225	348.00	443.29	379.23	4.8496	285	251.96	535.72	447.25	5.2151
226	345.75	444.99	380.52	4.8572	286	250.85	537.13	448.27	5.2201
227	343.53	446.68	381.79	4.8646	287	249.76	538.53	449.28	5.2250
228	341.33	448.37	383.07	4.8721	288	248.67	539.93	450.29	5.2298
229	339.17	450.06	384.33	4.8794	289	247.60	541.33	451.30	5.2347
230	337.03	451.73	385.59	4.8867	290	246.54	542.72	452.30	5.2395
231	334.92	453.40	386.84	4.8940	291	245.48	544.11	453.30	5.2443
232	332.83	455.07	388.09	4.9012	292	244.44	545.49	454.30	5.2490
233	330.77	456.72	389.33	4.9083	293	243.41	546.88	455.30	5.2537
234	328.74	458.38	390.57	4.9154	294	242.39	548.26	456.29	5.2584
235	326.73	460.02	391.80	4.9224	295	241.38	549.63	457.28	5.2631
236	324.75	461.66	393.02	4.9293	296	240.38	551.01	458.27	5.2678
237	322.80	463.30	394.24	4.9363	297	239.39	552.38	459.26	5.2724
238	320.86	464.92	395.45	4.9431	298	238.40	553.75	460.24	5.2770
239	318.96	466.54	396.66	4.9499	299	237.43	555.11	461.22	5.2816
240	317.07	468.16	397.86	4.9567	300	236.47	556.47	462.20	5.2861

## 240.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	702.80	246.34	211.74	3.6456
					122	699.43	248.24	213.47	3.6612
					123	696.05	250.13	215.19	3.6768
					124	692.67	252.04	216.93	3.6922
					125	689.28	253.97	218.69	3.7078
					126	685.89	255.90	220.44	3.7232
					127	682.49	257.83	222.20	3.7385
					128	679.08	259.77	223.96	3.7539
					129	675.67	261.70	225.71	3.7689
					130	672.26	263.59	227.42	3.7837
					131	668.83	265.43	229.07	3.7978
					132	665.40	267.06	230.51	3.8103
					133	661.97	269.32	232.58	3.8274
74	856.14	153.30	124.89	2.6675	134	658.53	271.40	234.47	3.8430
75	853.01	155.38	126.87	2.6954	135	655.08	273.46	236.34	3.8584
76	849.88	157.46	128.85	2.7230	136	651.63	275.51	238.19	3.8735
77	846.72	159.54	130.82	2.7501	137	648.17	277.54	240.02	3.8884
78	843.56	161.61	132.78	2.7769	138	644.71	279.56	241.84	3.9030
79	840.39	163.68	134.74	2.8032	139	641.24	281.56	243.64	3.9175
80	837.21	165.74	136.69	2.8292	140	637.76	283.55	245.42	3.9318
					141	634.28	285.53	247.19	3.9458
81	834.02	167.80	138.64	2.8548	142	630.80	287.50	248.95	3.9598
82	830.82	169.86	140.59	2.8801	143	627.31	289.46	250.69	3.9735
83	827.62	171.91	142.53	2.9049	144	623.82	291.41	252.43	3.9871
84	824.41	173.96	144.46	2.9295	145	620.32	293.36	254.15	4.0006
85	821.19	176.00	146.39	2.9537	146	616.81	295.29	255.87	4.0139
86	817.97	178.04	148.31	2.9775	147	613.31	297.23	257.58	4.0271
87	814.75	180.07	150.23	3.0010	148	609.80	299.15	259.27	4.0401
88	811.52	182.10	152.14	3.0242	149	606.28	301.07	260.96	4.0531
89	808.29	184.13	154.04	3.0471	150	602.77	302.99	262.65	4.0659
90	805.05	186.14	155.94	3.0697	151	599.25	304.90	264.32	4.0786
91	801.81	188.16	157.83	3.0919	152	595.72	306.81	265.99	4.0912
92	798.56	190.16	159.71	3.1138	153	592.20	308.72	267.65	4.1037
93	795.31	192.16	161.59	3.1355	154	588.67	310.62	269.31	4.1161
94	792.06	194.16	163.46	3.1568	155	585.14	312.52	270.96	4.1284
95	788.80	196.15	165.32	3.1779	156	581.62	314.42	272.61	4.1406
96	785.54	198.13	167.17	3.1986	157	578.09	316.31	274.25	4.1527
97	782.28	200.11	169.02	3.2191	158	574.56	318.21	275.88	4.1647
98	779.01	202.08	170.86	3.2394	159	571.03	320.10	277.52	4.1767
99	775.75	204.04	172.69	3.2593	160	567.50	321.99	279.14	4.1885
100	772.47	206.00	174.52	3.2790	161	563.98	323.88	280.77	4.2003
101	769.20	207.96	176.34	3.2985	162	560.45	325.77	282.38	4.2120
102	765.92	209.91	178.15	3.3177	163	556.93	327.66	284.00	4.2236
103	762.63	211.85	179.96	3.3366	164	553.42	329.55	285.61	4.2352
104	759.35	213.79	181.76	3.3554	165	549.90	331.44	287.22	4.2467
105	756.05	215.72	183.56	3.3739	166	546.40	333.33	288.82	4.2581
106	752.76	217.66	185.35	3.3922	167	542.89	335.21	290.42	4.2694
107	749.46	219.59	187.14	3.4104	168	539.40	337.10	292.01	4.2806
108	746.16	221.51	188.92	3.4283	169	535.90	338.98	293.61	4.2918
109	742.85	223.44	190.70	3.4460	170	532.42	340.87	295.19	4.3029
110	739.54	225.36	192.48	3.4636	171	528.95	342.75	296.78	4.3140
111	736.22	227.28	194.25	3.4810	172	525.48	344.64	298.36	4.3250
112	732.90	229.21	196.03	3.4983	173	522.02	346.52	299.94	4.3359
113	729.58	231.13	197.80	3.5154	174	518.57	348.40	301.51	4.3467
114	726.25	233.06	199.58	3.5324	175	515.14	350.28	303.08	4.3575
115	722.92	234.99	201.35	3.5493	176	511.71	352.17	304.64	4.3683
116	719.58	236.93	203.13	3.5660	177	508.30	354.05	306.20	4.3789
117	716.23	238.87	204.92	3.5827	178	504.90	355.92	307.76	4.3895
118	712.88	240.73	206.62	3.5985	179	501.51	357.80	309.31	4.4000
119	709.53	242.59	208.32	3.6143	180	498.14	359.68	310.86	4.4105
120	706.17	244.48	210.04	3.6301					

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	494.78	361.56	312.41	4.4209	241	336.05	467.37	395.00	4.9276
182	491.44	363.43	313.95	4.4312	242	334.17	468.98	396.20	4.9342
183	488.11	365.30	315.48	4.4414	243	332.30	470.58	397.40	4.9408
184	484.80	367.17	317.01	4.4516	244	330.46	472.18	398.59	4.9474
185	481.51	369.04	318.54	4.4618	245	328.64	473.78	399.78	4.9539
186	478.24	370.91	320.06	4.4718	246	326.85	475.36	400.96	4.9604
187	474.99	372.78	321.58	4.4818	247	325.07	476.95	402.14	4.9668
188	471.75	374.64	323.09	4.4918	248	323.31	478.53	403.31	4.9732
189	468.54	376.50	324.60	4.5016	249	321.57	480.10	404.48	4.9795
190	465.35	378.36	326.10	4.5114	250	319.86	481.67	405.64	4.9858
191	462.18	380.21	327.60	4.5212	251	318.16	483.23	406.80	4.9921
192	459.03	382.06	329.09	4.5308	252	316.48	484.79	407.95	4.9983
193	455.90	383.91	330.57	4.5405	253	314.82	486.35	409.10	5.0044
194	452.79	385.76	332.05	4.5500	254	313.18	487.90	410.25	5.0105
195	449.71	387.60	333.53	4.5595	255	311.56	489.44	411.39	5.0166
196	446.65	389.44	335.00	4.5689	256	309.95	490.98	412.53	5.0226
197	443.62	391.28	336.46	4.5782	257	308.37	492.52	413.66	5.0286
198	440.61	393.11	337.92	4.5875	258	306.80	494.05	414.79	5.0346
199	437.63	394.94	339.38	4.5967	259	305.25	495.58	415.91	5.0405
200	434.67	396.77	340.82	4.6059	260	303.71	497.10	417.03	5.0463
201	431.73	398.59	342.26	4.6150	261	302.19	498.62	418.14	5.0522
202	428.83	400.41	343.70	4.6240	262	300.69	500.13	419.26	5.0579
203	425.94	402.22	345.13	4.6329	263	299.21	501.64	420.36	5.0637
204	423.09	404.03	346.55	4.6418	264	297.74	503.14	421.47	5.0694
205	420.26	405.83	347.97	4.6506	265	296.29	504.64	422.57	5.0751
206	417.46	407.63	349.38	4.6594	266	294.85	506.14	423.66	5.0807
207	414.68	409.43	350.79	4.6681	267	293.43	507.63	424.75	5.0863
208	411.93	411.22	352.19	4.6767	268	292.03	509.12	425.84	5.0919
209	409.21	413.01	353.58	4.6853	269	290.64	510.60	426.93	5.0974
210	406.52	414.79	354.97	4.6938	270	289.26	512.08	428.01	5.1029
211	403.85	416.56	356.35	4.7022	271	287.90	513.55	429.09	5.1083
212	401.21	418.33	357.72	4.7106	272	286.56	515.02	430.16	5.1137
213	398.60	420.10	359.09	4.7189	273	285.22	516.49	431.23	5.1191
214	396.01	421.86	360.45	4.7271	274	283.90	517.95	432.30	5.1245
215	393.45	423.62	361.81	4.7353	275	282.60	519.41	433.36	5.1298
216	390.92	425.37	363.16	4.7435	276	281.31	520.87	434.42	5.1351
217	388.42	427.11	364.50	4.7515	277	280.03	522.32	435.48	5.1403
218	385.94	428.85	365.84	4.7595	278	278.77	523.77	436.53	5.1455
219	383.49	430.59	367.17	4.7675	279	277.52	525.21	437.58	5.1507
220	381.07	432.32	368.50	4.7753	280	276.28	526.65	438.63	5.1559
221	378.67	434.04	369.82	4.7831	281	275.05	528.09	439.68	5.1610
222	376.30	435.76	371.13	4.7909	282	273.84	529.52	440.72	5.1661
223	373.96	437.47	372.44	4.7986	283	272.64	530.95	441.76	5.1711
224	371.64	439.18	373.74	4.8062	284	271.45	532.38	442.79	5.1762
225	369.35	440.88	375.04	4.8138	285	270.27	533.80	443.82	5.1812
226	367.08	442.58	376.33	4.8213	286	269.10	535.22	444.85	5.1862
227	364.84	444.27	377.61	4.8288	287	267.95	536.64	445.88	5.1911
228	362.63	445.95	378.89	4.8362	288	266.81	538.05	446.91	5.1960
229	360.44	447.63	380.16	4.8436	289	265.67	539.46	447.93	5.2009
230	358.27	449.31	381.43	4.8509	290	264.55	540.87	448.95	5.2057
231	356.13	450.98	382.69	4.8581	291	263.44	542.27	449.96	5.2106
232	354.02	452.64	383.95	4.8653	292	262.34	543.67	450.97	5.2154
233	351.93	454.30	385.20	4.8724	293	261.26	545.07	451.98	5.2202
234	349.86	455.95	386.44	4.8795	294	260.18	546.46	452.99	5.2249
235	347.82	457.60	387.68	4.8865	295	259.11	547.85	454.00	5.2296
236	345.80	459.24	388.91	4.8935	296	258.05	549.24	455.00	5.2343
237	343.80	460.87	390.14	4.9004	297	257.01	550.62	456.00	5.2390
238	341.83	462.51	391.37	4.9073	298	255.97	552.00	457.00	5.2436
239	339.88	464.13	392.58	4.9141	299	254.94	553.38	457.99	5.2482
240	337.95	465.75	393.80	4.9208	300	253.92	554.76	458.99	5.2528

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TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	708.90	247.58	210.42	3.6321
					122	705.64	249.46	212.13	3.6476
					123	702.37	251.33	213.83	3.6630
					124	699.11	253.23	215.54	3.6783
					125	695.84	255.14	217.28	3.6937
					126	692.56	257.04	219.00	3.7090
					127	689.28	258.96	220.74	3.7242
					128	686.00	260.88	222.48	3.7394
					129	682.72	262.78	224.20	3.7542
					130	679.43	264.66	225.88	3.7688
					131	676.13	266.47	227.50	3.7827
					132	672.84	268.08	228.92	3.7951
					133	669.53	270.31	230.97	3.8120
					134	666.23	272.37	232.83	3.8275
74	858.69	155.03	124.35	2.6590	135	662.92	274.41	234.67	3.8426
75	855.61	157.11	126.32	2.6868	136	659.61	276.43	236.49	3.8575
76	852.52	159.18	128.28	2.7143	137	656.29	278.44	238.29	3.8722
77	849.42	161.25	130.23	2.7413	138	652.98	280.43	240.08	3.8867
78	846.31	163.31	132.18	2.7680	139	649.65	282.40	241.85	3.9010
79	843.19	165.37	134.13	2.7942	140	646.33	284.37	243.61	3.9150
80	840.07	167.43	136.07	2.8201	141	643.00	286.32	245.35	3.9289
					142	639.67	288.26	247.07	3.9427
81	836.93	169.48	138.01	2.8456	143	636.33	290.19	248.79	3.9562
82	833.79	171.53	139.94	2.8708	144	632.99	292.11	250.49	3.9696
83	830.65	173.58	141.86	2.8956	145	629.65	294.03	252.19	3.9828
84	827.49	175.62	143.78	2.9200	146	626.31	295.93	253.87	3.9960
85	824.34	177.65	145.70	2.9441	147	622.97	297.83	255.55	4.0089
86	821.18	179.68	147.60	2.9679	148	619.62	299.73	257.21	4.0218
87	818.01	181.71	149.51	2.9913	149	616.27	301.62	258.87	4.0345
88	814.84	183.73	151.40	3.0144	150	612.93	303.50	260.52	4.0471
89	811.67	185.75	153.29	3.0372	151	609.58	305.38	262.16	4.0596
90	808.50	187.76	155.17	3.0597	152	606.22	307.25	263.80	4.0719
					153	602.87	309.12	265.43	4.0842
91	805.32	189.76	157.05	3.0818	154	599.52	310.99	267.05	4.0964
92	802.14	191.76	158.92	3.1037	155	596.17	312.86	268.67	4.1084
93	798.96	193.75	160.78	3.1252	156	592.82	314.72	270.28	4.1204
94	795.78	195.74	162.63	3.1465	157	589.47	316.58	271.88	4.1323
95	792.59	197.72	164.48	3.1674	158	586.12	318.43	273.49	4.1441
96	789.40	199.69	166.32	3.1881	159	582.77	320.29	275.08	4.1558
97	786.21	201.66	168.15	3.2085	160	579.42	322.14	276.68	4.1674
98	783.02	203.62	169.97	3.2286	161	576.08	323.99	278.26	4.1789
99	779.82	205.58	171.79	3.2485	162	572.74	325.84	279.85	4.1904
100	776.62	207.53	173.60	3.2681	163	569.40	327.69	281.43	4.2018
					164	566.06	329.54	283.00	4.2131
101	773.42	209.47	175.41	3.2874	165	562.73	331.39	284.57	4.2243
102	770.22	211.41	177.20	3.3065	166	559.41	333.24	286.14	4.2354
103	767.02	213.34	178.99	3.3254	167	556.09	335.08	287.71	4.2465
104	763.81	215.27	180.78	3.3441	168	552.77	336.93	289.27	4.2575
105	760.61	217.19	182.56	3.3625	169	549.47	338.77	290.83	4.2685
106	757.39	219.12	184.33	3.3807	170	546.16	340.61	292.38	4.2794
107	754.18	221.03	186.10	3.3987	171	542.87	342.46	293.93	4.2902
108	750.97	222.95	187.87	3.4165	172	539.58	344.30	295.48	4.3009
109	747.75	224.86	189.63	3.4341	173	536.30	346.14	297.02	4.3116
110	744.53	226.77	191.39	3.4516	174	533.03	347.98	298.56	4.3222
					175	529.77	349.82	300.09	4.3327
111	741.30	228.68	193.14	3.4689	176	526.52	351.66	301.63	4.3432
112	738.08	230.59	194.90	3.4860	177	523.28	353.50	303.15	4.3536
113	734.85	232.50	196.65	3.5030	178	520.05	355.34	304.68	4.3640
114	731.61	234.42	198.41	3.5199	179	516.83	357.17	306.20	4.3743
115	728.38	236.33	200.16	3.5366	180	513.63	359.01	307.72	4.3845
116	725.14	238.25	201.92	3.5533					
117	721.90	240.18	203.68	3.5698					
118	718.65	242.02	205.36	3.5855					
119	715.40	243.87	207.05	3.6011					
120	712.15	245.74	208.75	3.6167					

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	510.43	360.84	309.23	4.3947	241	355.23	465.43	391.27	4.8952
182	507.25	362.68	310.74	4.4048	242	353.32	467.04	392.48	4.9019
183	504.09	364.51	312.25	4.4148	243	351.43	468.64	393.68	4.9085
184	500.93	366.34	313.75	4.4248	244	349.56	470.25	394.88	4.9151
185	497.80	368.17	315.25	4.4347	245	347.71	471.84	396.08	4.9216
186	494.67	370.00	316.74	4.4445	246	345.88	473.43	397.27	4.9281
187	491.57	371.82	318.23	4.4543	247	344.07	475.02	398.45	4.9345
188	488.48	373.65	319.72	4.4641	248	342.28	476.60	399.64	4.9409
189	485.40	375.47	321.20	4.4737	249	340.51	478.18	400.81	4.9473
190	482.35	377.29	322.68	4.4833	250	338.76	479.76	401.99	4.9536
191	479.31	379.11	324.15	4.4929	251	337.02	481.32	403.16	4.9598
192	476.29	380.93	325.62	4.5024	252	335.31	482.89	404.32	4.9660
193	473.29	382.74	327.08	4.5118	253	333.61	484.45	405.48	4.9722
194	470.30	384.55	328.54	4.5212	254	331.93	486.00	406.63	4.9784
195	467.34	386.36	329.99	4.5305	255	330.26	487.55	407.79	4.9844
196	464.40	388.17	331.44	4.5397	256	328.62	489.10	408.93	4.9905
197	461.47	389.98	332.89	4.5489	257	326.99	490.64	410.08	4.9965
198	458.57	391.78	334.33	4.5580	258	325.38	492.18	411.21	5.0025
199	455.69	393.57	335.76	4.5671	259	323.78	493.71	412.35	5.0084
200	452.83	395.37	337.19	4.5761	260	322.21	495.24	413.48	5.0143
201	449.99	397.16	338.62	4.5850	261	320.65	496.77	414.61	5.0202
202	447.17	398.95	340.04	4.5939	262	319.10	498.29	415.73	5.0260
203	444.37	400.74	341.45	4.6027	263	317.57	499.80	416.85	5.0318
204	441.60	402.52	342.86	4.6114	264	316.06	501.32	417.96	5.0375
205	438.85	404.30	344.27	4.6201	265	314.56	502.83	419.08	5.0432
206	436.12	406.07	345.66	4.6288	266	313.08	504.33	420.18	5.0489
207	433.41	407.84	347.06	4.6373	267	311.61	505.83	421.29	5.0545
208	430.73	409.61	348.45	4.6459	268	310.16	507.33	422.39	5.0601
209	428.07	411.37	349.83	4.6543	269	308.72	508.82	423.48	5.0656
210	425.43	413.13	351.21	4.6627	270	307.30	510.31	424.58	5.0712
211	422.82	414.89	352.58	4.6711	271	305.89	511.79	425.67	5.0766
212	420.23	416.64	353.95	4.6793	272	304.50	513.27	426.75	5.0821
213	417.66	418.38	355.31	4.6876	273	303.12	514.75	427.84	5.0875
214	415.12	420.13	356.67	4.6957	274	301.75	516.22	428.92	5.0929
215	412.60	421.87	358.02	4.7038	275	300.40	517.69	429.99	5.0982
216	410.11	423.60	359.36	4.7119	276	299.06	519.16	431.07	5.1036
217	407.63	425.33	360.70	4.7199	277	297.74	520.62	432.13	5.1089
218	405.19	427.05	362.04	4.7278	278	296.42	522.08	433.20	5.1141
219	402.76	428.77	363.37	4.7357	279	295.12	523.53	434.26	5.1193
220	400.36	430.49	364.69	4.7435	280	293.84	524.98	435.32	5.1245
221	397.98	432.20	366.01	4.7512	281	292.56	526.43	436.38	5.1297
222	395.63	433.91	367.32	4.7589	282	291.30	527.87	437.43	5.1348
223	393.30	435.61	368.63	4.7666	283	290.05	529.31	438.49	5.1399
224	390.99	437.31	369.93	4.7742	284	288.81	530.75	439.53	5.1450
225	388.71	439.00	371.23	4.7817	285	287.59	532.18	440.58	5.1500
226	386.45	440.69	372.52	4.7892	286	286.37	533.61	441.62	5.1550
227	384.21	442.37	373.80	4.7966	287	285.17	535.04	442.66	5.1600
228	382.00	444.05	375.09	4.8040	288	283.98	536.47	443.70	5.1650
229	379.81	445.72	376.36	4.8113	289	282.80	537.89	444.73	5.1699
230	377.64	447.39	377.63	4.8186	290	281.63	539.30	445.76	5.1748
231	375.49	449.06	378.90	4.8258	291	280.47	540.72	446.79	5.1796
232	373.37	450.71	380.16	4.8330	292	279.32	542.13	447.81	5.1845
233	371.27	452.37	381.41	4.8401	293	278.19	543.54	448.84	5.1893
234	369.19	454.02	382.66	4.8472	294	277.06	544.94	449.85	5.1941
235	367.13	455.66	383.90	4.8542	295	275.94	546.34	450.87	5.1988
236	365.09	457.30	385.14	4.8611	296	274.84	547.74	451.89	5.2036
237	363.08	458.94	386.38	4.8680	297	273.74	549.14	452.90	5.2083
238	361.09	460.57	387.61	4.8749	298	272.66	550.53	453.91	5.2130
239	359.11	462.19	388.83	4.8817	299	271.58	551.92	454.92	5.2176
240	357.16	463.81	390.05	4.8885	300	270.52	553.31	455.92	5.2223

## 280.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	714.65	248.87	209.17	3.6193
					122	711.49	250.74	210.87	3.6347
					123	708.33	252.60	212.54	3.6499
					124	705.17	254.47	214.24	3.6651
					125	702.00	256.37	215.96	3.6804
					126	698.83	258.26	217.66	3.6955
					127	695.66	260.15	219.37	3.7105
					128	692.49	262.06	221.09	3.7256
					129	689.31	263.94	222.78	3.7403
					130	686.13	265.80	224.45	3.7547
					131	682.96	267.59	226.05	3.7685
					132	679.77	269.18	227.44	3.7808
					133	676.59	271.39	229.46	3.7975
					134	673.40	273.43	231.30	3.8128
75	858.15	158.84	125.78	2.6784	135	670.22	275.45	233.12	3.8278
76	855.11	160.90	127.73	2.7057	136	667.03	277.45	234.92	3.8426
77	852.06	162.96	129.67	2.7327	137	663.83	279.43	236.69	3.8571
78	849.00	165.02	131.61	2.7593	138	660.64	281.40	238.46	3.8714
79	845.93	167.08	133.54	2.7854	139	657.45	283.35	240.20	3.8855
80	842.86	169.13	135.47	2.8112	140	654.25	285.29	241.93	3.8994
81	839.77	171.17	137.39	2.8367	141	651.05	287.22	243.65	3.9131
82	836.69	173.22	139.31	2.8617	142	647.85	289.14	245.35	3.9267
83	833.59	175.25	141.22	2.8864	143	644.65	291.05	247.04	3.9401
84	830.50	177.29	143.13	2.9108	144	641.45	292.94	248.71	3.9533
85	827.39	179.32	145.03	2.9348	145	638.24	294.83	250.38	3.9664
86	824.29	181.34	146.92	2.9585	146	635.04	296.71	252.04	3.9793
87	821.18	183.36	148.81	2.9819	147	631.83	298.59	253.68	3.9921
88	818.07	185.37	150.69	3.0049	148	628.63	300.45	255.32	4.0047
89	814.96	187.38	152.57	3.0276	149	625.42	302.31	256.95	4.0173
90	811.84	189.38	154.44	3.0500	150	622.21	304.17	258.57	4.0297
91	808.73	191.38	156.30	3.0720	151	619.01	306.02	260.19	4.0420
92	805.61	193.37	158.15	3.0938	152	615.80	307.87	261.79	4.0541
93	802.49	195.36	160.00	3.1153	153	612.60	309.71	263.39	4.0662
94	799.37	197.33	161.84	3.1364	154	609.39	311.55	264.99	4.0782
95	796.25	199.31	163.67	3.1573	155	606.19	313.38	266.58	4.0901
96	793.12	201.27	165.50	3.1779	156	602.99	315.21	268.16	4.1018
97	790.00	203.23	167.32	3.1982	157	599.79	317.04	269.74	4.1135
98	786.87	205.18	169.13	3.2182	158	596.59	318.87	271.31	4.1251
99	783.75	207.13	170.93	3.2380	159	593.39	320.69	272.88	4.1366
100	780.62	209.07	172.73	3.2575	160	590.20	322.51	274.44	4.1480
101	777.49	211.01	174.51	3.2768	161	587.01	324.33	276.00	4.1594
102	774.36	212.93	176.30	3.2958	162	583.82	326.15	277.55	4.1706
103	771.23	214.86	178.07	3.3146	163	580.64	327.96	279.10	4.1818
104	768.10	216.78	179.84	3.3331	164	577.46	329.78	280.65	4.1929
105	764.97	218.69	181.60	3.3514	165	574.29	331.59	282.19	4.2039
106	761.83	220.60	183.36	3.3695	166	571.11	333.41	283.73	4.2149
107	758.70	222.51	185.11	3.3875	167	567.95	335.22	285.26	4.2258
108	755.56	224.41	186.86	3.4052	168	564.79	337.03	286.80	4.2366
109	752.43	226.31	188.61	3.4227	169	561.63	338.84	288.32	4.2473
110	749.29	228.21	190.35	3.4400	170	558.49	340.65	289.85	4.2580
111	746.15	230.11	192.09	3.4572	171	555.35	342.46	291.37	4.2686
112	743.01	232.01	193.82	3.4743	172	552.21	344.26	292.89	4.2791
113	739.86	233.91	195.56	3.4912	173	549.09	346.07	294.40	4.2896
114	736.72	235.81	197.30	3.5079	174	545.97	347.88	295.91	4.3000
115	733.57	237.71	199.04	3.5245	175	542.86	349.68	297.42	4.3103
116	730.42	239.62	200.78	3.5411	176	539.75	351.48	298.92	4.3206
117	727.27	241.53	202.52	3.5575	177	536.66	353.29	300.42	4.3308
118	724.12	243.36	204.18	3.5730	178	533.58	355.09	301.92	4.3410
119	720.97	245.19	205.84	3.5886	179	530.51	356.89	303.41	4.3511
120	717.81	247.05	207.52	3.6040	180	527.45	358.69	304.90	4.3611



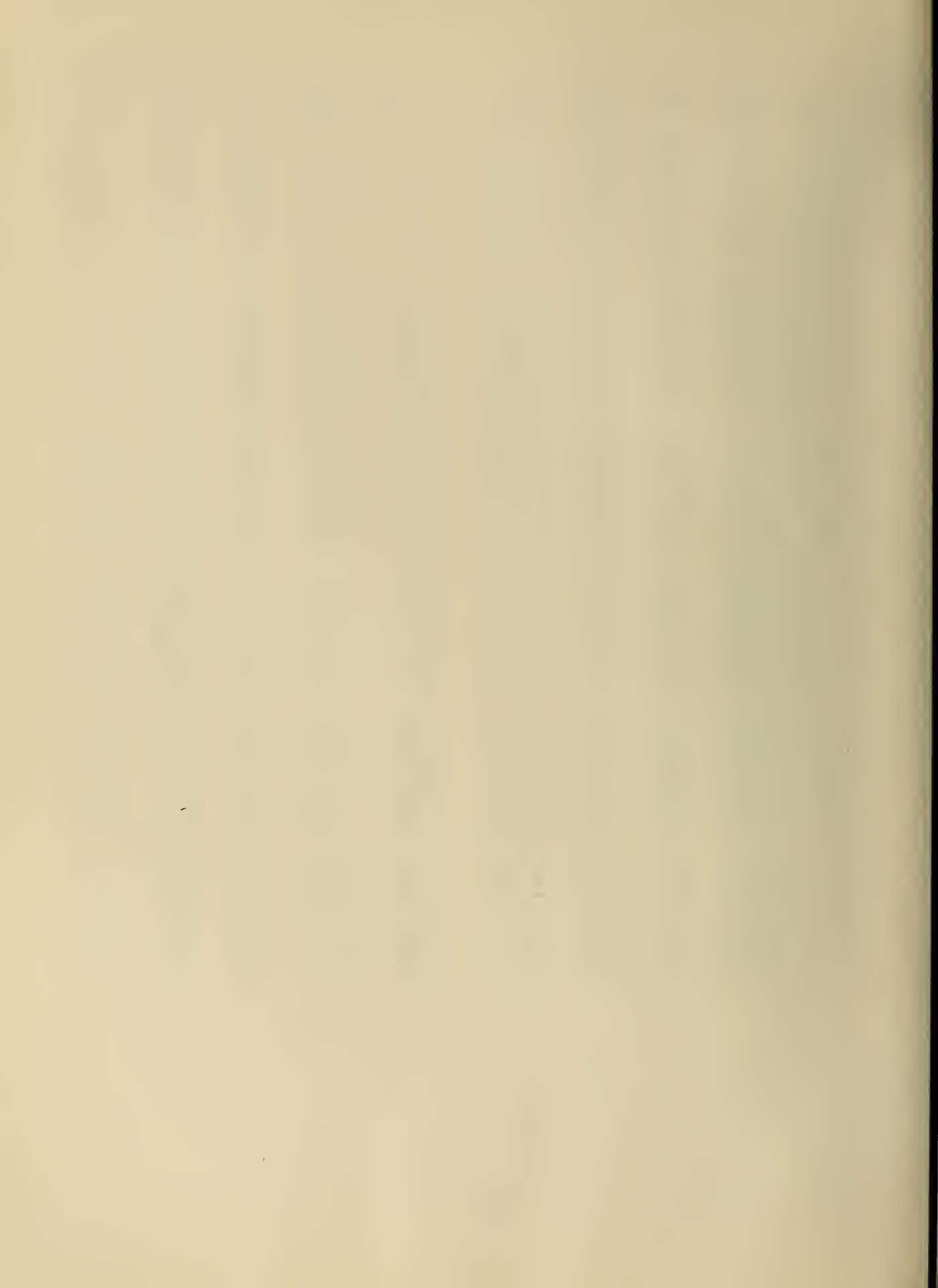
## 280.00 ATMOSPHERE ISO8AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	524.40	360.49	306.39	4.3711	241	372.91	463.89	387.82	4.8658
182	521.36	362.29	307.87	4.3810	242	370.99	465.50	389.03	4.8724
183	518.33	364.09	309.35	4.3909	243	369.09	467.11	390.24	4.8790
184	515.31	365.89	310.83	4.4006	244	367.20	468.71	391.45	4.8856
185	512.31	367.68	312.30	4.4104	245	365.34	470.30	392.65	4.8921
186	509.32	369.48	313.77	4.4200	246	363.49	471.90	393.84	4.8986
187	506.34	371.27	315.24	4.4297	247	361.66	473.48	395.04	4.9050
188	503.38	373.06	316.70	4.4392	248	359.85	475.07	396.23	4.9114
189	500.44	374.85	318.16	4.4487	249	358.06	476.64	397.41	4.9178
190	497.50	376.64	319.61	4.4581	250	356.29	478.22	398.59	4.9241
191	494.58	378.43	321.06	4.4675	251	354.53	479.79	399.76	4.9304
192	491.68	380.21	322.51	4.4768	252	352.79	481.36	400.94	4.9366
193	488.80	382.00	323.95	4.4861	253	351.06	482.92	402.10	4.9428
194	485.93	383.78	325.39	4.4953	254	349.36	484.48	403.27	4.9489
195	483.07	385.56	326.83	4.5045	255	347.67	486.03	404.43	4.9550
196	480.23	387.33	328.26	4.5135	256	346.00	487.58	405.58	4.9611
197	477.42	389.11	329.68	4.5226	257	344.34	489.12	406.73	4.9671
198	474.61	390.88	331.10	4.5316	258	342.70	490.67	407.88	4.9731
199	471.83	392.65	332.52	4.5405	259	341.08	492.20	409.02	4.9791
200	469.06	394.42	333.93	4.5493	260	339.47	493.74	410.16	4.9850
201	466.31	396.18	335.34	4.5581	261	337.88	495.27	411.30	4.9908
202	463.58	397.95	336.75	4.5669	262	336.30	496.79	412.43	4.9967
203	460.87	399.71	338.15	4.5756	263	334.74	498.31	413.56	5.0025
204	458.18	401.46	339.54	4.5842	264	333.19	499.83	414.68	5.0082
205	455.51	403.22	340.93	4.5928	265	331.66	501.34	415.80	5.0139
206	452.86	404.97	342.32	4.6013	266	330.15	502.85	416.92	5.0196
207	450.23	406.71	343.70	4.6098	267	328.65	504.36	418.03	5.0253
208	447.61	408.46	345.08	4.6182	268	327.16	505.86	419.14	5.0309
209	445.02	410.20	346.45	4.6265	269	325.69	507.36	420.25	5.0365
210	442.45	411.94	347.82	4.6348	270	324.23	508.85	421.35	5.0420
211	439.89	413.67	349.18	4.6430	271	322.79	510.35	422.45	5.0475
212	437.36	415.40	350.54	4.6512	272	321.36	511.83	423.55	5.0530
213	434.85	417.13	351.89	4.6594	273	319.94	513.32	424.64	5.0584
214	432.36	418.86	353.24	4.6674	274	318.54	514.80	425.73	5.0639
215	429.89	420.58	354.58	4.6755	275	317.15	516.27	426.82	5.0692
216	427.44	422.29	355.92	4.6834	276	315.77	517.75	427.90	5.0746
217	425.01	424.01	357.25	4.6913	277	314.41	519.22	428.98	5.0799
218	422.60	425.72	358.58	4.6992	278	313.05	520.68	430.05	5.0852
219	420.22	427.42	359.91	4.7070	279	311.72	522.14	431.13	5.0904
220	417.85	429.12	361.23	4.7147	280	310.39	523.60	432.20	5.0956
221	415.50	430.82	362.54	4.7224	281	309.08	525.06	433.27	5.1008
222	413.18	432.51	363.85	4.7301	282	307.78	526.51	434.33	5.1060
223	410.88	434.20	365.15	4.7377	283	306.49	527.96	435.39	5.1111
224	408.59	435.89	366.45	4.7452	284	305.21	529.40	436.45	5.1162
225	406.33	437.57	367.75	4.7527	285	303.95	530.85	437.50	5.1213
226	404.09	439.25	369.04	4.7601	286	302.69	532.28	438.56	5.1263
227	401.87	440.92	370.32	4.7675	287	301.45	533.72	439.61	5.1313
228	399.67	442.59	371.60	4.7749	288	300.22	535.15	440.65	5.1363
229	397.49	444.25	372.88	4.7822	289	299.00	536.58	441.70	5.1413
230	395.33	445.91	374.15	4.7894	290	297.79	538.01	442.74	5.1462
231	393.20	447.57	375.42	4.7966	291	296.59	539.43	443.77	5.1511
232	391.08	449.22	376.68	4.8037	292	295.41	540.85	444.81	5.1560
233	388.98	450.87	377.93	4.8108	293	294.23	542.27	445.84	5.1608
234	386.90	452.51	379.18	4.8178	294	293.06	543.68	446.87	5.1656
235	384.85	454.15	380.43	4.8248	295	291.91	545.09	447.90	5.1704
236	382.81	455.79	381.67	4.8318	296	290.76	546.50	448.93	5.1752
237	380.79	457.42	382.91	4.8386	297	289.63	547.91	449.95	5.1799
238	378.79	459.04	384.14	4.8455	298	288.50	549.31	450.97	5.1846
239	376.81	460.66	385.37	4.8523	299	287.39	550.71	451.99	5.1893
240	374.85	462.28	386.60	4.8590	300	286.28	552.10	453.00	5.1940

## 300.00 ATMOSPHERE 1508AR

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
					121	720.11	250.21	208.00	3.6070
					122	717.04	252.07	209.68	3.6223
					123	713.97	253.91	211.34	3.6374
					124	710.90	255.77	213.01	3.6525
					125	707.83	257.65	214.71	3.6677
					126	704.75	259.53	216.39	3.6827
					127	701.68	261.41	218.09	3.6976
					128	698.60	263.30	219.78	3.7125
					129	695.52	265.17	221.46	3.7271
					130	692.45	267.00	223.11	3.7414
					131	689.37	268.78	224.68	3.7551
					132	686.29	270.35	226.06	3.7672
					133	683.21	272.55	228.06	3.7838
					134	680.13	274.57	229.87	3.7989
75	860.64	160.58	125.26	2.6701	135	677.04	276.57	231.67	3.8138
76	857.65	162.63	127.19	2.6974	136	673.96	278.55	233.45	3.8284
77	854.64	164.69	129.12	2.7243	137	670.88	280.51	235.20	3.8428
78	851.63	166.74	131.05	2.7507	138	667.80	282.46	236.94	3.8570
79	848.61	168.79	132.97	2.7768	139	664.71	284.40	238.67	3.8710
80	845.58	170.83	134.88	2.8025	140	661.63	286.32	240.37	3.8847
					141	658.54	288.22	242.07	3.8983
81	842.55	172.87	136.79	2.8279	142	655.46	290.12	243.74	3.9117
82	839.51	174.91	138.70	2.8529	143	652.37	292.01	245.41	3.9249
83	836.47	176.94	140.60	2.8775	144	649.29	293.88	247.07	3.9380
84	833.42	178.97	142.49	2.9018	145	646.20	295.75	248.71	3.9509
85	830.37	180.99	144.38	2.9258	146	643.12	297.61	250.34	3.9637
86	827.32	183.01	146.27	2.9494	147	640.03	299.46	251.96	3.9763
87	824.26	185.02	148.14	2.9726	148	636.95	301.30	253.58	3.9888
88	821.21	187.03	150.01	2.9956	149	633.87	303.14	255.18	4.0012
89	818.15	189.03	151.87	3.0182	150	630.78	304.97	256.78	4.0134
90	815.09	191.02	153.73	3.0405					
					151	627.70	306.80	258.37	4.0256
91	812.03	193.01	155.58	3.0625	152	624.62	308.62	259.95	4.0376
92	808.97	195.00	157.42	3.0842	153	621.54	310.43	261.53	4.0495
93	805.91	196.97	159.26	3.1056	154	618.47	312.25	263.10	4.0613
94	802.85	198.95	161.08	3.1267	155	615.39	314.06	264.66	4.0730
95	799.79	200.91	162.90	3.1475	156	612.32	315.86	266.22	4.0846
96	796.72	202.87	164.72	3.1680	157	609.25	317.66	267.77	4.0961
97	793.66	204.82	166.52	3.1882	158	606.18	319.46	269.32	4.1076
98	790.60	206.76	168.32	3.2082	159	603.12	321.26	270.86	4.1189
99	787.54	208.70	170.11	3.2278	160	600.05	323.05	272.40	4.1302
100	784.47	210.64	171.89	3.2473					
					161	596.99	324.85	273.93	4.1413
101	781.41	212.56	173.66	3.2664	162	593.94	326.64	275.46	4.1524
102	778.35	214.48	175.43	3.2854	163	590.89	328.43	276.98	4.1634
103	775.29	216.40	177.19	3.3041	164	587.84	330.21	278.50	4.1743
104	772.22	218.31	178.94	3.3225	165	584.80	332.00	280.02	4.1852
105	769.16	220.21	180.69	3.3408	166	581.76	333.78	281.53	4.1960
106	766.10	222.11	182.44	3.3588	167	578.73	335.57	283.04	4.2067
107	763.04	224.01	184.17	3.3766	168	575.70	337.35	284.55	4.2173
108	759.97	225.90	185.91	3.3942	169	572.68	339.13	286.05	4.2279
109	756.91	227.80	187.64	3.4117	170	569.67	340.91	287.55	4.2384
110	753.85	229.68	189.36	3.4289					
					171	566.66	342.69	289.04	4.2488
111	750.78	231.57	191.08	3.4460	172	563.65	344.46	290.54	4.2592
112	747.72	233.46	192.81	3.4629	173	560.65	346.24	292.02	4.2695
113	744.65	235.35	194.53	3.4797	174	557.67	348.02	293.51	4.2797
114	741.59	237.24	196.25	3.4964	175	554.69	349.79	294.99	4.2899
115	738.52	239.13	197.97	3.5129	176	551.72	351.57	296.47	4.3000
116	735.45	241.02	199.69	3.5293	177	548.76	353.34	297.95	4.3101
117	732.39	242.92	201.42	3.5457	178	545.80	355.11	299.42	4.3200
118	729.32	244.74	203.06	3.5611	179	542.86	356.89	300.89	4.3300
119	726.25	246.56	204.71	3.5765	180	539.92	358.66	302.36	4.3398
120	723.18	248.40	206.37	3.5919					

TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)	TEMPER- ATURE (K)	DENSITY X(1000) (G/CC)	ENTHALPY (J/G)	INTERNAL ENERGY (J/G)	ENTROPY (J/G-K)
181	536.99	360.43	303.82	4.3496	241	389.24	462.72	384.62	4.8388
182	534.08	362.20	305.28	4.3594	242	387.31	464.32	385.84	4.8455
183	531.17	363.97	306.74	4.3691	243	385.41	465.92	387.05	4.8521
184	528.28	365.73	308.19	4.3787	244	383.52	467.52	388.26	4.8586
185	525.39	367.50	309.64	4.3883	245	381.65	469.11	389.47	4.8651
186	522.52	369.27	311.09	4.3978	246	379.80	470.70	390.67	4.8716
187	519.66	371.03	312.53	4.4073	247	377.97	472.29	391.86	4.8780
188	516.82	372.79	313.98	4.4167	248	376.15	473.87	393.05	4.8844
189	513.98	374.55	315.41	4.4260	249	374.35	475.44	394.24	4.8908
190	511.16	376.31	316.85	4.4353	250	372.56	477.02	395.43	4.8971
191	508.35	378.07	318.28	4.4445	251	370.79	478.59	396.61	4.9033
192	505.55	379.83	319.70	4.4537	252	369.04	480.15	397.78	4.9096
193	502.77	381.59	321.13	4.4628	253	367.30	481.72	398.96	4.9157
194	500.00	383.34	322.55	4.4719	254	365.58	483.27	400.12	4.9219
195	497.25	385.09	323.96	4.4809	255	363.88	484.83	401.29	4.9280
196	494.51	386.84	325.37	4.4898	256	362.19	486.38	402.45	4.9341
197	491.79	388.59	326.78	4.4987	257	360.52	487.92	403.61	4.9401
198	489.08	390.34	328.19	4.5076	258	358.86	489.47	404.76	4.9461
199	486.39	392.08	329.59	4.5164	259	357.22	491.01	405.91	4.9520
200	483.71	393.83	330.99	4.5251	260	355.59	492.54	407.06	4.9579
201	481.05	395.57	332.38	4.5338	261	353.98	494.07	408.20	4.9638
202	478.41	397.31	333.77	4.5424	262	352.38	495.60	409.34	4.9697
203	475.78	399.04	335.15	4.5510	263	350.80	497.12	410.47	4.9755
204	473.17	400.78	336.53	4.5595	264	349.23	498.65	411.60	4.9812
205	470.57	402.51	337.91	4.5680	265	347.67	500.16	412.73	4.9870
206	468.00	404.24	339.28	4.5764	266	346.13	501.68	413.86	4.9927
207	465.43	405.96	340.65	4.5848	267	344.61	503.18	414.98	4.9983
208	462.89	407.69	342.02	4.5931	268	343.10	504.69	416.09	5.0040
209	460.37	409.41	343.38	4.6013	269	341.60	506.19	417.21	5.0096
210	457.86	411.13	344.73	4.6095	270	340.12	507.69	418.32	5.0151
211	455.37	412.84	346.09	4.6177	271	338.65	509.19	419.42	5.0206
212	452.90	414.55	347.43	4.6257	272	337.19	510.68	420.53	5.0261
213	450.44	416.26	348.78	4.6338	273	335.74	512.17	421.63	5.0316
214	448.01	417.97	350.12	4.6418	274	334.31	513.65	422.73	5.0370
215	445.59	419.67	351.45	4.6497	275	332.90	515.13	423.82	5.0424
216	443.19	421.37	352.78	4.6576	276	331.49	516.61	424.91	5.0478
217	440.81	423.07	354.11	4.6654	277	330.10	518.09	426.00	5.0531
218	438.45	424.76	355.43	4.6732	278	328.72	519.56	427.08	5.0584
219	436.10	426.45	356.75	4.6810	279	327.35	521.02	428.17	5.0637
220	433.78	428.14	358.06	4.6886	280	326.00	522.49	429.24	5.0689
221	431.47	429.82	359.37	4.6963	281	324.65	523.95	430.32	5.0741
222	429.19	431.50	360.68	4.7039	282	323.32	525.41	431.39	5.0793
223	426.92	433.18	361.97	4.7114	283	322.00	526.86	432.46	5.0845
224	424.67	434.85	363.27	4.7189	284	320.69	528.32	433.53	5.0896
225	422.43	436.52	364.56	4.7263	285	319.40	529.76	434.59	5.0947
226	420.22	438.18	365.85	4.7337	286	318.11	531.21	435.65	5.0997
227	418.03	439.85	367.13	4.7410	287	316.84	532.65	436.71	5.1048
228	415.85	441.51	368.41	4.7483	288	315.58	534.09	437.77	5.1098
229	413.69	443.16	369.68	4.7556	289	314.33	535.53	438.82	5.1148
230	411.56	444.81	370.95	4.7628	290	313.09	536.96	439.87	5.1197
231	409.43	446.46	372.21	4.7699	291	311.86	538.39	440.92	5.1246
232	407.33	448.10	373.48	4.7770	292	310.64	539.82	441.96	5.1295
233	405.25	449.74	374.73	4.7841	293	309.43	541.24	443.00	5.1344
234	403.18	451.38	375.98	4.7911	294	308.23	542.66	444.04	5.1392
235	401.14	453.01	377.23	4.7980	295	307.04	544.08	445.08	5.1441
236	399.11	454.64	378.47	4.8049	296	305.86	545.49	446.11	5.1488
237	397.10	456.26	379.71	4.8118	297	304.70	546.91	447.14	5.1536
238	395.11	457.88	380.94	4.8186	298	303.54	548.32	448.17	5.1583
239	393.13	459.50	382.17	4.8254	299	302.39	549.72	449.20	5.1631
240	391.17	461.11	383.40	4.8321	300	301.25	551.13	450.22	5.1677



# THE NATIONAL BUREAU OF STANDARDS

The scope of activities of the National Bureau of Standards at its major laboratories in Washington, D.C., and Boulder, Colorado, is suggested in the following listing of the divisions and sections engaged in technical work. In general, each section carries out specialized research, development, and engineering in the field indicated by its title. A brief description of the activities, and of the resultant publications, appears on the inside of the front cover.

## WASHINGTON, D. C.

**Electricity.** Resistance and Reactance. Electrochemistry. Electrical Instruments. Magnetic Measurements. Dielectrics. High Voltage. Absolute Electrical Measurements.

**Metrology.** Photometry and Colorimetry. Refractometry. Photographic Research. Length. Engineering Metrology. Mass and Volume.

**Heat.** Temperature Physics. Heat Measurements. Cryogenic Physics. Equation of State. Statistical Physics.

**Radiation Physics.** X-ray. Radioactivity. Radiation Theory. High Energy Radiation. Radiological Equipment. Nucleonic Instrumentation. Neutron Physics.

**Analytical and Inorganic Chemistry.** Pure Substances. Spectrochemistry. Solution Chemistry. Standard Reference Materials. Applied Analytical Research. Crystal Chemistry.

**Mechanics.** Sound. Pressure and Vacuum. Fluid Mechanics. Engineering Mechanics. Rheology. Combustion Controls.

**Polymers.** Macromolecules: Synthesis and Structure. Polymer Chemistry. Polymer Physics. Polymer Characterization. Polymer Evaluation and Testing. Applied Polymer Standards and Research. Dental Research.

**Metallurgy.** Engineering Metallurgy. Metal Reactions. Metal Physics. Electrolysis and Metal Deposition.

**Inorganic Solids.** Engineering Ceramics. Glass. Solid State Chemistry. Crystal Growth. Physical Properties. Crystallography.

**Building Research.** Structural Engineering. Fire Research. Mechanical Systems. Organic Building Materials. Codes and Safety Standards. Heat Transfer. Inorganic Building Materials. Metallic Building Materials.

**Applied Mathematics.** Numerical Analysis. Computation. Statistical Engineering. Mathematical Physics. Operations Research.

**Data Processing Systems.** Components and Techniques. Computer Technology. Measurements Automation. Engineering Applications. Systems Analysis.

**Atomic Physics.** Spectroscopy. Infrared Spectroscopy. Far Ultraviolet Physics. Solid State Physics. Electron Physics. Atomic Physics. Plasma Spectroscopy.

**Instrumentation.** Engineering Electronics. Electron Devices. Electronic Instrumentation. Mechanical Instruments. Basic Instrumentation.

**Physical Chemistry.** Thermochemistry. Surface Chemistry. Organic Chemistry. Molecular Spectroscopy. Elementary Processes. Mass Spectrometry. Photochemistry and Radiation Chemistry.

**Office of Weights and Measures.**

## BOULDER, COLO.

### CRYOGENIC ENGINEERING LABORATORY

Cryogenic Processes. Cryogenic Properties of Solids. Cryogenic Technical Services. Properties of Cryogenic Fluids.

### CENTRAL RADIO PROPAGATION LABORATORY

**Ionosphere Research and Propagation.** Low Frequency and Very Low Frequency Research. Ionosphere Research. Prediction Services. Sun-Earth Relationships. Field Engineering. Radio Warning Services. Vertical Soundings Research.

**Troposphere and Space Telecommunications.** Data Reduction Instrumentation. Radio Noise. Tropospheric Measurements. Tropospheric Analysis. Spectrum Utilization Research. Radio-Meteorology. Lower Atmosphere Physics.

**Radio Systems.** Applied Electromagnetic Theory. High Frequency and Very High Frequency Research. Frequency Utilization. Modulation Research. Antenna Research. Radiodetermination.

**Upper Atmosphere and Space Physics.** Upper Atmosphere and Plasma Physics. High Latitude Ionosphere Physics. Ionosphere and Exosphere Scatter. Airglow and Aurora. Ionospheric Radio Astronomy.

### RADIO STANDARDS LABORATORY

**Radio Standards Physics.** Frequency and Time Disseminations. Radio and Microwave Materials. Atomic Frequency and Time-Interval Standards. Radio Plasma. Microwave Physics.

**Radio Standards Engineering.** High Frequency Electrical Standards. High Frequency Calibration Services. High Frequency Impedance Standards. Microwave Calibration Services. Microwave Circuit Standards. Low Frequency Calibration Services.

**Joint Institute for Laboratory Astrophysics-NBS Group (Univ. of Colo.).**

