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U.S. DEPARTMENT OF COMMERCE / National Bureau of Standards

Liquid Densities of Oxygen, Nitrogen,  
Argon and Parahydrogen

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# Liquid Densities of Oxygen, Nitrogen, Argon and Parahydrogen (Metric Supplement)

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H. M. Roder

Cryogenics Division  
Institute for Basic Standards  
National Bureau of Standards  
Boulder, Colorado 80302

U.S.

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t. Technical note no. 361 (revised)



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LIQUID DENSITIES OF  
OXYGEN, NITROGEN, ARGON, AND PARAHYDROGEN  
[Metric Supplement]

H. M. Roder

Tables of pressure, volume, density and temperature for the saturated liquid and for compressed liquid states from the triple point to the critical point, of oxygen, nitrogen, argon, and parahydrogen are presented. The table entries of temperature are in Kelvin and degrees Celsius, table entries in pressure are in bars and  $\text{kp}/\text{cm}^2$ . Volumes or densities are given in several different units, and density ratios are tabulated for each entry. Estimates of the uncertainty for the tabulated data are given. The tables were prepared in the style and in the units preferred by the users. They are intended as a source for both technician and engineer.

Key Words: Argon; compressed liquid; density; density ratios; liquid; nitrogen; oxygen; parahydrogen; pressure; saturated liquid; tables; temperature; uncertainties; volume.

## 1. INTRODUCTION

In this supplement standard density data for the saturated liquid and for compressed liquid states of four commercially important gases are presented in units commonly used by the European cryogenic industry. The supplement was prepared at the express request of the Industrial Gases Committee (IGC) of the Commission Permanente Internationale de l'Acétylène, de la Soudure Autogène et des Industries qui s'y Rattachent (CPI). The values presented are derived from the identical sources and computer programs which have been used earlier to prepare standard density data for users in the United States. The basic document is National Bureau of Standards (U.S.) Technical Note 361 (Revised), (Roder, et al. 1972), which was prepared to support a Code for Cryogenic Liquid-Measuring Devices. This code was presented at the 57th National Conference on Weights and Measures (U.S.), and has since been adopted by the conference.

The basic document is a logical extension of earlier efforts. The first effort was pamphlet P-6, "Standard Density Data Atmospheric Gases and Hydrogen," by the Compressed Gas Association (CGA, 1965). In this pamphlet, values of pressure, temperature, and density for the Normal Boiling Point (NBP)<sup>\*</sup> and Standard Temperature and Pressure (STP)<sup>\*\*</sup> were presented.

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<sup>\*</sup>NBP: 1 atm (760 torr)

<sup>\*\*</sup>STP: 1 atm, 0°C



The second effort was NBS Technical Note 361, "Saturated Liquid Densities of Oxygen, Nitrogen, Argon, and Parahydrogen" (Roder, et al. 1968). In addition to the two state points NBP and STP, this document included the definition of the saturated liquid curve. The sources selected were the best available at that time. In particular the compilations of oxygen, argon, and parahydrogen selected, each representing at least two man years of effort, were not available to the CGA in 1965.

The basic document includes all of the data presented previously in tables and graphs. It also provides the extension to the compressed liquid states which was forecast in Technical Note 361. In addition, the source selected for oxygen is based on a large body of new and highly accurate data, only a small portion of which was available in 1968. Numerical values differ from earlier selections by no more than 0.16%. We hope that the values presented here will serve as "agreed-on" values for some time to come.

The supplement follows the basic document in outline and in structure, however, at the request of the sponsor all but two figures were omitted from the supplement. Also omitted is section 5, in which the use of tables and graphs was described. The appendix has been changed to include the additional conversion factors required for the supplement. Finally, the sponsor requested that we emphasize the number of significant digits printed in the tables (see also section 4). We print no more than 5 significant figures because the precision in even the best PVT experiments is no better than 1 part in 10000. The accuracy of the liquid densities is considerably less, on the order of 1 to 4 parts in 1000.

## 2. DESCRIPTION OF THE TABLES

To understand the properties that are presented in the tables and graphs, it is helpful to recall one of the "standard" phase diagrams. Try to recollect the presentation of isotherms in pressure-volume (P-V) coordinates as given in figure 1. You may recall the rectangular hyperbolas of  $PV = \text{constant}$  of the ideal gas, and the critical isotherm first presented in a discussion of the Van der Waals equation of state. This report concerns the compressed liquid region and the equilibrium boundary between the single phase compressed liquid region and the two phase liquid-gas region. The compressed liquid region is shown dotted while the boundary is emphasized in figure 1. The boundary extends from the triple point to the critical point.\*

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\* Strictly speaking, in this phase diagram the NBP and the triple point are lines extending from liquid to vapor side at the pressure indicated.



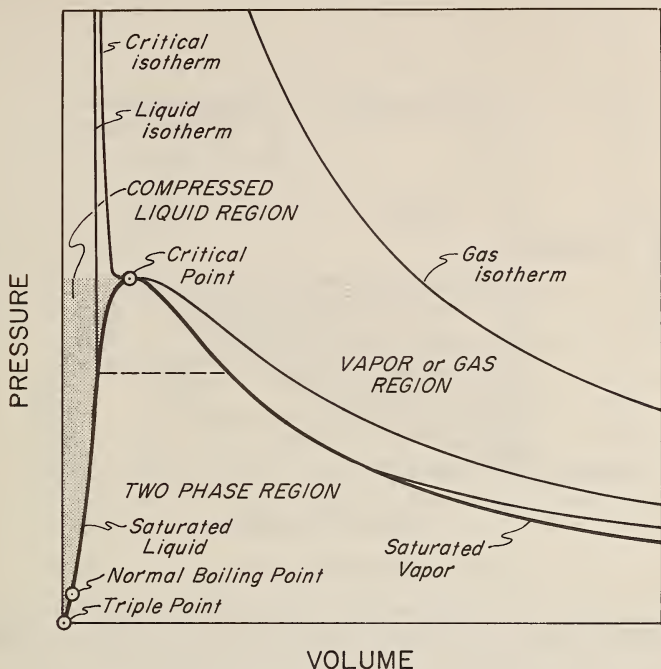


Figure 1. Generalized Phase Diagram; Pressure vs. Volume

A second way to show the region of interest is in a pressure-temperature (P-T) phase diagram. In figure 2 we recognize the vapor pressure curve, the melting line, and we recall that lines of constant volume or density are very nearly straight lines. The compressed liquid region is again shown dotted. The equilibrium boundary of concern coincides with the vapor pressure curve.

For each gas the various properties are presented in a series of tables:

- A table giving the densities near atmospheric pressure and room temperature
- A table giving uncertainties in the data
- A table giving property values for the saturated liquid
- A table giving property values for compressed liquid.

The first table for each fluid presents values of density for pressures of 1 bar (0.98692 atm) and 760 torr (1 atm) at temperatures of 0°C and 15°C. (These are the pressures and temperatures specified by the sponsor as representing the 'standards' used by

its members). Density ratios from boiling pressures of 1 bar and 760 torr to the room temperatures values are included in this table.

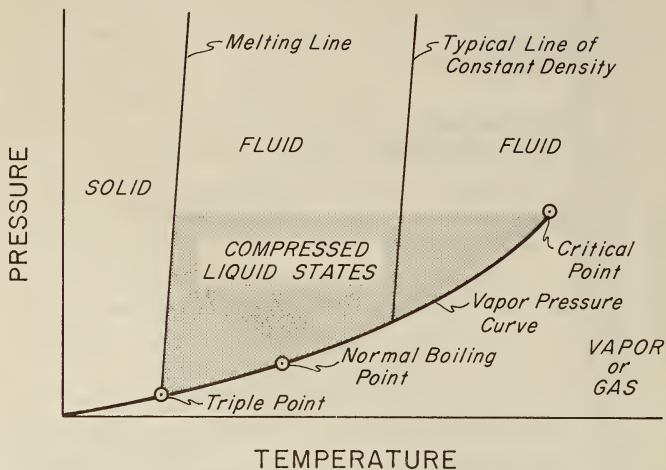


Figure 2. Generalized Phase Diagram; Pressure vs. Temperature

The second table for each fluid presents values for the uncertainties in the data. The uncertainties at low temperatures include both the error in the experimental values and the contribution to the error by using an analytical function to represent the experimental values. Errors for values near room temperature are seen to be much smaller because PVT measurements near room temperature can be made to great accuracy and a better fit to the equation of state can be made.

The third table presents values of increasing pressures and corresponding temperatures along the saturated liquid boundary. These two variables define the vapor pressure curve. The table contains in ascending order even values of pressure in both bar and  $\text{kp/cm}^2$ \* and even values of temperature in both K and  $^{\circ}\text{C}$ . Other columns contain entries in density, volume, and density ratios. There are two columns of density ratios. The first column is the ratio of the actual density as compared to the density at a boiling pressure of 1 bar. The second column is also a ratio of densities, namely the ratio of the actual density of the liquid as compared to the density at a boiling pressure of 760 torr. Both ratios are dimensionless. Entries in pressure are closely spaced so that interpolation between values should not be required. For parahydrogen, the increment in pressure is 0.1 bar. For the

\* designates kilogram-force per  $\text{cm}^2$ , see also appendix

other fluids the increment is 0.2 bar. The tables include entries for the Triple Point, a boiling pressure of 1  $\text{kp/cm}^2$ , a boiling pressure of 1 bar, and the Critical Point. These points are set off by double spacing in the table. In addition a line is included for a boiling pressure of 760 torr. Conversion of units are given in the appendix. Please note that the number of significant figures presented in the tables is not justified on the basis of accuracy, but are given to maintain internal consistency.

The fourth table presents density and density ratios for the compressed liquid states. The horizontal index of this table is pressure given for selected values in even bar. An additional line shows the equivalent pressure in  $\text{kp/cm}^2$ . The primary vertical index is temperature given in Kelvin. Auxiliary entries give the Kelvin equivalent in degrees Celsius, and the vapor pressure corresponding to this temperature in bar. Entries in the table proper are:

- a.) a density ratio, the actual density divided by the saturation density at a boiling pressure of 1 bar. The ratio is of course dimensionless; it corresponds to the first column of ratios in the saturation table described earlier.
- b.) a second density ratio, the actual density divided by the saturation density at a boiling pressure of 760 torr. This density ratio is also dimensionless and it corresponds to the second column of ratios given in the saturation tables.
- c.) the density in  $\text{kg/dm}^3$  ( $\text{kg/litre}$ ).

### 3. DISCUSSION

The nature of progress in cryogenics is such that today's "best" value may be superseded tomorrow. In the initial effort, Pamphlet P-6 of the Compressed Gas Association (1965), only values for the NBP and values at NTP were presented. The next report included values for the saturated liquid boundary. The present report includes the PVT values in the compressed fluid states because we know that in many applications the fluid entering pump intakes is subcooled to prevent cavitation.

We have selected the following sources: Weber (1970) for oxygen; Strobridge (1962) for nitrogen; Gosman, et al. (1969) for argon; and Roder, et al. (1965) for parahydrogen. In addition, we use Hilsenrath, et al. (1955) to establish the NTP and STP values for parahydrogen. The sources selected differ only slightly from earlier selections. The oxygen reference in particular has become available only in recent years. The most compelling reason for selecting these compilations as sources is that we require consistent values for the saturated liquid and the compressed liquid states. In our experience the "best" set of values is obtained when in addition to PVT and vapor pressure data other experimental data such as measurements of the liquid specific heats, the heats of vaporization, or the velocity of sound in the liquid are included in the establishment of the basic PVT surface.

One advantage in selecting these sources is that industry and one major user, National Aeronautics and Space Administration (NASA) will now be using consistent data.

The data in the NASA references for oxygen and hydrogen [NBS Tech. Note 384, McCarty and Weber (1971), and NBS Tech. Note 617, McCarty and Weber (1972)] are taken from Weber (1970) and Roder, et al. (1965). One other advantage arises when we select these compilations as sources: except for hydrogen, we can get the values at or near room temperature directly from the equation of state, interpolated to the accuracy of the original data.

The last point requires a bit more discussion because it ties in with the uncertainties in the values presented at or near room temperatures. In the present report we have used a high order interpolation - the equation of state - to get these values. We are justified in using a high order interpolation because the various experimenters went to considerable lengths to get the most accurate PVT values at conditions close to room temperature. According to Cragoe (1941), relative measurements of pressure and volume near room temperature can be made to a few parts per million, and the scatter between PVT values of different observers can to a large extent be explained by the use of different fundamental constants. In tables 2, 6, 10, and 14 we indicate an uncertainty of 0.01% as the uncertainty in molar volume at room temperature. The molar volume at 0°C and 1 atmosphere is the familiar 22.4 liters per mole encountered in elementary texts. The uncertainty is based on a consideration of the ice point temperature,  $T_0$ , rather than on a comparison of different experiments. The fundamental constant  $T_0$  is now defined to be 273.15 K, but the average over a large number of determinations of different investigators for different gases was 273.165 (Beattie, 1941). We have taken the difference between these two numbers as an indication of the true uncertainty in the molar volumes. Even if the values of different authors are compared directly, the differences are not much larger than 0.01%. Take for example hydrogen, the molar volume is 22428.5 cm<sup>3</sup>/mole according to Woolley, et al. (1948), while it is 22433.6 cm<sup>3</sup>/mole according to Michels, et al. (1959). The difference is 0.022%. In contrast to this there is no difference between recent measurements on oxygen by Weber (1970) and those of Michels, et al. (1954) if one uses identical values for the gas constant, R, and  $T_0$ .

Another word on the uncertainties in tables 2, 6, 10, and 14: The uncertainties are of course ultimately based upon the accuracy of the various experiments. We take them from the authors' estimates, from the statistics of the coefficients of the equation of state, and from the differences between practical temperature scales and the absolute thermodynamic one. We present uncertainties for all three variables, pressure, volume, and temperature. This allows the user to enter the tables with any combination of variables and obtain the uncertainty in the remaining one. For example, in obtaining entries for the other tables, we have assumed either temperature and density or temperature and pressure to be exact. Thus, only uncertainties in pressure in the first case and density in the second case are of concern in determining the number of digits presented in each table.

From the first effort to the present one, changes in property values have been minimal. The actual changes are best described in terms of density. The room temperature values presented in this report of oxygen and argon at 1 atmosphere differ by about 0.02% from those given by the CGA in 1965, while those for nitrogen and parahydrogen are unchanged. On the other hand, the densities of the saturated liquid at 760 torr have changed from earlier values by 0.16% for oxygen and 0.1% for nitrogen. They are virtually unchanged for argon and parahydrogen.

#### 4. LIMITATIONS

In practice, a number of problems are encountered that introduce errors beyond what we might expect from the uncertainties inherent in the data. A few of the practical problems are indicated below.

Instrumentation. Pressure and temperature measuring devices used in custody transfer situations will rarely be capable of the best state of the art measurements, i. e., those that are possible under controlled laboratory conditions. Thus, in most cases the error in instrumentation will be much larger than the uncertainties given for the property tables.

Equilibrium vs. Non-equilibrium Properties. The informed engineer recognizes that the processes of transfer, transport, pressurizing, siphoning, and stratification in storage tanks are all non-equilibrium events. The properties presented in this report are equilibrium properties.

Subcooling. We have indicated that pump intakes, or, for that matter, flow meter intakes, are usually subcooled to prevent cavitation. It is important to recognize that the degree of subcooling, that is the pressure and temperature parameters, may change during liquid transfer.

Purity. The purity of the product will also play a role. The properties presented here are for the pure product made available under laboratory conditions. They may not be appropriate for certain purity grades of commercially available gases without some adjustment for the known impurities.

Significant Digits. The values presented in this report were obtained from various computer programs. We have in the past made these programs available to any user requesting them. However, different computers will return different results from the same programs; in particular, they will round differently. The user should be aware of the following: The accuracy of the data for liquid conditions is on the order of 0.1 to 0.3%, while the accuracy of the room temperature values is on the order of 0.01 to 0.02%. We have, therefore, printed no more than 5 digits anywhere. Please bear in mind that even the fourth digit is uncertain for most values, that is, the digits printed are only to maintain internal consistency of the tables and to allow you to check out your computer programs. If occasionally pairs of values or reciprocals do not seem to correspond, then the fault can be traced to rounding errors.

5. (OMITTED)



## 6. OXYGEN

The data for oxygen tabulated here are based on the paper by Weber (1970). Additional, extensive tables of values based on this source were prepared by McCarty and Weber (1971) for NASA. Values for the saturated liquid were obtained by first solving the vapor pressure equation for either pressure or temperature, and then using the resulting P and T as input to Weber's programs to obtain the corresponding liquid density. Densities for the compressed liquid were obtained from Weber's programs directly using appropriate values of P and T as input.

Values near room temperature are given in table 1, uncertainties for the data in table 2, values for the saturated liquid are given in table 3, and values for the compressed liquid are shown in table 4.

Table 1

Density of Oxygen Near Atmospheric Pressure and Room Temperature

Temperature	Pressure	Density		Volume	
		gram-mole/cm <sup>3</sup>	kg/dm <sup>3</sup>	cm <sup>3</sup> /gram-mole	dm <sup>3</sup> /kg
0° C	1 bar	4.4073x10 <sup>-5</sup>	1.4103x10 <sup>-3</sup>	22690.	709.08
	760 torr	4.4658x10 <sup>-5</sup>	1.4290x10 <sup>-3</sup>	22392.	699.79
15° C	1 bar	4.1770x10 <sup>-5</sup>	1.3366x10 <sup>-3</sup>	23940.	748.17
	760 torr	4.2324x10 <sup>-5</sup>	1.3543x10 <sup>-3</sup>	23627.	738.37
Density Ratios - Dimensionless					
Liquid Density at a boiling pressure of 1 bar <sup>*</sup> /density at 1 bar and 0° C					809.50
Liquid Density at a boiling pressure of 1 bar/density at 1 bar and 15° C					854.13
Liquid Density at a boiling pressure of 760 torr <sup>†</sup> /density at 760 torr and 0° C					798.47
Liquid Density at a boiling pressure of 760 torr/density at 760 torr and 15° C					842.49

<sup>\*</sup> Liquid density at a boiling pressure of 1 bar                      1.1416 kg/dm<sup>3</sup>

<sup>†</sup> Liquid density at a boiling pressure of 760 torr                      1.1410 kg/dm<sup>3</sup>



Densities at the boiling point at 760 torr differ by 0.05% from CGA pamphlet P-6, and by 0.03% from the value given in the earlier version of Technical Note 361. The densities for the saturated liquid differ by a maximum of 0.16% from the earlier values at temperatures up to 150 K, that is, the new values are within the uncertainties previously specified. Above 150 K to the critical point the departures rise to several percent because better values for both critical density and critical temperature are now available. The present values are considered to be better because in addition to PVT data, experimental specific heats and dielectric constant measurements near the critical point were used to establish the PVT surface.

Table 2  
Uncertainties in the Data for Oxygen

variable	uncertainty	range of temperature
temperature	0.05 K	below 90 K
	0.02%	between 90 and 154 K
	0.1%	near critical
	0.015 K	room temperature
volume	0.1%	between 54.353 and 60 K
	0.2%	between 65 and 150 K
	larger than 0.5%	between 150 K and critical
	0.01%	room temperature
pressure	0.1%	below 90 K
	0.02%	between 90 and 154 K
	0.1%	near critical
	0.01%	room temperature

Routine checks of values in the present tables against those of Technical Note 361 (Revised) revealed a discrepancy in table 4 of the basic document. Entries 2. and 3. of table 4 of the basic document are too small by a factor of 1.0003. An Erratum for the basic document has been prepared.

TABLE 3

## SATURATED LIQUID OXYGEN

BAR	PRESSURE		TEMPERATURE		DENSITY		VOLUME		DENSITY RATIOS --		DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
	MP/CM <sup>2</sup>	KP/CM <sup>2</sup>	KELVIN	GELSIUS	GRAM-MOLE/ CMS	GRAM-MOLE/ CMS	CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG	LIQUID DENSITY/ DENSITY AT 1 BAR PRESS. OF 1 BAR	LIQUID DENSITY/ DENSITY AT 1 BAR PRESS. OF 760 TORR	
0.00152	0.00155	54.351	-218.799	0.040832	1.3066	24.490	0.7654	1.1445	1.1451		
0.00730	0.00744	60.000	-213.150	0.040054	1.2817	24.967	0.7802	1.1227	1.1233		
0.00750	0.00773	61.150	-213.000	0.040033	1.2810	24.980	0.7806	1.1221	1.1227		
0.00935	0.00953	61.000	-212.150	0.039915	1.2772	25.053	0.7829	1.1188	1.1194		
0.00969	0.00988	61.150	-212.000	0.039894	1.2766	25.066	0.7834	1.1182	1.1188		
0.0119	0.0121	62.000	-211.150	0.039776	1.2728	25.141	0.7857	1.1149	1.1155		
0.0123	0.0125	62.150	-211.000	0.039755	1.2721	25.154	0.7861	1.1143	1.1149		
0.0150	0.0153	63.000	-210.150	0.039636	1.2683	25.230	0.7885	1.1110	1.1116		
0.0155	0.0158	63.150	-210.000	0.039615	1.2676	25.243	0.7889	1.1104	1.1110		
0.0187	0.0191	64.000	-209.150	0.039496	1.2638	25.319	0.7912	1.1070	1.1076		
0.0193	0.0197	64.150	-209.000	0.039475	1.2632	25.332	0.7917	1.1065	1.1071		
0.0232	0.0237	65.000	-208.150	0.039356	1.2593	25.409	0.7941	1.1031	1.1037		
0.0240	0.0245	65.150	-208.000	0.039335	1.2587	25.423	0.7945	1.1025	1.1031		
0.0287	0.0292	66.000	-207.150	0.039215	1.2548	25.500	0.7969	1.0992	1.0998		
0.0296	0.0302	66.150	-207.000	0.039194	1.2542	25.514	0.7973	1.0986	1.0992		
0.0351	0.0358	67.000	-206.150	0.039074	1.2503	25.592	0.7998	1.0952	1.0958		
0.0362	0.0369	67.150	-206.000	0.039053	1.2497	25.606	0.8002	1.0946	1.0952		
0.0428	0.0436	68.000	-205.150	0.038933	1.2458	25.685	0.8027	1.0913	1.0918		
0.0440	0.0449	68.150	-205.000	0.038912	1.2451	25.699	0.8031	1.0907	1.0913		
0.0518	0.0528	69.000	-204.150	0.038791	1.2413	25.779	0.8056	1.0873	1.0879		
0.0532	0.0543	69.150	-204.000	0.038770	1.2406	25.793	0.8061	1.0867	1.0873		
0.0623	0.0635	70.000	-203.150	0.038649	1.2367	25.874	0.8086	1.0833	1.0839		
0.0640	0.0652	70.150	-203.000	0.038627	1.2360	25.888	0.8090	1.0827	1.0833		
0.0745	0.0765	71.000	-202.150	0.038506	1.2321	25.970	0.8116	1.0793	1.0799		
0.0765	0.0780	71.150	-202.000	0.038484	1.2315	25.984	0.8120	1.0787	1.0793		
0.0866	0.0886	72.000	-201.150	0.038363	1.2276	26.067	0.8146	1.0753	1.0759		
0.0909	0.0927	72.150	-201.000	0.038341	1.2269	26.082	0.8151	1.0747	1.0753		
0.105	0.107	73.000	-200.150	0.038219	1.2230	26.165	0.8177	1.0712	1.0718		
0.108	0.110	73.150	-200.000	0.038197	1.2223	26.180	0.8181	1.0706	1.0712		
0.124	0.126	74.000	-199.150	0.038075	1.2184	26.264	0.8208	1.0672	1.0678		
0.127	0.129	74.150	-199.000	0.038053	1.2177	26.279	0.8212	1.0666	1.0672		
0.145	0.148	75.000	-198.150	0.037930	1.2137	26.364	0.8239	1.0631	1.0637		
0.148	0.151	75.150	-198.000	0.037908	1.2130	26.379	0.8244	1.0625	1.0631		
0.169	0.172	76.000	-197.150	0.037785	1.2091	26.466	0.8271	1.0591	1.0597		
0.173	0.176	76.150	-197.000	0.037763	1.2084	26.481	0.8276	1.0585	1.0591		
0.195	0.200	77.000	-196.150	0.037639	1.2044	26.568	0.8303	1.0550	1.0556		
0.200	0.204	77.150	-196.000	0.037621	1.2038	26.581	0.8307	1.0545	1.0551		
0.201	0.205	77.000	-196.000	0.037617	1.2037	26.584	0.8308	1.0544	1.0550		
0.227	0.232	78.000	-195.150	0.037493	1.1997	26.672	0.8335	1.0509	1.0515		
0.232	0.237	78.150	-195.000	0.037471	1.1990	26.687	0.8340	1.0503	1.0509		
0.262	0.267	79.000	-194.150	0.037346	1.1950	26.777	0.8368	1.0467	1.0473		
0.267	0.273	79.150	-194.000	0.037326	1.1943	26.792	0.8373	1.0462	1.0467		
0.301	0.307	80.000	-193.150	0.037199	1.1903	26.883	0.8401	1.0426	1.0432		
0.307	0.313	80.150	-193.000	0.037176	1.1896	26.899	0.8406	1.0420	1.0426		

TABLE 3 CONTINUED

## SATURATED LIQUID OXYGEN

BAR	PRESSURE		TEMPERATURE		CELLSTUS	GRAM-MOLE/ CM <sup>3</sup>	DENSITY KG/ DM <sup>3</sup>	VOLUME		OH <sup>3</sup> / KC	DENSITY RATIOS - DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR	LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
	KP/CM <sup>2</sup>	KELVIN	KELVIN	GRAM-MOLE								
0.344	0.351	81.000	-192.150	0.037050	1.1856	26.980	0.8435	1.0385	1.0391			
0.351	0.358	81.150	-192.000	0.037028	1.1849	27.087	0.8440	1.0379	1.0384			
0.358	0.362	82.000	-191.150	0.036902	1.1808	27.099	0.8469	1.0343	1.0349			
0.362	0.369	82.150	-191.000	0.036879	1.1801	27.116	0.8474	1.0337	1.0343			
0.369	0.375	82.461	-190.989	0.036878	1.1800	27.117	0.8474	1.0336	1.0342			
0.375	0.382	83.000	-190.150	0.036752	1.1760	27.209	0.8503	1.0301	1.0307			
0.382	0.388	83.150	-190.000	0.036730	1.1753	27.222	0.8508	1.0295	1.0301			
0.388	0.394	84.000	-189.150	0.036602	1.1712	27.321	0.8538	1.0259	1.0265			
0.394	0.400	84.150	-189.000	0.036580	1.1705	27.338	0.8543	1.0253	1.0259			
0.400	0.406	85.000	-188.150	0.036451	1.1664	27.441	0.8579	1.0217	1.0216			
0.406	0.412	85.150	-188.000	0.036429	1.1657	27.441	0.8579	1.0211	1.0216			
0.412	0.418	85.460	-187.990	0.036382	1.1642	27.446	0.8590	1.0197	1.0203			
0.418	0.424	86.000	-187.150	0.036300	1.1615	27.548	0.8600	1.0174	1.0180			
0.424	0.430	86.150	-187.000	0.036277	1.1608	27.566	0.8615	1.0168	1.0174			
0.430	0.436	87.000	-186.150	0.036147	1.1567	27.664	0.8645	1.0132	1.0137			
0.436	0.442	87.150	-186.000	0.036125	1.1559	27.682	0.8651	1.0125	1.0131			
0.442	0.448	87.983	-185.167	0.035997	1.1519	27.780	0.8682	1.0090	1.0095			
0.448	0.454	88.000	-185.150	0.035994	1.1518	27.782	0.8682	1.0089	1.0094			
0.454	0.460	88.150	-185.000	0.035971	1.1510	27.800	0.8688	1.0082	1.0088			
0.460	0.466	89.000	-184.150	0.035840	1.1469	27.991	0.8720	1.0046	1.0051			
0.466	0.472	89.150	-184.000	0.035817	1.1461	27.919	0.8725	1.0039	1.0045			
0.472	0.478	89.869	-183.281	0.035706	1.1425	28.006	0.8752	1.0008	1.0014			
0.478	0.484	90.000	-183.150	0.035686	1.1419	28.022	0.8757	1.0002	1.0008			
0.484	0.490	90.054	-183.096	0.035677	1.1416	28.029	0.8759	1.0000	1.0005			
0.490	0.496	90.150	-183.000	0.035662	1.1412	28.041	0.8763	0.9996	1.0001			
0.496	0.502	91.000	-182.150	0.035568	1.1410	28.044	0.8764	0.9995	1.0000			
0.502	0.508	91.150	-182.000	0.035550	1.1369	28.145	0.8796	0.9959	0.9964			
0.508	0.514	91.500	-182.000	0.035507	1.1328	28.144	0.8801	0.9952	0.9958			
0.514	0.520	91.828	-181.322	0.035401	1.1328	28.248	0.8828	0.9928	0.9928			
0.520	0.526	92.000	-181.150	0.035374	1.1319	28.270	0.8835	0.9915	0.9915			
0.526	0.532	92.150	-181.000	0.035350	1.1312	28.289	0.8840	0.9910	0.9914			
0.532	0.538	93.000	-180.150	0.035216	1.1269	28.345	0.8874	0.9871	0.9874			
0.538	0.544	93.387	-179.763	0.035152	1.1249	28.445	0.8880	0.9864	0.9870			
0.544	0.550	93.150	-179.500	0.035155	1.1218	28.445	0.8880	0.9864	0.9870			
0.550	0.556	94.150	-178.150	0.035034	1.1210	28.544	0.8920	0.9826	0.9832			
0.556	0.562	94.785	-178.365	0.034933	1.1178	28.646	0.8966	0.9791	0.9797			
0.562	0.568	95.150	-178.000	0.034898	1.1159	28.655	0.8965	0.9782	0.9787			
0.568	0.574	95.000	-178.000	0.034874	1.1159	28.674	0.8961	0.9775	0.9780			
0.574	0.580	96.000	-177.150	0.034738	1.1116	28.787	0.8986	0.9737	0.9742			
0.580	0.586	96.055	-177.095	0.034729	1.1113	28.794	0.8999	0.9734	0.9740			

TABLE 3 CONTINUED

## SATURATED LIQUID OXYGEN

BAR	PRESSURE		TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	VOLUME CM <sup>3</sup> / GRAM-MOLE	DENSITY RATIO - LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 1 BAR	DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 760 TORR
	KP/CM <sup>2</sup>	BAR	KELVIN	CELSIUS				
1.816	1.851	96.150	-175.000	0.034714	1.1108	28.807	0.9033	0.9735
1.961	1.999	97.000	-176.500	0.034576	1.1064	28.921	0.9038	0.9697
1.961	2.000	97.004	-176.504	0.034576	1.1064	28.922	0.9038	0.9697
1.987	2.026	97.150	-176.000	0.034552	1.1056	28.942	0.9045	0.9690
2.000	2.039	97.223	-175.927	0.034540	1.1052	28.952	0.9048	0.9687
2.142	2.184	98.000	-175.150	0.034414	1.1012	29.058	0.9081	0.9651
2.170	2.213	98.150	-175.000	0.034389	1.1004	29.079	0.9087	0.9644
2.200	2.243	98.306	-174.844	0.034364	1.0996	29.100	0.9094	0.9637
2.336	2.382	99.000	-174.150	0.034250	1.0952	29.197	0.9124	0.9605
2.400	2.443	99.150	-174.000	0.034225	1.0952	29.218	0.9131	0.9598
2.542	2.593	100.000	-173.833	0.034198	1.0943	29.242	0.9138	0.9591
2.542	2.593	100.000	-173.833	0.034085	1.0907	29.338	0.9169	0.9559
2.675	2.725	100.250	-173.000	0.034060	1.0899	29.338	0.9175	0.9559
2.675	2.725	100.250	-173.000	0.034041	1.0893	29.377	0.9181	0.9544
2.753	2.817	101.000	-172.833	0.033919	1.0854	29.482	0.9221	0.9520
2.753	2.817	101.000	-172.833	0.033894	1.0845	29.506	0.9220	0.9520
2.800	2.865	101.154	-172.500	0.033891	1.0845	29.506	0.9243	0.9499
2.800	2.865	101.154	-172.500	0.033789	1.0812	29.595	0.9260	0.9476
2.927	3.026	102.000	-171.378	0.033785	1.0802	29.623	0.9260	0.9468
2.927	3.026	102.000	-171.378	0.033763	1.0802	29.623	0.9260	0.9468
3.000	3.093	102.150	-171.126	0.033729	1.0792	29.651	0.9266	0.9453
3.000	3.093	102.150	-171.126	0.033729	1.0792	29.651	0.9266	0.9453
3.200	3.303	103.000	-170.000	0.033682	1.0758	29.770	0.9298	0.9421
3.200	3.303	103.000	-170.000	0.033652	1.0758	29.770	0.9298	0.9421
3.245	3.347	103.150	-169.750	0.033582	1.0746	29.800	0.9306	0.9414
3.245	3.347	103.150	-169.750	0.033521	1.0744	29.800	0.9313	0.9406
3.400	3.497	104.000	-168.500	0.033444	1.0714	29.898	0.9334	0.9370
3.400	3.497	104.000	-168.500	0.033382	1.0693	29.929	0.9350	0.9350
3.500	3.619	104.150	-168.000	0.033360	1.0673	30.004	0.9360	0.9349
3.500	3.619	104.150	-168.000	0.033325	1.0673	30.004	0.9360	0.9349
3.600	3.712	105.000	-166.815	0.033250	1.0634	30.091	0.9404	0.9315
3.600	3.712	105.000	-166.815	0.033233	1.0634	30.091	0.9404	0.9315
3.767	3.875	106.000	-166.106	0.033210	1.0628	30.107	0.9409	0.9310
3.800	3.905	106.150	-166.000	0.033160	1.0611	30.157	0.9424	0.9294
3.923	4.000	106.456	-165.694	0.033115	1.0596	30.198	0.9437	0.9282
4.000	4.079	106.727	-165.423	0.033115	1.0596	30.198	0.9437	0.9282
4.082	4.163	106.000	-165.150	0.033067	1.0581	30.242	0.9451	0.9268
4.128	4.209	106.150	-165.000	0.033041	1.0573	30.265	0.9456	0.9266
4.200	4.288	106.384	-164.766	0.033000	1.0560	30.303	0.9470	0.9255
4.394	4.480	107.000	-164.150	0.032892	1.0525	30.402	0.9501	0.9229
4.400	4.487	107.019	-166.131	0.032869	1.0524	30.402	0.9501	0.9229
4.442	4.530	107.150	-166.000	0.032866	1.0517	30.427	0.9509	0.9218
4.600	4.651	107.833	-165.517	0.032781	1.0489	30.506	0.9533	0.9188
4.723	4.816	108.000	-165.150	0.032716	1.0469	30.566	0.9552	0.9170
4.773	4.868	108.150	-165.000	0.032689	1.0456	30.591	0.9560	0.9162
4.800	4.895	108.228	-164.922	0.032675	1.0450	30.604	0.9564	0.9159
4.903	5.000	108.528	-164.622	0.032622	1.0433	30.654	0.9580	0.9149
5.000	5.059	108.805	-164.345	0.032573	1.0423	30.701	0.9594	0.9130



TABLE 3 CONTINUED

## SATURATED LIQUID OXYGEN

PRESSURE		TEMPERATURE		DENSITY		VOLUME		LIQUID DENSITY/ DENSITY AT A BOIL PRESS. OF 1 BAR		DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL PRESS. OF 760 TORR	
BAR	KP/CM <sup>2</sup>	KELVIN	CELSIUS	GRAM-MOLE/ CM <sup>3</sup>	KG/ DM <sup>3</sup>	CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG				
5.069	5.469	109.000	-164.150	0.032538	1.0412	30.734	0.9605	0.9120	0.9125		
5.123	5.524	109.150	-164.000	0.032511	1.0403	30.759	0.9613	0.9112	0.9117		
5.200	5.603	109.365	-163.785	0.032472	1.0391	30.796	0.9624	0.9102	0.9107		
5.400	5.806	109.909	-163.241	0.032374	1.0359	30.889	0.9653	0.9074	0.9079		
5.434	5.841	110.000	-163.150	0.032358	1.0354	30.931	0.9658	0.9070	0.9074		
5.490	5.899	110.150	-163.000	0.032330	1.0345	30.931	0.9666	0.9062	0.9067		
5.600	5.910	110.339	-162.711	0.032278	1.0329	30.981	0.9682	0.9047	0.9052		
5.800	5.932	110.955	-162.150	0.032184	1.0296	31.071	0.9710	0.9021	0.9026		
5.818	5.932	111.000	-162.000	0.032176	1.0296	31.079	0.9713	0.9019	0.9023		
5.877	5.993	111.150	-161.800	0.032148	1.0287	31.186	0.9721	0.9011	0.9016		
5.884	5.993	111.166	-161.982	0.032145	1.0286	31.186	0.9721	0.9010	0.9015		
6.000	6.118	111.459	-161.691	0.032092	1.0269	31.109	0.9738	0.8995	0.9000		
6.200	6.322	111.950	-161.200	0.032001	1.0240	31.161	0.9766	0.8970	0.8975		
6.421	6.543	112.000	-161.150	0.031952	1.0237	31.249	0.9768	0.8967	0.8972		
6.283	6.407	112.150	-161.000	0.031964	1.0228	31.258	0.9777	0.8959	0.8964		
6.400	6.526	112.300	-160.720	0.031912	1.0212	31.336	0.9793	0.8945	0.8950		
6.600	6.730	112.899	-160.251	0.031825	1.0184	31.441	0.9820	0.8915	0.8920		
6.644	6.775	113.000	-160.150	0.031806	1.0178	31.441	0.9826	0.8915	0.8920		
6.709	6.841	113.150	-160.000	0.031778	1.0169	31.468	0.9834	0.8907	0.8912		
6.800	6.934	113.357	-159.793	0.031739	1.0156	31.507	0.9846	0.8896	0.8901		
6.865	7.000	113.504	-159.646	0.031712	1.0147	31.534	0.9855	0.8888	0.8893		
7.000	7.138	113.806	-159.344	0.031655	1.0129	31.591	0.9873	0.8872	0.8877		
7.088	7.227	114.000	-159.150	0.031618	1.0117	31.628	0.9884	0.8862	0.8867		
7.156	7.297	114.150	-159.000	0.031590	1.0108	31.656	0.9893	0.8854	0.8859		
7.200	7.342	114.246	-158.904	0.031571	1.0102	31.674	0.9899	0.8849	0.8854		
7.400	7.546	114.677	-158.473	0.031489	1.0076	31.757	0.9924	0.8826	0.8831		
7.552	7.701	115.000	-158.150	0.031428	1.0056	31.819	0.9944	0.8809	0.8814		
7.624	7.774	115.100	-158.050	0.031409	1.0050	31.838	0.9950	0.8804	0.8808		
7.800	7.954	115.514	-157.636	0.031399	1.0047	31.848	0.9953	0.8800	0.8806		
7.845	8.000	115.607	-157.543	0.031311	1.0019	31.938	0.9975	0.8781	0.8786		
8.000	8.158	115.921	-157.229	0.031250	1.0000	32.000	1.0000	0.8764	0.8764		
8.039	8.198	116.000	-157.150	0.031235	0.9995	32.015	1.0005	0.8755	0.8760		
8.114	8.274	116.150	-157.000	0.031206	0.9986	32.045	1.0014	0.8747	0.8752		
8.200	8.362	116.321	-156.829	0.031173	0.9975	32.079	1.0025	0.8737	0.8742		
8.400	8.566	116.714	-156.436	0.031056	0.9950	32.158	1.0050	0.8716	0.8721		
8.548	8.717	117.000	-156.150	0.031040	0.9932	32.217	1.0068	0.8700	0.8705		
8.600	8.770	117.099	-156.051	0.031020	0.9926	32.237	1.0074	0.8695	0.8699		
8.626	8.797	117.150	-156.000	0.031010	0.9923	32.247	1.0078	0.8692	0.8697		
8.800	8.974	117.479	-155.671	0.030946	0.9902	32.335	1.0099	0.8674	0.8679		
8.826	9.000	117.528	-155.622	0.030936	0.9899	32.335	1.0102	0.8671	0.8676		
9.000	9.177	117.852	-155.298	0.030872	0.9879	32.423	1.0133	0.8653	0.8658		
9.080	9.259	118.000	-155.150	0.030842	0.9869	32.423	1.0133	0.8650	0.8655		
9.162	9.343	118.150	-155.000	0.030812	0.9860	32.445	1.0142	0.8646	0.8651		
9.200	9.381	118.219	-154.931	0.030798	0.9855	32.449	1.0147	0.8643	0.8648		

TABLE 3 CONTINUED

## SATURATED LIQUID OXYGEN

BAR	PRESSURE		TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	KG/ DM <sup>3</sup>	VOLUME		DENSITY RATIOS - DIMENSIONLESS	
	KP/CM <sup>2</sup>	KELVIN	CELSIUS	GRAM-MOLE			DM <sup>3</sup> / KG	LIQUID DENSITY/ DENSITY AT A BOIL, PRESS. OF 1 BAR	LIQUID DENSITY/ DENSITY AT A BOIL, PRESS. OF 760 TORR	
9.400	9.585	118.581	-154.869	0.030726	0.9832	32.4546	1.0171	0.8612	0.8617	
9.600	9.789	116.937	-154.213	0.030654	0.9809	32.6222	1.0195	0.8597	0.8597	
9.800	9.826	115.400	-154.150	0.030642	0.9805	32.6335	1.0199	0.8589	0.8589	
9.974	9.913	119.450	-154.000	0.030611	0.9795	32.6667	1.0209	0.8585	0.8585	
10.000	9.993	119.828	-153.862	0.030584	0.9786	32.6700	1.0218	0.8572	0.8577	
10.007	10.000	119.999	-153.851	0.030581	0.9786	32.6700	1.0218	0.8572	0.8576	
10.000	10.197	119.833	-153.517	0.030513	0.9764	32.7773	1.0242	0.8557	0.8557	
10.200	10.401	119.974	-153.176	0.030444	0.9742	32.847	1.0265	0.8533	0.8538	
10.215	10.417	120.000	-153.150	0.030438	0.9740	32.853	1.0267	0.8532	0.8536	
10.304	10.508	120.150	-153.000	0.030408	0.9730	32.886	1.0277	0.8523	0.8528	
10.400	10.605	120.310	-152.840	0.030375	0.9720	32.922	1.0289	0.8514	0.8518	
10.600	10.809	120.641	-152.509	0.030307	0.9698	32.996	1.0333	0.8495	0.8499	
10.787	11.000	120.947	-152.203	0.030243	0.9676	33.065	1.0377	0.8477	0.8481	
10.800	11.013	120.968	-152.182	0.030239	0.9675	33.070	1.0375	0.8476	0.8480	
10.820	11.033	121.000	-152.150	0.030232	0.9674	33.077	1.0377	0.8474	0.8478	
10.903	11.128	121.150	-152.000	0.030201	0.9654	33.112	1.0348	0.8465	0.8470	
11.000	11.217	121.290	-151.850	0.030172	0.9655	33.144	1.0358	0.8457	0.8461	
11.200	11.421	121.608	-151.542	0.030105	0.9632	33.217	1.0381	0.8438	0.8443	
11.400	11.625	121.923	-151.227	0.030039	0.9612	33.290	1.0404	0.8420	0.8424	
11.600	11.829	122.150	-151.150	0.030023	0.9607	33.308	1.0409	0.8415	0.8420	
11.800	12.033	122.400	-151.000	0.029951	0.9597	33.344	1.0426	0.8406	0.8411	
12.000	12.237	122.650	-150.847	0.029873	0.9591	33.363	1.0445	0.8396	0.8406	
12.200	12.441	122.900	-150.660	0.029819	0.9574	33.420	1.0465	0.8386	0.8390	
12.400	12.645	123.150	-150.511	0.029768	0.9570	33.473	1.0489	0.8383	0.8388	
12.600	12.849	123.400	-150.308	0.029844	0.9559	33.509	1.0472	0.8365	0.8369	
12.800	13.053	123.650	-150.150	0.029810	0.9553	33.546	1.0484	0.8355	0.8360	
13.000	13.257	123.900	-150.000	0.029779	0.9529	33.580	1.0499	0.8347	0.8351	
13.200	13.461	124.150	-149.847	0.029749	0.9528	33.616	1.0495	0.8346	0.8351	
13.400	13.664	124.400	-149.700	0.029716	0.9508	33.652	1.0517	0.8329	0.8331	
13.600	13.868	124.650	-149.542	0.029685	0.9493	33.700	1.0529	0.8321	0.8324	
13.800	14.072	124.900	-149.400	0.029653	0.9473	33.744	1.0536	0.8314	0.8318	
14.000	14.276	125.150	-149.250	0.029623	0.9469	33.762	1.0536	0.8308	0.8313	
14.200	14.480	125.400	-149.100	0.029593	0.9460	33.766	1.0526	0.8299	0.8303	
14.400	14.684	125.650	-148.950	0.029562	0.9459	33.829	1.0522	0.8294	0.8298	
14.600	14.888	125.900	-148.800	0.029531	0.9428	33.868	1.0524	0.8286	0.8291	
14.800	15.092	126.150	-148.650	0.029500	0.9408	34.010	1.0529	0.8281	0.8286	
15.000	15.296	126.400	-148.500	0.029473	0.9399	34.045	1.0529	0.8274	0.8279	
15.200	15.500	126.650	-148.350	0.029446	0.9389	34.082	1.0524	0.8269	0.8274	
15.400	15.704	126.900	-148.200	0.029419	0.9380	34.084	1.0524	0.8264	0.8269	
15.600	15.908	127.150	-148.050	0.029392	0.9376	34.128	1.0525	0.8259	0.8264	
15.800	16.112	127.400	-147.900	0.029365	0.9366	34.153	1.0525	0.8254	0.8259	
16.000	16.316	127.650	-147.750	0.029338	0.9359	34.224	1.0523	0.8249	0.8254	
16.200	16.520	127.900	-147.600	0.029311	0.9351	34.295	1.0523	0.8244	0.8249	
16.400	16.724	128.150	-147.450	0.029284	0.9332	34.307	1.0521	0.8239	0.8244	
16.600	16.928	128.400	-147.300	0.029257	0.9327	34.348	1.0521	0.8234	0.8239	
16.800	17.132	128.650	-147.150	0.029230	0.9317	34.389	1.0521	0.8229	0.8234	
17.000	17.336	128.900	-147.000	0.029203	0.9312	34.430	1.0521	0.8224	0.8229	
17.200	17.540	129.150	-146.850	0.029176	0.9302	34.471	1.0521	0.8219	0.8224	
17.400	17.744	129.400	-146.700	0.029149	0.9292	34.512	1.0521	0.8214	0.8219	
17.600	17.948	129.650	-146.550	0.029122	0.9282	34.553	1.0521	0.8209	0.8214	
17.800	18.152	129.900	-146.400	0.029095	0.9272	34.594	1.0521	0.8204	0.8209	
18.000	18.356	130.150	-146.250	0.029068	0.9262	34.635	1.0521	0.8199	0.8204	
18.200	18.560	130.400	-146.100	0.029041	0.9252	34.676	1.0521	0.8194	0.8199	
18.400	18.764	130.650	-145.950	0.029014	0.9242	34.717	1.0521	0.8189	0.8194	
18.600	18.968	130.900	-145.800	0.028987	0.9232	34.758	1.0521	0.8184	0.8189	
18.800	19.172	131.150	-145.650	0.028960	0.9222	34.799	1.0521	0.8179	0.8184	
19.000	19.376	131.400	-145.500	0.028933	0.9212	34.840	1.0521	0.8174	0.8179	
19.200	19.580	131.650	-145.350	0.028906	0.9202	34.881	1.0521	0.8169	0.8174	
19.400	19.784	131.900	-145.200	0.028879	0.9192	34.922	1.0521	0.8164	0.8169	
19.600	19.988	132.150	-145.050	0.028852	0.9182	34.963	1.0521	0.8159	0.8164	
19.800	20.192	132.400	-144.900	0.028825	0.9172	35.004	1.0521	0.8154	0.8159	
20.000	20.396	132.650	-144.750	0.028798	0.9162	35.045	1.0521	0.8149	0.8154	
20.200	20.600	132.900	-144.600	0.028771	0.9152	35.086	1.0521	0.8144	0.8149	
20.400	20.804	133.150	-144.450	0.028744	0.9142	35.127	1.0521	0.8139	0.8144	
20.600	21.008	133.400	-144.300	0.028717	0.9132	35.168	1.0521	0.8134	0.8139	
20.800	21.212	133.650	-144.150	0.028690	0.9122	35.209	1.0521	0.8129	0.8134	
21.000	21.416	133.900	-144.000	0.028663	0.9112	35.250	1.0521	0.8124	0.8129	
21.200	21.620	134.150	-143.850	0.028636	0.9102	35.291	1.0521	0.8119	0.8124	
21.400	21.824	134.400	-143.700	0.028609	0.9092	35.332	1.0521	0.8114	0.8119	
21.600	22.028	134.650	-143.550	0.028582	0.9082	35.373	1.0521	0.8109	0.8114	
21.800	22.232	134.900	-143.400	0.028555	0.9072	35.414	1.0521	0.8104	0.8109	
22.000	22.436	135.150	-143.250	0.028528	0.9062	35.455	1.0521	0.8099	0.8104	
22.200	22.640	135.400	-143.100	0.028501	0.9052	35.496	1.0521	0.8094	0.8104	
22.400	22.844	135.650	-142.950	0.028474	0.9042	35.537	1.0521	0.8089	0.8104	
22.600	23.048	135.900	-142.800	0.028447	0.9032	35.578	1.0521	0.8084	0.8104	
22.800	23.252	136.150	-142.650	0.028420	0.9022	35.619	1.0521	0.8079	0.8104	
23.000	23.456	136.400	-142.500	0.028393	0.9012	35.660	1.0521	0.8074	0.8104	
23.200	23.660	136.650	-142.350	0.028366	0.9002	35.701	1.0521	0.8069	0.8104	
23.400	23.864	136.900	-142.200	0.028339	0.8992	35.742	1.0521	0.8064	0.8104	
23.600	24.068	137.150	-142.050	0.028312	0.8982	35.783	1.0521	0.8059	0.8104	
23.800	24.272	137.400	-141.900	0.028285	0.8972	35.824	1.0521	0.8054	0.8104	
24.000	24.476	137.650	-141.750	0.028258	0.8962	35.865	1.0521	0.8049	0.8104	
24.200	24.680	137.900	-141.600	0.028231	0.8952	35.906	1.0521	0.8044	0.8104	
24.400	24.884	138.150	-141.450	0.028204	0.8942	35.947	1.0521	0.8039	0.8104	
24.600	25.088	138.400	-141.300	0.028177	0.8932	35.988	1.0521	0.8034	0.8104	
24.800	25.292	138.650	-141.150	0.028150	0.8922	36.029	1.0521	0.8029	0.8104	
25.000	25.496	138.900	-141.000	0.028123	0.8912	36.070	1.0521	0.8024	0.8104	
25.200	25.700	139.150	-140.850	0.028096	0.8902	36.111	1.0521	0.8019	0.8104	
25.400	25.904	139.400	-140.700	0.028069	0.8892	36.152	1.0521	0.8014	0.8104	
25.600	26.108	139.650	-140.550	0.028042	0.8882	36.193	1.0521	0.8009	0.8104	
25.800	26.312	139.900	-140.400	0.028015	0.8872	36.234	1.0521	0.8004	0.8104	
26.000	26.516	140.150	-140.250	0.027988	0.8862	36.275	1.0521	0.8004	0.8104	
26.200	26.720	140.400	-140.100	0.027961	0.8852	36.316	1.0521	0.8004	0.8104	
26.400	26.924	140.650	-140.000	0.027934	0.8842	36.357	1.0521	0.8004	0.8104	
26.600	27.128	140.900	-139.850	0.027907	0.8832	36.398	1.0521	0.8004	0.8104	
26.800	27.332	141.150	-139.700	0.027880	0.8822	36.439	1.0521	0.8004	0.8104	
27.000	27.536	141.400	-139.550	0.027853	0.8812	36.480	1.0521	0.8004	0.8104	
27.200	27.740	141.650	-139.400	0.027826	0.8802	36.521	1.0521	0.8004	0.8104	
27.400	27.944	141.900	-139.250	0.027799	0.8792	36.562	1.0521	0.8004	0.8104	
27.600	28.148	142.150	-139.100	0.027772	0.8782	36.603	1.0521	0.8004	0.8104	
27.800	28.352	142.400	-138.950	0.027745	0.8772	36.644	1.0521	0.8004	0.8104	
28.										

## SATURATED LIQUID OXYGEN

## TABLE 3 CONTINUED

BAR	PRESSURE		TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	VOLUME CM <sup>3</sup> / GRAM-MOLE	DENSITY RATIOS -		DENSITY AT A BOIL, PRESS. OF 1 BAR	DENSITY AT A BOIL, PRESS. OF 760 TORR
	KP/CM <sup>2</sup>	MP/CM <sup>2</sup>	KELVIN	CELSIUS			LIQUID DENSITY/ DENSITY AT A BOIL	DIMENSIONLESS/ LIQUID DENSITY/ DENSITY AT A BOIL		
14.349	14.832	126.150	-142.000	0.023114	0.8316	34.347	1.0734	0.8160	0.8165	
14.400	14.864	126.218	-142.932	0.023059	0.8311	34.366	1.0740	0.8156	0.8161	
14.600	14.888	126.470	-146.670	0.023039	0.8292	34.436	1.0762	0.8139	0.8144	
14.710	15.000	126.624	-146.526	0.023006	0.8282	34.475	1.0774	0.8130	0.8135	
14.800	15.092	126.740	-146.410	0.022980	0.8273	34.507	1.0784	0.8123	0.8127	
15.000	15.296	127.000	-146.152	0.022920	0.8254	34.578	1.0806	0.8106	0.8111	
15.002	15.298	127.000	-146.150	0.022920	0.8254	34.578	1.0806	0.8106	0.8110	
15.119	15.417	127.150	-146.000	0.022885	0.8243	34.620	1.0819	0.8096	0.8101	
15.200	15.500	127.253	-145.897	0.022861	0.8235	34.649	1.0828	0.8094	0.8100	
15.400	15.704	127.505	-145.505	0.022804	0.8216	34.719	1.0850	0.8073	0.8077	
15.600	15.908	127.756	-145.394	0.022744	0.8198	34.790	1.0872	0.8057	0.8061	
15.691	16.000	127.868	-145.282	0.022718	0.8189	34.822	1.0882	0.8049	0.8054	
15.797	16.109	128.000	-145.166	0.022687	0.8179	34.860	1.0894	0.8041	0.8045	
15.800	16.112	128.004	-145.166	0.022686	0.8181	34.855	1.0893	0.8042	0.8046	
15.919	16.233	128.150	-144.901	0.022656	0.8170	34.897	1.0906	0.8032	0.8036	
16.000	16.315	128.249	-144.801	0.022633	0.8162	34.925	1.0915	0.8025	0.8030	
16.200	16.519	128.493	-144.657	0.022575	0.8144	34.996	1.0937	0.8009	0.8014	
16.400	16.723	128.734	-144.416	0.022481	0.8125	35.066	1.0959	0.7993	0.7998	
16.600	16.927	128.973	-144.177	0.022361	0.8107	35.136	1.0981	0.7977	0.7982	
16.622	16.950	129.000	-144.175	0.022344	0.8105	35.144	1.0983	0.7975	0.7980	
16.671	17.000	129.058	-144.092	0.022340	0.8101	35.161	1.0988	0.7972	0.7976	
16.749	17.079	129.150	-144.000	0.022300	0.8093	35.189	1.0997	0.7965	0.7970	
16.800	17.131	129.211	-143.939	0.022304	0.8089	35.207	1.0003	0.7961	0.7966	
17.000	17.335	129.446	-143.704	0.022347	0.8071	35.277	1.0025	0.7945	0.7950	
17.200	17.539	129.679	-143.471	0.022290	0.8053	35.344	1.0047	0.7930	0.7934	
17.400	17.743	129.910	-143.240	0.022234	0.8035	35.446	1.0069	0.7914	0.7918	
17.478	17.823	130.000	-143.150	0.022212	0.8028	35.446	1.0077	0.7914	0.7918	
17.600	17.947	130.140	-143.010	0.022178	0.8017	35.489	1.0091	0.7898	0.7902	
17.609	17.956	130.140	-143.000	0.022178	0.8016	35.489	1.0092	0.7898	0.7902	
17.652	18.000	130.199	-142.911	0.022163	0.8012	35.507	1.0096	0.7897	0.7901	
18.000	18.255	130.593	-142.733	0.022122	0.8000	35.560	1.0113	0.7882	0.7887	
18.000	18.259	130.593	-142.733	0.022122	0.8000	35.560	1.0113	0.7882	0.7887	
18.365	18.467	131.000	-142.510	0.022066	0.8000	35.630	1.0135	0.7867	0.7871	
18.400	18.473	131.039	-142.411	0.022066	0.8000	35.630	1.0135	0.7867	0.7871	
18.501	18.565	131.039	-142.411	0.022066	0.8000	35.630	1.0135	0.7867	0.7871	
18.600	18.667	131.039	-142.411	0.022066	0.8000	35.630	1.0135	0.7867	0.7871	
18.600	18.673	131.039	-142.411	0.022066	0.8000	35.630	1.0135	0.7867	0.7871	
18.633	18.700	131.229	-142.229	0.022000	0.8000	35.760	1.0175	0.7838	0.7842	
18.800	18.911	131.591	-141.891	0.021927	0.8000	35.808	1.0190	0.7820	0.7824	
18.800	18.911	131.591	-141.891	0.021927	0.8000	35.808	1.0190	0.7820	0.7824	
19.000	19.115	132.000	-141.615	0.021899	0.8000	35.843	1.0201	0.7804	0.7808	
19.000	19.115	132.000	-141.615	0.021899	0.8000	35.843	1.0201	0.7804	0.7808	
19.200	19.319	132.478	-141.478	0.021840	0.8000	35.914	1.0224	0.7789	0.7793	
19.200	19.319	132.478	-141.478	0.021840	0.8000	35.914	1.0224	0.7789	0.7793	
19.283	19.464	132.825	-141.283	0.021778	0.8000	36.057	1.0268	0.7774	0.7778	
19.283	19.464	132.825	-141.283	0.021778	0.8000	36.057	1.0268	0.7774	0.7778	
19.424	19.607	133.144	-141.026	0.021711	0.8000	36.129	1.0291	0.7758	0.7762	
19.424	19.607	133.144	-141.026	0.021711	0.8000	36.129	1.0291	0.7758	0.7762	
19.600	19.896	133.337	-140.813	0.021624	0.8000	36.200	1.0323	0.7743	0.7747	
19.600	19.896	133.337	-140.813	0.021624	0.8000	36.200	1.0323	0.7743	0.7747	



TABLE 3 CONTINUED

## SATURATED LIQUID OXYGEN

BAR	PRESSURE KP/CM <sup>2</sup>	TEMPERATURE		CEL SIUS	DENSITY GRAM-MOLE/ CM <sup>3</sup>	DENSITY KG/ DM <sup>3</sup>	VOLUME		DM <sup>3</sup> / KG	DENSITY RATIOS - DIMENSIONLESS	
		KELVIN	DEG STUS				CM <sup>3</sup> / GRAM-MOLE	LIQUID DENSITY/ DENSITY AT A BOIL/ PRESS. OF 760 TORR		LIQUID DENSITY/ DENSITY AT A BOIL/ PRESS. OF 760 TORR	
19.613	20.000	132.351	-140.799	0.027620	1.1315	0.7742	36.285	1.1315	0.7742	0.7746	
19.800	20.190	132.547	-140.603	0.027569	1.1335	0.7777	36.272	1.1335	0.7777	0.7773	
20.000	20.394	132.756	-140.394	0.027515	1.1358	0.7810	36.344	1.1358	0.7810	0.7816	
20.200	20.598	132.964	-140.186	0.027460	1.1380	0.7842	36.416	1.1380	0.7842	0.7849	
20.325	20.634	133.000	-140.150	0.027451	1.1384	0.7849	36.429	1.1384	0.7849	0.7856	
20.380	20.672	133.050	-140.100	0.027411	1.1401	0.7871	36.481	1.1401	0.7871	0.7878	
20.400	20.802	133.100	-139.980	0.027406	1.1403	0.7878	36.488	1.1403	0.7878	0.7886	
20.594	21.006	133.369	-139.781	0.027353	1.1425	0.7967	36.558	1.1425	0.7967	0.7971	
20.600	21.240	133.578	-139.572	0.027328	1.1448	0.7966	36.633	1.1448	0.7966	0.7971	
20.800	21.444	133.780	-139.370	0.027244	1.1471	0.7966	36.716	1.1471	0.7966	0.7971	
21.200	21.648	133.981	-139.169	0.027190	1.1494	0.7962	36.779	1.1494	0.7962	0.7962	
21.219	21.637	134.000	-139.150	0.027184	1.1496	0.7962	36.786	1.1496	0.7962	0.7962	
21.370	21.791	134.150	-139.000	0.027144	1.1513	0.7968	36.841	1.1513	0.7968	0.7968	
21.400	21.822	134.183	-138.970	0.027136	1.1517	0.7968	36.852	1.1517	0.7968	0.7968	
21.575	22.000	134.353	-138.797	0.027089	1.1537	0.7959	36.916	1.1537	0.7959	0.7959	
21.600	22.026	134.378	-138.772	0.027082	1.1540	0.7959	36.925	1.1540	0.7959	0.7959	
21.800	22.230	134.575	-138.575	0.027028	1.1562	0.7956	36.995	1.1562	0.7956	0.7956	
22.000	22.434	134.770	-138.380	0.026974	1.1585	0.7951	37.072	1.1585	0.7951	0.7951	
22.000	22.638	134.964	-138.186	0.026921	1.1609	0.7956	37.146	1.1609	0.7956	0.7956	
22.237	22.678	135.000	-138.150	0.026911	1.1613	0.7953	37.160	1.1613	0.7953	0.7953	
22.593	22.835	135.150	-138.000	0.026869	1.1632	0.7953	37.218	1.1632	0.7953	0.7953	
22.800	22.802	135.157	-137.993	0.026867	1.1632	0.7953	37.220	1.1632	0.7953	0.7953	
22.855	22.854	135.305	-137.845	0.026826	1.1650	0.7959	37.278	1.1650	0.7959	0.7959	
22.800	23.006	135.348	-137.802	0.026814	1.1655	0.7959	37.284	1.1655	0.7959	0.7959	
23.000	23.200	135.538	-137.612	0.026760	1.1678	0.7956	37.344	1.1678	0.7956	0.7956	
23.000	23.437	135.727	-137.423	0.026707	1.1702	0.7946	37.404	1.1702	0.7946	0.7946	
23.000	23.697	136.015	-137.235	0.026653	1.1725	0.7941	37.464	1.1725	0.7941	0.7945	
23.291	23.750	136.000	-137.250	0.026629	1.1750	0.7941	37.530	1.1750	0.7941	0.7945	
23.400	23.864	136.102	-137.048	0.026580	1.1768	0.7946	37.583	1.1768	0.7946	0.7960	
23.452	23.834	136.150	-137.000	0.026586	1.1775	0.7956	37.574	1.1775	0.7956	0.7956	
23.536	24.000	136.228	-136.822	0.026524	1.1795	0.7942	37.637	1.1795	0.7942	0.7950	
23.600	24.065	136.288	-136.862	0.026497	1.1805	0.7945	37.650	1.1805	0.7945	0.7945	
23.800	24.259	136.472	-136.678	0.026433	1.1826	0.7945	37.715	1.1826	0.7945	0.7945	
24.000	24.473	136.655	-136.495	0.026340	1.1849	0.7941	37.785	1.1849	0.7941	0.7945	
24.000	24.677	136.838	-136.312	0.026287	1.1868	0.7939	37.861	1.1868	0.7939	0.7945	
24.379	24.860	137.000	-136.150	0.026239	1.1889	0.7938	37.938	1.1889	0.7938	0.7940	
24.400	24.881	137.019	-136.131	0.026230	1.1891	0.7938	37.974	1.1891	0.7938	0.7936	
24.517	25.000	137.124	-136.026	0.026203	1.1881	0.7937	38.015	1.1881	0.7937	0.7937	
24.546	25.085	137.150	-136.000	0.026195	1.1885	0.7937	38.030	1.1885	0.7937	0.7937	
24.600	25.089	137.199	-135.951	0.026180	1.1891	0.7935	38.051	1.1891	0.7935	0.7935	
24.800	25.289	137.378	-135.772	0.026127	1.1916	0.7936	38.128	1.1916	0.7936	0.7940	
25.000	25.493	137.556	-135.594	0.026074	1.1940	0.7936	38.206	1.1940	0.7936	0.7940	
25.200	25.697	137.733	-135.421	0.026021	1.1964	0.7931	38.284	1.1964	0.7931	0.7935	
25.400	25.901	137.909	-135.241	0.025968	1.1988	0.7931	38.361	1.1988	0.7931	0.7931	

TABLE 3 CONTINUED

## SATURATED LIQUID OXYGEN

BAR	PRESSURE		TEMPERATURE		GRAM-MOLE/ CM <sup>3</sup>	DENSITY	KG/ DM <sup>3</sup>	VOLUME	CH <sub>3</sub> / GRAM-MOLE	DM <sup>3</sup> / KG	DENSITY RATIOS -	
	KP/CM <sup>2</sup>	BAR	KELVIN	CELSIUS							LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 760 TORR	DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 760 TORR
25.497	26.000	137.994	-135.156	0.026042	0.8333	1.2000	36.400	0.7299	0.7303			
25.504	26.000	138.000	-135.150	0.026040	0.8332	1.2001	36.402	0.7299	0.7303			
25.506	26.105	138.084	-135.066	0.026014	0.8324	1.2013	36.440	0.7282	0.7296			
25.676	26.182	138.150	-135.000	0.025994	0.8318	1.2022	36.470	0.7286	0.7298			
25.800	26.309	138.258	-134.892	0.025961	0.8307	1.2038	36.519	0.7277	0.7281			
26.200	26.513	138.431	-134.719	0.025908	0.8293	1.2062	36.568	0.7262	0.7266			
26.400	26.621	138.603	-134.547	0.025855	0.8279	1.2087	36.617	0.7247	0.7251			
26.478	26.621	138.774	-134.376	0.025802	0.8256	1.2112	36.757	0.7232	0.7236			
26.600	27.124	138.840	-134.310	0.025781	0.8256	1.2122	36.768	0.7226	0.7230			
26.656	27.124	138.944	-134.206	0.025748	0.8239	1.2137	36.837	0.7217	0.7221			
26.800	27.424	139.000	-134.150	0.025733	0.8234	1.2145	36.854	0.7216	0.7220			
26.843	27.376	139.113	-134.037	0.025693	0.8222	1.2162	36.938	0.7206	0.7210			
27.000	27.382	139.282	-133.868	0.025663	0.8205	1.2188	37.009	0.7198	0.7203			
27.200	27.326	139.249	-133.793	0.025662	0.8188	1.2213	37.080	0.7192	0.7197			
27.459	27.960	139.616	-133.534	0.025635	0.8172	1.2232	37.162	0.7183	0.7186			
27.659	28.000	139.656	-133.486	0.025635	0.8166	1.2239	37.186	0.7182	0.7187			
27.800	28.164	139.781	-133.395	0.025623	0.8154	1.2264	37.206	0.7180	0.7185			
27.860	28.148	139.846	-133.329	0.025620	0.8137	1.2289	37.257	0.7175	0.7180			
28.066	28.145	140.000	-133.150	0.025611	0.8131	1.2299	37.354	0.7172	0.7176			
28.000	28.252	140.150	-133.060	0.025611	0.8120	1.2316	37.410	0.7162	0.7166			
28.049	28.252	140.370	-133.000	0.025611	0.8115	1.2322	37.430	0.7160	0.7164			
28.200	28.126	140.272	-133.071	0.025621	0.8102	1.2342	37.593	0.7087	0.7101			
28.400	28.260	140.435	-133.715	0.025627	0.8085	1.2366	37.577	0.7082	0.7086			
28.435	28.000	140.467	-133.693	0.025625	0.8082	1.2373	37.593	0.7079	0.7083			
28.600	28.344	140.537	-133.593	0.025614	0.8068	1.2395	37.661	0.7075	0.7079			
28.600	28.252	140.537	-133.393	0.025616	0.8051	1.2421	37.746	0.7032	0.7036			
29.000	28.272	140.917	-133.233	0.025106	0.8034	1.2448	37.831	0.7037	0.7041			
29.104	28.576	141.000	-133.150	0.025082	0.8025	1.2468	37.876	0.7039	0.7033			
29.200	28.776	141.076	-133.074	0.025052	0.8016	1.2474	37.917	0.7032	0.7036			
29.234	28.871	141.350	-133.000	0.025027	0.8008	1.2487	37.957	0.7029	0.7019			
29.400	28.960	141.434	-133.016	0.024958	0.7999	1.2501	38.003	0.7017	0.7011			
29.420	30.000	141.250	-133.900	0.024953	0.7997	1.2504	40.003	0.7005	0.7009			
29.600	30.184	141.331	-133.795	0.024944	0.7982	1.2520	40.050	0.6992	0.6996			
29.600	30.351	141.586	-133.692	0.024890	0.7964	1.2526	40.177	0.6976	0.6980			
30.000	30.351	141.704	-133.446	0.024836	0.7947	1.2526	40.265	0.6961	0.6965			
30.200	30.862	141.659	-133.259	0.024781	0.7930	1.2531	40.353	0.6948	0.6950			
30.368	30.962	142.000	-133.150	0.024732	0.7914	1.2534	40.434	0.6932	0.6936			
30.400	30.959	142.013	-133.137	0.024727	0.7912	1.2538	40.442	0.6931	0.6935			
30.401	31.000	142.014	-133.136	0.024727	0.7912	1.2539	40.444	0.6931	0.6934			
30.576	31.161	142.150	-133.000	0.024670	0.7897	1.2563	40.521	0.6917	0.6921			
30.600	31.073	142.157	-133.069	0.024672	0.7895	1.2566	40.531	0.6915	0.6919			
31.000	31.611	142.319	-133.631	0.024618	0.7877	1.2595	40.621	0.6900	0.6904			
31.200	31.615	142.623	-133.623	0.024563	0.7860	1.2723	40.671	0.6885	0.6889			
				0.024508	0.7842	1.2751	40.693	0.6869	0.6873			

TABLE 3 CONTINUED

SATURATED LIQUID OXYGEN

BAR	PRESSURE		TEMPERATURE		DENSITY		VOLUME		LIQUID DENSITY/ PRESS. OF 1 BAR		DIMENSIONLESS LIQUID DENSITY/ PRESS. OF 760 TORR	
	KP/CM <sup>2</sup>	CELSIUS	KELVIN	GRAM-MOLE/CM <sup>3</sup>	KG/DM <sup>3</sup>	GRAM-MOLE	CM <sup>3</sup> /KG	DM <sup>3</sup> /KG	DENSITY AT A BOIL. PRESS. OF 1 BAR	DENSITY RATIOS - LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR	DENSITY AT A BOIL. PRESS. OF 760 TORR	DENSITY RATIOS - LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
31.381	32.000	142.760	-130.390	0.024458	0.7826	40.886	1.2777	0.6859	0.6859			
31.400	32.019	142.774	-130.376	0.024453	0.7825	40.894	1.2780	0.6858	0.6858			
31.460	32.223	142.824	-130.226	0.024398	0.7807	40.987	1.2809	0.6839	0.6842			
31.702	32.327	143.000	-130.150	0.024370	0.7798	41.034	1.2824	0.6834	0.6834			
31.800	32.427	143.073	-130.077	0.024343	0.7789	41.080	1.2838	0.6823	0.6827			
31.904	32.533	143.150	-130.000	0.024314	0.7780	41.128	1.2853	0.6815	0.6819			
32.000	32.631	143.221	-129.929	0.024287	0.7772	41.173	1.2867	0.6808	0.6811			
32.000	32.835	143.369	-129.781	0.024232	0.7754	41.268	1.2897	0.6792	0.6796			
32.340	33.039	143.688	-129.662	0.024197	0.7740	41.345	1.2921	0.6779	0.6783			
32.500	33.039	143.816	-129.634	0.024176	0.7736	41.363	1.2926	0.6778	0.6780			
32.500	33.243	143.863	-129.607	0.024150	0.7718	41.345	1.2956	0.6761	0.6764			
32.800	33.647	143.909	-129.361	0.024064	0.7700	41.555	1.2986	0.6749	0.6749			
33.000	33.551	143.954	-129.196	0.024008	0.7682	41.652	1.3017	0.6733	0.6733			
33.064	33.551	144.000	-129.150	0.023990	0.7672	41.683	1.3027	0.6729	0.6728			
33.272	33.856	144.058	-129.052	0.023952	0.7654	41.750	1.3047	0.6714	0.6717			
33.526	34.026	144.130	-128.989	0.023932	0.7658	41.768	1.3058	0.6708	0.6712			
33.843	34.000	144.501	-128.809	0.023892	0.7621	41.820	1.3069	0.6692	0.6701			
33.400	34.029	144.542	-128.826	0.023896	0.7626	41.869	1.3078	0.6692	0.6695			
33.600	34.262	144.585	-128.765	0.023829	0.7610	41.948	1.3109	0.6685	0.6685			
33.800	34.466	144.528	-128.622	0.023786	0.7606	42.009	1.3144	0.6666	0.6664			
34.000	34.670	144.570	-128.480	0.023725	0.7592	42.159	1.3172	0.6654	0.6654			
34.200	34.874	144.611	-128.339	0.023668	0.7582	42.345	1.3204	0.6637	0.6638			
34.400	35.000	144.658	-128.252	0.023620	0.7573	42.452	1.3224	0.6628	0.6628			
34.400	35.076	144.692	-128.198	0.023610	0.7575	42.435	1.3224	0.6624	0.6624			
34.468	35.148	145.000	-128.058	0.023553	0.7549	42.524	1.3259	0.6615	0.6615			
34.600	35.282	145.150	-128.058	0.023553	0.7537	42.456	1.3269	0.6612	0.6612			
34.683	35.367	145.150	-128.058	0.023553	0.7529	42.501	1.3282	0.6599	0.6599			
34.800	35.486	145.232	-127.918	0.023495	0.7516	42.568	1.3304	0.6585	0.6585			
35.000	35.650	145.370	-127.780	0.023437	0.7499	42.775	1.3365	0.6569	0.6569			
35.200	35.894	145.509	-127.641	0.023378	0.7481	42.831	1.3385	0.6544	0.6546			
35.304	36.000	145.580	-127.570	0.023348	0.7471	42.882	1.3401	0.6536	0.6536			
35.400	36.098	145.646	-127.504	0.023320	0.7462	42.891	1.3435	0.6520	0.6520			
35.600	36.302	145.783	-127.367	0.023261	0.7443	43.100	1.3469	0.6507	0.6507			
35.800	36.506	146.000	-127.230	0.023202	0.7424	43.211	1.3508	0.6490	0.6490			
36.000	36.626	146.000	-127.194	0.023182	0.7405	43.211	1.3528	0.6478	0.6478			
36.000	36.710	146.056	-127.094	0.023142	0.7386	43.323	1.3539	0.6473	0.6473			
36.139	36.851	146.150	-127.000	0.023101	0.7367	43.370	1.3554	0.6453	0.6457			
36.285	37.000	146.248	-126.902	0.023057	0.7348	43.435	1.3574	0.6436	0.6466			
36.400	37.112	146.326	-126.824	0.023023	0.7367	43.454	1.3574	0.6436	0.6457			
36.600	37.322	146.460	-126.690	0.022962	0.7348	43.549	1.3610	0.6419	0.6440			
36.800	37.526	146.594	-126.556	0.022902	0.7328	43.665	1.3646	0.6403	0.6423			
37.000	37.729	146.727	-126.423	0.022841	0.7309	43.761	1.3682	0.6402	0.6402			
37.200	37.933	146.860	-126.290	0.022780	0.7289	43.899	1.3719	0.6388	0.6388			
37.265	38.000	146.903	-126.247	0.022760	0.7283	43.937	1.3731	0.6383	0.6383			

TABLE 3 CONTINUED

## SATURATED LIQUID OXYGEN

BAR	PRESSURE		TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	VOLUME CM <sup>3</sup> / GRAM-MOLE	LIQUID DENSITY/ DENSITY AT A BOIL PRESS. OF 1 BAR	DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL PRESS. OF 760 TORR	
	KP/CM <sup>2</sup>	KG/CM <sup>2</sup>	KELVIN	CELSIUS					
37.400	38.137	146.932	-126.158	0.022718	0.7270	44.017	1.3756	0.6368	0.6371
37.413	38.150	147.000	-126.150	0.022714	0.7268	44.025	1.3758	0.6367	0.6370
37.600	38.351	147.123	-126.077	0.022656	0.7250	44.138	1.3794	0.6350	0.6354
37.641	38.383	147.150	-126.060	0.022644	0.7246	44.162	1.3801	0.6347	0.6350
37.800	38.595	147.254	-125.896	0.022594	0.7230	44.259	1.3831	0.6333	0.6336
38.000	38.719	147.364	-125.736	0.022532	0.7210	44.382	1.3870	0.6315	0.6319
38.200	38.853	147.514	-125.616	0.022469	0.7190	44.507	1.3909	0.6298	0.6301
38.246	38.893	147.544	-125.606	0.022454	0.7185	44.535	1.3918	0.6297	0.6299
38.400	39.157	147.644	-125.516	0.022405	0.7169	44.632	1.3948	0.6283	0.6286
38.600	39.351	147.772	-125.378	0.022341	0.7149	44.760	1.3988	0.6262	0.6266
38.600	39.555	147.910	-125.249	0.022277	0.7128	44.878	1.4028	0.6244	0.6248
38.855	39.723	148.000	-125.150	0.022227	0.7112	44.990	1.4060	0.6230	0.6233
39.000	39.759	148.029	-125.121	0.022213	0.7108	45.020	1.4069	0.6229	0.6229
39.191	39.954	148.150	-125.000	0.022150	0.7088	45.146	1.4109	0.6209	0.6212
39.200	39.973	148.156	-124.994	0.022147	0.7087	45.152	1.4110	0.6208	0.6211
39.227	40.000	148.173	-124.977	0.022139	0.7084	45.170	1.4116	0.6205	0.6209
39.400	40.177	148.283	-124.867	0.022082	0.7066	45.286	1.4152	0.6189	0.6193
39.600	40.331	148.409	-124.741	0.022016	0.7045	45.422	1.4195	0.6171	0.6174
39.600	40.595	148.535	-124.615	0.021949	0.7024	45.560	1.4238	0.6152	0.6156
40.000	40.793	148.660	-124.490	0.021882	0.7002	45.699	1.4282	0.6133	0.6137
40.000	40.953	148.785	-124.365	0.021815	0.6980	45.841	1.4326	0.6114	0.6118
40.207	41.100	148.789	-124.361	0.021812	0.6980	45.846	1.4327	0.6114	0.6117
40.400	41.157	148.919	-124.241	0.021746	0.6959	46.000	1.4371	0.6095	0.6099
40.547	41.337	149.030	-124.150	0.021696	0.6942	46.131	1.4404	0.6081	0.6084
40.600	41.400	149.033	-124.117	0.021678	0.6937	46.137	1.4416	0.6076	0.6079
40.790	41.594	149.150	-124.000	0.021612	0.6915	46.275	1.4460	0.6059	0.6061
40.800	41.600	149.156	-123.994	0.021606	0.6914	46.279	1.4463	0.6058	0.6060
41.000	41.808	149.279	-123.871	0.021538	0.6892	46.420	1.4510	0.6037	0.6040
41.188	42.000	149.334	-123.756	0.021472	0.6871	46.573	1.4557	0.6018	0.6022
41.200	42.012	149.401	-123.749	0.021467	0.6869	46.582	1.4557	0.6017	0.6020
41.400	42.212	149.523	-123.627	0.021396	0.6846	46.736	1.4606	0.5997	0.6000
41.600	42.400	149.645	-123.505	0.021320	0.6823	46.890	1.4655	0.5977	0.5980
41.800	42.624	149.775	-123.385	0.021251	0.6800	47.056	1.4706	0.5956	0.5960
42.000	42.800	149.896	-123.264	0.021174	0.6777	47.220	1.4757	0.5933	0.5939
42.169	43.000	149.997	-123.157	0.021115	0.6757	47.360	1.4801	0.5918	0.5922
42.190	43.022	150.000	-123.150	0.021107	0.6754	47.370	1.4801	0.5916	0.5919
42.200	43.033	150.006	-123.143	0.021103	0.6753	47.380	1.4809	0.5915	0.5918
42.600	43.240	150.126	-123.024	0.021020	0.6729	47.566	1.4862	0.5890	0.5897
42.641	43.278	150.160	-123.010	0.021012	0.6729	47.581	1.4873	0.5889	0.5893
42.800	43.464	150.235	-122.905	0.020952	0.6704	47.702	1.4916	0.5873	0.5876
42.800	43.604	150.233	-122.775	0.020875	0.6680	47.900	1.4970	0.5853	0.5856
43.000	43.808	150.344	-122.658	0.020797	0.6655	48.082	1.5027	0.5832	0.5832
43.149	43.800	150.549	-122.549	0.020730	0.6632	48.221	1.5077	0.5813	0.5816
43.200	44.052	150.559	-122.531	0.020710	0.6629	48.268	1.5084	0.5807	0.5810
43.400	44.256	150.717	-122.423	0.020637	0.6604	48.456	1.5143	0.5784	0.5788



TABLE 3 CONTINUED

## SATURATED LIQUID OXYGEN

PRESSURE BAR	TEMPERATURE KELVIN	TEMPERATURE CELSIUS	DENSITY GRAM-MOLE/ CM <sup>3</sup>	KG/ DM <sup>3</sup>	VOLUME CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG	DENSITY RATIOS -	
							LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 1 BAR	DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
4.3-6.00	44.4-60	150.8-833	-0.020556	0.6578	48.6-67	1.5203	0.5762	0.5765
4.3-6.00	44.5-64	150-930	-0.020474	0.6581	48.8-68	1.5204	0.5739	0.5742
4.3-6.00	44.7-51	151-000	-0.020438	0.6584	48.9-69	1.5201	0.5719	0.5732
4.3-6.00	44.8-68	151-066	-0.020390	0.6587	49.0-73	1.5367	0.5700	0.5716
4.3-6.00	45.0-00	151-141	-0.020335	0.6590	49.1-76	1.5368	0.5670	0.5703
4.3-6.00	45.0-16	152-000	-0.020329	0.6595	49.1-82	1.5373	0.5639	0.5701
4.3-6.00	45.0-16	152-000	-0.020305	0.6497	49.2-88	1.5391	0.5698	0.5694
4.3-6.00	45.2-75	152-0219	-0.020219	0.6470	49.3-89	1.5456	0.5667	0.5670
4.3-6.00	45.4-79	151-4-11	-0.020131	0.6442	49.3-95	1.5524	0.5643	0.5646
4.3-6.00	45.6-83	151-526	-0.020042	0.6413	49.4-96	1.5593	0.5617	0.5621
4.3-6.00	45.6-83	151-640	-0.019951	0.6384	49.5-104	1.5664	0.5592	0.5598
4.3-6.00	45.8-87	151-702	-0.019900	0.6368	49.5-112	1.5704	0.5578	0.5581
4.3-6.00	46.0-91	151-753	-0.019858	0.6354	49.6-120	1.5737	0.5566	0.5569
4.3-6.00	46.2-95	151-866	-0.019763	0.6324	49.6-128	1.5813	0.5542	0.5544
4.3-6.00	46.4-99	151-979	-0.019667	0.6293	49.7-136	1.5891	0.5512	0.5515
4.3-6.00	46.5-38	152-000	-0.019648	0.6287	49.8-144	1.5906	0.5507	0.5510
4.3-6.00	46.7-03	152-091	-0.019568	0.6261	49.8-152	1.5971	0.5485	0.5488
4.3-6.00	46.8-11	152-150	-0.019515	0.6244	49.9-160	1.6014	0.5473	0.5476
4.3-6.00	46.9-07	152-203	-0.019467	0.6229	49.9-168	1.6054	0.5456	0.5459
4.3-6.00	47.0-00	152-253	-0.019420	0.6214	50.0-176	1.6093	0.5446	0.5446
4.3-6.00	47.1-11	152-314	-0.019363	0.6196	50.0-184	1.6140	0.5430	0.5430
4.3-6.00	47.3-15	152-425	-0.019227	0.6162	50.1-192	1.6229	0.5414	0.5414
4.3-6.00	47.5-19	152-536	-0.019147	0.6127	50.2-200	1.6321	0.5397	0.5397
4.3-6.00	47.7-23	152-646	-0.019035	0.6091	50.2-208	1.6418	0.5380	0.5388
4.3-6.00	47.9-27	152-755	-0.018919	0.6054	50.2-216	1.6514	0.5363	0.5366
4.3-6.00	48.0-00	152-795	-0.018876	0.6040	50.2-224	1.6556	0.5349	0.5350
4.3-6.00	48.1-31	152-865	-0.018799	0.6016	50.3-232	1.6624	0.5336	0.5338
4.3-6.00	48.3-30	152-974	-0.018675	0.5976	50.3-240	1.6682	0.5324	0.5324
4.3-6.00	48.3-34	153-000	-0.018645	0.5966	50.3-248	1.6734	0.5315	0.5315
4.3-6.00	48.5-38	153-082	-0.018547	0.5935	50.3-256	1.6781	0.5306	0.5306
4.3-6.00	48.6-66	153-150	-0.018463	0.5908	50.4-264	1.6829	0.5294	0.5294
4.3-6.00	48.7-42	153-191	-0.018412	0.5892	50.4-272	1.6875	0.5282	0.5282
4.3-6.00	48.9-46	153-298	-0.018272	0.5847	50.4-280	1.6916	0.5270	0.5270
4.3-6.00	49.0-00	153-327	-0.018234	0.5835	50.4-288	1.6956	0.5259	0.5259
4.3-6.00	49.1-50	153-406	-0.018125	0.5800	50.5-296	1.7003	0.5247	0.5247
4.3-6.00	49.3-54	153-513	-0.017970	0.5750	50.5-304	1.7042	0.5235	0.5235
4.3-6.00	49.3-54	153-619	-0.017906	0.5698	50.5-312	1.7081	0.5223	0.5223
4.3-6.00	49.5-58	153-726	-0.017631	0.5642	50.5-320	1.7113	0.5211	0.5211
4.3-6.00	49.7-62	153-832	-0.017442	0.5591	50.5-328	1.7144	0.5198	0.5198
4.3-6.00	50.0-00	153-849	-0.017409	0.5571	50.5-336	1.7173	0.5186	0.5186
4.3-6.00	50.1-70	153-937	-0.017237	0.5516	50.5-344	1.7202	0.5174	0.5174
4.3-6.00	50.2-92	154-000	-0.017104	0.5473	50.5-352	1.7231	0.5162	0.5164
4.3-6.00	50.3-74	154-042	-0.017010	0.5443	50.5-360	1.7259	0.5150	0.5151
4.3-6.00	50.5-78	154-147	-0.016754	0.5341	50.5-368	1.7288	0.5138	0.5140
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-376	1.7316	0.5126	0.5128
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-384	1.7345	0.5114	0.5114
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-392	1.7373	0.5102	0.5102
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-400	1.7402	0.5090	0.5090
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-408	1.7430	0.5078	0.5078
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-416	1.7458	0.5066	0.5066
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-424	1.7487	0.5054	0.5054
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-432	1.7515	0.5042	0.5042
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-440	1.7544	0.5030	0.5030
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-448	1.7572	0.5018	0.5018
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-456	1.7601	0.5006	0.5006
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-464	1.7629	0.4994	0.4994
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-472	1.7658	0.4982	0.4982
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-480	1.7686	0.4970	0.4970
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-488	1.7715	0.4958	0.4958
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-496	1.7743	0.4946	0.4946
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-504	1.7772	0.4934	0.4934
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-512	1.7800	0.4922	0.4922
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-520	1.7829	0.4910	0.4910
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-528	1.7857	0.4898	0.4898
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-536	1.7886	0.4886	0.4886
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-544	1.7914	0.4874	0.4874
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-552	1.7943	0.4862	0.4862
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-560	1.7971	0.4850	0.4850
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-568	1.8000	0.4838	0.4838
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-576	1.8028	0.4826	0.4826
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-584	1.8057	0.4814	0.4814
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-592	1.8085	0.4802	0.4802
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-600	1.8114	0.4790	0.4790
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-608	1.8142	0.4778	0.4778
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-616	1.8171	0.4766	0.4766
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-624	1.8200	0.4754	0.4754
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-632	1.8228	0.4742	0.4742
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-640	1.8257	0.4730	0.4730
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-648	1.8285	0.4718	0.4718
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-656	1.8314	0.4706	0.4706
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-664	1.8342	0.4694	0.4694
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-672	1.8371	0.4682	0.4682
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-680	1.8400	0.4670	0.4670
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-688	1.8428	0.4658	0.4658
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-696	1.8457	0.4646	0.4646
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-704	1.8485	0.4634	0.4634
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-712	1.8514	0.4622	0.4622
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-720	1.8542	0.4610	0.4610
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-728	1.8571	0.4598	0.4598
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-736	1.8600	0.4586	0.4586
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-744	1.8628	0.4574	0.4574
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-752	1.8657	0.4562	0.4562
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-760	1.8685	0.4550	0.4550
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-768	1.8714	0.4538	0.4538
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-776	1.8742	0.4526	0.4526
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-784	1.8771	0.4514	0.4514
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-792	1.8800	0.4502	0.4502
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-800	1.8828	0.4490	0.4490
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-808	1.8857	0.4478	0.4478
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-816	1.8885	0.4466	0.4466
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-824	1.8914	0.4454	0.4454
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-832	1.8942	0.4442	0.4442
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-840	1.8971	0.4430	0.4430
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-848	1.9000	0.4418	0.4418
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-856	1.9028	0.4406	0.4406
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-864	1.9057	0.4394	0.4394
4.3-6.00	50.5-84	154-150	-0.016746	0.5339	50.5-872	1.9085	0.4382	0.4382
4.3-6.00	50.5-84	154-150	-0.016746					

TABLE 3 CONTINUED

## SATURATED LIQUID OXYGEN

BAR	PRESSURE		TEMPERATURE		DENSITY		VOLUME		DENSITY RATIOS - LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 1 BAR	DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 760 TORR
	KP/CM <sup>2</sup>	KELVIN	CELSIUS	GRAM-MOLE/ CM <sup>3</sup>	KG/ DM <sup>3</sup>	GRAM-MOLE	DM <sup>3</sup> / KG			
49.800	50.782	154.251	-118.899	0.016456	0.5266	60.767	1.8590	0.4613	0.4613	
50.000	50.986	154.355	-118.795	0.016091	0.5149	62.146	1.9421	0.4510	0.4513	
50.014	51.000	154.363	-118.787	0.016062	0.5140	62.258	1.9456	0.4502	0.4505	
50.427	51.421	154.576	-118.574	0.013630	0.4361	73.368	2.2528	0.3920	0.3822	

TABLE 4

## DENSITY OF COMPRESSED LIQUID OXYGEN

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, °C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/CM <sup>3</sup>											
8AR	0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KP/CM <sup>2</sup>	0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789
88.0	1.0089	1.0091	1.0095	1.0099	1.0102	1.0106	1.0115	1.0124	1.0133	1.0142	1.0151	1.0160	1.0166
-165.15	1.0095	1.0097	1.0100	1.0104	1.0108	1.0111	1.0121	1.0130	1.0139	1.0148	1.0157	1.0166	1.0172
0.832	1.1518	1.1520	1.1525	1.1529	1.1533	1.1537	1.1544	1.1558	1.1568	1.1579	1.1589	1.1599	1.1599
88.1	1.0085	1.0087	1.0091	1.0094	1.0098	1.0102	1.0111	1.0120	1.0129	1.0138	1.0147	1.0157	1.0159
-165.05	1.0090	1.0092	1.0096	1.0100	1.0103	1.0107	1.0116	1.0126	1.0135	1.0144	1.0153	1.0161	1.0161
0.810	1.1513	1.1515	1.1520	1.1524	1.1528	1.1532	1.1543	1.1553	1.1564	1.1574	1.1584	1.1593	1.1594
88.2	1.0081	1.0082	1.0086	1.0090	1.0094	1.0097	1.0107	1.0116	1.0125	1.0134	1.0143	1.0152	1.0152
-164.95	1.0086	1.0088	1.0092	1.0095	1.0099	1.0103	1.0112	1.0121	1.0130	1.0139	1.0148	1.0157	1.0157
0.819	1.1508	1.1510	1.1515	1.1519	1.1523	1.1527	1.1538	1.1548	1.1559	1.1569	1.1579	1.1579	1.1590
88.3	1.0076	1.0078	1.0082	1.0086	1.0089	1.0093	1.0102	1.0112	1.0121	1.0130	1.0139	1.0148	1.0148
-164.85	1.0082	1.0084	1.0087	1.0091	1.0095	1.0099	1.0108	1.0117	1.0126	1.0135	1.0144	1.0153	1.0153
0.828	1.1503	1.1506	1.1510	1.1514	1.1518	1.1523	1.1533	1.1544	1.1554	1.1564	1.1575	1.1575	1.1585
88.4	1.0072	1.0074	1.0078	1.0081	1.0085	1.0089	1.0098	1.0107	1.0116	1.0125	1.0134	1.0143	1.0143
-164.75	1.0077	1.0079	1.0083	1.0087	1.0091	1.0094	1.0104	1.0113	1.0122	1.0131	1.0140	1.0149	1.0149
0.838	1.1498	1.1501	1.1505	1.1509	1.1513	1.1518	1.1528	1.1539	1.1549	1.1560	1.1570	1.1570	1.1580
88.5	1.0068	1.0070	1.0073	1.0077	1.0081	1.0085	1.0095	1.0103	1.0112	1.0121	1.0130	1.0139	1.0139
-164.65	1.0073	1.0075	1.0079	1.0083	1.0086	1.0090	1.0099	1.0108	1.0118	1.0127	1.0136	1.0145	1.0145
0.847	1.1493	1.1496	1.1500	1.1504	1.1509	1.1513	1.1523	1.1534	1.1544	1.1555	1.1565	1.1565	1.1575
88.6	1.0063	1.0065	1.0069	1.0073	1.0076	1.0080	1.0090	1.0099	1.0108	1.0117	1.0126	1.0135	1.0135
-164.55	1.0069	1.0071	1.0074	1.0078	1.0082	1.0086	1.0095	1.0104	1.0113	1.0123	1.0132	1.0141	1.0141
0.856	1.1488	1.1491	1.1495	1.1499	1.1504	1.1508	1.1518	1.1529	1.1540	1.1550	1.1560	1.1560	1.1571
88.7	1.0059	1.0061	1.0065	1.0068	1.0072	1.0076	1.0085	1.0095	1.0104	1.0113	1.0122	1.0131	1.0131
-164.45	1.0064	1.0066	1.0070	1.0074	1.0078	1.0081	1.0091	1.0100	1.0109	1.0118	1.0127	1.0136	1.0136
0.865	1.1484	1.1486	1.1490	1.1494	1.1499	1.1503	1.1514	1.1524	1.1535	1.1545	1.1555	1.1555	1.1566
88.8	1.0055	1.0057	1.0060	1.0064	1.0068	1.0072	1.0081	1.0090	1.0099	1.0109	1.0118	1.0127	1.0127
-164.35	1.0060	1.0062	1.0066	1.0070	1.0073	1.0077	1.0087	1.0096	1.0105	1.0114	1.0123	1.0132	1.0132
0.875	1.1479	1.1481	1.1485	1.1489	1.1494	1.1498	1.1509	1.1519	1.1530	1.1540	1.1550	1.1551	1.1561
88.9	1.0050	1.0052	1.0056	1.0060	1.0064	1.0067	1.0077	1.0086	1.0095	1.0104	1.0114	1.0123	1.0123
-164.25	1.0056	1.0058	1.0061	1.0065	1.0069	1.0073	1.0082	1.0092	1.0101	1.0110	1.0119	1.0128	1.0128
0.884	1.1474	1.1476	1.1480	1.1485	1.1489	1.1493	1.1504	1.1514	1.1525	1.1535	1.1545	1.1545	1.1556
89.0	1.0046	1.0048	1.0052	1.0055	1.0059	1.0063	1.0072	1.0082	1.0091	1.0100	1.0109	1.0118	1.0118
-164.15	1.0051	1.0053	1.0057	1.0061	1.0065	1.0069	1.0078	1.0087	1.0097	1.0106	1.0115	1.0124	1.0124
0.894	1.1469	1.1471	1.1475	1.1480	1.1484	1.1488	1.1499	1.1510	1.1520	1.1531	1.1541	1.1541	1.1551
89.1	1.0042	1.0044	1.0047	1.0051	1.0055	1.0059	1.0068	1.0077	1.0087	1.0096	1.0105	1.0114	1.0114
-164.05	1.0047	1.0049	1.0053	1.0057	1.0061	1.0064	1.0074	1.0083	1.0092	1.0101	1.0111	1.0120	1.0120
0.904	1.1464	1.1466	1.1470	1.1475	1.1479	1.1483	1.1494	1.1505	1.1515	1.1526	1.1536	1.1536	1.1547
89.2	1.0037	1.0039	1.0043	1.0047	1.0051	1.0054	1.0064	1.0073	1.0083	1.0092	1.0101	1.0110	1.0110
-163.95	1.0043	1.0045	1.0048	1.0052	1.0056	1.0060	1.0069	1.0079	1.0088	1.0097	1.0106	1.0116	1.0116
0.913	1.1459	1.1461	1.1465	1.1470	1.1474	1.1478	1.1489	1.1500	1.1511	1.1521	1.1531	1.1531	1.1542
89.3	1.0033	1.0035	1.0039	1.0042	1.0046	1.0050	1.0060	1.0069	1.0078	1.0088	1.0097	1.0107	1.0107
-163.85	1.0038	1.0040	1.0044	1.0048	1.0052	1.0056	1.0065	1.0074	1.0084	1.0093	1.0102	1.0111	1.0111
0.923	1.1454	1.1456	1.1460	1.1465	1.1469	1.1473	1.1484	1.1495	1.1506	1.1516	1.1527	1.1527	1.1537
89.4	1.0029	1.0030	1.0034	1.0038	1.0042	1.0046	1.0055	1.0065	1.0074	1.0083	1.0093	1.0103	1.0103
-163.75	1.0034	1.0036	1.0040	1.0044	1.0047	1.0051	1.0060	1.0070	1.0080	1.0089	1.0098	1.0107	1.0107
0.933	1.1449	1.1451	1.1455	1.1460	1.1464	1.1469	1.1479	1.1490	1.1501	1.1511	1.1522	1.1522	1.1532
89.5	1.0024	1.0026	1.0030	1.0034	1.0038	1.0041	1.0051	1.0060	1.0070	1.0079	1.0088	1.0097	1.0097
-163.65	1.0030	1.0032	1.0035	1.0039	1.0043	1.0047	1.0056	1.0066	1.0075	1.0085	1.0094	1.0103	1.0103
0.943	1.1444	1.1446	1.1451	1.1455	1.1459	1.1464	1.1474	1.1485	1.1496	1.1507	1.1517	1.1517	1.1528
89.6	1.0020	1.0022	1.0026	1.0029	1.0033	1.0037	1.0047	1.0056	1.0066	1.0075	1.0084	1.0093	1.0093
-163.55	1.0025	1.0027	1.0031	1.0035	1.0039	1.0043	1.0052	1.0062	1.0071	1.0080	1.0089	1.0098	1.0098
0.953	1.1439	1.1441	1.1446	1.1450	1.1454	1.1459	1.1470	1.1480	1.1491	1.1502	1.1512	1.1512	1.1523
89.7	1.0015	1.0017	1.0021	1.0025	1.0029	1.0033	1.0042	1.0052	1.0061	1.0071	1.0080	1.0089	1.0089
-163.45	1.0021	1.0023	1.0027	1.0031	1.0034	1.0038	1.0047	1.0057	1.0067	1.0076	1.0085	1.0094	1.0094
0.963	1.1434	1.1436	1.1441	1.1445	1.1449	1.1454	1.1465	1.1476	1.1486	1.1497	1.1507	1.1507	1.1518
89.8	1.0011	1.0013	1.0017	1.0021	1.0025	1.0029	1.0038	1.0048	1.0057	1.0066	1.0076	1.0085	1.0085
-163.35	1.0017	1.0019	1.0022	1.0026	1.0030	1.0034	1.0043	1.0053	1.0063	1.0072	1.0081	1.0091	1.0091
0.974	1.1429	1.1431	1.1436	1.1440	1.1444	1.1449	1.1460	1.1471	1.1481	1.1492	1.1503	1.1503	1.1513
89.9	1.0007	1.0009	1.0013	1.0016	1.0020	1.0024	1.0034	1.0044	1.0053	1.0062	1.0071	1.0081	1.0081
-163.25	1.0012	1.0014	1.0018	1.0022	1.0026	1.0030	1.0039	1.0049	1.0058	1.0068	1.0077	1.0086	1.0086
0.984	1.1424	1.1426	1.1431	1.1435	1.1440	1.1444	1.1455	1.1466	1.1477	1.1487	1.1498	1.1498	1.1508



		TABLE ENTRIES													
		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS													
		2. TEMPERATURE, C													
		3. VAPOR PRESSURE, BAR													
BAR		0.600	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	
KP/CM <sup>2</sup>		0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.354	25.493	30.591	35.690	40.789	
90.0		1.0002	1.0004	1.0008	1.0012	1.0016	1.0020	1.0024	1.0028	1.0032	1.0036	1.0040	1.0044	1.0048	
-182.55	0.994	1.0010	1.0014	1.0018	1.0024	1.0028	1.0032	1.0036	1.0040	1.0044	1.0048	1.0052	1.0056	1.0060	
		1.1419	1.1421	1.1426	1.1430	1.1435	1.1439	1.1450	1.1461	1.1472	1.1482	1.1492	1.1503	1.1504	
90.1		1.0000	1.0004	1.0008	1.0012	1.0016	1.0020	1.0024	1.0028	1.0032	1.0036	1.0040	1.0044	1.0048	
-183.05	1.005	1.0005	1.0009	1.0013	1.0017	1.0021	1.0024	1.0031	1.0040	1.0050	1.0059	1.0068	1.0076	1.0084	
		1.1416	1.1421	1.1425	1.1430	1.1434	1.1434	1.1445	1.1456	1.1467	1.1478	1.1488	1.1498	1.1499	
90.2		0.9996	1.0000	1.0003	1.0007	1.0011	1.0014	1.0018	1.0022	1.0026	1.0030	1.0034	1.0038	1.0042	
-182.55	1.015	1.0011	1.0005	1.0009	1.0013	1.0017	1.0021	1.0024	1.0028	1.0032	1.0036	1.0040	1.0044	1.0048	
		1.1411	1.1416	1.1420	1.1425	1.1429	1.1434	1.1440	1.1451	1.1462	1.1473	1.1483	1.1493	1.1494	
90.3		0.9991	0.9995	0.9999	1.0003	1.0007	1.0011	1.0015	1.0019	1.0023	1.0027	1.0031	1.0035	1.0039	
-182.65	1.026	0.9997	1.0001	1.0005	1.0009	1.0012	1.0016	1.0022	1.0028	1.0034	1.0041	1.0045	1.0049	1.0053	
		1.1406	1.1411	1.1415	1.1420	1.1424	1.1424	1.1435	1.1446	1.1457	1.1468	1.1479	1.1489	1.1490	
90.4		0.9987	0.9991	0.9995	0.9999	1.0003	1.0007	1.0012	1.0016	1.0021	1.0025	1.0031	1.0034	1.0038	
-182.75	1.037	0.9992	0.9996	1.0000	1.0004	1.0008	1.0012	1.0016	1.0022	1.0027	1.0032	1.0036	1.0040	1.0044	
		1.1401	1.1406	1.1410	1.1415	1.1419	1.1419	1.1430	1.1441	1.1452	1.1464	1.1474	1.1484	1.1484	
90.5		0.9982	0.9986	0.9990	0.9994	0.9998	1.0002	1.0006	1.0010	1.0014	1.0018	1.0022	1.0026	1.0030	
-182.65	1.048	0.9988	0.9992	0.9996	1.0000	1.0004	1.0008	1.0013	1.0018	1.0023	1.0028	1.0034	1.0039	1.0044	
		1.1396	1.1401	1.1405	1.1410	1.1414	1.1414	1.1425	1.1436	1.1447	1.1458	1.1468	1.1478	1.1480	
90.6		0.9978	0.9982	0.9986	0.9990	0.9994	0.9998	1.0002	1.0006	1.0010	1.0014	1.0018	1.0022	1.0026	
-182.55	1.059	0.9984	0.9988	0.9991	0.9995	0.9999	1.0003	1.0007	1.0011	1.0015	1.0019	1.0023	1.0027	1.0031	
		1.1391	1.1396	1.1400	1.1405	1.1409	1.1409	1.1420	1.1431	1.1442	1.1453	1.1464	1.1474	1.1475	
90.7		0.9974	0.9978	0.9982	0.9986	0.9990	0.9994	0.9998	1.0002	1.0006	1.0010	1.0014	1.0018	1.0022	
-182.45	1.070	0.9979	0.9983	0.9987	0.9991	0.9995	0.9999	1.0003	1.0007	1.0011	1.0015	1.0019	1.0023	1.0027	
		1.1386	1.1391	1.1395	1.1400	1.1404	1.1404	1.1415	1.1427	1.1438	1.1448	1.1459	1.1469	1.1470	
90.8		0.9969	0.9973	0.9977	0.9981	0.9985	0.9989	0.9993	0.9997	1.0001	1.0005	1.0010	1.0014	1.0018	
-182.35	1.081	0.9975	0.9979	0.9983	0.9987	0.9991	0.9995	1.0000	1.0004	1.0008	1.0012	1.0016	1.0020	1.0024	
		1.1381	1.1386	1.1390	1.1395	1.1399	1.1399	1.1411	1.1422	1.1433	1.1444	1.1454	1.1464	1.1465	
90.9		0.9965	0.9969	0.9973	0.9977	0.9981	0.9985	0.9989	0.9993	0.9997	1.0001	1.0005	1.0009	1.0013	
-182.25	1.092	0.9970	0.9974	0.9978	0.9982	0.9986	0.9990	0.9994	0.9998	1.0002	1.0006	1.0010	1.0014	1.0018	
		1.1376	1.1381	1.1385	1.1390	1.1394	1.1394	1.1406	1.1417	1.1428	1.1438	1.1448	1.1458	1.1460	
91.0		0.9961	0.9965	0.9969	0.9973	0.9977	0.9981	0.9985	0.9989	0.9993	0.9997	1.0001	1.0005	1.0009	
-182.15	1.103	0.9966	0.9970	0.9974	0.9978	0.9982	0.9986	0.9990	0.9994	0.9998	1.0002	1.0006	1.0010	1.0014	
		1.1371	1.1376	1.1380	1.1385	1.1389	1.1389	1.1401	1.1412	1.1423	1.1434	1.1444	1.1454	1.1455	
91.1		0.9956	0.9960	0.9964	0.9968	0.9972	0.9976	0.9980	0.9984	0.9988	0.9992	0.9996	1.0000	1.0004	
-182.05	1.115	0.9962	0.9966	0.9970	0.9974	0.9978	0.9982	0.9986	0.9990	0.9994	0.9998	1.0002	1.0006	1.0010	
		1.1366	1.1371	1.1375	1.1380	1.1384	1.1384	1.1396	1.1407	1.1418	1.1428	1.1438	1.1448	1.1450	
91.2		0.9952	0.9956	0.9960	0.9964	0.9968	0.9972	0.9976	0.9980	0.9984	0.9988	0.9992	0.9996	1.0000	
-181.95	1.126	0.9957	0.9961	0.9965	0.9969	0.9973	0.9977	0.9981	0.9985	0.9989	0.9993	0.9997	1.0001	1.0005	
		1.1361	1.1366	1.1370	1.1375	1.1379	1.1379	1.1391	1.1402	1.1413	1.1424	1.1435	1.1445	1.1446	
91.3		0.9947	0.9951	0.9955	0.9959	0.9963	0.9967	0.9971	0.9975	0.9979	0.9983	0.9987	0.9991	0.9995	
-181.85	1.138	0.9953	0.9957	0.9961	0.9965	0.9969	0.9973	0.9977	0.9981	0.9985	0.9989	0.9993	0.9997	1.0001	
		1.1356	1.1361	1.1365	1.1370	1.1374	1.1374	1.1386	1.1397	1.1408	1.1419	1.1430	1.1441	1.1441	
91.4		0.9943	0.9947	0.9951	0.9955	0.9959	0.9963	0.9967	0.9971	0.9975	0.9979	0.9983	0.9987	0.9991	
-181.75	1.149	0.9948	0.9952	0.9956	0.9960	0.9964	0.9968	0.9972	0.9976	0.9980	0.9984	0.9988	0.9992	0.9996	
		1.1351	1.1356	1.1360	1.1365	1.1369	1.1369	1.1381	1.1392	1.1403	1.1414	1.1425	1.1435	1.1436	
91.5		0.9939	0.9943	0.9947	0.9951	0.9955	0.9959	0.9963	0.9967	0.9971	0.9975	0.9979	0.9983	0.9987	
-181.65	1.161	0.9944	0.9948	0.9952	0.9956	0.9960	0.9964	0.9968	0.9972	0.9976	0.9980	0.9984	0.9988	0.9992	
		1.1346	1.1351	1.1355	1.1360	1.1365	1.1365	1.1377	1.1387	1.1398	1.1409	1.1420	1.1431	1.1431	
91.6		0.9934	0.9938	0.9942	0.9946	0.9950	0.9954	0.9958	0.9962	0.9966	0.9970	0.9974	0.9978	0.9982	
-181.55	1.173	0.9940	0.9944	0.9948	0.9952	0.9956	0.9960	0.9964	0.9968	0.9972	0.9976	0.9980	0.9984	0.9988	
		1.1341	1.1346	1.1350	1.1355	1.1360	1.1360	1.1371	1.1382	1.1393	1.1405	1.1416	1.1427	1.1427	
91.7		0.9930	0.9934	0.9938	0.9942	0.9946	0.9950	0.9954	0.9958	0.9962	0.9966	0.9970	0.9974	0.9978	
-181.45	1.185	0.9935	0.9939	0.9943	0.9947	0.9951	0.9955	0.9959	0.9963	0.9967	0.9971	0.9975	0.9979	0.9983	
		1.1336	1.1341	1.1345	1.1350	1.1355	1.1355	1.1366	1.1377	1.1389	1.1400	1.1411	1.1422	1.1422	
91.8		0.9925	0.9929	0.9933	0.9937	0.9941	0.9945	0.9949	0.9953	0.9957	0.9961	0.9965	0.9969	0.9973	
-181.35	1.197	0.9931	0.9935	0.9939	0.9943	0.9947	0.9951	0.9955	0.9959	0.9963	0.9967	0.9971	0.9975	0.9979	
		1.1331	1.1336	1.1340	1.1345	1.1350	1.1350	1.1361	1.1372	1.1384	1.1395	1.1406	1.1417	1.1417	
91.9		0.9921	0.9925	0.9929	0.9933	0.9937	0.9941	0.9945	0.9949	0.9953	0.9957	0.9961	0.9965	0.9969	
-181.25	1.209	0.9926	0.9930	0.9934	0.9938	0.9942	0.9946	0.9950	0.9954	0.9958	0.9962	0.9966	0.9970	0.9974	
		1.1326	1.1331	1.1335	1.1340	1.1345	1.1345	1.1356	1.1367	1.1379	1.1390	1.1401	1.1412	1.1412	

TABLE 4 - CONTINUED

DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A ROLLING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A ROLLING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/CM <sup>3</sup>											
BAR	0.480	1.080	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KFCM <sup>2</sup>	0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789
92.0			0.991E	0.992E	0.9925	0.9924	0.9933	0.9943	0.9953	0.9963	0.9973	0.9982	0.9992
-181.15			0.9922	0.9926	0.9930	0.9934	0.9938	0.9948	0.9958	0.9968	0.9978	0.9988	0.9997
1.221			1.1321	1.1326	1.1330	1.1335	1.1340	1.1351	1.1362	1.1374	1.1385	1.1396	1.1407
92.1			0.9912	0.9916	0.9920	0.9924	0.9928	0.9938	0.9948	0.9958	0.9968	0.9978	0.9988
-181.05			0.9917	0.9922	0.9926	0.9931	0.9934	0.9944	0.9954	0.9964	0.9974	0.9984	0.9993
1.233			1.131E	1.1321	1.1325	1.1330	1.1335	1.1346	1.1357	1.1369	1.1380	1.1391	1.1402
92.2			0.9908	0.9912	0.9916	0.9920	0.9924	0.9934	0.9944	0.9954	0.9964	0.9974	0.9984
-180.95			0.9913	0.9917	0.9921	0.9925	0.9929	0.9940	0.9950	0.9960	0.9969	0.9979	0.9989
1.246			1.1311	1.1316	1.1320	1.1325	1.1330	1.1341	1.1353	1.1364	1.1375	1.1386	1.1397
92.3			0.9903	0.9907	0.9911	0.9916	0.9920	0.9930	0.9940	0.9950	0.9960	0.9970	0.9979
-180.85			0.9909	0.9913	0.9917	0.9921	0.9925	0.9936	0.9945	0.9955	0.9965	0.9975	0.9985
1.250			1.1306	1.1310	1.1315	1.1320	1.1325	1.1336	1.1348	1.1359	1.1370	1.1381	1.1393
92.4			0.9899	0.9903	0.9907	0.9911	0.9915	0.9925	0.9935	0.9945	0.9955	0.9965	0.9975
-180.75			0.9904	0.9908	0.9912	0.9917	0.9921	0.9931	0.9941	0.9951	0.9961	0.9971	0.9980
1.271			1.1301	1.1305	1.1310	1.1315	1.1320	1.1331	1.1343	1.1354	1.1365	1.1377	1.1388
92.5			0.9894	0.9898	0.9903	0.9907	0.9911	0.9921	0.9931	0.9941	0.9951	0.9961	0.9971
-180.65			0.9900	0.9904	0.9908	0.9912	0.9916	0.9926	0.9936	0.9946	0.9956	0.9966	0.9976
1.283			1.1296	1.1300	1.1305	1.1310	1.1314	1.1326	1.1338	1.1349	1.1360	1.1372	1.1383
92.6			0.9890	0.9894	0.9898	0.9902	0.9906	0.9917	0.9927	0.9937	0.9947	0.9957	0.9966
-180.55			0.9895	0.9899	0.9904	0.9908	0.9912	0.9922	0.9932	0.9942	0.9952	0.9962	0.9972
1.296			1.1291	1.1295	1.1300	1.1305	1.1309	1.1321	1.1333	1.1344	1.1356	1.1367	1.1378
92.7			0.9885	0.9889	0.9894	0.9898	0.9902	0.9912	0.9922	0.9932	0.9942	0.9952	0.9962
-180.45			0.9891	0.9895	0.9899	0.9903	0.9907	0.9918	0.9928	0.9938	0.9948	0.9958	0.9968
1.309			1.1286	1.1290	1.1295	1.1300	1.1304	1.1316	1.1328	1.1339	1.1351	1.1362	1.1373
92.8			0.9881	0.9885	0.9889	0.9893	0.9898	0.9908	0.9918	0.9928	0.9938	0.9948	0.9958
-180.35			0.9886	0.9891	0.9895	0.9899	0.9903	0.9913	0.9923	0.9934	0.9944	0.9954	0.9963
1.322			1.1280	1.1285	1.1290	1.1295	1.1299	1.1311	1.1323	1.1334	1.1346	1.1357	1.1368
92.9			0.9877	0.9881	0.9885	0.9889	0.9893	0.9903	0.9913	0.9924	0.9934	0.9944	0.9954
-180.25			0.9882	0.9886	0.9890	0.9894	0.9899	0.9909	0.9919	0.9929	0.9939	0.9949	0.9959
1.335			1.1275	1.1280	1.1285	1.1290	1.1294	1.1306	1.1318	1.1329	1.1341	1.1352	1.1363
93.0			0.9872	0.9876	0.9881	0.9885	0.9889	0.9899	0.9909	0.9919	0.9930	0.9940	0.9949
-180.15			0.9878	0.9882	0.9886	0.9890	0.9894	0.9904	0.9915	0.9925	0.9935	0.9945	0.9955
1.346			1.1270	1.1275	1.1280	1.1285	1.1289	1.1301	1.1313	1.1324	1.1336	1.1347	1.1358
93.1			0.9868	0.9872	0.9876	0.9880	0.9884	0.9894	0.9905	0.9915	0.9925	0.9935	0.9945
-180.05			0.9873	0.9877	0.9881	0.9886	0.9890	0.9900	0.9911	0.9921	0.9931	0.9941	0.9951
1.361			1.1265	1.1270	1.1275	1.1280	1.1284	1.1296	1.1308	1.1319	1.1331	1.1342	1.1354
93.2			0.9863	0.9867	0.9872	0.9876	0.9880	0.9890	0.9901	0.9911	0.9921	0.9931	0.9941
-179.95			0.9869	0.9873	0.9877	0.9881	0.9885	0.9895	0.9906	0.9916	0.9926	0.9936	0.9946
1.375			1.1260	1.1265	1.1270	1.1275	1.1279	1.1291	1.1303	1.1314	1.1326	1.1337	1.1348
93.3			0.9859	0.9863	0.9867	0.9871	0.9876	0.9886	0.9896	0.9906	0.9917	0.9927	0.9937
-179.85			0.9864	0.9868	0.9873	0.9877	0.9881	0.9891	0.9902	0.9912	0.9922	0.9932	0.9942
1.388			1.1255	1.1260	1.1265	1.1269	1.1274	1.1286	1.1298	1.1310	1.1321	1.1333	1.1344
93.4			0.9854	0.9859	0.9863	0.9867	0.9871	0.9882	0.9892	0.9902	0.9912	0.9922	0.9932
-179.75			0.9860	0.9864	0.9868	0.9872	0.9877	0.9887	0.9897	0.9908	0.9918	0.9928	0.9938
1.402			1.1250	1.1255	1.1260	1.1264	1.1268	1.1280	1.1293	1.1305	1.1316	1.1328	1.1339
93.5			0.9850	0.9854	0.9858	0.9863	0.9867	0.9877	0.9888	0.9898	0.9908	0.9918	0.9928
-179.65			0.9855	0.9859	0.9864	0.9868	0.9872	0.9882	0.9893	0.9903	0.9913	0.9923	0.9933
1.415			1.1245	1.1250	1.1255	1.1259	1.1264	1.1276	1.1288	1.1300	1.1311	1.1323	1.1334
93.6			0.9845	0.9850	0.9854	0.9858	0.9862	0.9873	0.9883	0.9893	0.9904	0.9914	0.9924
-179.55			0.9851	0.9855	0.9859	0.9863	0.9868	0.9878	0.9889	0.9899	0.9909	0.9919	0.9929
1.429			1.1240	1.1245	1.1249	1.1254	1.1259	1.1271	1.1283	1.1295	1.1306	1.1318	1.1329
93.7			0.9841	0.9845	0.9849	0.9854	0.9858	0.9868	0.9879	0.9889	0.9899	0.9909	0.9919
-179.45			0.9846	0.9851	0.9855	0.9859	0.9863	0.9874	0.9884	0.9894	0.9905	0.9915	0.9925
1.443			1.1235	1.1240	1.1244	1.1249	1.1254	1.1266	1.1278	1.1290	1.1301	1.1313	1.1324
93.8			0.9836	0.9841	0.9845	0.9849	0.9853	0.9864	0.9874	0.9885	0.9895	0.9905	0.9915
-179.35			0.9842	0.9846	0.9850	0.9855	0.9859	0.9869	0.9880	0.9890	0.9900	0.9911	0.9921
1.457			1.1230	1.1234	1.1239	1.1244	1.1249	1.1261	1.1273	1.1285	1.1296	1.1308	1.1319
93.9			0.9832	0.9836	0.9841	0.9845	0.9849	0.9860	0.9870	0.9880	0.9891	0.9901	0.9911
-179.25			0.9837	0.9842	0.9846	0.9850	0.9854	0.9865	0.9875	0.9886	0.9896	0.9906	0.9916
1.471			1.1224	1.1229	1.1234	1.1239	1.1244	1.1256	1.1268	1.1280	1.1291	1.1303	1.1315

TABLE 4 - CONTINUED

## DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

		TABLE ENTRIES													
1. TEMPERATURE, K		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS													
2. TEMPERATURE, C		3. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS													
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/DN <sup>3</sup>													
BAR	°C	0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	40.789
kPa/cm <sup>2</sup>		0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789	
94.0				0.9827	0.9832	0.9836	0.9840	0.9845	0.9855	0.9866	0.9876	0.9886	0.9897	0.9907	
-178.15		0.9833	0.9837	0.9841	0.9846	0.9850	0.9854	0.9861	0.9871	0.9881	0.9891	0.9902	0.9912	0.9922	
1.4485		1.1219	1.1224	1.1226	1.1234	1.1239	1.1251	1.1263	1.1275	1.1286	1.1298	1.1310	1.1322	1.1334	
94.1				0.9823	0.9827	0.9832	0.9836	0.9840	0.9851	0.9861	0.9872	0.9882	0.9892	0.9902	
-179.05		0.9828	0.9833	0.9837	0.9841	0.9846	0.9850	0.9857	0.9867	0.9877	0.9887	0.9897	0.9907	0.9917	
1.500		1.1214	1.1219	1.1224	1.1229	1.1234	1.1246	1.1258	1.1270	1.1282	1.1293	1.1305	1.1317	1.1329	
94.2				0.9818	0.9823	0.9827	0.9831	0.9836	0.9846	0.9857	0.9867	0.9877	0.9887	0.9897	
-179.95		0.9824	0.9828	0.9832	0.9837	0.9841	0.9846	0.9852	0.9862	0.9873	0.9883	0.9893	0.9903	0.9913	
1.514		1.1209	1.1214	1.1219	1.1224	1.1229	1.1239	1.1241	1.1253	1.1265	1.1277	1.1288	1.1299	1.1310	
94.3				0.9814	0.9818	0.9823	0.9827	0.9831	0.9842	0.9852	0.9863	0.9873	0.9884	0.9894	
-178.85		0.9819	0.9824	0.9828	0.9832	0.9837	0.9841	0.9847	0.9858	0.9868	0.9879	0.9889	0.9899	0.9909	
1.528		1.1204	1.1209	1.1214	1.1219	1.1224	1.1236	1.1248	1.1260	1.1272	1.1284	1.1295	1.1306	1.1317	
94.4				0.9810	0.9814	0.9818	0.9822	0.9827	0.9837	0.9848	0.9859	0.9869	0.9879	0.9889	
-178.75		0.9815	0.9819	0.9824	0.9828	0.9832	0.9837	0.9843	0.9854	0.9864	0.9874	0.9884	0.9894	0.9904	
1.543		1.1199	1.1204	1.1209	1.1214	1.1219	1.1229	1.1231	1.1243	1.1255	1.1267	1.1278	1.1289	1.1299	
94.5				0.9805	0.9809	0.9814	0.9818	0.9822	0.9833	0.9844	0.9854	0.9865	0.9875	0.9885	
-178.65		0.9810	0.9815	0.9819	0.9823	0.9828	0.9832	0.9838	0.9849	0.9860	0.9870	0.9880	0.9890	0.9901	
1.558		1.1194	1.1199	1.1204	1.1209	1.1213	1.1226	1.1238	1.1250	1.1262	1.1273	1.1284	1.1295	1.1305	
94.6				0.9801	0.9805	0.9809	0.9814	0.9818	0.9829	0.9840	0.9850	0.9860	0.9871	0.9881	
-178.55		0.9806	0.9810	0.9815	0.9819	0.9823	0.9828	0.9834	0.9845	0.9855	0.9866	0.9876	0.9886	0.9896	
1.572		1.1189	1.1194	1.1199	1.1203	1.1208	1.1221	1.1233	1.1245	1.1257	1.1269	1.1280	1.1291	1.1301	
94.7				0.9796	0.9800	0.9805	0.9809	0.9813	0.9824	0.9835	0.9845	0.9856	0.9866	0.9877	
-178.45		0.9801	0.9806	0.9810	0.9814	0.9819	0.9823	0.9830	0.9840	0.9851	0.9861	0.9872	0.9882	0.9892	
1.587		1.1183	1.1188	1.1193	1.1198	1.1203	1.1216	1.1228	1.1240	1.1252	1.1264	1.1275	1.1286	1.1296	
94.8				0.9792	0.9796	0.9800	0.9805	0.9809	0.9820	0.9830	0.9841	0.9851	0.9862	0.9872	
-178.35		0.9797	0.9801	0.9806	0.9810	0.9814	0.9820	0.9831	0.9841	0.9852	0.9862	0.9873	0.9883	0.9893	
1.602		1.1178	1.1183	1.1188	1.1193	1.1198	1.1210	1.1222	1.1235	1.1247	1.1259	1.1270	1.1281	1.1291	
94.9				0.9787	0.9791	0.9796	0.9800	0.9804	0.9815	0.9826	0.9837	0.9847	0.9858	0.9868	
-178.25		0.9792	0.9797	0.9801	0.9806	0.9810	0.9816	0.9827	0.9837	0.9847	0.9857	0.9868	0.9878	0.9888	
1.617		1.1173	1.1178	1.1183	1.1188	1.1193	1.1205	1.1217	1.1230	1.1242	1.1254	1.1265	1.1276	1.1286	
95.0				0.9782	0.9787	0.9791	0.9796	0.9800	0.9811	0.9822	0.9832	0.9843	0.9853	0.9864	
-178.15		0.9788	0.9792	0.9797	0.9801	0.9805	0.9811	0.9822	0.9832	0.9843	0.9854	0.9864	0.9875	0.9885	
1.633		1.1168	1.1173	1.1178	1.1183	1.1188	1.1200	1.1212	1.1225	1.1237	1.1249	1.1260	1.1271	1.1281	
95.1				0.9778	0.9782	0.9787	0.9791	0.9796	0.9806	0.9817	0.9828	0.9838	0.9848	0.9859	
-178.05		0.9783	0.9788	0.9792	0.9797	0.9801	0.9807	0.9818	0.9828	0.9838	0.9848	0.9858	0.9868	0.9878	
1.648		1.1163	1.1168	1.1173	1.1178	1.1183	1.1195	1.1208	1.1220	1.1232	1.1244	1.1255	1.1266	1.1276	
95.2				0.9773	0.9778	0.9782	0.9787	0.9791	0.9802	0.9813	0.9823	0.9834	0.9844	0.9855	
-177.95		0.9779	0.9783	0.9788	0.9792	0.9796	0.9802	0.9813	0.9823	0.9833	0.9843	0.9853	0.9863	0.9873	
1.663		1.1158	1.1163	1.1168	1.1173	1.1178	1.1190	1.1203	1.1215	1.1227	1.1239	1.1250	1.1261	1.1271	
95.3				0.9769	0.9773	0.9778	0.9782	0.9787	0.9798	0.9808	0.9818	0.9828	0.9838	0.9848	
-177.85		0.9774	0.9779	0.9783	0.9788	0.9792	0.9798	0.9809	0.9819	0.9829	0.9839	0.9849	0.9859	0.9869	
1.679		1.1152	1.1158	1.1163	1.1168	1.1173	1.1185	1.1197	1.1210	1.1222	1.1234	1.1245	1.1256	1.1266	
95.4				0.9764	0.9769	0.9773	0.9778	0.9782	0.9793	0.9804	0.9815	0.9825	0.9835	0.9846	
-177.75		0.9770	0.9774	0.9779	0.9783	0.9787	0.9793	0.9804	0.9814	0.9824	0.9834	0.9844	0.9854	0.9864	
1.695		1.1147	1.1152	1.1157	1.1163	1.1168	1.1180	1.1192	1.1205	1.1217	1.1229	1.1240	1.1251	1.1261	
95.5				0.9760	0.9764	0.9769	0.9773	0.9778	0.9789	0.9799	0.9810	0.9821	0.9831	0.9842	
-177.65		0.9765	0.9770	0.9774	0.9778	0.9782	0.9788	0.9799	0.9809	0.9819	0.9829	0.9839	0.9849	0.9859	
1.710		1.1142	1.1147	1.1152	1.1157	1.1162	1.1175	1.1187	1.1200	1.1212	1.1224	1.1235	1.1246	1.1256	
95.6				0.9755	0.9760	0.9764	0.9769	0.9773	0.9784	0.9795	0.9806	0.9817	0.9827	0.9838	
-177.55		0.9761	0.9765	0.9770	0.9774	0.9778	0.9784	0.9795	0.9805	0.9815	0.9825	0.9835	0.9845	0.9855	
1.726		1.1137	1.1142	1.1147	1.1152	1.1157	1.1170	1.1182	1.1195	1.1207	1.1219	1.1230	1.1241	1.1251	
95.7				0.9751	0.9755	0.9760	0.9764	0.9769	0.9780	0.9791	0.9801	0.9812	0.9822	0.9833	
-177.45		0.9756	0.9761	0.9765	0.9769	0.9773	0.9779	0.9790	0.9800	0.9810	0.9820	0.9830	0.9840	0.9850	
1.742		1.1132	1.1137	1.1142	1.1147	1.1152	1.1165	1.1177	1.1190	1.1202	1.1214	1.1225	1.1236	1.1246	
95.8				0.9746	0.9751	0.9755	0.9760	0.9764	0.9775	0.9786	0.9797	0.9808	0.9818	0.9829	
-177.35		0.9752	0.9756	0.9761	0.9765	0.9770	0.9776	0.9787	0.9797	0.9807	0.9817	0.9827	0.9837	0.9847	
1.758		1.1127	1.1132	1.1137	1.1142	1.1147	1.1160	1.1172	1.1185	1.1197	1.1209	1.1220	1.1231	1.1241	
95.9				0.9742	0.9746	0.9751	0.9755	0.9760	0.9771	0.9782	0.9793	0.9803	0.9814	0.9825	
-177.25		0.9747	0.9752	0.9756	0.9760	0.9765	0.9771	0.9782	0.9792	0.9802	0.9812	0.9822	0.9832	0.9842	
1.775		1.1121	1.1127	1.1132	1.1137	1.1142	1.1155	1.1167	1.1180	1.1192	1.1204	1.1215	1.1226	1.1236	

		TABLE ENTRIES											
1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS 3. DENSITY, KG/Dm <sup>3</sup>											
BAR KPa/cm <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.038	4.000 4.078	6.000 6.118	8.000 8.150	10.000 10.197	15.000 15.296	20.000 20.364	25.000 25.493	30.000 30.591	35.000 35.690	40.000 40.789
96.0			0.9737	0.9742	0.9746	0.9751	0.9755	0.9766	0.9777	0.9788	0.9799	0.9810	0.9820
-177.15			0.9743	0.9747	0.9752	0.9756	0.9760	0.9772	0.9783	0.9794	0.9804	0.9815	0.9826
1.791			1.1116	1.1121	1.1127	1.1132	1.1137	1.1149	1.1162	1.1174	1.1187	1.1199	1.1211
96.1			0.9733	0.9737	0.9742	0.9746	0.9751	0.9762	0.9773	0.9784	0.9795	0.9805	0.9816
-177.05			0.9738	0.9742	0.9747	0.9752	0.9756	0.9767	0.9778	0.9789	0.9800	0.9811	0.9821
1.807			1.1111	1.1116	1.1121	1.1127	1.1132	1.1144	1.1157	1.1169	1.1182	1.1194	1.1202
96.2			0.9728	0.9733	0.9737	0.9742	0.9746	0.9757	0.9768	0.9779	0.9790	0.9801	0.9812
-176.95			0.9733	0.9738	0.9742	0.9747	0.9751	0.9763	0.9774	0.9785	0.9796	0.9806	0.9817
1.824			1.1106	1.1111	1.1116	1.1121	1.1126	1.1139	1.1152	1.1164	1.1177	1.1189	1.1201
96.3			0.9724	0.9728	0.9733	0.9737	0.9742	0.9753	0.9764	0.9775	0.9786	0.9797	0.9807
-176.85			0.9729	0.9733	0.9738	0.9742	0.9747	0.9758	0.9769	0.9780	0.9791	0.9802	0.9813
1.841			1.1101	1.1106	1.1111	1.1116	1.1121	1.1134	1.1147	1.1159	1.1172	1.1184	1.1196
96.4			0.9719	0.9724	0.9728	0.9733	0.9737	0.9748	0.9759	0.9770	0.9781	0.9792	0.9803
-176.75			0.9724	0.9729	0.9733	0.9738	0.9742	0.9754	0.9765	0.9776	0.9787	0.9798	0.9808
1.857			1.1095	1.1101	1.1106	1.1111	1.1116	1.1129	1.1142	1.1154	1.1167	1.1179	1.1191
96.5			0.9714	0.9719	0.9724	0.9728	0.9733	0.9744	0.9755	0.9766	0.9777	0.9788	0.9799
-176.65			0.9720	0.9724	0.9729	0.9733	0.9738	0.9749	0.9760	0.9771	0.9782	0.9793	0.9804
1.874			1.1090	1.1095	1.1101	1.1106	1.1111	1.1124	1.1137	1.1149	1.1162	1.1174	1.1186
96.6			0.9710	0.9714	0.9719	0.9724	0.9728	0.9739	0.9751	0.9762	0.9773	0.9783	0.9794
-176.55			0.9715	0.9720	0.9724	0.9729	0.9733	0.9744	0.9756	0.9767	0.9778	0.9789	0.9800
1.891			1.1085	1.1090	1.1095	1.1101	1.1106	1.1119	1.1131	1.1144	1.1157	1.1169	1.1181
96.7			0.9705	0.9710	0.9714	0.9719	0.9724	0.9735	0.9746	0.9757	0.9768	0.9779	0.9790
-176.45			0.9711	0.9715	0.9720	0.9724	0.9729	0.9740	0.9751	0.9762	0.9773	0.9784	0.9795
1.908			1.1080	1.1085	1.1090	1.1096	1.1101	1.1114	1.1126	1.1139	1.1152	1.1164	1.1176
96.8			0.9701	0.9705	0.9710	0.9714	0.9719	0.9730	0.9741	0.9753	0.9764	0.9775	0.9785
-176.35			0.9706	0.9711	0.9715	0.9720	0.9724	0.9736	0.9747	0.9758	0.9769	0.9780	0.9791
1.926			1.1075	1.1080	1.1085	1.1090	1.1096	1.1109	1.1121	1.1134	1.1147	1.1159	1.1171
96.9			0.9696	0.9701	0.9705	0.9710	0.9715	0.9726	0.9737	0.9748	0.9759	0.9770	0.9781
-176.25			0.9701	0.9706	0.9711	0.9715	0.9720	0.9731	0.9742	0.9753	0.9764	0.9775	0.9786
1.943			1.1069	1.1075	1.1080	1.1085	1.1090	1.1103	1.1116	1.1129	1.1141	1.1154	1.1166
97.0			0.9692	0.9696	0.9701	0.9705	0.9710	0.9721	0.9733	0.9744	0.9755	0.9766	0.9777
-176.15			0.9697	0.9701	0.9706	0.9711	0.9715	0.9727	0.9738	0.9749	0.9760	0.9771	0.9782
1.961			1.1064	1.1069	1.1075	1.1080	1.1085	1.1098	1.1111	1.1124	1.1136	1.1149	1.1161
97.1			0.9687	0.9692	0.9696	0.9701	0.9705	0.9717	0.9728	0.9739	0.9750	0.9761	0.9772
-176.05			0.9692	0.9697	0.9702	0.9706	0.9711	0.9722	0.9733	0.9744	0.9755	0.9766	0.9777
1.978			1.1059	1.1064	1.1070	1.1075	1.1080	1.1093	1.1106	1.1119	1.1131	1.1144	1.1156
97.2			0.9682	0.9687	0.9692	0.9696	0.9701	0.9712	0.9724	0.9735	0.9746	0.9757	0.9768
-175.95			0.9688	0.9692	0.9697	0.9702	0.9706	0.9718	0.9729	0.9740	0.9751	0.9762	0.9773
1.996			1.1054	1.1059	1.1064	1.1070	1.1075	1.1088	1.1101	1.1114	1.1126	1.1139	1.1151
97.3			0.9682	0.9687	0.9692	0.9696	0.9701	0.9712	0.9724	0.9735	0.9746	0.9757	0.9768
-175.85			0.9688	0.9692	0.9697	0.9702	0.9706	0.9718	0.9729	0.9740	0.9751	0.9762	0.9773
2.014			1.1054	1.1059	1.1064	1.1070	1.1075	1.1088	1.1101	1.1114	1.1126	1.1139	1.1151
97.4			0.9678	0.9683	0.9687	0.9692	0.9703	0.9715	0.9726	0.9737	0.9748	0.9759	0.9770
-175.75			0.9683	0.9688	0.9692	0.9697	0.9709	0.9720	0.9731	0.9742	0.9753	0.9764	0.9775
2.032			1.1049	1.1054	1.1059	1.1064	1.1076	1.1089	1.1101	1.1113	1.1126	1.1138	1.1150
97.5			0.9673	0.9678	0.9683	0.9687	0.9699	0.9711	0.9722	0.9733	0.9744	0.9755	0.9766
-175.65			0.9679	0.9683	0.9688	0.9693	0.9704	0.9716	0.9727	0.9738	0.9749	0.9760	0.9771
2.050			1.1043	1.1049	1.1054	1.1059	1.1072	1.1085	1.1098	1.1111	1.1124	1.1136	1.1148
97.6			0.9669	0.9673	0.9678	0.9683	0.9694	0.9706	0.9717	0.9728	0.9739	0.9750	0.9761
-175.55			0.9674	0.9679	0.9683	0.9688	0.9700	0.9711	0.9722	0.9733	0.9744	0.9755	0.9766
2.068			1.1038	1.1043	1.1049	1.1054	1.1067	1.1080	1.1093	1.1106	1.1118	1.1131	1.1143
97.7			0.9664	0.9669	0.9673	0.9678	0.9690	0.9702	0.9713	0.9724	0.9735	0.9746	0.9757
-175.45			0.9669	0.9674	0.9679	0.9683	0.9695	0.9707	0.9718	0.9729	0.9740	0.9751	0.9762
2.086			1.1033	1.1038	1.1044	1.1049	1.1062	1.1075	1.1088	1.1101	1.1114	1.1126	1.1138
97.8			0.9659	0.9664	0.9669	0.9674	0.9685	0.9697	0.9708	0.9719	0.9730	0.9741	0.9752
-175.35			0.9665	0.9669	0.9674	0.9679	0.9691	0.9703	0.9714	0.9725	0.9736	0.9747	0.9758
2.105			1.1028	1.1033	1.1039	1.1044	1.1057	1.1070	1.1083	1.1096	1.1108	1.1120	1.1132
97.9			0.9655	0.9660	0.9664	0.9669	0.9681	0.9692	0.9704	0.9715	0.9726	0.9737	0.9748
-175.25			0.9660	0.9665	0.9670	0.9674	0.9686	0.9698	0.9709	0.9720	0.9731	0.9742	0.9753
2.123			1.1022	1.1028	1.1033	1.1038	1.1052	1.1065	1.1078	1.1091	1.1104	1.1116	1.1128



TABLE 4 - CONTINUED

DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR		TABLE ENTRIES												
		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS						2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS						
BAR	KP/C	0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
98.0	-175.15	0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.294	20.394	25.493	30.591	35.690	40.789
2.142					0.9650	0.9655	0.9660	0.9664	0.9676	0.9688	0.9699	0.9710	0.9722	0.9733
					0.9656	0.9660	0.9665	0.9670	0.9681	0.9693	0.9704	0.9716	0.9727	0.9738
					1.1017	1.1022	1.1028	1.1033	1.1047	1.1060	1.1073	1.1086	1.1099	1.1112
98.1	-175.05				0.9646	0.9650	0.9655	0.9660	0.9672	0.9683	0.9695	0.9706	0.9717	0.9728
2.161					0.9651	0.9656	0.9660	0.9665	0.9677	0.9688	0.9700	0.9711	0.9723	0.9734
					1.1012	1.1017	1.1023	1.1028	1.1041	1.1055	1.1068	1.1081	1.1094	1.1106
98.2	-174.95				0.9641	0.9646	0.9651	0.9655	0.9667	0.9679	0.9690	0.9702	0.9713	0.9724
2.180					0.9646	0.9651	0.9656	0.9661	0.9672	0.9684	0.9695	0.9707	0.9718	0.9729
					1.1007	1.1012	1.1017	1.1023	1.1036	1.1049	1.1063	1.1076	1.1088	1.1101
98.3	-174.85				0.9636	0.9641	0.9646	0.9651	0.9662	0.9674	0.9686	0.9697	0.9708	0.9720
2.199					0.9642	0.9647	0.9651	0.9656	0.9668	0.9679	0.9691	0.9702	0.9714	0.9725
					1.1001	1.1007	1.1012	1.1018	1.1031	1.1044	1.1057	1.1071	1.1083	1.1096
98.4	-174.75				0.9632	0.9637	0.9641	0.9646	0.9658	0.9670	0.9681	0.9693	0.9704	0.9715
2.218					0.9637	0.9642	0.9647	0.9651	0.9663	0.9675	0.9686	0.9698	0.9709	0.9721
					1.0996	1.1001	1.1007	1.1012	1.1026	1.1039	1.1052	1.1065	1.1078	1.1091
98.5	-174.65				0.9627	0.9632	0.9637	0.9642	0.9653	0.9665	0.9677	0.9688	0.9700	0.9711
2.237					0.9632	0.9637	0.9642	0.9647	0.9659	0.9670	0.9682	0.9693	0.9705	0.9717
					1.0991	1.0996	1.1002	1.1007	1.1021	1.1034	1.1047	1.1060	1.1073	1.1086
98.6	-174.55				0.9623	0.9627	0.9632	0.9637	0.9648	0.9661	0.9672	0.9684	0.9695	0.9706
2.257					0.9628	0.9633	0.9637	0.9642	0.9654	0.9666	0.9677	0.9689	0.9700	0.9712
					1.0985	1.0991	1.0996	1.1002	1.1015	1.1029	1.1042	1.1055	1.1068	1.1081
98.7	-174.45				0.9618	0.9623	0.9628	0.9632	0.9644	0.9656	0.9668	0.9679	0.9691	0.9702
2.276					0.9623	0.9628	0.9633	0.9638	0.9650	0.9661	0.9673	0.9684	0.9695	0.9707
					1.0980	1.0986	1.0991	1.0997	1.1010	1.1024	1.1037	1.1050	1.1063	1.1076
98.8	-174.35				0.9613	0.9618	0.9623	0.9628	0.9640	0.9652	0.9663	0.9675	0.9686	0.9698
2.296					0.9619	0.9623	0.9628	0.9633	0.9645	0.9657	0.9668	0.9680	0.9692	0.9703
					1.0975	1.0980	1.0986	1.0991	1.1005	1.1018	1.1032	1.1045	1.1058	1.1071
98.9	-174.25				0.9609	0.9614	0.9618	0.9623	0.9635	0.9647	0.9659	0.9670	0.9682	0.9693
2.316					0.9614	0.9619	0.9624	0.9628	0.9640	0.9652	0.9664	0.9676	0.9687	0.9698
					1.0970	1.0975	1.0981	1.0986	1.1000	1.1013	1.1027	1.1040	1.1053	1.1066
99.0	-174.15				0.9604	0.9609	0.9614	0.9619	0.9631	0.9642	0.9654	0.9666	0.9677	0.9689
2.336					0.9609	0.9614	0.9619	0.9624	0.9636	0.9648	0.9659	0.9671	0.9683	0.9694
					1.0964	1.0970	1.0975	1.0981	1.0995	1.1008	1.1021	1.1035	1.1048	1.1061
99.1	-174.05				0.9599	0.9604	0.9609	0.9614	0.9626	0.9638	0.9650	0.9661	0.9673	0.9684
2.356					0.9605	0.9610	0.9614	0.9619	0.9631	0.9643	0.9655	0.9667	0.9678	0.9690
					1.0959	1.0964	1.0970	1.0976	1.0990	1.1003	1.1016	1.1029	1.1043	1.1056
99.2	-173.95				0.9595	0.9600	0.9604	0.9609	0.9621	0.9633	0.9645	0.9657	0.9668	0.9680
2.376					0.9600	0.9605	0.9610	0.9615	0.9627	0.9639	0.9650	0.9662	0.9674	0.9685
					1.0954	1.0959	1.0965	1.0970	1.0984	1.0998	1.1011	1.1025	1.1038	1.1051
99.3	-173.85				0.9590	0.9595	0.9600	0.9605	0.9617	0.9629	0.9641	0.9652	0.9664	0.9675
2.396					0.9595	0.9600	0.9605	0.9610	0.9622	0.9634	0.9646	0.9658	0.9669	0.9681
					1.0948	1.0954	1.0959	1.0965	1.0979	1.0992	1.1006	1.1019	1.1033	1.1046
99.4	-173.75				0.9585	0.9590	0.9595	0.9600	0.9612	0.9624	0.9636	0.9648	0.9659	0.9671
2.417					0.9591	0.9596	0.9600	0.9605	0.9617	0.9629	0.9641	0.9653	0.9665	0.9676
					1.0943	1.0949	1.0954	1.0960	1.0974	1.0987	1.1001	1.1014	1.1028	1.1041
99.5	-173.65				0.9581	0.9586	0.9591	0.9595	0.9608	0.9620	0.9632	0.9643	0.9655	0.9667
2.438					0.9586	0.9591	0.9596	0.9601	0.9613	0.9625	0.9637	0.9649	0.9660	0.9672
					1.0938	1.0943	1.0949	1.0954	1.0968	1.0982	1.0996	1.1009	1.1022	1.1036
99.6	-173.55				0.9576	0.9581	0.9586	0.9591	0.9603	0.9615	0.9627	0.9639	0.9651	0.9662
2.458					0.9581	0.9586	0.9591	0.9596	0.9608	0.9620	0.9632	0.9644	0.9656	0.9667
					1.0932	1.0938	1.0944	1.0949	1.0963	1.0977	1.0990	1.1004	1.1017	1.1031
99.7	-173.45				0.9571	0.9576	0.9581	0.9586	0.9599	0.9611	0.9623	0.9634	0.9646	0.9658
2.479					0.9577	0.9582	0.9587	0.9591	0.9604	0.9616	0.9628	0.9640	0.9651	0.9663
					1.0927	1.0933	1.0938	1.0944	1.0958	1.0972	1.0985	1.0999	1.1012	1.1025
99.8	-173.35				0.9567	0.9572	0.9577	0.9582	0.9594	0.9606	0.9618	0.9630	0.9642	0.9653
2.500					0.9572	0.9577	0.9582	0.9587	0.9599	0.9611	0.9623	0.9635	0.9647	0.9658
					1.0922	1.0927	1.0933	1.0939	1.0953	1.0966	1.0980	1.0994	1.1008	1.1020
99.9	-173.25				0.9562	0.9567	0.9572	0.9577	0.9589	0.9601	0.9613	0.9625	0.9637	0.9649
2.521					0.9567	0.9572	0.9577	0.9582	0.9594	0.9607	0.9619	0.9631	0.9642	0.9654
					1.0916	1.0922	1.0928	1.0933	1.0947	1.0961	1.0975	1.0989	1.1002	1.1015

		TABLE ENTRIES											
1. TEMPERATURE, K		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, C		3. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/DM <sup>3</sup>											
BAR	0.800	1.008	2.000	4.000	6.000	8.008	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KP/CM <sup>2</sup>	0.816	1.028	2.035	4.075	6.118	8.158	10.197	15.239	20.354	25.493	30.591	35.650	40.785
100.0				0.957	0.9562	0.9567	0.9572	0.9585	0.9587	0.9609	0.9621	0.9633	0.9644
-173.15				0.9563	0.9568	0.9573	0.9578	0.9590	0.9602	0.9614	0.9626	0.9638	0.9650
2.542				1.0911	1.0917	1.0922	1.0928	1.0942	1.0956	1.0970	1.0983	1.0997	1.1010
100.1				0.9553	0.9558	0.9563	0.9568	0.9580	0.9592	0.9604	0.9616	0.9628	0.9640
-173.85				0.9558	0.9563	0.9568	0.9573	0.9585	0.9597	0.9610	0.9622	0.9633	0.9645
2.564				1.0906	1.0911	1.0917	1.0923	1.0937	1.0951	1.0965	1.0978	1.0992	1.1005
100.2				0.9548	0.9553	0.9558	0.9563	0.9575	0.9588	0.9600	0.9612	0.9624	0.9635
-172.95				0.9553	0.9558	0.9563	0.9568	0.9581	0.9593	0.9605	0.9617	0.9629	0.9641
2.585				1.0900	1.0906	1.0912	1.0917	1.0932	1.0946	1.0959	1.0973	1.0987	1.1000
100.3				0.9543	0.9548	0.9553	0.9558	0.9571	0.9583	0.9595	0.9607	0.9619	0.9631
-172.85				0.9549	0.9554	0.9559	0.9564	0.9576	0.9588	0.9600	0.9612	0.9624	0.9636
2.607				1.0895	1.0901	1.0906	1.0912	1.0926	1.0940	1.0954	1.0968	1.0981	1.0995
100.4				0.9539	0.9544	0.9549	0.9554	0.9566	0.9578	0.9591	0.9603	0.9615	0.9627
-172.75				0.9544	0.9549	0.9554	0.9559	0.9571	0.9583	0.9596	0.9608	0.9620	0.9632
2.629				1.0890	1.0895	1.0901	1.0907	1.0921	1.0935	1.0949	1.0963	1.0976	1.0990
100.5				0.9534	0.9539	0.9544	0.9549	0.9562	0.9574	0.9586	0.9598	0.9610	0.9622
-172.65				0.9539	0.9544	0.9549	0.9554	0.9567	0.9579	0.9591	0.9603	0.9615	0.9627
2.651				1.0884	1.0890	1.0896	1.0901	1.0915	1.0929	1.0944	1.0958	1.0971	1.0985
100.6				0.9529	0.9534	0.9539	0.9544	0.9557	0.9569	0.9582	0.9594	0.9606	0.9617
-172.55				0.9534	0.9539	0.9545	0.9550	0.9562	0.9574	0.9587	0.9599	0.9611	0.9623
2.673				1.0879	1.0885	1.0890	1.0896	1.0911	1.0925	1.0939	1.0952	1.0966	1.0980
100.7				0.9524	0.9530	0.9535	0.9540	0.9552	0.9565	0.9577	0.9589	0.9601	0.9613
-172.45				0.9530	0.9535	0.9540	0.9545	0.9557	0.9570	0.9582	0.9594	0.9606	0.9618
2.695				1.0873	1.0879	1.0885	1.0891	1.0905	1.0919	1.0933	1.0947	1.0961	1.0974
100.8				0.9520	0.9525	0.9530	0.9535	0.9548	0.9560	0.9572	0.9585	0.9597	0.9609
-172.35				0.9525	0.9530	0.9535	0.9540	0.9553	0.9565	0.9578	0.9590	0.9602	0.9614
2.717				1.0868	1.0874	1.0880	1.0885	1.0900	1.0914	1.0928	1.0942	1.0956	1.0969
100.9				0.9515	0.9520	0.9525	0.9530	0.9543	0.9555	0.9568	0.9580	0.9592	0.9604
-172.25				0.9520	0.9525	0.9530	0.9535	0.9548	0.9561	0.9573	0.9586	0.9598	0.9610
2.740				1.0863	1.0868	1.0874	1.0880	1.0894	1.0909	1.0923	1.0937	1.0951	1.0964
101.0				0.9510	0.9515	0.9521	0.9526	0.9538	0.9551	0.9563	0.9575	0.9588	0.9600
-172.15				0.9516	0.9521	0.9526	0.9531	0.9544	0.9556	0.9568	0.9581	0.9593	0.9605
2.763				1.0857	1.0863	1.0869	1.0875	1.0888	1.0903	1.0918	1.0932	1.0945	1.0959
101.1				0.9506	0.9511	0.9516	0.9521	0.9533	0.9546	0.9559	0.9571	0.9583	0.9595
-172.05				0.9511	0.9516	0.9521	0.9526	0.9538	0.9551	0.9564	0.9576	0.9588	0.9600
2.785				1.0852	1.0858	1.0864	1.0869	1.0884	1.0898	1.0912	1.0926	1.0940	1.0954
101.2				0.9501	0.9506	0.9511	0.9516	0.9528	0.9542	0.9554	0.9566	0.9578	0.9591
-171.95				0.9506	0.9511	0.9516	0.9521	0.9533	0.9547	0.9559	0.9572	0.9584	0.9596
2.808				1.0846	1.0852	1.0858	1.0864	1.0877	1.0893	1.0907	1.0921	1.0935	1.0948
101.3				0.9496	0.9501	0.9506	0.9512	0.9524	0.9537	0.9549	0.9562	0.9574	0.9586
-171.85				0.9501	0.9506	0.9512	0.9517	0.9529	0.9542	0.9555	0.9567	0.9579	0.9591
2.831				1.0841	1.0847	1.0853	1.0859	1.0873	1.0888	1.0902	1.0916	1.0930	1.0944
101.4				0.9491	0.9497	0.9502	0.9507	0.9520	0.9532	0.9545	0.9557	0.9569	0.9582
-171.75				0.9497	0.9502	0.9507	0.9512	0.9525	0.9538	0.9550	0.9562	0.9575	0.9587
2.854				1.0836	1.0842	1.0847	1.0853	1.0868	1.0882	1.0897	1.0911	1.0925	1.0939
101.5				0.9487	0.9492	0.9497	0.9502	0.9515	0.9528	0.9540	0.9553	0.9565	0.9577
-171.65				0.9492	0.9497	0.9502	0.9507	0.9520	0.9533	0.9546	0.9558	0.9570	0.9582
2.878				1.0830	1.0836	1.0842	1.0848	1.0863	1.0877	1.0891	1.0906	1.0920	1.0933
101.6				0.9482	0.9487	0.9492	0.9497	0.9510	0.9523	0.9536	0.9548	0.9560	0.9573
-171.55				0.9487	0.9492	0.9497	0.9503	0.9516	0.9528	0.9541	0.9553	0.9566	0.9578
2.901				1.0825	1.0831	1.0837	1.0843	1.0857	1.0872	1.0886	1.0900	1.0914	1.0928
101.7				0.9477	0.9482	0.9488	0.9493	0.9506	0.9518	0.9531	0.9543	0.9556	0.9568
-171.45				0.9482	0.9488	0.9493	0.9498	0.9511	0.9524	0.9536	0.9548	0.9561	0.9573
2.925				1.0819	1.0825	1.0831	1.0837	1.0852	1.0866	1.0881	1.0895	1.0909	1.0923
101.8				0.9472	0.9478	0.9483	0.9488	0.9501	0.9514	0.9526	0.9539	0.9551	0.9563
-171.35				0.9478	0.9483	0.9488	0.9493	0.9506	0.9519	0.9532	0.9544	0.9556	0.9569
2.949				1.0814	1.0820	1.0826	1.0832	1.0847	1.0861	1.0876	1.0890	1.0904	1.0918
101.9				0.9468	0.9473	0.9478	0.9483	0.9496	0.9509	0.9522	0.9534	0.9547	0.9559
-171.25				0.9473	0.9478	0.9483	0.9488	0.9501	0.9514	0.9527	0.9540	0.9552	0.9564
2.972				1.0808	1.0814	1.0820	1.0826	1.0841	1.0856	1.0870	1.0885	1.0899	1.0913

TABLE 4 - CONTINUED

DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

BAR KPa/cm <sup>2</sup>	TABLE ENTRIES												
	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.156	10.000 10.197	15.000 15.296	20.000 20.394	25.000 25.493	30.000 30.591	35.000 35.690	40.000 40.769
102.0 -171.15 2.997	0.9463 0.9468 1.0803	0.9468 0.9473 1.0809	0.9473 0.9479 1.0815	0.9479 0.9484 1.0821	0.9482 0.9487 1.0828	0.9487 0.9492 1.0835	0.9492 0.9497 1.0842	0.9497 0.9502 1.0849	0.9502 0.9507 1.0856	0.9507 0.9512 1.0863	0.9512 0.9517 1.0870	0.9517 0.9522 1.0877	0.9522 0.9527 1.0884
102.1 -171.05 3.021	0.9458 0.9463 1.0799	0.9463 0.9469 1.0804	0.9469 0.9474 1.0810	0.9474 0.9479 1.0816	0.9479 0.9484 1.0822	0.9482 0.9487 1.0829	0.9487 0.9492 1.0836	0.9492 0.9497 1.0843	0.9497 0.9502 1.0850	0.9502 0.9507 1.0857	0.9507 0.9512 1.0864	0.9512 0.9517 1.0871	0.9517 0.9522 1.0878
102.2 -170.95 3.045	0.9453 0.9458 1.0792	0.9459 0.9464 1.0798	0.9464 0.9469 1.0804	0.9469 0.9474 1.0810	0.9474 0.9479 1.0816	0.9479 0.9484 1.0822	0.9482 0.9487 1.0829	0.9487 0.9492 1.0836	0.9492 0.9497 1.0843	0.9497 0.9502 1.0850	0.9502 0.9507 1.0857	0.9507 0.9512 1.0864	0.9512 0.9517 1.0871
102.3 -170.85 3.079	0.9448 0.9454 1.0787	0.9454 0.9459 1.0793	0.9459 0.9464 1.0799	0.9464 0.9469 1.0805	0.9469 0.9474 1.0812	0.9474 0.9479 1.0819	0.9479 0.9484 1.0826	0.9482 0.9487 1.0833	0.9487 0.9492 1.0840	0.9492 0.9497 1.0847	0.9497 0.9502 1.0854	0.9502 0.9507 1.0861	0.9507 0.9512 1.0868
102.4 -170.75 3.094	0.9444 0.9449 1.0781	0.9449 0.9454 1.0787	0.9454 0.9459 1.0793	0.9459 0.9464 1.0799	0.9464 0.9469 1.0805	0.9469 0.9474 1.0812	0.9474 0.9479 1.0819	0.9479 0.9484 1.0826	0.9482 0.9487 1.0833	0.9487 0.9492 1.0840	0.9492 0.9497 1.0847	0.9497 0.9502 1.0854	0.9502 0.9507 1.0861
102.5 -170.65 3.119	0.9439 0.9444 1.0776	0.9444 0.9449 1.0782	0.9449 0.9454 1.0788	0.9454 0.9459 1.0794	0.9459 0.9464 1.0800	0.9464 0.9469 1.0807	0.9469 0.9474 1.0814	0.9474 0.9479 1.0821	0.9479 0.9484 1.0828	0.9484 0.9489 1.0835	0.9489 0.9494 1.0842	0.9494 0.9499 1.0849	0.9499 0.9504 1.0856
102.6 -170.55 3.144	0.9434 0.9439 1.0770	0.9439 0.9445 1.0776	0.9445 0.9450 1.0783	0.9450 0.9455 1.0789	0.9455 0.9460 1.0796	0.9460 0.9465 1.0803	0.9465 0.9470 1.0810	0.9470 0.9475 1.0817	0.9475 0.9480 1.0824	0.9480 0.9485 1.0831	0.9485 0.9490 1.0838	0.9490 0.9495 1.0845	0.9495 0.9500 1.0852
102.7 -170.45 3.169	0.9429 0.9434 1.0765	0.9434 0.9440 1.0771	0.9440 0.9445 1.0777	0.9445 0.9450 1.0783	0.9450 0.9455 1.0790	0.9455 0.9460 1.0796	0.9460 0.9465 1.0803	0.9465 0.9470 1.0810	0.9470 0.9475 1.0817	0.9475 0.9480 1.0824	0.9480 0.9485 1.0831	0.9485 0.9490 1.0838	0.9490 0.9495 1.0845
102.8 -170.35 3.194	0.9425 0.9430 1.0759	0.9430 0.9435 1.0765	0.9435 0.9440 1.0772	0.9440 0.9445 1.0778	0.9445 0.9450 1.0785	0.9450 0.9455 1.0792	0.9455 0.9460 1.0799	0.9460 0.9465 1.0806	0.9465 0.9470 1.0813	0.9470 0.9475 1.0820	0.9475 0.9480 1.0827	0.9480 0.9485 1.0834	0.9485 0.9490 1.0841
102.9 -170.25 3.219	0.9420 0.9425 1.0754	0.9425 0.9430 1.0760	0.9430 0.9435 1.0766	0.9435 0.9440 1.0772	0.9440 0.9445 1.0779	0.9445 0.9450 1.0786	0.9450 0.9455 1.0793	0.9455 0.9460 1.0800	0.9460 0.9465 1.0807	0.9465 0.9470 1.0814	0.9470 0.9475 1.0821	0.9475 0.9480 1.0828	0.9480 0.9485 1.0835
103.0 -170.15 3.245	0.9415 0.9420 1.0748	0.9420 0.9425 1.0755	0.9425 0.9430 1.0761	0.9430 0.9435 1.0767	0.9435 0.9440 1.0774	0.9440 0.9445 1.0781	0.9445 0.9450 1.0788	0.9450 0.9455 1.0795	0.9455 0.9460 1.0802	0.9460 0.9465 1.0809	0.9465 0.9470 1.0816	0.9470 0.9475 1.0823	0.9475 0.9480 1.0830
103.1 -170.05 3.271	0.9410 0.9415 1.0743	0.9416 0.9421 1.0749	0.9421 0.9426 1.0755	0.9426 0.9431 1.0761	0.9431 0.9436 1.0767	0.9436 0.9441 1.0774	0.9441 0.9446 1.0781	0.9446 0.9451 1.0788	0.9451 0.9456 1.0795	0.9456 0.9461 1.0802	0.9461 0.9466 1.0809	0.9466 0.9471 1.0816	0.9471 0.9476 1.0823
103.2 -169.95 3.296	0.9405 0.9410 1.0737	0.9411 0.9416 1.0744	0.9416 0.9421 1.0750	0.9421 0.9426 1.0756	0.9426 0.9431 1.0763	0.9431 0.9436 1.0770	0.9436 0.9441 1.0777	0.9441 0.9446 1.0784	0.9446 0.9451 1.0791	0.9451 0.9456 1.0798	0.9456 0.9461 1.0805	0.9461 0.9466 1.0812	0.9466 0.9471 1.0819
103.3 -169.85 3.322	0.9400 0.9406 1.0732	0.9406 0.9411 1.0738	0.9411 0.9416 1.0744	0.9416 0.9421 1.0751	0.9421 0.9426 1.0757	0.9426 0.9431 1.0764	0.9431 0.9436 1.0771	0.9436 0.9441 1.0778	0.9441 0.9446 1.0785	0.9446 0.9451 1.0792	0.9451 0.9456 1.0799	0.9456 0.9461 1.0806	0.9461 0.9466 1.0813
103.4 -169.75 3.348	0.9396 0.9401 1.0726	0.9401 0.9406 1.0733	0.9406 0.9411 1.0739	0.9411 0.9416 1.0745	0.9416 0.9421 1.0752	0.9421 0.9426 1.0759	0.9426 0.9431 1.0766	0.9431 0.9436 1.0773	0.9436 0.9441 1.0780	0.9441 0.9446 1.0787	0.9446 0.9451 1.0794	0.9451 0.9456 1.0801	0.9456 0.9461 1.0808
103.5 -169.65 3.375	0.9391 0.9396 1.0721	0.9396 0.9401 1.0727	0.9401 0.9406 1.0733	0.9406 0.9411 1.0740	0.9411 0.9416 1.0746	0.9416 0.9421 1.0753	0.9421 0.9426 1.0760	0.9426 0.9431 1.0767	0.9431 0.9436 1.0774	0.9436 0.9441 1.0781	0.9441 0.9446 1.0788	0.9446 0.9451 1.0795	0.9451 0.9456 1.0802
103.6 -169.55 3.401	0.9386 0.9391 1.0715	0.9391 0.9397 1.0722	0.9397 0.9402 1.0728	0.9402 0.9408 1.0734	0.9408 0.9414 1.0741	0.9414 0.9420 1.0748	0.9420 0.9426 1.0755	0.9426 0.9432 1.0762	0.9432 0.9438 1.0769	0.9438 0.9444 1.0776	0.9444 0.9450 1.0783	0.9450 0.9456 1.0790	0.9456 0.9462 1.0797
103.7 -169.45 3.428	0.9381 0.9386 1.0710	0.9387 0.9392 1.0716	0.9392 0.9397 1.0722	0.9397 0.9403 1.0729	0.9403 0.9409 1.0735	0.9409 0.9415 1.0742	0.9415 0.9421 1.0749	0.9421 0.9427 1.0756	0.9427 0.9433 1.0763	0.9433 0.9439 1.0770	0.9439 0.9445 1.0777	0.9445 0.9451 1.0784	0.9451 0.9457 1.0791
103.8 -169.35 3.454	0.9376 0.9381 1.0704	0.9382 0.9387 1.0711	0.9387 0.9392 1.0717	0.9392 0.9398 1.0723	0.9398 0.9404 1.0730	0.9404 0.9410 1.0737	0.9410 0.9416 1.0744	0.9416 0.9422 1.0751	0.9422 0.9428 1.0758	0.9428 0.9434 1.0765	0.9434 0.9440 1.0772	0.9440 0.9446 1.0779	0.9446 0.9452 1.0786
103.9 -169.25 3.481	0.9371 0.9376 1.0699	0.9377 0.9382 1.0705	0.9382 0.9388 1.0711	0.9388 0.9393 1.0718	0.9393 0.9399 1.0725	0.9399 0.9405 1.0732	0.9405 0.9411 1.0739	0.9411 0.9417 1.0746	0.9417 0.9423 1.0753	0.9423 0.9429 1.0760	0.9429 0.9435 1.0767	0.9435 0.9441 1.0774	0.9441 0.9447 1.0781



TABLE 4 - CONTINUED

DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TCRR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>3</sup>												
BAR		0.800	1.000	2.039	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KP/CM <sup>2</sup>		0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.256	20.354	25.493	30.591	35.690	40.789
104.0					0.9366	0.9372	0.9378	0.9383	0.9397	0.9411	0.9424	0.9437	0.9450	0.9463
-169.15					0.9372	0.9377	0.9383	0.9388	0.9402	0.9416	0.9429	0.9442	0.9455	0.9468
3.508					1.0693	1.0699	1.0706	1.0712	1.0722	1.0743	1.0759	1.0774	1.0785	1.0804
104.1					0.9362	0.9367	0.9373	0.9378	0.9392	0.9406	0.9419	0.9433	0.9446	0.9459
-169.05					0.9367	0.9372	0.9378	0.9384	0.9397	0.9411	0.9424	0.9438	0.9451	0.9464
3.536					1.0687	1.0694	1.0700	1.0707	1.0722	1.0738	1.0753	1.0768	1.0783	1.0798
104.2					0.9357	0.9362	0.9368	0.9374	0.9387	0.9401	0.9415	0.9428	0.9441	0.9454
-168.95					0.9362	0.9367	0.9373	0.9379	0.9393	0.9406	0.9420	0.9433	0.9446	0.9459
3.563					1.0682	1.0688	1.0695	1.0701	1.0713	1.0731	1.0748	1.0763	1.0778	1.0793
104.3					0.9352	0.9358	0.9363	0.9369	0.9383	0.9396	0.9410	0.9423	0.9436	0.9449
-168.85					0.9357	0.9363	0.9368	0.9374	0.9388	0.9401	0.9415	0.9428	0.9442	0.9455
3.590					1.0676	1.0683	1.0689	1.0696	1.0711	1.0727	1.0743	1.0758	1.0773	1.0788
104.4					0.9347	0.9353	0.9358	0.9364	0.9378	0.9392	0.9405	0.9419	0.9432	0.9445
-168.75					0.9352	0.9358	0.9363	0.9369	0.9383	0.9397	0.9410	0.9424	0.9437	0.9450
3.618					1.0671	1.0677	1.0684	1.0690	1.0706	1.0722	1.0737	1.0752	1.0768	1.0783
104.5					0.9342	0.9348	0.9353	0.9359	0.9373	0.9387	0.9400	0.9414	0.9427	0.9440
-168.65					0.9347	0.9353	0.9359	0.9364	0.9378	0.9392	0.9406	0.9419	0.9432	0.9445
3.646					1.0665	1.0672	1.0678	1.0685	1.0701	1.0716	1.0732	1.0747	1.0762	1.0777
104.6					0.9337	0.9343	0.9349	0.9354	0.9368	0.9382	0.9396	0.9409	0.9422	0.9436
-168.55					0.9342	0.9348	0.9354	0.9359	0.9373	0.9387	0.9401	0.9414	0.9428	0.9441
3.674					1.0660	1.0666	1.0673	1.0679	1.0695	1.0711	1.0726	1.0742	1.0757	1.0772
104.7					0.9332	0.9338	0.9344	0.9349	0.9363	0.9377	0.9391	0.9404	0.9418	0.9431
-168.45					0.9337	0.9343	0.9349	0.9354	0.9368	0.9382	0.9396	0.9410	0.9423	0.9436
3.702					1.0654	1.0661	1.0667	1.0674	1.0690	1.0705	1.0721	1.0736	1.0752	1.0767
104.8					0.9327	0.9333	0.9339	0.9345	0.9359	0.9373	0.9386	0.9400	0.9413	0.9426
-168.35					0.9332	0.9338	0.9344	0.9350	0.9364	0.9378	0.9391	0.9405	0.9418	0.9432
3.730					1.0648	1.0655	1.0662	1.0668	1.0684	1.0700	1.0716	1.0731	1.0746	1.0761
104.9					0.9322	0.9328	0.9334	0.9340	0.9354	0.9368	0.9381	0.9395	0.9408	0.9422
-168.25					0.9328	0.9333	0.9339	0.9345	0.9359	0.9373	0.9387	0.9400	0.9414	0.9427
3.759					1.0643	1.0649	1.0656	1.0662	1.0679	1.0695	1.0710	1.0726	1.0741	1.0756
105.0					0.9318	0.9323	0.9329	0.9335	0.9348	0.9362	0.9377	0.9390	0.9404	0.9417
-168.15					0.9323	0.9328	0.9334	0.9340	0.9354	0.9368	0.9382	0.9395	0.9409	0.9422
3.787					1.0637	1.0644	1.0650	1.0657	1.0673	1.0689	1.0705	1.0720	1.0736	1.0751
105.1					0.9313	0.9318	0.9324	0.9330	0.9344	0.9358	0.9372	0.9386	0.9399	0.9412
-168.05					0.9318	0.9324	0.9329	0.9335	0.9348	0.9363	0.9377	0.9391	0.9404	0.9418
3.816					1.0632	1.0638	1.0645	1.0651	1.0666	1.0684	1.0699	1.0715	1.0730	1.0746
105.2					0.9308	0.9314	0.9319	0.9325	0.9339	0.9353	0.9367	0.9381	0.9394	0.9408
-167.95					0.9313	0.9319	0.9324	0.9330	0.9344	0.9358	0.9372	0.9386	0.9400	0.9413
3.845					1.0626	1.0633	1.0639	1.0646	1.0662	1.0678	1.0694	1.0710	1.0725	1.0740
105.3					0.9303	0.9309	0.9314	0.9320	0.9334	0.9349	0.9362	0.9376	0.9390	0.9403
-167.85					0.9308	0.9314	0.9320	0.9325	0.9340	0.9354	0.9368	0.9381	0.9395	0.9408
3.874					1.0620	1.0627	1.0634	1.0640	1.0657	1.0673	1.0688	1.0704	1.0720	1.0735
105.4					0.9298	0.9304	0.9310	0.9315	0.9330	0.9344	0.9358	0.9372	0.9385	0.9399
-167.75					0.9303	0.9309	0.9315	0.9320	0.9335	0.9349	0.9363	0.9377	0.9390	0.9404
3.903					1.0615	1.0621	1.0628	1.0635	1.0651	1.0667	1.0683	1.0699	1.0714	1.0730
105.5					0.9293	0.9299	0.9305	0.9310	0.9325	0.9339	0.9353	0.9367	0.9380	0.9394
-167.65					0.9298	0.9304	0.9310	0.9316	0.9331	0.9344	0.9358	0.9372	0.9386	0.9399
3.933					1.0609	1.0616	1.0622	1.0629	1.0645	1.0662	1.0678	1.0693	1.0709	1.0724
105.6					0.9288	0.9294	0.9300	0.9306	0.9320	0.9334	0.9348	0.9362	0.9376	0.9389
-167.55					0.9293	0.9299	0.9305	0.9311	0.9322	0.9336	0.9350	0.9364	0.9378	0.9391
3.962					1.0603	1.0610	1.0617	1.0623	1.0640	1.0656	1.0672	1.0688	1.0704	1.0719
105.7					0.9283	0.9289	0.9295	0.9301	0.9315	0.9329	0.9343	0.9357	0.9371	0.9385
-167.45					0.9288	0.9294	0.9300	0.9306	0.9320	0.9334	0.9348	0.9362	0.9376	0.9390
3.992					1.0598	1.0605	1.0611	1.0618	1.0634	1.0651	1.0667	1.0683	1.0699	1.0714
105.8					0.9278	0.9284	0.9290	0.9296	0.9310	0.9325	0.9339	0.9353	0.9366	0.9380
-167.35					0.9283	0.9289	0.9295	0.9301	0.9315	0.9330	0.9344	0.9358	0.9371	0.9385
4.022					1.0599	1.0606	1.0612	1.0619	1.0635	1.0651	1.0666	1.0681	1.0695	1.0710
105.9					0.9273	0.9279	0.9285	0.9291	0.9305	0.9320	0.9334	0.9348	0.9362	0.9375
-167.25					0.9278	0.9284	0.9290	0.9296	0.9310	0.9325	0.9339	0.9353	0.9367	0.9380
4.052					1.0593	1.0600	1.0607	1.0613	1.0629	1.0644	1.0658	1.0672	1.0688	1.0702

TABLE 4 - CONTINUED

DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A ROLLING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A ROLLING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/DM <sup>3</sup>											
BAR	0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
K/CM <sup>2</sup>	0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.334	25.493	30.591	35.690	40.789
106.0					0.9274	0.9280	0.9286	0.9300	0.9315	0.9329	0.9343	0.9357	0.9371
-167.15					0.9279	0.9285	0.9291	0.9306	0.9320	0.9334	0.9348	0.9362	0.9376
4.082					1.0568	1.0594	1.0601	1.0618	1.0634	1.0650	1.0668	1.0682	1.0698
106.1					0.9269	0.9275	0.9281	0.9296	0.9310	0.9324	0.9338	0.9352	0.9366
-167.05					0.9274	0.9280	0.9286	0.9301	0.9315	0.9329	0.9343	0.9357	0.9371
4.113					1.0582	1.0589	1.0595	1.0612	1.0629	1.0645	1.0661	1.0677	1.0692
106.2					0.9264	0.9270	0.9276	0.9291	0.9305	0.9319	0.9334	0.9348	0.9361
-166.95					0.9269	0.9275	0.9281	0.9296	0.9310	0.9325	0.9339	0.9353	0.9366
4.143					1.0576	1.0583	1.0590	1.0607	1.0623	1.0639	1.0655	1.0671	1.0687
106.3					0.9259	0.9265	0.9271	0.9286	0.9300	0.9315	0.9329	0.9343	0.9357
-166.85					0.9264	0.9270	0.9276	0.9291	0.9305	0.9320	0.9334	0.9348	0.9362
4.174					1.0571	1.0577	1.0584	1.0601	1.0618	1.0634	1.0650	1.0666	1.0682
106.4					0.9254	0.9260	0.9266	0.9281	0.9296	0.9310	0.9324	0.9338	0.9352
-166.75					0.9259	0.9265	0.9271	0.9286	0.9301	0.9315	0.9329	0.9343	0.9357
4.205					1.0565	1.0572	1.0579	1.0595	1.0612	1.0628	1.0645	1.0661	1.0676
106.5					0.9249	0.9255	0.9261	0.9276	0.9291	0.9305	0.9319	0.9333	0.9347
-166.65					0.9254	0.9260	0.9266	0.9281	0.9296	0.9310	0.9324	0.9338	0.9352
4.236					1.0559	1.0566	1.0573	1.0590	1.0607	1.0623	1.0639	1.0655	1.0671
106.6					0.9244	0.9250	0.9256	0.9271	0.9286	0.9300	0.9315	0.9329	0.9342
-166.55					0.9249	0.9255	0.9261	0.9276	0.9291	0.9305	0.9320	0.9334	0.9348
4.267					1.0554	1.0560	1.0567	1.0584	1.0601	1.0617	1.0634	1.0650	1.0666
106.7					0.9239	0.9245	0.9251	0.9266	0.9281	0.9295	0.9310	0.9324	0.9338
-166.45					0.9244	0.9250	0.9256	0.9271	0.9286	0.9301	0.9315	0.9329	0.9343
4.299					1.0548	1.0555	1.0562	1.0578	1.0595	1.0612	1.0628	1.0644	1.0660
106.8					0.9234	0.9240	0.9246	0.9261	0.9276	0.9291	0.9305	0.9319	0.9333
-166.35					0.9239	0.9245	0.9251	0.9266	0.9281	0.9296	0.9310	0.9324	0.9338
4.330					1.0542	1.0549	1.0556	1.0573	1.0590	1.0606	1.0623	1.0639	1.0655
106.9					0.9229	0.9235	0.9241	0.9256	0.9271	0.9286	0.9300	0.9314	0.9328
-166.25					0.9234	0.9240	0.9247	0.9262	0.9276	0.9291	0.9305	0.9319	0.9333
4.362					1.0536	1.0543	1.0550	1.0567	1.0584	1.0601	1.0617	1.0634	1.0650
107.0					0.9224	0.9230	0.9237	0.9252	0.9266	0.9281	0.9295	0.9310	0.9324
-166.15					0.9229	0.9235	0.9242	0.9257	0.9271	0.9286	0.9300	0.9315	0.9329
4.394					1.0531	1.0538	1.0545	1.0562	1.0579	1.0595	1.0612	1.0628	1.0644
107.1					0.9219	0.9225	0.9232	0.9247	0.9261	0.9276	0.9291	0.9305	0.9319
-166.05					0.9224	0.9230	0.9237	0.9252	0.9267	0.9281	0.9296	0.9310	0.9324
4.426					1.0525	1.0532	1.0539	1.0556	1.0573	1.0590	1.0606	1.0623	1.0639
107.2					0.9214	0.9220	0.9227	0.9242	0.9257	0.9271	0.9286	0.9300	0.9314
-165.95					0.9219	0.9225	0.9232	0.9247	0.9262	0.9276	0.9291	0.9305	0.9319
4.458					1.0519	1.0526	1.0533	1.0551	1.0568	1.0584	1.0601	1.0617	1.0633
107.3					0.9209	0.9215	0.9222	0.9237	0.9252	0.9266	0.9281	0.9295	0.9310
-165.85					0.9214	0.9220	0.9227	0.9242	0.9257	0.9271	0.9286	0.9300	0.9315
4.491					1.0514	1.0521	1.0528	1.0546	1.0562	1.0579	1.0595	1.0612	1.0628
107.4					0.9204	0.9210	0.9217	0.9232	0.9247	0.9262	0.9276	0.9291	0.9305
-165.75					0.9209	0.9215	0.9222	0.9237	0.9252	0.9267	0.9281	0.9296	0.9310
4.523					1.0508	1.0515	1.0522	1.0539	1.0556	1.0573	1.0590	1.0606	1.0623
107.5					0.9199	0.9205	0.9212	0.9227	0.9242	0.9257	0.9271	0.9286	0.9300
-165.65					0.9204	0.9210	0.9217	0.9232	0.9247	0.9262	0.9276	0.9291	0.9305
4.556					1.0502	1.0509	1.0516	1.0534	1.0551	1.0568	1.0584	1.0601	1.0617
107.6					0.9194	0.9200	0.9207	0.9222	0.9237	0.9252	0.9267	0.9281	0.9295
-165.55					0.9199	0.9205	0.9212	0.9227	0.9242	0.9257	0.9272	0.9286	0.9300
4.589					1.0496	1.0503	1.0511	1.0528	1.0545	1.0562	1.0579	1.0595	1.0612
107.7					0.9189	0.9195	0.9202	0.9217	0.9232	0.9247	0.9262	0.9276	0.9291
-165.45					0.9194	0.9200	0.9207	0.9222	0.9237	0.9252	0.9267	0.9281	0.9296
4.622					1.0491	1.0498	1.0505	1.0522	1.0540	1.0557	1.0573	1.0590	1.0606
107.8					0.9184	0.9190	0.9197	0.9212	0.9227	0.9242	0.9257	0.9271	0.9286
-165.35					0.9189	0.9195	0.9202	0.9217	0.9232	0.9247	0.9262	0.9277	0.9291
4.655					1.0485	1.0492	1.0499	1.0517	1.0534	1.0551	1.0568	1.0585	1.0601
107.9					0.9179	0.9185	0.9192	0.9207	0.9222	0.9237	0.9252	0.9267	0.9281
-165.25					0.9184	0.9190	0.9197	0.9212	0.9227	0.9242	0.9257	0.9272	0.9286
4.689					1.0479	1.0486	1.0493	1.0511	1.0528	1.0546	1.0562	1.0579	1.0596

TABLE 4 - CONTINUED

DENSITY OF COMPRESSED LIQUID OXIGEN - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, °C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>3</sup>												
BAR	°C	0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KPa/cm <sup>2</sup>		0.816	1.020	2.035	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789
108.0					0.9174	0.9180	0.9187	0.9202	0.9217	0.9232	0.9247	0.9262	0.9276	
-145.15					0.9179	0.9185	0.9192	0.9207	0.9222	0.9237	0.9252	0.9267	0.9281	
4.723					1.0473	1.0480	1.0488	1.0505	1.0523	1.0540	1.0557	1.0574	1.0590	
108.1					0.9169	0.9175	0.9182	0.9197	0.9212	0.9227	0.9242	0.9257	0.9272	
-145.85					0.9174	0.9180	0.9187	0.9202	0.9217	0.9233	0.9247	0.9262	0.9277	
4.756					1.0467	1.0475	1.0482	1.0500	1.0517	1.0534	1.0551	1.0568	1.0585	
108.2					0.9164	0.9170	0.9176	0.9192	0.9207	0.9223	0.9238	0.9252	0.9267	
-144.95					0.9169	0.9175	0.9181	0.9197	0.9212	0.9228	0.9243	0.9257	0.9272	
4.790					1.0462	1.0469	1.0476	1.0494	1.0511	1.0529	1.0546	1.0563	1.0579	
108.3					0.9159	0.9165	0.9171	0.9187	0.9202	0.9218	0.9233	0.9247	0.9262	
-144.85					0.9164	0.9170	0.9176	0.9192	0.9208	0.9223	0.9238	0.9252	0.9267	
4.825					1.0456	1.0463	1.0470	1.0488	1.0506	1.0523	1.0540	1.0557	1.0574	
108.4					0.9154	0.9160	0.9166	0.9182	0.9198	0.9213	0.9228	0.9243	0.9257	
-144.75					0.9159	0.9165	0.9171	0.9187	0.9203	0.9218	0.9233	0.9248	0.9262	
4.859					1.0450	1.0457	1.0465	1.0483	1.0500	1.0518	1.0535	1.0552	1.0568	
108.5					0.9149	0.9155	0.9161	0.9177	0.9193	0.9208	0.9223	0.9238	0.9252	
-144.65					0.9154	0.9160	0.9166	0.9182	0.9198	0.9213	0.9228	0.9243	0.9258	
4.894					1.0444	1.0452	1.0459	1.0477	1.0495	1.0512	1.0529	1.0546	1.0563	
108.6					0.9143	0.9150	0.9156	0.9172	0.9188	0.9203	0.9218	0.9233	0.9248	
-144.55					0.9148	0.9155	0.9161	0.9177	0.9193	0.9208	0.9223	0.9238	0.9253	
4.928					1.0438	1.0446	1.0453	1.0471	1.0489	1.0506	1.0523	1.0541	1.0557	
108.7					0.9138	0.9145	0.9151	0.9167	0.9183	0.9198	0.9213	0.9228	0.9243	
-144.45					0.9143	0.9150	0.9156	0.9172	0.9188	0.9203	0.9218	0.9233	0.9248	
4.963					1.0433	1.0440	1.0447	1.0465	1.0483	1.0501	1.0518	1.0535	1.0552	
108.8					0.9133	0.9140	0.9146	0.9162	0.9178	0.9193	0.9208	0.9223	0.9238	
-144.35					0.9138	0.9145	0.9151	0.9167	0.9183	0.9198	0.9213	0.9228	0.9243	
4.998					1.0427	1.0434	1.0442	1.0460	1.0478	1.0495	1.0512	1.0530	1.0546	
108.9					0.9128	0.9135	0.9141	0.9157	0.9173	0.9188	0.9203	0.9218	0.9233	
-144.25					0.9133	0.9140	0.9146	0.9162	0.9178	0.9193	0.9208	0.9223	0.9238	
5.034					1.0421	1.0428	1.0436	1.0454	1.0472	1.0490	1.0507	1.0524	1.0541	
109.0					0.9123	0.9130	0.9136	0.9152	0.9168	0.9183	0.9199	0.9214	0.9229	
-144.15					0.9128	0.9135	0.9141	0.9157	0.9173	0.9188	0.9204	0.9219	0.9234	
5.069					1.0415	1.0423	1.0430	1.0448	1.0466	1.0484	1.0501	1.0519	1.0536	
109.1					0.9118	0.9124	0.9131	0.9147	0.9163	0.9178	0.9194	0.9209	0.9224	
-144.05					0.9123	0.9129	0.9136	0.9152	0.9168	0.9183	0.9199	0.9214	0.9229	
5.105					1.0409	1.0417	1.0424	1.0442	1.0460	1.0478	1.0496	1.0513	1.0530	
109.2					0.9113	0.9119	0.9126	0.9142	0.9158	0.9173	0.9189	0.9204	0.9219	
-143.95					0.9118	0.9124	0.9131	0.9147	0.9163	0.9178	0.9194	0.9209	0.9224	
5.141					1.0403	1.0411	1.0418	1.0437	1.0455	1.0473	1.0490	1.0507	1.0525	
109.3					0.9108	0.9114	0.9121	0.9137	0.9153	0.9168	0.9184	0.9199	0.9214	
-143.85					0.9113	0.9119	0.9126	0.9142	0.9158	0.9173	0.9189	0.9204	0.9219	
5.177					1.0398	1.0405	1.0412	1.0431	1.0449	1.0467	1.0485	1.0502	1.0519	
109.4					0.9102	0.9109	0.9116	0.9132	0.9148	0.9163	0.9179	0.9194	0.9209	
-143.75					0.9107	0.9114	0.9121	0.9137	0.9153	0.9168	0.9184	0.9199	0.9214	
5.213					1.0392	1.0399	1.0407	1.0425	1.0443	1.0461	1.0479	1.0496	1.0514	
109.5					0.9097	0.9104	0.9111	0.9127	0.9143	0.9159	0.9174	0.9189	0.9204	
-143.65					0.9102	0.9109	0.9115	0.9132	0.9148	0.9164	0.9180	0.9195	0.9210	
5.249					1.0386	1.0393	1.0401	1.0419	1.0438	1.0456	1.0473	1.0491	1.0509	
109.6					0.9092	0.9099	0.9105	0.9122	0.9138	0.9154	0.9169	0.9184	0.9200	
-143.55					0.9097	0.9104	0.9110	0.9127	0.9143	0.9159	0.9174	0.9189	0.9205	
5.286					1.0380	1.0387	1.0395	1.0414	1.0432	1.0450	1.0468	1.0485	1.0503	
109.7					0.9087	0.9094	0.9100	0.9117	0.9133	0.9149	0.9164	0.9180	0.9195	
-143.45					0.9092	0.9098	0.9105	0.9122	0.9138	0.9154	0.9169	0.9185	0.9200	
5.323					1.0374	1.0382	1.0389	1.0408	1.0426	1.0444	1.0462	1.0480	1.0497	
109.8					0.9082	0.9088	0.9095	0.9112	0.9128	0.9144	0.9159	0.9175	0.9190	
-143.35					0.9087	0.9093	0.9100	0.9117	0.9133	0.9149	0.9164	0.9180	0.9195	
5.359					1.0368	1.0376	1.0383	1.0402	1.0420	1.0439	1.0456	1.0474	1.0492	
109.9					0.9077	0.9083	0.9090	0.9106	0.9123	0.9139	0.9154	0.9170	0.9185	
-143.25					0.9082	0.9088	0.9095	0.9111	0.9128	0.9144	0.9159	0.9175	0.9190	
5.397					1.0362	1.0370	1.0377	1.0396	1.0415	1.0433	1.0451	1.0469	1.0486	

1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR		TABLE ENTRIES												
		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS						2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS						
BAR	0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	
K/P/CM2	0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789	
110.0					0.9071	0.9078	0.9085	0.9101	0.9118	0.9134	0.9149	0.9165	0.9180	
-163.45					0.9076	0.9083	0.9090	0.9107	0.9123	0.9139	0.9155	0.9172	0.9188	
5.434					1.0356	1.0364	1.0372	1.0390	1.0409	1.0427	1.0445	1.0463	1.0480	
110.1					0.9066	0.9073	0.9080	0.9096	0.9113	0.9129	0.9144	0.9160	0.9175	
-163.05					0.9071	0.9078	0.9085	0.9101	0.9118	0.9134	0.9149	0.9165	0.9180	
5.471					1.0350	1.0358	1.0366	1.0385	1.0403	1.0421	1.0439	1.0457	1.0475	
110.2					0.9061	0.9068	0.9075	0.9091	0.9108	0.9124	0.9140	0.9155	0.9171	
-162.95					0.9066	0.9073	0.9080	0.9096	0.9113	0.9129	0.9144	0.9160	0.9176	
5.509					1.0344	1.0352	1.0360	1.0378	1.0397	1.0416	1.0434	1.0452	1.0469	
110.3					0.9056	0.9063	0.9069	0.9086	0.9102	0.9119	0.9135	0.9150	0.9166	
-162.85					0.9061	0.9068	0.9074	0.9091	0.9107	0.9124	0.9140	0.9155	0.9171	
5.547					1.0338	1.0346	1.0354	1.0373	1.0392	1.0410	1.0428	1.0446	1.0464	
110.4					0.9051	0.9057	0.9064	0.9081	0.9097	0.9114	0.9130	0.9145	0.9161	
-162.75					0.9056	0.9062	0.9069	0.9086	0.9102	0.9119	0.9135	0.9150	0.9166	
5.585					1.0332	1.0340	1.0348	1.0367	1.0386	1.0404	1.0423	1.0441	1.0458	
110.5					0.9045	0.9052	0.9059	0.9076	0.9092	0.9109	0.9125	0.9140	0.9156	
-162.65					0.9050	0.9057	0.9064	0.9081	0.9097	0.9114	0.9130	0.9145	0.9161	
5.623					1.0326	1.0334	1.0342	1.0361	1.0380	1.0399	1.0417	1.0435	1.0453	
110.6					0.9040	0.9047	0.9054	0.9071	0.9087	0.9104	0.9120	0.9135	0.9151	
-162.55					0.9045	0.9052	0.9059	0.9076	0.9092	0.9109	0.9125	0.9140	0.9156	
5.662					1.0321	1.0328	1.0336	1.0355	1.0374	1.0393	1.0411	1.0429	1.0447	
110.7					0.9035	0.9042	0.9049	0.9066	0.9082	0.9099	0.9115	0.9131	0.9146	
-162.45					0.9040	0.9047	0.9054	0.9071	0.9087	0.9104	0.9120	0.9136	0.9151	
5.700					1.0315	1.0322	1.0330	1.0350	1.0368	1.0387	1.0406	1.0424	1.0442	
110.8					0.9030	0.9037	0.9043	0.9060	0.9077	0.9094	0.9110	0.9126	0.9141	
-162.35					0.9035	0.9042	0.9048	0.9065	0.9082	0.9098	0.9115	0.9131	0.9146	
5.739					1.0309	1.0316	1.0324	1.0344	1.0363	1.0381	1.0400	1.0418	1.0436	
110.9					0.9024	0.9031	0.9038	0.9055	0.9072	0.9088	0.9105	0.9121	0.9136	
-162.25					0.9029	0.9036	0.9043	0.9060	0.9077	0.9093	0.9110	0.9126	0.9141	
5.778					1.0303	1.0310	1.0318	1.0338	1.0357	1.0376	1.0394	1.0412	1.0430	
111.0					0.9019	0.9026	0.9033	0.9050	0.9067	0.9083	0.9100	0.9116	0.9131	
-162.15					0.9024	0.9031	0.9038	0.9055	0.9072	0.9088	0.9105	0.9121	0.9136	
5.818					1.0297	1.0305	1.0312	1.0332	1.0351	1.0370	1.0388	1.0407	1.0425	
111.1					0.9014	0.9021	0.9028	0.9045	0.9062	0.9078	0.9095	0.9111	0.9127	
-162.05					0.9019	0.9026	0.9033	0.9050	0.9067	0.9083	0.9100	0.9116	0.9132	
5.857					1.0291	1.0299	1.0306	1.0326	1.0345	1.0364	1.0383	1.0401	1.0419	
111.2					0.9009	0.9016	0.9023	0.9040	0.9057	0.9073	0.9090	0.9106	0.9122	
-161.95					0.9014	0.9021	0.9028	0.9045	0.9062	0.9078	0.9095	0.9111	0.9127	
5.897					1.0285	1.0293	1.0300	1.0320	1.0339	1.0358	1.0377	1.0395	1.0414	
111.3					0.9003	0.9010	0.9017	0.9035	0.9052	0.9068	0.9085	0.9101	0.9117	
-161.85					0.9008	0.9015	0.9022	0.9040	0.9057	0.9073	0.9090	0.9106	0.9122	
5.936					1.0275	1.0287	1.0295	1.0314	1.0334	1.0353	1.0371	1.0390	1.0408	
111.4					0.8998	0.9005	0.9012	0.9029	0.9046	0.9063	0.9080	0.9096	0.9112	
-161.75					0.9003	0.9010	0.9017	0.9034	0.9051	0.9068	0.9085	0.9101	0.9117	
5.976					1.0272	1.0281	1.0289	1.0308	1.0328	1.0347	1.0366	1.0384	1.0402	
111.5					0.9000	0.9007	0.9014	0.9031	0.9048	0.9065	0.9082	0.9099	0.9107	
-161.65					0.9005	0.9012	0.9019	0.9036	0.9053	0.9070	0.9087	0.9104	0.9121	
6.017					1.0275	1.0283	1.0292	1.0312	1.0332	1.0351	1.0370	1.0389	1.0397	
111.6					0.8995	0.9002	0.9019	0.9036	0.9053	0.9070	0.9086	0.9102	0.9107	
-161.55					0.9000	0.9007	0.9024	0.9041	0.9058	0.9075	0.9091	0.9107	0.9107	
6.057					1.0268	1.0277	1.0296	1.0316	1.0335	1.0354	1.0373	1.0391	1.0391	
111.7					0.8989	0.8996	0.9014	0.9031	0.9048	0.9065	0.9081	0.9097	0.9097	
-161.45					0.8994	0.9001	0.9018	0.9036	0.9053	0.9070	0.9086	0.9102	0.9102	
6.098					1.0262	1.0271	1.0291	1.0310	1.0329	1.0348	1.0367	1.0385	1.0385	
111.8					0.8984	0.8991	0.9009	0.9026	0.9043	0.9060	0.9076	0.9092	0.9092	
-161.35					0.8989	0.8996	0.9014	0.9031	0.9048	0.9065	0.9081	0.9097	0.9097	
6.139					1.0256	1.0265	1.0285	1.0304	1.0324	1.0343	1.0361	1.0378	1.0378	
111.9					0.8979	0.8986	0.9003	0.9021	0.9038	0.9055	0.9071	0.9087	0.9087	
-161.25					0.8984	0.8991	0.9008	0.9026	0.9043	0.9059	0.9076	0.9092	0.9092	
6.180					1.0250	1.0259	1.0279	1.0299	1.0319	1.0338	1.0357	1.0375	1.0374	

TABLE 4 - CONTINUED

DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TCRR, DIMENSIONLESS 3. DENSITY, KG/DM <sup>3</sup>											
BAR KPa/CM <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.150	10.000 10.197	15.296	20.900 20.394	25.000 25.493	30.000 30.591	35.000 35.490	40.000 40.789
112.0													
-161.15 6.221													
112.1													
-161.05 6.262													
112.2													
-160.95 6.304													
112.3													
-160.85 6.346													
112.4													
-160.75 6.388													
112.5													
-160.65 6.430													
112.6													
-160.55 6.472													
112.7													
-160.45 6.515													
112.8													
-160.35 6.558													
112.9													
-160.25 6.601													
113.0													
-160.15 6.644													
113.1													
-160.05 6.687													
113.2													
-159.95 6.731													
113.3													
-159.85 6.775													
113.4													
-159.75 6.819													
113.5													
-159.65 6.863													
113.6													
-159.55 6.908													
113.7													
-159.45 6.952													
113.8													
-159.35 6.997													
113.9													
-159.25 7.042													



TABLE 4 - CONTINUED

DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 766 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/CM <sup>3</sup>												
BAR		0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KP/CM <sup>2</sup>		0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789
114.0							0.8866	0.8873	0.8892	0.8911	0.8929	0.8947	0.8965	0.8982
-159.15							0.8871	0.8878	0.8897	0.8916	0.8934	0.8952	0.8970	0.8987
7.086							1.0121	1.0130	1.0152	1.0173	1.0194	1.0214	1.0234	1.0254
114.1							0.8860	0.8868	0.8887	0.8906	0.8924	0.8942	0.8960	0.8977
-159.05							0.8865	0.8873	0.8892	0.8911	0.8929	0.8947	0.8965	0.8982
7.133							1.0115	1.0124	1.0146	1.0167	1.0188	1.0208	1.0225	1.0248
114.2							0.8855	0.8863	0.8882	0.8900	0.8919	0.8937	0.8955	0.8972
-159.95							0.8860	0.8867	0.8886	0.8905	0.8924	0.8942	0.8959	0.8977
7.179							1.0109	1.0118	1.0140	1.0161	1.0182	1.0202	1.0223	1.0243
114.3							0.8849	0.8857	0.8876	0.8895	0.8913	0.8932	0.8949	0.8967
-158.85							0.8854	0.8862	0.8881	0.8900	0.8918	0.8936	0.8954	0.8972
7.225							1.0103	1.0112	1.0133	1.0155	1.0176	1.0197	1.0217	1.0237
114.4							0.8844	0.8852	0.8871	0.8890	0.8908	0.8926	0.8944	0.8962
-158.75							0.8849	0.8856	0.8875	0.8895	0.8913	0.8931	0.8949	0.8967
7.271							1.0096	1.0105	1.0127	1.0149	1.0170	1.0191	1.0211	1.0231
114.5							0.8838	0.8846	0.8865	0.8884	0.8903	0.8921	0.8939	0.8957
-158.65							0.8843	0.8851	0.8870	0.8889	0.8908	0.8926	0.8944	0.8962
7.317							1.0090	1.0099	1.0121	1.0143	1.0164	1.0185	1.0205	1.0225
114.6							0.8833	0.8841	0.8860	0.8879	0.8898	0.8916	0.8934	0.8952
-158.56							0.8838	0.8846	0.8865	0.8884	0.8903	0.8921	0.8939	0.8956
7.364							1.0084	1.0093	1.0115	1.0137	1.0158	1.0179	1.0199	1.0219
114.7							0.8827	0.8835	0.8855	0.8874	0.8892	0.8911	0.8925	0.8946
-158.45							0.8832	0.8840	0.8859	0.8879	0.8897	0.8916	0.8934	0.8951
7.411							1.0077	1.0086	1.0108	1.0130	1.0152	1.0173	1.0193	1.0214
114.8							0.8822	0.8830	0.8849	0.8868	0.8887	0.8905	0.8924	0.8941
-158.35							0.8827	0.8835	0.8854	0.8873	0.8892	0.8910	0.8928	0.8946
7.458							1.0071	1.0080	1.0102	1.0124	1.0146	1.0167	1.0187	1.0208
114.9							0.8816	0.8824	0.8844	0.8863	0.8882	0.8900	0.8916	0.8936
-158.25							0.8821	0.8829	0.8848	0.8868	0.8887	0.8905	0.8923	0.8941
7.505							1.0065	1.0074	1.0096	1.0118	1.0140	1.0161	1.0182	1.0202
115.0							0.8811	0.8819	0.8838	0.8858	0.8876	0.8895	0.8913	0.8931
-158.15							0.8815	0.8823	0.8842	0.8862	0.8881	0.8900	0.8918	0.8936
7.552							1.0059	1.0068	1.0090	1.0112	1.0134	1.0155	1.0176	1.0196
115.1							0.8805	0.8813	0.8833	0.8852	0.8871	0.8890	0.8908	0.8926
-158.05							0.8810	0.8818	0.8838	0.8857	0.8876	0.8895	0.8913	0.8931
7.600							1.0052	1.0061	1.0084	1.0106	1.0128	1.0149	1.0170	1.0190
115.2							0.8800	0.8808	0.8827	0.8847	0.8866	0.8885	0.8903	0.8921
-157.95							0.8804	0.8812	0.8832	0.8852	0.8871	0.8890	0.8908	0.8926
7.648							1.0046	1.0055	1.0077	1.0100	1.0121	1.0143	1.0164	1.0184
115.3							0.8794	0.8802	0.8822	0.8841	0.8861	0.8879	0.8898	0.8916
-157.85							0.8799	0.8807	0.8827	0.8846	0.8865	0.8884	0.8903	0.8921
7.696							1.0039	1.0048	1.0071	1.0094	1.0115	1.0137	1.0158	1.0178
115.4							0.8788	0.8797	0.8816	0.8836	0.8855	0.8874	0.8892	0.8911
-157.75							0.8793	0.8801	0.8821	0.8841	0.8860	0.8879	0.8897	0.8915
7.744							1.0033	1.0042	1.0065	1.0087	1.0109	1.0131	1.0152	1.0173
115.5							0.8783	0.8791	0.8811	0.8831	0.8850	0.8869	0.8887	0.8905
-157.65							0.8788	0.8796	0.8815	0.8835	0.8855	0.8874	0.8892	0.8910
7.793							1.0027	1.0036	1.0059	1.0081	1.0103	1.0125	1.0146	1.0167
115.6							0.8777	0.8785	0.8805	0.8825	0.8844	0.8863	0.8882	0.8900
-157.55							0.8782	0.8790	0.8810	0.8830	0.8849	0.8868	0.8887	0.8905
7.842							1.0020	1.0030	1.0053	1.0075	1.0097	1.0119	1.0140	1.0161
115.7							0.8772	0.8780	0.8800	0.8820	0.8839	0.8858	0.8877	0.8895
-157.45							0.8776	0.8785	0.8805	0.8825	0.8844	0.8863	0.8882	0.8900
7.891							1.0014	1.0023	1.0046	1.0069	1.0091	1.0113	1.0134	1.0155
115.8							0.8766	0.8774	0.8794	0.8814	0.8834	0.8853	0.8872	0.8890
-157.35							0.8771	0.8779	0.8799	0.8819	0.8839	0.8858	0.8876	0.8895
7.940							1.0008	1.0017	1.0040	1.0063	1.0085	1.0107	1.0128	1.0149
115.9							0.8760	0.8769	0.8789	0.8809	0.8828	0.8848	0.8866	0.8885
-157.25							0.8765	0.8773	0.8794	0.8814	0.8833	0.8852	0.8871	0.8890
7.989							1.0001	1.0011	1.0034	1.0056	1.0079	1.0101	1.0122	1.0143



TABLE 4 - CONTINUED

## DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

			TABLE ENTRIES												
1. TEMPERATURE, K			1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C			2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR			3. DENSITY, KG/DM <sup>3</sup>												
BAR	KP/CM <sup>2</sup>		0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
			0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789
116.0									0.8763	0.8743	0.8803	0.8823	0.8842	0.8861	0.8880
-157.15									0.8768	0.8768	0.8808	0.8828	0.8847	0.8866	0.8884
8.039									1.0004	1.0027	1.0050	1.0073	1.0095	1.0116	1.0137
116.1									0.8757	0.8778	0.8798	0.8818	0.8837	0.8856	0.8874
-157.05									0.8752	0.8783	0.8803	0.8822	0.8842	0.8861	0.8879
8.009									0.9598	1.0021	1.0044	1.0066	1.0088	1.0110	1.0131
116.2									0.8752	0.8772	0.8792	0.8812	0.8832	0.8851	0.8869
-156.95									0.8757	0.8777	0.8797	0.8817	0.8836	0.8855	0.8874
8.139									0.9991	1.0015	1.0038	1.0060	1.0082	1.0104	1.0125
116.3									0.8746	0.8767	0.8787	0.8807	0.8826	0.8845	0.8864
-156.85									0.8751	0.8772	0.8792	0.8812	0.8831	0.8850	0.8868
8.169									0.9985	1.0009	1.0032	1.0054	1.0076	1.0098	1.0119
116.4									0.8741	0.8761	0.8782	0.8801	0.8821	0.8840	0.8859
-156.75									0.8745	0.8766	0.8786	0.8806	0.8826	0.8845	0.8864
8.240									0.9978	1.0002	1.0025	1.0048	1.0070	1.0092	1.0113
116.5									0.8735	0.8756	0.8776	0.8796	0.8816	0.8835	0.8853
-156.65									0.8740	0.8761	0.8781	0.8801	0.8820	0.8839	0.8858
8.291									0.9972	0.9996	1.0019	1.0042	1.0064	1.0086	1.0107
116.6									0.8729	0.8750	0.8771	0.8791	0.8810	0.8829	0.8848
-156.55									0.8734	0.8755	0.8775	0.8795	0.8815	0.8834	0.8853
8.342									0.9966	0.9989	1.0013	1.0036	1.0058	1.0080	1.0101
116.7									0.8724	0.8744	0.8765	0.8785	0.8805	0.8824	0.8843
-156.45									0.8728	0.8749	0.8769	0.8789	0.8809	0.8829	0.8848
8.393									0.9959	0.9983	1.0006	1.0029	1.0052	1.0074	1.0095
116.8									0.8718	0.8739	0.8759	0.8779	0.8799	0.8819	0.8838
-156.35									0.8723	0.8744	0.8764	0.8784	0.8804	0.8824	0.8843
8.445									0.9953	0.9977	1.0000	1.0023	1.0046	1.0068	1.0089
116.9									0.8712	0.8733	0.8754	0.8774	0.8794	0.8813	0.8833
-156.25									0.8717	0.8738	0.8759	0.8779	0.8799	0.8818	0.8837
8.496									0.9946	0.9970	0.9994	1.0017	1.0040	1.0062	1.0083
117.0									0.8706	0.8727	0.8748	0.8768	0.8788	0.8808	0.8827
-156.15									0.8711	0.8732	0.8753	0.8774	0.8793	0.8813	0.8832
8.548									0.9940	0.9964	0.9987	1.0011	1.0033	1.0056	1.0077
117.1									0.8701	0.8722	0.8743	0.8763	0.8783	0.8803	0.8822
-156.05									0.8706	0.8727	0.8748	0.8768	0.8788	0.8808	0.8827
8.600									0.9933	0.9957	0.9981	1.0004	1.0027	1.0050	1.0071
117.2									0.8695	0.8716	0.8737	0.8758	0.8778	0.8797	0.8817
-155.95									0.8700	0.8721	0.8742	0.8763	0.8783	0.8802	0.8822
8.653									0.9926	0.9951	0.9975	0.9998	1.0021	1.0043	1.0065
117.3									0.8689	0.8711	0.8732	0.8752	0.8772	0.8792	0.8811
-155.85									0.8694	0.8716	0.8737	0.8757	0.8777	0.8797	0.8816
8.705									0.9920	0.9944	0.9968	0.9992	1.0015	1.0037	1.0059
117.4									0.8684	0.8705	0.8726	0.8747	0.8767	0.8787	0.8806
-155.75									0.8688	0.8711	0.8731	0.8752	0.8772	0.8792	0.8811
8.758									0.9913	0.9938	0.9962	0.9986	1.0009	1.0031	1.0053
117.5									0.8678	0.8699	0.8721	0.8741	0.8762	0.8781	0.8801
-155.65									0.8683	0.8704	0.8725	0.8746	0.8766	0.8786	0.8806
8.811									0.9907	0.9932	0.9956	0.9979	1.0002	1.0025	1.0047
117.6									0.8672	0.8694	0.8715	0.8736	0.8756	0.8776	0.8796
-155.55									0.8677	0.8699	0.8720	0.8741	0.8761	0.8781	0.8800
8.865									0.9900	0.9925	0.9949	0.9973	0.9996	1.0019	1.0041
117.7									0.8666	0.8688	0.8709	0.8730	0.8751	0.8771	0.8790
-155.45									0.8671	0.8693	0.8714	0.8735	0.8755	0.8776	0.8795
8.918									0.9894	0.9919	0.9943	0.9967	0.9990	1.0013	1.0035
117.8									0.8661	0.8682	0.8704	0.8725	0.8745	0.8765	0.8785
-155.35									0.8665	0.8687	0.8709	0.8730	0.8750	0.8770	0.8790
8.972									0.9887	0.9912	0.9937	0.9960	0.9984	1.0007	1.0029
117.9									0.8655	0.8677	0.8698	0.8719	0.8740	0.8760	0.8780
-155.25									0.8660	0.8681	0.8703	0.8724	0.8745	0.8765	0.8784
9.026									0.9880	0.9906	0.9930	0.9954	0.9978	1.0001	1.0023

TABLE 4 - CONTINUED

DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR		TABLE ENTRIES												
		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS 3. DENSITY, KG/DM <sup>3</sup>												
BAR KPa/CM <sup>2</sup>	0.000 0.016	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 6.158	10.000 10.197	15.000 15.296	20.000 20.394	25.000 25.493	30.000 30.591	35.000 35.690	40.000 40.789	
118.0 -155.15 9.080	0.8640 0.8654 0.9874	0.8671 0.8676 0.9899	0.8693 0.8697 0.9924	0.8714 0.8718 0.9948	0.8734 0.8739 0.9971	0.8755 0.8759 0.9994	0.8774 0.8779 1.0017	0.8794 0.8799 1.0037	0.8814 0.8819 1.0057	0.8834 0.8839 1.0077	0.8854 0.8859 1.0097	0.8874 0.8879 1.0117	0.8894 0.8899 1.0137	
118.1 -155.05 9.135	0.8643 0.8648 0.9867	0.8665 0.8670 0.9892	0.8687 0.8692 0.9917	0.8708 0.8713 0.9941	0.8729 0.8734 0.9965	0.8749 0.8754 0.9989	0.8769 0.8774 1.0011	0.8789 0.8794 1.0031	0.8809 0.8814 1.0051	0.8829 0.8834 1.0071	0.8849 0.8854 1.0091	0.8869 0.8874 1.0111	0.8889 0.8894 1.0131	
118.2 -154.95 9.189	0.8637 0.8642 0.9861	0.8660 0.8664 0.9886	0.8681 0.8686 0.9911	0.8703 0.8707 0.9935	0.8723 0.8728 0.9959	0.8744 0.8749 0.9982	0.8764 0.8769 1.0005	0.8784 0.8789 1.0025	0.8804 0.8809 1.0045	0.8824 0.8829 1.0065	0.8844 0.8849 1.0085	0.8864 0.8869 1.0105	0.8884 0.8889 1.0125	
118.3 -154.85 9.244	0.8631 0.8636 0.9854	0.8654 0.8659 0.9875	0.8676 0.8680 0.9894	0.8697 0.8702 0.9918	0.8718 0.8723 0.9942	0.8738 0.8743 0.9966	0.8758 0.8763 0.9990	0.8778 0.8783 1.0014	0.8798 0.8803 1.0038	0.8818 0.8823 1.0062	0.8838 0.8843 1.0086	0.8858 0.8863 1.0110	0.8878 0.8883 1.0134	
118.4 -154.75 9.299	0.8626 0.8630 0.9847	0.8648 0.8653 0.9872	0.8670 0.8675 0.9898	0.8691 0.8696 0.9922	0.8712 0.8717 0.9946	0.8733 0.8738 0.9970	0.8753 0.8758 0.9993	0.8773 0.8778 1.0017	0.8793 0.8798 1.0041	0.8813 0.8818 1.0065	0.8833 0.8838 1.0089	0.8853 0.8858 1.0113	0.8873 0.8878 1.0137	
118.5 -154.65 9.355	0.8620 0.8624 0.9841	0.8642 0.8647 0.9866	0.8664 0.8669 0.9891	0.8685 0.8690 0.9916	0.8706 0.8711 0.9940	0.8727 0.8732 0.9964	0.8747 0.8752 0.9988	0.8767 0.8772 1.0012	0.8787 0.8792 1.0036	0.8807 0.8812 1.0060	0.8827 0.8832 1.0084	0.8847 0.8852 1.0108	0.8867 0.8872 1.0132	
118.6 -154.55 9.411	0.8614 0.8619 0.9834	0.8637 0.8641 0.9859	0.8659 0.8663 0.9885	0.8680 0.8685 0.9910	0.8701 0.8706 0.9934	0.8722 0.8727 0.9958	0.8742 0.8747 0.9982	0.8762 0.8767 1.0006	0.8782 0.8787 1.0030	0.8802 0.8807 1.0054	0.8822 0.8827 1.0078	0.8842 0.8847 1.0102	0.8862 0.8867 1.0126	
118.7 -154.45 9.466	0.8608 0.8613 0.9827	0.8631 0.8635 0.9853	0.8653 0.8657 0.9878	0.8675 0.8680 0.9903	0.8696 0.8701 0.9927	0.8717 0.8722 0.9951	0.8737 0.8742 0.9974	0.8757 0.8762 0.9998	0.8777 0.8782 1.0022	0.8797 0.8802 1.0046	0.8817 0.8822 1.0070	0.8837 0.8842 1.0094	0.8857 0.8862 1.0118	
118.8 -154.35 9.523	0.8602 0.8607 0.9820	0.8625 0.8630 0.9846	0.8647 0.8652 0.9872	0.8669 0.8674 0.9897	0.8690 0.8695 0.9921	0.8711 0.8716 0.9945	0.8731 0.8736 0.9969	0.8751 0.8756 0.9993	0.8771 0.8776 1.0017	0.8791 0.8796 1.0041	0.8811 0.8816 1.0065	0.8831 0.8836 1.0089	0.8851 0.8856 1.0113	
118.9 -154.25 9.579	0.8596 0.8601 0.9814	0.8619 0.8624 0.9840	0.8642 0.8646 0.9865	0.8663 0.8668 0.9890	0.8684 0.8689 0.9914	0.8705 0.8710 0.9938	0.8725 0.8730 0.9962	0.8745 0.8750 0.9986	0.8765 0.8770 1.0010	0.8785 0.8790 1.0034	0.8805 0.8810 1.0058	0.8825 0.8830 1.0082	0.8845 0.8850 1.0106	
119.0 -154.15 9.636	0.8590 0.8595 0.9807	0.8613 0.8618 0.9833	0.8636 0.8641 0.9859	0.8658 0.8663 0.9884	0.8679 0.8684 0.9908	0.8700 0.8705 0.9932	0.8720 0.8725 0.9956	0.8740 0.8745 0.9980	0.8760 0.8765 1.0004	0.8780 0.8785 1.0028	0.8800 0.8805 1.0052	0.8820 0.8825 1.0076	0.8840 0.8845 1.0100	
119.1 -154.05 9.693	0.8584 0.8589 0.9800	0.8608 0.8612 0.9827	0.8630 0.8635 0.9852	0.8652 0.8657 0.9877	0.8673 0.8678 0.9902	0.8694 0.8699 0.9926	0.8714 0.8719 0.9950	0.8734 0.8739 0.9974	0.8754 0.8759 0.9998	0.8774 0.8779 1.0022	0.8794 0.8799 1.0046	0.8814 0.8819 1.0070	0.8834 0.8839 1.0094	
119.2 -153.95 9.750	0.8578 0.8583 0.9793	0.8602 0.8606 0.9820	0.8624 0.8629 0.9846	0.8646 0.8651 0.9871	0.8667 0.8672 0.9896	0.8688 0.8693 0.9920	0.8708 0.8713 0.9944	0.8728 0.8733 0.9968	0.8748 0.8753 0.9992	0.8768 0.8773 1.0016	0.8788 0.8793 1.0040	0.8808 0.8813 1.0064	0.8828 0.8833 1.0088	
119.3 -153.85 9.807	0.8573 0.8577 0.9787	0.8596 0.8601 0.9813	0.8619 0.8623 0.9839	0.8641 0.8645 0.9865	0.8662 0.8667 0.9890	0.8683 0.8688 0.9914	0.8703 0.8708 0.9938	0.8723 0.8728 0.9962	0.8743 0.8748 0.9986	0.8763 0.8768 1.0010	0.8783 0.8788 1.0034	0.8803 0.8808 1.0058	0.8823 0.8828 1.0082	
119.4 -153.75 9.865	0.8567 0.8571 0.9780	0.8590 0.8595 0.9807	0.8613 0.8618 0.9833	0.8635 0.8640 0.9858	0.8657 0.8662 0.9883	0.8678 0.8683 0.9907	0.8698 0.8703 0.9931	0.8718 0.8723 0.9955	0.8738 0.8743 0.9979	0.8758 0.8763 1.0003	0.8778 0.8783 1.0027	0.8798 0.8803 1.0051	0.8818 0.8823 1.0075	
119.5 -153.65 9.922	0.8561 0.8566 0.9773	0.8584 0.8589 0.9800	0.8607 0.8612 0.9826	0.8629 0.8634 0.9852	0.8651 0.8656 0.9877	0.8672 0.8677 0.9901	0.8692 0.8697 0.9925	0.8712 0.8717 0.9949	0.8732 0.8737 0.9973	0.8752 0.8757 0.9997	0.8772 0.8777 1.0021	0.8792 0.8797 1.0045	0.8812 0.8817 1.0069	
119.6 -153.55 9.981	0.8555 0.8559 0.9766	0.8578 0.8583 0.9793	0.8601 0.8606 0.9819	0.8624 0.8629 0.9845	0.8646 0.8651 0.9870	0.8667 0.8672 0.9894	0.8688 0.8693 0.9918	0.8708 0.8713 0.9942	0.8728 0.8733 0.9966	0.8748 0.8753 0.9990	0.8768 0.8773 1.0014	0.8788 0.8793 1.0038	0.8808 0.8813 1.0062	
119.7 -153.45 10.039	0.8551 0.8555 0.9761	0.8574 0.8579 0.9788	0.8597 0.8602 0.9814	0.8619 0.8624 0.9840	0.8641 0.8646 0.9865	0.8662 0.8667 0.9890	0.8683 0.8688 0.9914	0.8703 0.8708 0.9938	0.8723 0.8728 0.9962	0.8743 0.8748 0.9986	0.8763 0.8768 1.0010	0.8783 0.8788 1.0034	0.8803 0.8808 1.0058	
119.8 -153.35 10.097	0.8546 0.8550 0.9757	0.8569 0.8574 0.9784	0.8592 0.8597 0.9810	0.8614 0.8619 0.9836	0.8636 0.8641 0.9861	0.8657 0.8662 0.9885	0.8678 0.8683 0.9909	0.8698 0.8703 0.9933	0.8718 0.8723 0.9957	0.8738 0.8743 0.9981	0.8758 0.8763 1.0005	0.8778 0.8783 1.0029	0.8798 0.8803 1.0053	
119.9 -153.25 10.156	0.8541 0.8545 0.9752	0.8564 0.8569 0.9779	0.8587 0.8592 0.9805	0.8609 0.8614 0.9831	0.8631 0.8636 0.9856	0.8652 0.8657 0.9880	0.8673 0.8678 0.9904	0.8693 0.8698 0.9928	0.8713 0.8718 0.9952	0.8733 0.8738 0.9976	0.8753 0.8758 0.9999	0.8773 0.8778 1.0023	0.8793 0.8798 1.0047	

				TABLE ENTRIES										
1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR				1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS 3. DENSITY, KG/CM <sup>3</sup>										
BAR KPa/CM <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.158	10.000 10.197	15.000 15.296	20.000 20.354	25.000 25.493	30.000 30.591	35.000 35.690	40.000 40.789	
120.0 -153.15 10.235								0.8555	0.8578	0.8601	0.8623	0.8645	0.8666	
								0.8555	0.8583	0.8606	0.8628	0.8650	0.8671	
								0.8566	0.8753	0.9813	0.9844	0.9865	0.9884	
120.1 -153.05 10.275								0.8549	0.8572	0.8595	0.8617	0.8639	0.8661	
								0.8553	0.8577	0.8600	0.8622	0.8644	0.8665	
								0.8559	0.8786	0.9812	0.9838	0.9863	0.9887	
120.2 -152.95 10.334								0.8543	0.8566	0.8589	0.8612	0.8634	0.8655	
								0.8547	0.8571	0.8594	0.8617	0.8639	0.8660	
								0.8553	0.8786	0.9806	0.9832	0.9857	0.9881	
120.3 -152.85 10.394								0.8537	0.8560	0.8584	0.8606	0.8628	0.8650	
								0.8541	0.8565	0.8588	0.8611	0.8633	0.8654	
								0.8546	0.8773	0.9799	0.9825	0.9850	0.9875	
120.4 -152.75 10.454								0.8531	0.8555	0.8578	0.8600	0.8623	0.8644	
								0.8535	0.8559	0.8583	0.8605	0.8627	0.8649	
								0.8539	0.8766	0.9793	0.9819	0.9844	0.9868	
120.5 -152.65 10.514								0.8525	0.8549	0.8572	0.8595	0.8617	0.8639	
								0.8529	0.8553	0.8577	0.8599	0.8622	0.8643	
								0.8532	0.8759	0.9786	0.9812	0.9837	0.9862	
120.6 -152.55 10.575								0.8519	0.8543	0.8566	0.8589	0.8611	0.8633	
								0.8523	0.8548	0.8571	0.8594	0.8616	0.8638	
								0.8527	0.8753	0.9779	0.9806	0.9831	0.9856	
120.7 -152.45 10.636								0.8513	0.8537	0.8560	0.8583	0.8606	0.8629	
								0.8517	0.8542	0.8565	0.8588	0.8610	0.8632	
								0.8518	0.8746	0.9773	0.9799	0.9825	0.9850	
120.8 -152.35 10.697								0.8507	0.8531	0.8555	0.8578	0.8600	0.8622	
								0.8511	0.8536	0.8560	0.8582	0.8604	0.8627	
								0.8512	0.8739	0.9766	0.9793	0.9818	0.9843	
120.9 -152.25 10.758								0.8501	0.8525	0.8549	0.8572	0.8594	0.8617	
								0.8505	0.8530	0.8553	0.8577	0.8599	0.8621	
								0.8505	0.8733	0.9760	0.9786	0.9812	0.9837	
121.0 -152.15 10.820								0.8495	0.8519	0.8543	0.8566	0.8589	0.8611	
								0.8499	0.8524	0.8548	0.8571	0.8594	0.8616	
								0.8499	0.8726	0.9753	0.9779	0.9805	0.9831	
121.1 -152.05 10.882								0.8489	0.8513	0.8537	0.8560	0.8583	0.8605	
								0.8493	0.8518	0.8542	0.8565	0.8588	0.8610	
								0.8491	0.8719	0.9746	0.9773	0.9799	0.9824	
121.2 -151.95 10.944								0.8483	0.8507	0.8531	0.8555	0.8578	0.8600	
								0.8487	0.8512	0.8536	0.8559	0.8582	0.8604	
								0.8484	0.8712	0.9740	0.9766	0.9792	0.9818	
121.3 -151.85 11.006								0.8477	0.8501	0.8525	0.8549	0.8572	0.8594	
								0.8481	0.8506	0.8530	0.8554	0.8577	0.8599	
								0.8477	0.8705	0.9733	0.9760	0.9786	0.9811	
121.4 -151.75 11.069								0.8470	0.8495	0.8520	0.8543	0.8566	0.8589	
								0.8475	0.8500	0.8524	0.8548	0.8571	0.8593	
								0.8470	0.8699	0.9726	0.9753	0.9779	0.9805	
121.5 -151.65 11.132								0.8464	0.8489	0.8514	0.8537	0.8560	0.8583	
								0.8469	0.8494	0.8518	0.8542	0.8565	0.8588	
								0.8463	0.8692	0.9719	0.9746	0.9773	0.9799	
121.6 -151.55 11.195								0.8458	0.8483	0.8508	0.8532	0.8555	0.8577	
								0.8463	0.8488	0.8512	0.8536	0.8559	0.8582	
								0.8458	0.8685	0.9713	0.9740	0.9766	0.9792	
121.7 -151.45 11.258								0.8452	0.8477	0.8502	0.8526	0.8549	0.8572	
								0.8457	0.8482	0.8506	0.8530	0.8554	0.8576	
								0.8454	0.8678	0.9706	0.9733	0.9760	0.9786	
121.8 -151.35 11.322								0.8446	0.8471	0.8496	0.8520	0.8543	0.8566	
								0.8451	0.8476	0.8501	0.8525	0.8548	0.8571	
								0.8442	0.8671	0.9699	0.9727	0.9753	0.9779	
121.9 -151.25 11.386								0.8440	0.8465	0.8490	0.8514	0.8538	0.8560	
								0.8444	0.8470	0.8495	0.8519	0.8542	0.8565	
								0.8435	0.8664	0.9692	0.9720	0.9747	0.9773	

TABLE 4 - CONTINUED

## DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

				TABLE ENTRIES											
1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR				1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS 3. DENSITY, KG/CM <sup>3</sup>											
BAR KPa/cm <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.110	8.000 8.158	10.000 10.197	15.000 15.296	20.000 20.394	25.000 25.493	30.000 30.591	35.000 35.690	40.000 40.789		
122.0															
-151.15															
11.450															
122.1															
-151.05															
11.514															
122.2															
-150.95															
11.579															
122.3															
-150.85															
11.644															
122.4															
-150.75															
11.709															
122.5															
-150.65															
11.774															
122.6															
-150.55															
11.840															
122.7															
-150.45															
11.906															
122.8															
-150.35															
11.972															
122.9															
-150.25															
12.039															
123.0															
-150.15															
12.106															
123.1															
-150.05															
12.173															
123.2															
-149.95															
12.240															
123.3															
-149.85															
12.308															
123.4															
-149.75															
12.375															
123.5															
-149.65															
12.443															
123.6															
-149.55															
12.512															
123.7															
-149.45															
12.581															
123.8															
-149.35															
12.649															
123.9															
-149.25															
12.719															

TABLE 4 - CONTINUED

## DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS 3. DENSITY, KG/DM <sup>3</sup>											
BAR KPa/cm <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.158	10.000 10.197	15.000 15.296	20.000 20.364	25.000 25.493	30.000 30.591	35.000 35.690	40.000 40.789
124.0 -149.15 12.788								0.8307 0.8312 0.8344	0.8335 0.8340 0.8356	0.8363 0.8367 0.8377	0.8389 0.8394 0.8377	0.8415 0.8419 0.8406	0.8440 0.8444 0.8435
125.0 -148.15 13.498								0.8242 0.8246 0.8405	0.8272 0.8276 0.8443	0.8308 0.8305 0.8476	0.8328 0.8332 0.8507	0.8354 0.8359 0.8538	0.8381 0.8385 0.8567
126.0 -147.15 14.206								0.8175 0.8179 0.8332	0.8206 0.8210 0.8368	0.8236 0.8241 0.8402	0.8265 0.8270 0.8436	0.8293 0.8298 0.8468	0.8320 0.8325 0.8499
127.0 -146.15 15.002								0.8139 0.8143 0.8291	0.8170 0.8175 0.8328	0.8201 0.8205 0.8362	0.8230 0.8235 0.8396	0.8259 0.8263 0.8428	0.8289 0.8293 0.8462
128.0 -145.15 15.797								0.8070 0.8074 0.8213	0.8103 0.8108 0.8251	0.8135 0.8140 0.8287	0.8166 0.8171 0.8323	0.8196 0.8201 0.8357	0.8221 0.8225 0.8381
129.0 -144.15 16.622								0.7999 0.8004 0.9132	0.8034 0.8038 0.9172	0.8067 0.8071 0.9209	0.8099 0.8103 0.9246	0.8130 0.8135 0.9282	0.8155 0.8160 0.9318
130.0 -143.15 17.478								0.7925 0.7930 0.9048	0.7962 0.7967 0.9080	0.7998 0.8002 0.9130	0.8032 0.8036 0.9165	0.8064 0.8069 0.9207	0.8089 0.8093 0.9242
131.0 -142.15 18.365								0.7851 0.7855 0.8963	0.7890 0.7894 0.9007	0.7927 0.7931 0.9049	0.7963 0.7967 0.9091	0.7997 0.8002 0.9130	0.8021 0.8025 0.9165
132.0 -141.15 19.283								0.7772 0.7776 0.8873	0.7814 0.7818 0.8921	0.7854 0.7858 0.8966	0.7892 0.7896 0.9009	0.7928 0.7933 0.9051	0.7963 0.7967 0.9086
133.0 -140.15 20.235								0.7737 0.7741 0.8833	0.7779 0.7783 0.8881	0.7819 0.7824 0.8927	0.7858 0.7862 0.8971	0.7895 0.7899 0.9006	0.7929 0.7933 0.9041
134.0 -139.15 21.219								0.7656 0.7660 0.8740	0.7702 0.7706 0.8792	0.7745 0.7749 0.8841	0.7786 0.7790 0.8881	0.7825 0.7829 0.8916	0.7863 0.7867 0.8951
135.0 -138.15 22.237								0.7572 0.7576 0.8644	0.7620 0.7625 0.8700	0.7667 0.7671 0.8752	0.7710 0.7715 0.8803	0.7750 0.7755 0.8848	0.7788 0.7793 0.8888
136.0 -137.15 23.291								0.7493 0.7497 0.8543	0.7536 0.7541 0.8604	0.7586 0.7590 0.8661	0.7633 0.7637 0.8714	0.7673 0.7677 0.8761	0.7710 0.7714 0.8801
137.0 -136.15 24.379								0.7390 0.7394 0.8437	0.7449 0.7453 0.8504	0.7503 0.7507 0.8565	0.7553 0.7557 0.8616	0.7602 0.7606 0.8667	0.7649 0.7653 0.8712
138.0 -135.15 25.504								0.7351 0.7355 0.8399	0.7411 0.7415 0.8466	0.7461 0.7465 0.8533	0.7511 0.7515 0.8600	0.7560 0.7564 0.8667	0.7607 0.7611 0.8712
139.0 -134.15 26.666								0.7259 0.7263 0.8287	0.7324 0.7328 0.8361	0.7384 0.7388 0.8436	0.7444 0.7448 0.8511	0.7502 0.7506 0.8586	0.7559 0.7563 0.8661
140.0 -133.15 27.866								0.7157 0.7161 0.8170	0.7228 0.7232 0.8252	0.7298 0.7302 0.8337	0.7367 0.7371 0.8422	0.7435 0.7439 0.8507	0.7502 0.7506 0.8582
141.0 -132.15 29.104								0.7045 0.7049 0.8043	0.7126 0.7130 0.8135	0.7206 0.7210 0.8220	0.7285 0.7289 0.8305	0.7362 0.7366 0.8390	0.7438 0.7442 0.8385
142.0 -131.15 30.383								0.6918 0.6922 0.8012	0.7001 0.7005 0.8102	0.7082 0.7086 0.8197	0.7161 0.7165 0.8292	0.7239 0.7243 0.8387	0.7316 0.7320 0.8482
143.0 -130.15 31.702								0.6809 0.6813 0.7876	0.6899 0.6903 0.7971	0.6988 0.6992 0.8060	0.7076 0.7080 0.8158	0.7163 0.7167 0.8255	0.7249 0.7253 0.8352



TABLE 4 - CONTINUED

## DENSITY OF COMPRESSED LIQUID OXYGEN - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>M3</sup>												
BAR		0.000	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KP/CM <sup>2</sup>		0.016	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789
144.0													0.6772	0.6876
-129.15													0.6776	0.6879
33.064													0.7731	0.7849
145.0													0.6627	0.6749
-128.15													0.6631	0.6753
34.468													0.7565	0.7705
146.0														0.6612
-127.15														0.6615
35.918														0.7548
147.0														0.6456
-126.15														0.6458
37.413														0.7370
148.0														0.6277
-125.15														0.6280
38.955														0.7166

## 7. NITROGEN

The data tabulated for nitrogen are based on the paper by Strobridge (1962). The saturated liquid values were calculated by solving simultaneously the vapor pressure equation and the equation of state. First the vapor pressure equation was solved for either pressure or temperature depending on the integral value desired, then using the resulting P and T, the equation of state was solved for the corresponding density. All of the tabulated values were obtained in this manner except the critical point. At the critical point the vapor pressure equation was used to calculate the pressure from an input temperature of 126.26 K but the density was calculated using the theory of rectilinear diameters and the saturation densities tabulated by Strobridge.

Values near room temperature are given in table 5, uncertainties for the data in table 6, values for the saturated liquid are given in table 7, and values for the compressed liquid are shown in table 8. Near the critical point, the deviations between calculated and

Table 5

Density of Nitrogen Near Atmospheric Pressure and Room Temperature

Temperature	Pressure	Density		Volume	
		gram-mole/cm <sup>3</sup>	kg/dm <sup>3</sup>	cm <sup>3</sup> /gram-mole	dm <sup>3</sup> /kg
0° C	1 bar	4.4051x10 <sup>-5</sup>	1.2341x10 <sup>-3</sup>	22701.	810.28
	760 torr	4.4635x10 <sup>-5</sup>	1.2505x10 <sup>-3</sup>	22404.	799.68
15° C	1 bar	4.1752x10 <sup>-5</sup>	1.1697x10 <sup>-3</sup>	23951.	854.91
	760 torr	4.2305x10 <sup>-5</sup>	1.1852x10 <sup>-3</sup>	23638.	843.73
Density Ratios - Dimensionless					
Liquid Density at a boiling pressure of 1 bar <sup>*</sup> /density at 1 bar and 0° C					654.63
Liquid Density at a boiling pressure of 1 bar /density at 1 bar and 15° C					690.70
Liquid Density at a boiling pressure of 760 torr <sup>†</sup> /density at 760 torr and 0° C					645.67
Liquid Density at a boiling pressure of 760 torr /density at 760 torr and 15° C					681.23

\* Liquid density at a boiling pressure of 1 bar                      0.8079 kg/dm<sup>3</sup>

† Liquid density at a boiling pressure of 760 torr                    0.8074 kg/dm<sup>3</sup>

experimental data range from 0.2% at 125 K to 5% at 126 K. The critical density given in table 7 is uncertain by 5% as well. The value of the density at the boiling point at 760 torr in table 7 should be the same as in the CGA pamphlet P-6, yet they differ by 0.1%. This is surprising as the source has not changed, and we can only suspect an error in the printing of the pamphlet.

Table 6  
Uncertainties in the Data for Nitrogen

variable	uncertainty	range of temperature
temperature	0.5%	64 to 72 K
	0.1%	72 to 125 K
	0.015 K	room temperature
volume	0.4%	up to 125 K
	increases to 5%	at 126 K
	0.01%	room temperature
pressure	1%	64 to 72 K
	0.1%	72 to 126 K
	0.01%	room temperature

## SATURATED LIQUID NITROGEN

TABLE 7

PRESSURE		TEMPERATURE		DENSITY		VOLUME		DENSITY RATIOS -		DIMENSIONLESS	
BAR	KP/CM <sup>2</sup>	KELVIN	CELSIUS	GRAM-MOLE/ CM <sup>3</sup>	KG/ DM <sup>3</sup>	CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG	LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 1 BAR	LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR	LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR	LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
0.125	0.127	53.150	-210.000	0.030598	0.8684	32.260	1.1515	1.0749	1.0756	1.0756	1.0756
0.146	0.149	64.000	-209.150	0.030677	0.8650	32.387	1.1560	1.0707	1.0714	1.0714	1.0714
0.170	0.173	64.150	-209.000	0.030655	0.8644	32.409	1.1563	1.0700	1.0707	1.0707	1.0707
0.154	0.157	65.000	-208.150	0.030733	0.8610	32.458	1.1614	1.0657	1.0664	1.0664	1.0664
0.178	0.182	65.150	-208.000	0.030711	0.8604	32.561	1.1622	1.0650	1.0656	1.0656	1.0656
0.200	0.204	65.200	-207.330	0.030613	0.8577	32.665	1.1660	1.0616	1.0623	1.0623	1.0623
0.206	0.210	66.000	-207.150	0.030587	0.8569	32.694	1.1670	1.0610	1.0617	1.0617	1.0617
0.211	0.215	66.150	-207.000	0.030565	0.8563	32.717	1.1678	1.0606	1.0613	1.0613	1.0613
0.243	0.248	67.000	-206.150	0.030439	0.8522	32.852	1.1726	1.0555	1.0562	1.0562	1.0562
0.249	0.254	67.150	-206.000	0.030417	0.8522	32.876	1.1735	1.0548	1.0555	1.0555	1.0555
0.285	0.290	68.000	-205.150	0.030290	0.8486	33.014	1.1784	1.0510	1.0517	1.0517	1.0517
0.291	0.297	68.150	-205.000	0.030268	0.8480	33.039	1.1793	1.0504	1.0511	1.0511	1.0511
0.332	0.339	69.000	-204.150	0.030139	0.8444	33.179	1.1843	1.0458	1.0465	1.0465	1.0465
0.340	0.346	69.150	-204.000	0.030117	0.8437	33.204	1.1852	1.0451	1.0458	1.0458	1.0458
0.385	0.393	70.000	-203.150	0.029987	0.8401	33.345	1.1903	1.0405	1.0412	1.0412	1.0412
0.396	0.402	70.150	-203.000	0.029964	0.8395	33.373	1.1912	1.0399	1.0406	1.0406	1.0406
0.400	0.408	70.256	-202.694	0.029948	0.8390	33.392	1.1919	1.0392	1.0399	1.0399	1.0399
0.445	0.454	71.000	-202.150	0.029833	0.8358	33.520	1.1965	1.0345	1.0352	1.0352	1.0352
0.455	0.464	71.150	-202.000	0.029810	0.8352	33.546	1.1974	1.0339	1.0346	1.0346	1.0346
0.512	0.522	72.000	-201.150	0.029678	0.8314	33.695	1.2027	1.0298	1.0305	1.0305	1.0305
0.523	0.533	72.150	-201.000	0.029654	0.8308	33.722	1.2037	1.0290	1.0297	1.0297	1.0297
0.566	0.578	73.000	-200.150	0.029521	0.8271	33.874	1.2091	1.0243	1.0250	1.0250	1.0250
0.594	0.610	73.150	-200.000	0.029497	0.8264	33.906	1.2102	1.0235	1.0242	1.0242	1.0242
0.600	0.612	73.174	-199.676	0.029493	0.8263	33.906	1.2102	1.0235	1.0242	1.0242	1.0242
0.659	0.682	74.000	-199.150	0.029363	0.8226	34.057	1.2156	1.0188	1.0195	1.0195	1.0195
0.682	0.705	74.150	-199.000	0.029339	0.8220	34.085	1.2166	1.0180	1.0187	1.0187	1.0187
0.774	0.775	75.000	-198.150	0.029203	0.8181	34.243	1.2223	1.0127	1.0134	1.0134	1.0134
0.774	0.780	75.150	-198.000	0.029179	0.8175	34.272	1.2233	1.0118	1.0125	1.0125	1.0125
0.840	0.846	76.141	-197.236	0.029137	0.8163	34.321	1.2251	1.0110	1.0117	1.0117	1.0117
0.883	0.877	76.000	-197.150	0.029042	0.8136	34.333	1.2261	1.0077	1.0084	1.0084	1.0084
0.886	0.893	76.150	-197.000	0.029012	0.8129	34.362	1.2269	1.0069	1.0076	1.0076	1.0076
0.971	0.990	77.000	-196.150	0.028873	0.8091	34.627	1.2360	1.0014	1.0021	1.0021	1.0021
0.981	1.000	77.047	-196.063	0.028865	0.8087	34.644	1.2366	1.0009	1.0016	1.0016	1.0016
0.968	1.037	77.150	-196.000	0.028854	0.8084	34.657	1.2370	1.0006	1.0012	1.0012	1.0012
1.000	1.020	77.252	-195.698	0.028838	0.8079	34.677	1.2376	1.0000	1.0006	1.0006	1.0006
1.013	1.033	77.364	-195.786	0.028819	0.8074	34.699	1.2385	0.9994	1.0000	1.0000	1.0000
1.051	1.113	76.000	-195.150	0.028715	0.8045	34.325	1.2430	0.9957	0.9964	0.9964	0.9964
1.140	1.132	76.150	-195.000	0.028690	0.8036	34.355	1.2441	0.9950	0.9957	0.9957	0.9957
1.200	1.224	76.831	-194.315	0.028577	0.8006	34.993	1.2490	0.9910	0.9917	0.9917	0.9917
1.223	1.247	76.000	-194.150	0.028549	0.7998	35.027	1.2503	0.9900	0.9906	0.9906	0.9906

TABLE 7 CONTINUED

## SATURATED LIQUID NITROGEN

BAR	PRESSURE KP/CM <sup>2</sup>	TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	VOLUME CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG	DENSITY RATIOS -	
		KELVIN	CELSIUS				LIQUID DENSITY/ DENSITY AT 1 BAR PRESS. OF 760 TORR	DIMENSIONLESS LIQUID DENSITY/ DENSITY AT 1 BAR PRESS. OF 760 TORR
1.644	1.268	79.150	-134.000	0.028524	55.958	1.2514	0.9391	0.9898
1.367	1.034	80.000	-133.150	0.028582	52.634	1.2574	0.9362	0.9898
1.300	1.000	80.150	-132.850	0.028587	52.655	1.2567	0.9373	0.9898
1.400	1.049	80.220	-132.530	0.028345	52.679	1.2593	0.9369	0.9898
1.823	1.353	81.000	-132.150	0.028213	52.444	1.2691	0.9375	0.9794
1.947	1.457	81.150	-132.000	0.028168	52.476	1.2663	0.9375	0.9794
1.692	1.282	81.467	-131.683	0.028134	52.544	1.2667	0.9356	0.9792
1.850	1.375	82.000	-131.150	0.028043	52.559	1.2728	0.9374	0.9791
1.718	1.272	82.150	-131.000	0.028017	52.592	1.2740	0.93716	0.9782
1.800	1.335	82.601	-130.450	0.027940	52.791	1.2775	0.9369	0.9695
1.875	1.392	83.000	-130.000	0.027871	52.879	1.2807	0.9365	0.9671
1.903	1.414	83.150	-130.000	0.027845	52.913	1.2819	0.9356	0.9662
1.861	1.389	83.449	-129.701	0.027793	52.960	1.2843	0.9338	0.9684
2.000	1.509	83.644	-129.506	0.027759	52.824	1.2858	0.9305	0.9632
2.072	1.543	84.000	-129.150	0.027697	52.804	1.2887	0.9305	0.9611
2.103	1.565	84.150	-129.000	0.027671	52.772	1.2899	0.9296	0.9602
2.200	1.643	84.612	-128.538	0.027590	52.645	1.2937	0.9267	0.9574
2.284	1.709	85.000	-128.150	0.027522	52.771	1.2963	0.9244	0.9550
2.317	1.735	85.150	-128.000	0.027496	52.770	1.2982	0.9235	0.9541
2.400	1.802	85.516	-127.634	0.027431	52.655	1.3012	0.9212	0.9518
2.512	1.902	86.000	-127.150	0.027345	52.670	1.3053	0.9182	0.9488
2.548	1.938	86.150	-127.000	0.027318	52.606	1.3066	0.9157	0.9479
2.600	1.981	86.366	-126.784	0.027280	52.654	1.3085	0.9160	0.9466
2.757	2.111	87.000	-126.150	0.027166	52.311	1.3139	0.9120	0.9426
2.795	2.139	87.150	-126.000	0.027139	52.648	1.3152	0.9111	0.9417
2.800	2.145	87.168	-126.000	0.027135	52.652	1.3154	0.9110	0.9416
2.942	2.285	87.825	-125.582	0.027037	52.367	1.3202	0.9076	0.9381
3.000	2.354	88.000	-125.421	0.026997	52.341	1.3221	0.9062	0.9368
3.019	2.379	88.000	-125.400	0.026985	52.328	1.3228	0.9057	0.9354
3.200	2.523	88.500	-124.900	0.026857	52.056	1.3286	0.9016	0.9326
3.343	2.654	89.000	-124.496	0.026665	52.727	1.3286	0.9016	0.9326
3.499	2.804	89.400	-124.150	0.026601	52.311	1.3318	0.8994	0.9300
3.660	2.954	90.000	-123.600	0.026574	52.311	1.3318	0.8984	0.9290
3.843	3.129	89.150	-123.000	0.026738	52.311	1.3318	0.8984	0.9290
3.958	3.269	89.346	-122.804	0.026738	52.311	1.3318	0.8984	0.9290
3.600	2.871	90.000	-123.000	0.026616	52.311	1.3318	0.8984	0.9290
3.644	2.916	90.150	-122.850	0.026616	52.311	1.3318	0.8984	0.9290
3.800	3.075	90.644	-122.506	0.026588	52.311	1.3318	0.8984	0.9290
3.916	3.193	91.000	-122.000	0.026496	52.311	1.3318	0.8984	0.9290
3.923	3.200	91.000	-122.000	0.026424	52.311	1.3318	0.8984	0.9290
3.965	3.243	91.150	-121.829	0.026424	52.311	1.3318	0.8984	0.9290
4.000	3.283	91.500	-121.495	0.026400	52.311	1.3318	0.8984	0.9290
4.200	3.513	92.000	-120.900	0.026380	52.311	1.3318	0.8984	0.9290
4.254	3.563	92.000	-120.900	0.026368	52.311	1.3318	0.8984	0.9290
4.306	3.613	92.150	-120.733	0.026262	52.311	1.3318	0.8984	0.9290
4.306	3.613	92.150	-120.733	0.026210	52.311	1.3318	0.8984	0.9290



TABLE 7 CONTINUED

SATURATED LIQUID NITROGEN

BAR	PRESSURE KPC/M <sup>2</sup>	TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	KG/ DM <sup>3</sup>	GM-MOLE GRAM-MOLE	VOLUME CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG	DENSITY RATIOS - DIMENSIONLESS	
		KELVIN	CELSIUS						LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 1 BAR	LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
4.400	4.4437	92.414	-180.736	0.0266159	0.7359	38.289	1.3645	0.9071	0.9077	
4.600	4.691	92.965	-180.185	0.0262053	0.7299	38.383	1.3701	0.9040	0.9046	
4.813	4.764	93.000	-180.150	0.0260046	0.7297	38.394	1.3704	0.9032	0.9038	
4.869	4.770	93.150	-180.000	0.0260147	0.7299	38.4437	1.3719	0.9028	0.9028	
4.800	4.895	93.476	-179.652	0.025949	0.7270	38.537	1.3755	0.8998	0.9004	
4.903	5.000	93.767	-179.361	0.025897	0.7255	38.615	1.3783	0.8980	0.8986	
4.994	5.092	94.000	-179.150	0.0258851	0.7242	38.683	1.3808	0.8970	0.8976	
5.000	5.039	94.015	-179.135	0.0258648	0.7242	38.688	1.3809	0.8969	0.8969	
5.053	5.153	94.150	-178.900	0.0258821	0.7234	38.728	1.3823	0.8954	0.8950	
5.200	5.303	94.518	-178.532	0.025749	0.7214	38.837	1.3862	0.8936	0.8935	
5.397	5.504	95.000	-178.150	0.025653	0.7187	38.962	1.3914	0.8911	0.8911	
5.400	5.506	95.006	-178.144	0.025653	0.7187	38.964	1.3915	0.8911	0.8911	
5.460	5.567	95.150	-178.000	0.0256623	0.7179	39.027	1.3930	0.8885	0.8885	
5.600	5.710	95.482	-177.668	0.0255623	0.7160	39.129	1.3967	0.8862	0.8868	
5.800	5.914	95.945	-177.205	0.025463	0.7134	39.272	1.4018	0.8830	0.8835	
5.824	5.939	96.000	-177.150	0.025452	0.7131	39.289	1.4024	0.8826	0.8826	
5.884	6.000	96.137	-177.013	0.025425	0.7123	39.332	1.4039	0.8816	0.8816	
5.950	6.006	96.150	-177.000	0.025422	0.7122	39.336	1.4041	0.8815	0.8821	
6.000	6.118	96.397	-176.753	0.025372	0.7108	39.414	1.4068	0.8798	0.8804	
6.200	6.322	96.838	-176.312	0.025281	0.7083	39.555	1.4119	0.8767	0.8772	
6.374	6.398	97.000	-176.150	0.025248	0.7074	39.607	1.4137	0.8755	0.8761	
6.344	6.469	97.150	-176.000	0.025217	0.7055	39.653	1.4154	0.8745	0.8750	
6.400	6.520	97.269	-175.881	0.025193	0.7048	39.694	1.4168	0.8736	0.8742	
6.600	6.730	97.691	-175.459	0.025105	0.7034	39.842	1.4218	0.8706	0.8711	
6.750	6.833	98.000	-175.150	0.025041	0.7015	39.935	1.4254	0.8683	0.8689	
6.800	6.934	98.103	-175.047	0.025020	0.7009	39.969	1.4266	0.8676	0.8682	
6.823	6.958	98.150	-175.000	0.025010	0.7007	39.985	1.4272	0.8673	0.8678	
6.865	7.000	98.234	-174.916	0.024992	0.7002	40.013	1.4282	0.8666	0.8672	
7.000	7.138	98.506	-174.644	0.024935	0.6986	40.103	1.4315	0.8647	0.8652	
7.200	7.342	99.001	-174.249	0.024851	0.6962	40.239	1.4363	0.8618	0.8623	
7.251	7.394	99.100	-174.200	0.024830	0.6956	40.273	1.4375	0.8616	0.8616	
7.328	7.472	99.150	-174.100	0.024798	0.6948	40.373	1.4411	0.8599	0.8605	
7.400	7.545	99.269	-173.961	0.024769	0.6939	40.437	1.4441	0.8589	0.8594	
7.500	7.750	99.668	-173.588	0.024687	0.6916	40.517	1.4458	0.8561	0.8566	
7.778	7.931	100.000	-173.150	0.024616	0.6894	40.624	1.4500	0.8541	0.8541	
7.954	8.000	100.041	-173.100	0.024607	0.6892	40.639	1.4506	0.8536	0.8538	
8.000	8.000	100.125	-173.025	0.024589	0.6889	40.669	1.4516	0.8527	0.8532	
8.059	8.014	100.150	-173.000	0.024583	0.6887	40.678	1.4520	0.8525	0.8530	
8.200	8.158	100.407	-172.743	0.024457	0.6872	40.771	1.4553	0.8505	0.8511	
8.362	8.252	100.766	-172.384	0.024449	0.6860	40.912	1.4599	0.8478	0.8483	
8.572	8.592	101.119	-172.031	0.024337	0.6835	41.038	1.4630	0.8451	0.8456	
8.760	8.765	101.150	-172.000	0.024321	0.6832	41.044	1.4646	0.8449	0.8454	
8.818	8.770	101.150	-172.000	0.024324	0.6832	41.162	1.4692	0.8424	0.8430	
8.800	8.874	101.666	-171.666	0.024264	0.6826	41.162	1.4692	0.8424	0.8430	
8.800	8.974	101.800	-171.404	0.024218	0.6805	41.232	1.4733	0.8398	0.8403	

TABLE 7 CONTINUED

## SATURATED LIQUID NITROGEN

BAR	PRESSURE		TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	KG/ DM <sup>3</sup>	CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG	DENSITY RATIOS -	
	KP/CM <sup>2</sup>	BAR	KELVIN	CELSIUS					LIQUID DENSITY/ DENSITY AT A BOIL PRESS. OF 1 BAR	DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL PRESS. OF 760 TORR
8-826	9.000	101.851	-171.299	0.024208	0.6782	41.309	1.4745	0.8395	0.8400	
8-914	9.050	102.000	-171.150	0.024175	0.6773	41.366	1.4765	0.8383	0.8388	
9-000	9.177	102.143	-171.007	0.024142	0.6764	41.421	1.4785	0.8372	0.8377	
9-004	9.182	102.150	-171.000	0.024141	0.6763	41.424	1.4786	0.8371	0.8377	
9-200	9.351	102.474	-170.676	0.024068	0.6743	41.550	1.4831	0.8346	0.8351	
9-400	9.595	102.799	-170.351	0.023993	0.6722	41.677	1.4877	0.8320	0.8325	
9-525	9.713	103.000	-170.150	0.023947	0.6709	41.758	1.4905	0.8304	0.8309	
9-600	9.789	103.119	-170.031	0.023920	0.6701	41.806	1.4922	0.8295	0.8300	
9-619	9.803	103.150	-170.000	0.023913	0.6699	41.818	1.4927	0.8292	0.8298	
9-800	9.993	103.435	-169.745	0.023847	0.6681	41.934	1.4968	0.8269	0.8274	
9-807	10.000	103.445	-169.740	0.023845	0.6680	41.938	1.4969	0.8269	0.8274	
10-000	10.197	103.746	-169.440	0.023775	0.6661	42.062	1.5013	0.8244	0.8250	
10-165	10.356	104.000	-169.150	0.023715	0.6644	42.167	1.5051	0.8229	0.8229	
10-200	10.401	104.033	-169.097	0.023703	0.6641	42.189	1.5059	0.8224	0.8225	
10-264	10.466	104.150	-168.980	0.023680	0.6634	42.230	1.5073	0.8219	0.8217	
10-400	10.605	104.355	-168.795	0.023632	0.6621	42.315	1.5104	0.8211	0.8200	
10-600	10.809	104.653	-168.497	0.023561	0.6601	42.443	1.5150	0.8195	0.8195	
10-787	11.000	104.929	-168.221	0.023465	0.6582	42.563	1.5192	0.8170	0.8175	
10-800	11.013	104.947	-168.200	0.023490	0.6581	42.571	1.5195	0.8177	0.8181	
10-836	11.050	105.000	-168.150	0.023478	0.6578	42.593	1.5203	0.8166	0.8167	
10-939	11.153	105.150	-168.000	0.023442	0.6567	42.659	1.5227	0.8141	0.8147	
10-939	11.217	105.238	-167.942	0.023421	0.6561	42.699	1.5240	0.8129	0.8134	
11-200	11.421	105.524	-167.626	0.023351	0.6542	42.825	1.5286	0.8122	0.8127	
11-400	11.625	105.807	-167.343	0.023282	0.6523	42.952	1.5331	0.8097	0.8103	
11-538	11.755	106.000	-167.150	0.023235	0.6509	43.073	1.5362	0.8073	0.8079	
11-600	11.823	106.087	-167.083	0.023213	0.6503	43.079	1.5362	0.8057	0.8062	
11-646	11.875	106.150	-167.000	0.023198	0.6499	43.108	1.5376	0.8050	0.8055	
11-768	12.000	106.319	-166.631	0.023156	0.6487	43.186	1.5387	0.8044	0.8049	
11-800	12.033	106.363	-166.600	0.023145	0.6484	43.206	1.5415	0.8030	0.8035	
12-000	12.237	106.635	-166.245	0.023077	0.6465	43.333	1.5422	0.8025	0.8031	
12-200	12.441	106.905	-165.850	0.023009	0.6446	43.461	1.5467	0.8002	0.8007	
12-271	12.513	107.000	-165.800	0.022985	0.6440	43.504	1.5479	0.7979	0.7984	
12-384	12.629	107.150	-165.600	0.022942	0.6429	43.579	1.5523	0.7951	0.7956	
12-400	12.644	107.171	-165.579	0.022942	0.6429	43.588	1.5558	0.7956	0.7962	
12-600	12.848	107.448	-165.246	0.022875	0.6409	43.716	1.5558	0.7937	0.7943	
12-749	13.000	107.628	-165.025	0.022825	0.6395	43.841	1.5634	0.7932	0.7937	
12-800	13.052	107.664	-165.000	0.022808	0.6395	43.841	1.5650	0.7909	0.7914	
13-000	13.256	107.982	-164.642	0.022742	0.6371	43.972	1.5695	0.7887	0.7891	
13-038	13.295	108.000	-164.600	0.022720	0.6364	43.992	1.5705	0.7882	0.7887	
13-156	13.445	108.150	-164.300	0.022670	0.6357	44.072	1.5731	0.7862	0.7867	
13-200	13.460	108.206	-164.264	0.022675	0.6353	44.102	1.5741	0.7850	0.7856	
13-400	13.640	108.468	-163.843	0.022609	0.6333	44.229	1.5787	0.7845	0.7845	
13-600	13.858	108.707	-163.443	0.022560	0.6316	44.358	1.5863	0.7817	0.7822	
13-729	14.000	108.867	-163.043	0.022504	0.6301	44.442	1.5863	0.7803	0.7808	
13-800	14.072	108.954	-163.000	0.022478	0.6297	44.488	1.5875	0.7795	0.7800	

TABLE 7 CONTINUED

## SATURATED LIQUID NITROGEN

BAR	PRESSURE		TEMPERATURE		GRAM-MOLE/ CM <sup>3</sup>	DENSITY KG/ DM <sup>3</sup>	VOLUME		DENSITY RATIOS -		DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 760 TORR
	KP/CM <sup>2</sup>	BAR	KELVIN	CELSIUS			CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG	LIQUID DENSITY/ DENSITY AT 1 BAR	LIQUID DENSITY/ DENSITY AT A BOIL-	
13.838	14.111	109.000	-164.150	0.022466	0.6294	44.512	1.5888	0.7790	0.7795		
13.961	14.276	109.150	-164.000	0.025420	0.6523	44.592	1.5617	0.7776	0.7781		
14.000	14.359	109.150	-163.992	0.025420	0.6523	44.617	1.5626	0.7777	0.7777		
14.200	14.760	109.439	-163.772	0.025413	0.6564	44.748	1.5572	0.7749	0.7754		
14.400	14.984	109.678	-163.772	0.025283	0.6564	44.878	1.5572	0.7732	0.7732		
14.600	14.988	109.915	-163.225	0.025216	0.6524	45.003	1.6066	0.7704	0.7709		
14.710	15.001	110.004	-163.110	0.025194	0.6515	45.057	1.6082	0.7596	0.7601		
14.800	15.092	110.150	-163.000	0.025182	0.6515	45.082	1.6091	0.7592	0.7597		
14.800	15.092	110.150	-163.000	0.025183	0.6506	45.141	1.6113	0.7582	0.7587		
14.800	15.096	110.382	-162.768	0.025064	0.6168	45.272	1.6367	0.7597	0.7592		
15.200	15.950	110.612	-162.350	0.025028	0.6170	45.405	1.6507	0.7615	0.7620		
15.400	15.704	111.840	-162.130	0.024959	0.6132	45.536	1.6534	0.7635	0.7640		
15.542	15.805	111.840	-162.130	0.024959	0.6134	45.572	1.6502	0.7584	0.7589		
15.600	15.988	111.855	-162.000	0.024895	0.6126	45.733	1.6324	0.7592	0.7597		
15.676	16.000	111.167	-161.983	0.024871	0.6127	45.733	1.6324	0.7592	0.7597		
15.691	16.000	111.289	-161.861	0.024831	0.6116	45.806	1.6350	0.7570	0.7575		
15.800	16.115	111.510	-161.640	0.024767	0.6098	45.941	1.6398	0.7548	0.7553		
16.200	16.919	111.730	-161.420	0.024703	0.6080	46.077	1.6447	0.7526	0.7531		
16.400	16.723	111.946	-161.202	0.024639	0.6062	46.213	1.6495	0.7504	0.7509		
16.448	16.772	112.000	-161.150	0.024624	0.6058	46.246	1.6507	0.7499	0.7504		
16.587	16.914	112.150	-161.000	0.024579	0.6046	46.341	1.6541	0.7483	0.7488		
16.600	16.927	112.150	-161.000	0.024579	0.6044	46.350	1.6544	0.7482	0.7486		
16.671	17.000	112.240	-160.980	0.024552	0.6038	46.399	1.6562	0.7478	0.7483		
16.800	17.131	112.378	-160.772	0.024511	0.6027	46.488	1.6593	0.7459	0.7464		
17.000	17.335	112.590	-160.560	0.024447	0.6009	46.626	1.6643	0.7437	0.7442		
17.200	17.335	112.800	-160.350	0.024383	0.5991	46.626	1.6643	0.7415	0.7420		
17.392	17.734	113.009	-160.140	0.024322	0.5974	46.900	1.6740	0.7399	0.7399		
17.400	17.743	113.009	-160.140	0.024322	0.5973	46.905	1.6742	0.7383	0.7388		
17.536	17.932	113.150	-159.934	0.024256	0.5961	47.001	1.6777	0.7378	0.7383		
17.600	17.947	113.269	-159.816	0.024256	0.5955	47.046	1.6793	0.7371	0.7375		
17.652	18.000	113.421	-159.699	0.024239	0.5950	47.083	1.6806	0.7365	0.7370		
17.800	18.151	113.421	-159.699	0.024192	0.5937	47.183	1.6843	0.7349	0.7353		
18.000	18.359	113.624	-159.486	0.024128	0.5919	47.331	1.6894	0.7326	0.7331		
18.200	18.595	113.826	-159.274	0.024064	0.5901	47.475	1.6645	0.7304	0.7309		
18.373	18.733	114.000	-159.153	0.024008	0.5886	47.600	1.6690	0.7285	0.7290		
18.400	18.763	114.000	-159.153	0.024008	0.5882	47.613	1.6697	0.7282	0.7287		
18.524	18.967	114.150	-158.924	0.020960	0.5872	47.709	1.7029	0.7263	0.7268		
18.600	18.967	114.150	-158.924	0.020936	0.5865	47.765	1.7049	0.7264	0.7264		
18.633	19.000	114.256	-158.692	0.020925	0.5862	47.789	1.7058	0.7256	0.7261		
18.800	19.171	114.423	-158.777	0.020872	0.5847	47.912	1.7102	0.7238	0.7242		
19.000	19.375	114.619	-158.551	0.020807	0.5829	48.060	1.7154	0.7215	0.7220		
19.200	19.574	114.813	-158.331	0.020743	0.5811	48.209	1.7208	0.7193	0.7198		
19.354	19.776	115.000	-158.150	0.020681	0.5794	48.354	1.7260	0.7171	0.7176		

TABLE 7 CONTINUED

## SATURATED LIQUID NITROGEN

BAR	PRESSURE KPI/CM <sup>2</sup>	TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	VOLUME		LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 1 BAR	DENSITY RATIOS - DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
		KELVIN	CELSIUS		CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG		
19.400	19.782	115.006	-158.144	0.020679	48.359	1.7261	0.7171	0.7175
19.551	19.936	115.150	-158.000	0.020630	48.473	1.7302	0.7150	0.7158
19.600	19.986	115.197	-157.953	0.020610	48.510	1.7315	0.7148	0.7153
19.613	20.000	115.210	-157.940	0.020610	48.520	1.7319	0.7147	0.7151
19.800	20.190	115.387	-157.763	0.020550	48.661	1.7370	0.7126	0.7130
20.000	20.394	115.576	-157.574	0.020485	48.817	1.7425	0.7103	0.7108
20.200	20.598	115.763	-157.387	0.020420	49.072	1.7480	0.7085	0.7088
20.400	20.802	115.949	-157.201	0.020355	49.328	1.7536	0.7058	0.7063
20.455	20.859	116.000	-157.150	0.020337	49.412	1.7551	0.7052	0.7057
20.594	21.000	116.128	-157.022	0.020292	49.526	1.7591	0.7036	0.7041
20.660	21.025	116.133	-157.017	0.020290	49.526	1.7592	0.7036	0.7040
20.800	21.205	116.150	-157.000	0.020284	49.530	1.7597	0.7034	0.7038
21.000	21.414	116.199	-156.833	0.020224	49.846	1.7649	0.7013	0.7018
21.200	21.618	116.479	-156.651	0.020159	49.607	1.7707	0.6990	0.6995
21.400	21.822	116.879	-156.471	0.020093	49.769	1.7765	0.6968	0.6972
21.558	21.983	117.000	-156.291	0.020027	49.933	1.7823	0.6945	0.6949
21.575	22.000	117.015	-156.285	0.020027	50.064	1.7870	0.6936	0.6941
21.600	22.026	117.037	-156.135	0.019969	50.078	1.7875	0.6925	0.6929
21.727	22.156	117.150	-156.113	0.019918	50.205	1.7920	0.6911	0.6915
21.800	22.230	117.214	-156.036	0.019894	50.267	1.7942	0.6903	0.6907
22.000	22.434	117.390	-155.827	0.019827	50.436	1.8003	0.6875	0.6880
22.200	22.638	117.565	-155.585	0.019760	50.607	1.8064	0.6852	0.6857
22.400	22.842	117.739	-155.311	0.019693	50.780	1.8125	0.6831	0.6835
22.555	23.000	117.873	-155.177	0.019640	50.916	1.8174	0.6815	0.6818
22.600	23.046	117.911	-155.239	0.019625	50.955	1.8188	0.6805	0.6810
22.704	23.151	118.000	-155.150	0.019590	51.046	1.8220	0.6793	0.6798
22.800	23.250	118.082	-155.068	0.019557	51.132	1.8251	0.6782	0.6786
22.879	23.300	118.150	-155.000	0.019530	51.203	1.8276	0.6772	0.6777
23.000	23.453	118.253	-154.897	0.019489	51.311	1.8315	0.6758	0.6762
23.200	23.657	118.422	-154.628	0.019420	51.434	1.8360	0.6740	0.6744
23.400	23.861	118.590	-154.260	0.019352	51.676	1.8445	0.6711	0.6715
23.536	24.000	118.704	-154.000	0.019300	51.840	1.8490	0.6694	0.6698
23.600	24.055	118.757	-154.393	0.019282	51.861	1.8511	0.6686	0.6691
23.800	24.269	118.923	-154.227	0.019212	52.049	1.8578	0.6667	0.6671
23.853	24.364	119.000	-154.150	0.019180	52.073	1.8583	0.6655	0.6659
24.000	24.473	119.088	-154.062	0.019142	52.240	1.8640	0.6638	0.6642
24.200	24.550	119.150	-154.000	0.019116	52.333	1.8672	0.6622	0.6626
24.400	24.677	119.252	-153.898	0.019072	52.433	1.8715	0.6614	0.6618
24.517	25.000	119.415	-153.735	0.019001	52.629	1.8787	0.6593	0.6597
24.600	25.085	119.509	-153.641	0.018959	52.745	1.8827	0.6574	0.6578
24.800	25.395	119.738	-153.373	0.018829	52.838	1.8856	0.6568	0.6572
25.000	25.693	119.898	-153.142	0.018657	53.029	1.8928	0.6543	0.6547
25.128	25.824	120.000	-153.252	0.018675	53.237	1.9001	0.6514	0.6518
25.624	26.624	120.000	-153.150	0.018678	53.367	1.9049	0.6498	0.6502



TABLE 7 CONTINUED

## SATURATED LIQUID NITROGEN

BAR	PRESSURE		TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	VOLUME CM <sup>3</sup> / GRAM-MOLE	LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 1 BAR	DIMENSIONLESS/ LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 760 TORR
	XP/CM <sup>2</sup>	KG/CM <sup>2</sup>	KELVIN	CELSIUS				
25.200	25.697	120.057	-153.093	0.01712	0.5242	53.442	1.9075	0.6493
25.318	25.817	120.150	-153.000	0.01666	0.5230	53.565	1.9120	0.6478
25.440	25.941	120.245	-152.935	0.01633	0.5222	53.653	1.9151	0.6467
25.497	26.001	120.292	-152.888	0.01602	0.5212	53.756	1.9188	0.6455
25.600	26.105	120.375	-152.778	0.01566	0.5201	53.867	1.9227	0.6442
25.680	26.305	120.579	-152.621	0.01494	0.5181	54.084	1.9305	0.6416
26.000	26.311	120.568	-152.702	0.01461	0.5159	54.306	1.9384	0.6390
26.200	26.377	120.599	-152.719	0.01433	0.5136	54.536	1.9464	0.6363
26.440	26.351	120.592	-152.716	0.01426	0.5116	54.766	1.9546	0.6337
26.478	26.351	121.000	-152.150	0.01357	0.5116	54.772	1.9550	0.6335
26.478	27.124	121.052	-152.095	0.01323	0.5094	54.852	1.9578	0.6326
26.600	27.124	121.145	-152.005	0.01318	0.5094	54.993	1.9629	0.6310
26.600	27.351	121.350	-152.000	0.01318	0.5074	55.001	1.9629	0.6309
26.800	27.351	121.437	-151.893	0.01310	0.5074	55.231	1.9732	0.6283
27.000	27.352	121.448	-151.702	0.013027	0.5059	55.273	1.9800	0.6257
27.200	27.352	121.448	-151.582	0.012947	0.5028	55.720	1.9899	0.6221
27.400	27.940	121.747	-151.403	0.012666	0.5005	55.871	1.9978	0.6193
27.459	28.000	121.791	-151.355	0.012482	0.4989	56.045	2.0005	0.6187
27.474	28.288	122.000	-151.254	0.012277	0.4983	56.225	2.0070	0.6174
27.480	28.348	122.043	-151.107	0.01202	0.4959	56.490	2.0164	0.6152
27.495	28.496	122.150	-151.000	0.011764	0.4942	56.684	2.0233	0.6142
28.000	28.552	122.390	-150.960	0.0117619	0.4936	56.758	2.0259	0.6113
28.200	28.556	122.336	-150.814	0.0117534	0.4912	57.032	2.0357	0.6084
28.400	28.960	122.482	-150.668	0.011448	0.4888	57.313	2.0457	0.6054
28.439	29.000	122.510	-150.640	0.011431	0.4884	57.368	2.0477	0.6048
28.600	29.464	122.626	-150.524	0.011361	0.4864	57.599	2.0559	0.6024
28.600	29.368	122.770	-150.384	0.011273	0.4839	57.893	2.0664	0.5994
29.000	29.752	122.913	-150.237	0.011184	0.4814	58.194	2.0772	0.5959
29.122	29.696	123.055	-150.150	0.011125	0.4799	58.382	2.0839	0.5943
29.200	29.776	123.055	-150.095	0.011093	0.4789	58.503	2.0882	0.5931
29.334	29.912	123.150	-150.000	0.011032	0.4772	58.715	2.0958	0.5910
29.400	30.000	123.211	-149.939	0.011001	0.4763	58.821	2.0995	0.5899
29.420	30.000	123.211	-149.939	0.010992	0.4760	58.853	2.1007	0.5896
29.600	30.484	123.337	-149.813	0.010907	0.4737	59.147	2.1112	0.5867
29.800	30.384	123.477	-149.673	0.010812	0.4710	59.462	2.1231	0.5830
30.000	30.591	123.615	-149.533	0.010715	0.4683	59.827	2.1355	0.5796
30.200	30.935	123.755	-149.393	0.010616	0.4655	60.183	2.1482	0.5766
30.400	30.999	123.894	-149.256	0.010515	0.4627	60.551	2.1613	0.5727
30.401	31.000	123.894	-149.256	0.010515	0.4627	60.551	2.1613	0.5730
30.556	31.433	124.000	-149.150	0.010435	0.4605	60.845	2.1718	0.5699
30.600	31.203	124.030	-149.100	0.010412	0.4598	60.930	2.1748	0.5695
30.775	31.382	124.150	-149.000	0.010320	0.4572	61.273	2.1871	0.5659
30.800	31.407	124.167	-148.963	0.010307	0.4569	61.322	2.1883	0.5658
31.000	31.611	124.302	-148.846	0.010200	0.4539	61.728	2.2033	0.5621



TABLE 7 CONTINUED

## SATURATED LIQUID NITROGEN

BAR	PRESSURE		TEMPERATURE		DENSITY		VOLUME		LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 1 BAR	DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
	KP/CM <sup>2</sup>	BAR	KELVIN	CELSIUS	GRAM-MOLE/ CM <sup>3</sup>	KG/ DM <sup>3</sup>	CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG		
31.200	31.815		124.438	-148.712	0.016050	0.4508	62.150	2.2184	0.5580	0.5583
31.361	32.000		124.559	-148.591	0.015988	0.4479	62.546	2.2325	0.5544	0.5548
31.400	32.019		124.572	-148.578	0.015978	0.4476	62.547	2.2330	0.5541	0.5544
31.600	32.223		124.706	-148.444	0.015662	0.4444	63.043	2.2503	0.5501	0.5504
31.800	32.427		124.839	-148.311	0.015744	0.4411	63.518	2.2672	0.5459	0.5463
32.000	32.631		124.971	-148.175	0.015621	0.4377	64.014	2.2849	0.5417	0.5420
32.044	32.676		125.000	-148.150	0.015594	0.4359	64.126	2.2889	0.5408	0.5411
32.200	32.835		125.103	-148.047	0.015496	0.4341	64.534	2.3035	0.5373	0.5377
32.272	32.908		125.150	-148.000	0.015450	0.4328	64.727	2.3104	0.5357	0.5361
32.362	33.000		125.209	-147.941	0.015391	0.4312	64.973	2.3192	0.5332	0.5340
32.400	33.034		125.234	-147.916	0.015366	0.4305	65.079	2.3229	0.5328	0.5332
32.600	33.243		125.364	-147.786	0.015232	0.4267	65.653	2.3434	0.5282	0.5285
32.800	33.447		125.494	-147.656	0.015092	0.4228	66.259	2.3650	0.5234	0.5237
33.000	33.651		125.623	-147.527	0.014948	0.4188	66.900	2.3879	0.5187	0.5187
33.343	34.000		126.643	-147.307	0.014695	0.4144	68.095	2.4306	0.5096	0.5096
33.589	34.251		126.800	-147.150	0.014483	0.4058	69.045	2.4645	0.5022	0.5026
34.000	34.671		126.260	-146.690	0.011230	0.3146	89.046	3.1784	0.3394	0.3897

TABLE 8

## DENSITY OF COMPRESSED LIQUID NITROGEN

TABLE ENTRIES													
1. TEMPERATURE, K			2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS										
2. TEMPERATURE, C			3. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS										
3. VAPOR PRESSURE, BAR			3. DENSITY, KG/D <sup>3</sup>										
BAR KPa/cm <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 0.158	10.000 10.197	12.500 12.74E	15.000 15.296	17.500 17.850	20.000 20.394	25.000 25.493	30.000 30.591
75.0	1.0127	1.0127	1.0130	1.0135	1.0141	1.0146	1.0151	1.0158	1.0164	1.0171	1.0177	1.0180	1.0203
-198.15	1.0133	1.0134	1.0136	1.0142	1.0147	1.0152	1.0158	1.0164	1.0171	1.0177	1.0184	1.0186	1.0209
0.760	0.8162	0.8162	0.8175	0.8180	0.8180	0.8197	0.8203	0.8207	0.8212	0.8217	0.8222	0.8223	0.8243
75.1	1.0121	1.0122	1.0124	1.0130	1.0135	1.0140	1.0146	1.0152	1.0159	1.0165	1.0172	1.0174	1.0197
-198.05	1.0128	1.0128	1.0131	1.0136	1.0141	1.0147	1.0152	1.0159	1.0165	1.0172	1.0178	1.0181	1.0204
0.769	0.8177	0.8177	0.8180	0.8184	0.8188	0.8193	0.8197	0.8202	0.8207	0.8213	0.8218	0.8222	0.8238
75.2	1.0116	1.0116	1.0119	1.0124	1.0129	1.0135	1.0140	1.0147	1.0153	1.0160	1.0166	1.0168	1.0192
-197.95	1.0122	1.0122	1.0125	1.0131	1.0136	1.0143	1.0147	1.0153	1.0160	1.0166	1.0173	1.0176	1.0199
0.779	0.8172	0.8173	0.8175	0.8179	0.8184	0.8188	0.8192	0.8198	0.8203	0.8208	0.8213	0.8218	0.8234
75.3	1.0110	1.0110	1.0113	1.0119	1.0124	1.0129	1.0135	1.0141	1.0148	1.0154	1.0161	1.0164	1.0188
-197.85	1.0116	1.0117	1.0120	1.0125	1.0130	1.0136	1.0141	1.0148	1.0154	1.0161	1.0167	1.0170	1.0193
0.789	0.8168	0.8168	0.8171	0.8175	0.8179	0.8184	0.8188	0.8193	0.8199	0.8204	0.8209	0.8212	0.8230
75.4	1.0104	1.0105	1.0108	1.0113	1.0118	1.0124	1.0129	1.0136	1.0142	1.0149	1.0155	1.0160	1.0184
-197.75	1.0111	1.0111	1.0114	1.0119	1.0125	1.0130	1.0135	1.0142	1.0149	1.0155	1.0162	1.0165	1.0188
0.799	0.8163	0.8164	0.8166	0.8170	0.8175	0.8179	0.8183	0.8188	0.8194	0.8199	0.8205	0.8211	0.8225
75.5	1.0099	1.0102	1.0107	1.0113	1.0119	1.0124	1.0130	1.0137	1.0143	1.0149	1.0155	1.0161	1.0186
-197.65	1.0106	1.0108	1.0114	1.0119	1.0125	1.0130	1.0137	1.0143	1.0150	1.0156	1.0162	1.0166	1.0189
0.809	0.8159	0.8162	0.8166	0.8170	0.8175	0.8179	0.8184	0.8190	0.8195	0.8200	0.8211	0.8216	0.8221
75.6	1.0094	1.0096	1.0102	1.0107	1.0113	1.0118	1.0125	1.0131	1.0138	1.0144	1.0150	1.0156	1.0180
-197.55	1.0100	1.0103	1.0108	1.0114	1.0120	1.0126	1.0131	1.0138	1.0144	1.0151	1.0157	1.0164	1.0187
0.819	0.8155	0.8157	0.8161	0.8166	0.8170	0.8174	0.8180	0.8185	0.8191	0.8196	0.8202	0.8208	0.8217
75.7	1.0088	1.0091	1.0096	1.0102	1.0107	1.0112	1.0119	1.0126	1.0132	1.0139	1.0145	1.0152	1.0176
-197.45	1.0094	1.0097	1.0103	1.0108	1.0113	1.0119	1.0126	1.0132	1.0139	1.0145	1.0152	1.0159	1.0182
0.829	0.8150	0.8152	0.8157	0.8161	0.8166	0.8170	0.8176	0.8181	0.8186	0.8191	0.8197	0.8202	0.8212
75.8	1.0082	1.0085	1.0091	1.0096	1.0101	1.0107	1.0114	1.0120	1.0127	1.0134	1.0141	1.0147	1.0170
-197.35	1.0088	1.0091	1.0096	1.0102	1.0107	1.0112	1.0119	1.0126	1.0132	1.0140	1.0147	1.0154	1.0177
0.839	0.8146	0.8148	0.8152	0.8157	0.8161	0.8166	0.8171	0.8176	0.8182	0.8187	0.8193	0.8200	0.8208
75.9	1.0077	1.0080	1.0085	1.0090	1.0096	1.0101	1.0108	1.0115	1.0121	1.0128	1.0135	1.0141	1.0164
-197.25	1.0083	1.0086	1.0091	1.0097	1.0102	1.0108	1.0114	1.0121	1.0128	1.0135	1.0142	1.0148	1.0161
0.850	0.8141	0.8143	0.8148	0.8152	0.8157	0.8161	0.8166	0.8172	0.8177	0.8183	0.8189	0.8193	0.8204
76.0	1.0071	1.0074	1.0079	1.0085	1.0090	1.0096	1.0102	1.0109	1.0116	1.0123	1.0130	1.0136	1.0159
-197.15	1.0077	1.0080	1.0086	1.0091	1.0097	1.0102	1.0109	1.0116	1.0122	1.0129	1.0136	1.0142	1.0165
0.860	0.8137	0.8139	0.8143	0.8148	0.8152	0.8157	0.8162	0.8167	0.8173	0.8178	0.8184	0.8189	0.8195
76.1	1.0065	1.0068	1.0074	1.0079	1.0085	1.0090	1.0097	1.0104	1.0110	1.0117	1.0124	1.0130	1.0154
-197.05	1.0072	1.0075	1.0080	1.0086	1.0091	1.0097	1.0103	1.0110	1.0117	1.0124	1.0131	1.0137	1.0160
0.871	0.8132	0.8134	0.8139	0.8143	0.8148	0.8152	0.8157	0.8163	0.8168	0.8174	0.8179	0.8185	0.8195
76.2	1.0060	1.0063	1.0068	1.0074	1.0079	1.0085	1.0091	1.0098	1.0105	1.0112	1.0119	1.0125	1.0148
-196.95	1.0066	1.0069	1.0075	1.0080	1.0086	1.0091	1.0098	1.0105	1.0111	1.0118	1.0124	1.0131	1.0154
0.882	0.8127	0.8130	0.8134	0.8139	0.8143	0.8148	0.8153	0.8159	0.8164	0.8169	0.8174	0.8180	0.8191
76.3	1.0054	1.0057	1.0063	1.0068	1.0074	1.0079	1.0086	1.0093	1.0099	1.0106	1.0112	1.0118	1.0141
-196.85	1.0061	1.0063	1.0069	1.0074	1.0080	1.0085	1.0092	1.0099	1.0106	1.0113	1.0120	1.0126	1.0139
0.892	0.8123	0.8125	0.8130	0.8134	0.8139	0.8143	0.8148	0.8154	0.8159	0.8165	0.8171	0.8176	0.8186
76.4	1.0048	1.0051	1.0057	1.0062	1.0068	1.0074	1.0080	1.0087	1.0094	1.0101	1.0108	1.0114	1.0137
-196.75	1.0054	1.0056	1.0063	1.0069	1.0074	1.0080	1.0087	1.0094	1.0101	1.0108	1.0115	1.0121	1.0134
0.903	0.8118	0.8121	0.8125	0.8130	0.8134	0.8139	0.8144	0.8150	0.8155	0.8161	0.8167	0.8171	0.8182
76.5	1.0043	1.0046	1.0051	1.0057	1.0062	1.0068	1.0075	1.0082	1.0088	1.0095	1.0102	1.0109	1.0122
-196.65	1.0049	1.0052	1.0058	1.0063	1.0069	1.0074	1.0081	1.0088	1.0095	1.0102	1.0110	1.0118	1.0132
0.914	0.8114	0.8116	0.8121	0.8125	0.8130	0.8134	0.8140	0.8145	0.8151	0.8156	0.8162	0.8167	0.8178
76.6	1.0037	1.0040	1.0046	1.0051	1.0057	1.0062	1.0069	1.0076	1.0083	1.0090	1.0100	1.0103	1.0117
-196.55	1.0044	1.0046	1.0052	1.0058	1.0063	1.0069	1.0076	1.0083	1.0090	1.0096	1.0103	1.0110	1.0123
0.925	0.8109	0.8111	0.8116	0.8121	0.8125	0.8130	0.8135	0.8141	0.8146	0.8152	0.8157	0.8162	0.8173
76.7	1.0031	1.0034	1.0040	1.0046	1.0051	1.0057	1.0064	1.0071	1.0077	1.0084	1.0094	1.0098	1.0111
-196.45	1.0038	1.0041	1.0046	1.0052	1.0058	1.0063	1.0070	1.0077	1.0084	1.0091	1.0104	1.0108	1.0121
0.936	0.8105	0.8107	0.8111	0.8116	0.8120	0.8125	0.8131	0.8136	0.8142	0.8147	0.8153	0.8158	0.8169
76.8	1.0026	1.0029	1.0034	1.0040	1.0046	1.0051	1.0058	1.0065	1.0072	1.0079	1.0088	1.0092	1.0106
-196.35	1.0032	1.0035	1.0041	1.0046	1.0052	1.0058	1.0064	1.0071	1.0078	1.0085	1.0093	1.0100	1.0112
0.948	0.8100	0.8102	0.8107	0.8111	0.8116	0.8120	0.8126	0.8132	0.8137	0.8143	0.8148	0.8154	0.8165
76.9	1.0020	1.0023	1.0029	1.0034	1.0040	1.0046	1.0053	1.0059	1.0066	1.0073	1.0081	1.0087	1.0100
-196.25	1.0026	1.0029	1.0035	1.0041	1.0046	1.0052	1.0059	1.0066	1.0073	1.0080	1.0089	1.0093	1.0107
0.959	0.8095	0.8098	0.8102	0.8107	0.8111	0.8116	0.8122	0.8127	0.8133	0.8138	0.8144	0.8149	0.8160

TABLE 8 - CONTINUED

## DENSITY OF COMPRESSED LIQUID NITROGEN - CONTINUED

		TABLE ENTRIES													
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/CEASITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS													
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS													
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>3</sup>													
BAR		0.800	1.000	2.000	4.000	6.000	8.000	10.000	12.500	15.000	17.500	20.000	25.000	30.000	
KP/CM <sup>2</sup>		0.816	1.020	2.039	4.079	6.118	8.158	10.197	12.742	15.296	17.845	20.394	25.493	30.591	
77.0		1.0014	1.0017	1.0023	1.0029	1.0034	1.0038	1.0042	1.0045	1.0048	1.0051	1.0054	1.0057	1.0060	
-196.15	1.0021	1.0022	1.0029	1.0035	1.0041	1.0046	1.0050	1.0054	1.0057	1.0060	1.0063	1.0066	1.0069	1.0071	
0.971	0.8091	0.8093	0.8098	0.8102	0.8107	0.8111	0.8115	0.8117	0.8123	0.8128	0.8134	0.8145	0.8156		
77.1		1.0009	1.0012	1.0017	1.0023	1.0029	1.0034	1.0041	1.0048	1.0055	1.0062	1.0069	1.0076	1.0089	
-196.05	1.0015	1.0018	1.0024	1.0029	1.0035	1.0041	1.0048	1.0055	1.0062	1.0069	1.0076	1.0082	1.0092		
0.982	0.8086	0.8089	0.8093	0.8098	0.8102	0.8107	0.8112	0.8117	0.8123	0.8128	0.8134	0.8140	0.8151		
77.2		1.0003	1.0006	1.0012	1.0017	1.0023	1.0029	1.0035	1.0042	1.0049	1.0056	1.0063	1.0070	1.0084	
-195.95	1.0009	1.0012	1.0018	1.0024	1.0029	1.0035	1.0042	1.0049	1.0056	1.0063	1.0070	1.0077	1.0090		
0.994	0.8082	0.8084	0.8089	0.8093	0.8098	0.8102	0.8108	0.8114	0.8119	0.8125	0.8132	0.8140	0.8147		
77.3		1.0000	1.0006	1.0012	1.0017	1.0023	1.0029	1.0035	1.0042	1.0049	1.0056	1.0063	1.0070	1.0085	
-195.85	1.0007	1.0012	1.0018	1.0024	1.0029	1.0035	1.0042	1.0049	1.0056	1.0063	1.0070	1.0077	1.0090		
1.006	0.8079	0.8084	0.8089	0.8093	0.8098	0.8102	0.8108	0.8114	0.8119	0.8125	0.8132	0.8140	0.8147		
77.4		0.9994	1.0000	1.0006	1.0012	1.0017	1.0023	1.0029	1.0035	1.0042	1.0049	1.0056	1.0063	1.0079	
-195.75	1.0001	1.0007	1.0012	1.0018	1.0024	1.0031	1.0038	1.0045	1.0052	1.0060	1.0067	1.0075	1.0085		
1.018	0.8075	0.8079	0.8084	0.8089	0.8093	0.8098	0.8105	0.8110	0.8116	0.8122	0.8127	0.8134	0.8143		
77.5		0.9989	0.9995	1.0000	1.0006	1.0012	1.0018	1.0024	1.0031	1.0038	1.0045	1.0052	1.0060	1.0074	
-195.65	0.9995	1.0001	1.0007	1.0012	1.0018	1.0024	1.0031	1.0038	1.0045	1.0052	1.0060	1.0067	1.0077		
1.038	0.8070	0.8075	0.8077	0.8084	0.8089	0.8094	0.8099	0.8104	0.8109	0.8116	0.8122	0.8127	0.8134		
77.6		0.9983	0.9989	0.9995	1.0000	1.0006	1.0013	1.0020	1.0027	1.0034	1.0041	1.0048	1.0056	1.0062	
-195.55	0.9989	0.9995	1.0001	1.0007	1.0013	1.0020	1.0027	1.0034	1.0041	1.0048	1.0055	1.0062	1.0069		
1.042	0.8065	0.8070	0.8075	0.8080	0.8084	0.8090	0.8096	0.8101	0.8107	0.8113	0.8118	0.8124	0.8129		
77.7		0.9977	0.9983	0.9989	0.9995	1.0001	1.0008	1.0015	1.0022	1.0029	1.0036	1.0043	1.0051	1.0057	
-195.45	0.9984	0.9989	0.9995	1.0001	1.0007	1.0014	1.0021	1.0028	1.0035	1.0042	1.0049	1.0056	1.0063		
1.054	0.8061	0.8066	0.8072	0.8075	0.8080	0.8086	0.8091	0.8097	0.8103	0.8111	0.8118	0.8124	0.8131		
77.8		0.9972	0.9977	0.9983	0.9989	0.9995	1.0002	1.0009	1.0016	1.0023	1.0030	1.0037	1.0045	1.0051	
-195.35	0.9978	0.9984	0.9990	0.9995	1.0001	1.0008	1.0016	1.0023	1.0030	1.0038	1.0044	1.0052	1.0059		
1.066	0.8056	0.8061	0.8066	0.8070	0.8075	0.8081	0.8087	0.8092	0.8098	0.8104	0.8110	0.8116	0.8121		
77.9		0.9966	0.9972	0.9978	0.9983	0.9989	0.9996	1.0004	1.0011	1.0018	1.0026	1.0032	1.0040	1.0046	
-195.25	0.9972	0.9978	0.9984	0.9989	0.9996	1.0002	1.0010	1.0017	1.0024	1.0032	1.0039	1.0046	1.0052		
1.079	0.8052	0.8056	0.8061	0.8066	0.8070	0.8076	0.8082	0.8088	0.8094	0.8101	0.8107	0.8114	0.8121		
78.0		0.9960	0.9966	0.9972	0.9978	0.9984	0.9991	0.9999	1.0005	1.0012	1.0020	1.0026	1.0034	1.0040	
-195.15	0.9966	0.9972	0.9978	0.9984	0.9990	0.9997	1.0004	1.0011	1.0018	1.0025	1.0032	1.0039	1.0047		
1.091	0.8047	0.8052	0.8056	0.8061	0.8066	0.8072	0.8078	0.8083	0.8089	0.8100	0.8112	0.8124	0.8137		
78.1		0.9954	0.9960	0.9966	0.9972	0.9978	0.9984	0.9992	1.0000	1.0007	1.0015	1.0021	1.0029	1.0035	
-195.05	0.9961	0.9967	0.9973	0.9978	0.9984	0.9991	0.9998	1.0006	1.0013	1.0021	1.0028	1.0035	1.0042		
1.104	0.8042	0.8047	0.8052	0.8057	0.8061	0.8067	0.8073	0.8079	0.8085	0.8092	0.8101	0.8110	0.8119		
78.2		0.9949	0.9955	0.9960	0.9966	0.9972	0.9978	0.9987	0.9994	1.0001	1.0011	1.0015	1.0029	1.0035	
-194.95	0.9955	0.9961	0.9967	0.9973	0.9979	0.9986	0.9993	1.0000	1.0007	1.0017	1.0022	1.0030	1.0036		
1.117	0.8038	0.8042	0.8047	0.8052	0.8057	0.8063	0.8068	0.8074	0.8080	0.8089	0.8100	0.8112	0.8124		
78.3		0.9943	0.9949	0.9955	0.9961	0.9967	0.9974	0.9981	0.9988	0.9996	1.0004	1.0010	1.0024	1.0030	
-194.85	0.9949	0.9955	0.9961	0.9967	0.9973	0.9980	0.9987	0.9995	1.0002	1.0010	1.0018	1.0024	1.0030		
1.130	0.8033	0.8038	0.8043	0.8047	0.8052	0.8057	0.8064	0.8070	0.8076	0.8083	0.8091	0.8100	0.8110		
78.4		0.9937	0.9943	0.9949	0.9955	0.9961	0.9968	0.9976	0.9983	0.9990	1.0004	1.0010	1.0024	1.0030	
-194.75	0.9943	0.9949	0.9955	0.9961	0.9967	0.9974	0.9982	0.9989	0.9996	1.0011	1.0017	1.0025	1.0031		
1.143	0.8028	0.8033	0.8038	0.8043	0.8048	0.8054	0.8061	0.8068	0.8075	0.8083	0.8091	0.8100	0.8110		
78.5		0.9931	0.9937	0.9943	0.9949	0.9955	0.9962	0.9970	0.9977	0.9984	0.9996	1.0004	1.0013	1.0020	
-194.65	0.9938	0.9944	0.9950	0.9956	0.9962	0.9969	0.9976	0.9983	0.9990	1.0002	1.0010	1.0018	1.0026		
1.156	0.8024	0.8029	0.8033	0.8038	0.8043	0.8048	0.8055	0.8061	0.8068	0.8075	0.8083	0.8091	0.8100		
78.6		0.9926	0.9932	0.9938	0.9944	0.9949	0.9957	0.9964	0.9972	0.9979	0.9989	1.0000	1.0014	1.0020	
-194.55	0.9932	0.9938	0.9944	0.9950	0.9956	0.9963	0.9971	0.9978	0.9985	1.0000	1.0010	1.0014	1.0021		
1.169	0.8019	0.8024	0.8029	0.8034	0.8038	0.8043	0.8048	0.8055	0.8060	0.8068	0.8075	0.8083	0.8091		
78.7		0.9920	0.9926	0.9932	0.9938	0.9944	0.9951	0.9959	0.9966	0.9973	0.9984	1.0000	1.0014	1.0020	
-194.45	0.9926	0.9932	0.9938	0.9944	0.9950	0.9956	0.9963	0.9970	0.9977	0.9985	1.0000	1.0010	1.0014		
1.182	0.8014	0.8019	0.8024	0.8029	0.8034	0.8038	0.8044	0.8048	0.8054	0.8062	0.8071	0.8080	0.8088		
78.8		0.9914	0.9920	0.9926	0.9932	0.9938	0.9944	0.9951	0.9959	0.9966	0.9974	0.9984	1.0000	1.0014	
-194.35	0.9920	0.9926	0.9932	0.9938	0.9944	0.9950	0.9956	0.9963	0.9970	0.9977	0.9985	1.0000	1.0010		
1.196	0.8010	0.8015	0.8019	0.8024	0.8029	0.8034	0.8038	0.8041	0.8047	0.8053	0.8061	0.8069	0.8076		
78.9		0.9908	0.9914	0.9920	0.9926	0.9932	0.9938	0.9944	0.9951	0.9959	0.9966	0.9974	0.9984	1.0000	
-194.25	0.9914	0.9921	0.9927	0.9933	0.9939	0.9946	0.9954	0.9961	0.9968	0.9976	0.9984	1.0000	1.0010		
1.209	0.8005	0.8010	0.8015	0.8020	0.8025	0.8031	0.8037	0.8043	0.8048	0.8054	0.8061	0.8069	0.8076		

TABLE 8 - CONTINUED

DENSITY OF CO<sub>2</sub>/FRESH LIQUID NITROGEN - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, °C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>3</sup>											
BAR KPa/C <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.158	10.000 10.197	12.500 12.74E	15.000 15.296	17.500 17.845	20.000 20.394	25.000 25.493	30.000 30.591
79.0			0.9902	0.9908	0.9915	0.9921	0.9927	0.9934	0.9942	0.9949	0.9956	0.9971	0.9985
-194.15			0.9909	0.9915	0.9921	0.9927	0.9933	0.9940	0.9948	0.9955	0.9963	0.9977	0.9992
1.223			0.9900	0.9905	0.9910	0.9915	0.9920	0.9926	0.9932	0.9938	0.9944	0.9956	0.9967
79.1			0.9897	0.9903	0.9909	0.9915	0.9921	0.9928	0.9936	0.9943	0.9951	0.9965	0.9980
-194.35			0.9903	0.9909	0.9915	0.9921	0.9927	0.9935	0.9942	0.9950	0.9957	0.9972	0.9986
1.237			0.7996	0.8001	0.8005	0.8010	0.8015	0.8021	0.8027	0.8033	0.8039	0.8051	0.8063
79.2			0.9891	0.9897	0.9903	0.9909	0.9915	0.9923	0.9930	0.9938	0.9945	0.9958	0.9974
-193.95			0.9897	0.9903	0.9909	0.9915	0.9922	0.9929	0.9937	0.9944	0.9951	0.9966	0.9981
1.251			0.7991	0.7996	0.8001	0.8006	0.8011	0.8017	0.8023	0.8029	0.8035	0.8047	0.8058
79.3			0.9885	0.9891	0.9897	0.9903	0.9909	0.9917	0.9925	0.9932	0.9939	0.9954	0.9969
-193.85			0.9891	0.9897	0.9904	0.9910	0.9916	0.9923	0.9931	0.9938	0.9946	0.9961	0.9975
1.265			0.7986	0.7991	0.7996	0.8001	0.8006	0.8012	0.8018	0.8024	0.8030	0.8042	0.8055
79.4			0.9879	0.9885	0.9891	0.9898	0.9904	0.9911	0.9919	0.9926	0.9934	0.9946	0.9963
-193.75			0.9885	0.9892	0.9898	0.9904	0.9910	0.9918	0.9925	0.9933	0.9940	0.9955	0.9970
1.279			0.7981	0.7987	0.7991	0.7996	0.8001	0.8008	0.8014	0.8020	0.8026	0.8038	0.8049
79.5			0.9873	0.9880	0.9886	0.9892	0.9898	0.9906	0.9913	0.9921	0.9928	0.9943	0.9958
-193.65			0.9880	0.9886	0.9892	0.9898	0.9904	0.9912	0.9920	0.9927	0.9935	0.9949	0.9964
1.293			0.7977	0.7982	0.7987	0.7992	0.7997	0.8003	0.8009	0.8015	0.8021	0.8033	0.8045
79.6			0.9867	0.9874	0.9880	0.9886	0.9892	0.9900	0.9908	0.9915	0.9923	0.9937	0.9952
-193.55			0.9874	0.9880	0.9886	0.9892	0.9899	0.9906	0.9914	0.9921	0.9929	0.9944	0.9958
1.308			0.7972	0.7977	0.7982	0.7987	0.7992	0.7998	0.8004	0.8011	0.8017	0.8025	0.8040
79.7			0.9862	0.9868	0.9874	0.9880	0.9887	0.9894	0.9902	0.9909	0.9917	0.9932	0.9947
-193.45			0.9868	0.9874	0.9880	0.9887	0.9893	0.9900	0.9908	0.9916	0.9923	0.9938	0.9953
1.322			0.7967	0.7972	0.7977	0.7982	0.7987	0.7994	0.8000	0.8006	0.8012	0.8024	0.8036
79.8			0.9856	0.9862	0.9868	0.9875	0.9881	0.9888	0.9896	0.9904	0.9911	0.9926	0.9941
-193.35			0.9862	0.9868	0.9875	0.9881	0.9887	0.9895	0.9902	0.9910	0.9918	0.9933	0.9947
1.337			0.7963	0.7968	0.7973	0.7978	0.7983	0.7989	0.7995	0.8001	0.8007	0.8020	0.8032
79.9			0.9850	0.9856	0.9863	0.9869	0.9875	0.9883	0.9890	0.9898	0.9906	0.9921	0.9935
-193.25			0.9856	0.9862	0.9869	0.9875	0.9881	0.9888	0.9897	0.9904	0.9912	0.9927	0.9942
1.352			0.7958	0.7963	0.7968	0.7973	0.7978	0.7984	0.7991	0.7997	0.8003	0.8015	0.8027
80.0			0.9844	0.9850	0.9857	0.9863	0.9869	0.9877	0.9885	0.9892	0.9900	0.9915	0.9930
-193.15			0.9850	0.9857	0.9863	0.9869	0.9875	0.9883	0.9891	0.9899	0.9906	0.9921	0.9936
1.367			0.7953	0.7958	0.7963	0.7968	0.7973	0.7978	0.7986	0.7992	0.7998	0.8010	0.8023
80.1			0.9838	0.9845	0.9851	0.9857	0.9863	0.9871	0.9879	0.9887	0.9894	0.9909	0.9924
-193.05			0.9844	0.9851	0.9857	0.9863	0.9870	0.9877	0.9885	0.9893	0.9901	0.9916	0.9931
1.382			0.7948	0.7954	0.7959	0.7964	0.7969	0.7975	0.7981	0.7988	0.7994	0.8006	0.8018
80.2			0.9832	0.9839	0.9845	0.9851	0.9858	0.9865	0.9873	0.9881	0.9889	0.9904	0.9919
-192.95			0.9839	0.9845	0.9851	0.9858	0.9864	0.9872	0.9880	0.9887	0.9895	0.9910	0.9925
1.397			0.7944	0.7949	0.7954	0.7959	0.7964	0.7970	0.7977	0.7983	0.7989	0.8001	0.8014
80.3			0.9826	0.9833	0.9839	0.9846	0.9852	0.9860	0.9868	0.9875	0.9883	0.9898	0.9913
-192.85			0.9833	0.9839	0.9845	0.9852	0.9858	0.9866	0.9874	0.9882	0.9889	0.9904	0.9919
1.412			0.7939	0.7944	0.7949	0.7954	0.7959	0.7966	0.7972	0.7978	0.7985	0.7997	0.8009
80.4			0.9821	0.9827	0.9833	0.9840	0.9846	0.9854	0.9862	0.9870	0.9877	0.9893	0.9908
-192.75			0.9827	0.9833	0.9840	0.9846	0.9852	0.9860	0.9868	0.9876	0.9884	0.9899	0.9914
1.428			0.7934	0.7939	0.7945	0.7950	0.7955	0.7961	0.7967	0.7974	0.7980	0.7992	0.8005
80.5			0.9815	0.9821	0.9828	0.9834	0.9840	0.9848	0.9856	0.9864	0.9872	0.9887	0.9902
-192.65			0.9821	0.9827	0.9834	0.9840	0.9847	0.9854	0.9862	0.9870	0.9878	0.9893	0.9908
1.443			0.7929	0.7935	0.7940	0.7945	0.7950	0.7956	0.7962	0.7969	0.7975	0.7988	0.8000
80.6			0.9809	0.9815	0.9822	0.9828	0.9834	0.9842	0.9850	0.9858	0.9866	0.9881	0.9896
-192.55			0.9815	0.9821	0.9828	0.9834	0.9841	0.9848	0.9857	0.9864	0.9872	0.9888	0.9903
1.459			0.7925	0.7930	0.7935	0.7940	0.7945	0.7952	0.7958	0.7965	0.7971	0.7983	0.7995
80.7			0.9803	0.9809	0.9816	0.9822	0.9829	0.9837	0.9845	0.9852	0.9860	0.9876	0.9891
-192.45			0.9809	0.9816	0.9822	0.9828	0.9835	0.9843	0.9851	0.9859	0.9866	0.9882	0.9897
1.475			0.7920	0.7925	0.7930	0.7936	0.7941	0.7947	0.7954	0.7960	0.7966	0.7979	0.7991
80.8			0.9797	0.9803	0.9810	0.9816	0.9823	0.9831	0.9839	0.9847	0.9854	0.9870	0.9885
-192.35			0.9803	0.9810	0.9816	0.9823	0.9829	0.9837	0.9845	0.9853	0.9861	0.9876	0.9891
1.491			0.7915	0.7920	0.7926	0.7931	0.7936	0.7942	0.7948	0.7955	0.7962	0.7974	0.7986
80.9			0.9791	0.9798	0.9804	0.9811	0.9817	0.9825	0.9833	0.9841	0.9849	0.9864	0.9880
-192.25			0.9797	0.9804	0.9810	0.9817	0.9823	0.9831	0.9839	0.9847	0.9855	0.9871	0.9886
1.507			0.7910	0.7916	0.7921	0.7926	0.7931	0.7938	0.7944	0.7951	0.7957	0.7970	0.7982



TABLE 8 - CONTINUED

## DENSITY OF COMPRESSED LIQUID NITROGEN - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/Dm <sup>3</sup>											
BAR KPa/Cm <sup>2</sup>	0.00 0.016	1.008 1.020	2.000 2.039	4.008 4.079	6.000 6.110	8.000 8.150	10.000 10.197	12.500 12.746	15.000 15.296	17.500 17.845	20.000 20.394	25.000 25.493	30.000 30.591
81.8			0.9785	0.9792	0.9798	0.9805	0.9811	0.9819	0.9827	0.9835	0.9843	0.9859	0.9874
-192.15			0.9791	0.9798	0.9804	0.9811	0.9817	0.9825	0.9833	0.9841	0.9849	0.9865	0.9880
1.523			0.7966	0.7911	0.7916	0.7921	0.7927	0.7933	0.7940	0.7946	0.7952	0.7965	0.7977
81.1			0.9779	0.9786	0.9792	0.9799	0.9805	0.9812	0.9820	0.9828	0.9836	0.9853	0.9868
-192.05			0.9785	0.9792	0.9799	0.9805	0.9812	0.9820	0.9828	0.9836	0.9844	0.9861	0.9875
1.539			0.7901	0.7906	0.7911	0.7917	0.7922	0.7928	0.7935	0.7941	0.7948	0.7960	0.7973
81.2			0.9773	0.9780	0.9786	0.9793	0.9800	0.9808	0.9816	0.9824	0.9832	0.9847	0.9863
-191.95			0.9779	0.9786	0.9793	0.9799	0.9805	0.9814	0.9822	0.9830	0.9838	0.9854	0.9869
1.556			0.7896	0.7901	0.7907	0.7913	0.7917	0.7924	0.7930	0.7937	0.7943	0.7956	0.7968
81.3			0.9767	0.9774	0.9781	0.9787	0.9794	0.9802	0.9810	0.9818	0.9826	0.9842	0.9857
-191.85			0.9773	0.9780	0.9787	0.9793	0.9800	0.9808	0.9816	0.9824	0.9832	0.9848	0.9863
1.572			0.7881	0.7897	0.7902	0.7907	0.7912	0.7919	0.7926	0.7932	0.7938	0.7951	0.7964
81.4			0.9761	0.9768	0.9775	0.9781	0.9788	0.9796	0.9804	0.9812	0.9820	0.9836	0.9852
-191.75			0.9766	0.9774	0.9781	0.9787	0.9794	0.9802	0.9810	0.9818	0.9826	0.9842	0.9858
1.589			0.7866	0.7882	0.7897	0.7902	0.7908	0.7914	0.7921	0.7927	0.7934	0.7947	0.7959
81.5			0.9755	0.9762	0.9769	0.9775	0.9782	0.9790	0.9798	0.9806	0.9814	0.9830	0.9846
-191.65			0.9762	0.9768	0.9775	0.9782	0.9788	0.9796	0.9804	0.9813	0.9821	0.9836	0.9852
1.606			0.7882	0.7887	0.7892	0.7898	0.7903	0.7910	0.7916	0.7923	0.7929	0.7942	0.7955
81.6			0.9749	0.9756	0.9763	0.9769	0.9776	0.9784	0.9792	0.9801	0.9809	0.9825	0.9840
-191.55			0.9756	0.9762	0.9769	0.9776	0.9782	0.9791	0.9799	0.9807	0.9815	0.9831	0.9846
1.623			0.7877	0.7882	0.7888	0.7893	0.7899	0.7907	0.7914	0.7918	0.7925	0.7937	0.7950
81.7			0.9743	0.9750	0.9757	0.9764	0.9770	0.9778	0.9787	0.9795	0.9803	0.9819	0.9835
-191.45			0.9750	0.9756	0.9763	0.9770	0.9776	0.9785	0.9793	0.9801	0.9809	0.9825	0.9841
1.640			0.7872	0.7877	0.7883	0.7888	0.7894	0.7900	0.7908	0.7913	0.7920	0.7933	0.7946
81.8			0.9737	0.9744	0.9751	0.9758	0.9764	0.9773	0.9781	0.9789	0.9797	0.9813	0.9829
-191.35			0.9744	0.9750	0.9757	0.9764	0.9771	0.9777	0.9787	0.9795	0.9803	0.9819	0.9835
1.657			0.7867	0.7873	0.7878	0.7883	0.7889	0.7895	0.7902	0.7909	0.7915	0.7928	0.7941
81.9			0.9732	0.9738	0.9745	0.9752	0.9758	0.9767	0.9775	0.9783	0.9791	0.9807	0.9823
-191.25			0.9738	0.9744	0.9751	0.9758	0.9765	0.9773	0.9781	0.9788	0.9796	0.9814	0.9830
1.674			0.7862	0.7868	0.7873	0.7879	0.7884	0.7891	0.7897	0.7904	0.7911	0.7924	0.7936
82.0			0.9726	0.9732	0.9739	0.9746	0.9753	0.9761	0.9769	0.9777	0.9786	0.9802	0.9818
-191.15			0.9732	0.9738	0.9745	0.9752	0.9759	0.9767	0.9775	0.9784	0.9792	0.9808	0.9824
1.692			0.7857	0.7863	0.7868	0.7874	0.7879	0.7886	0.7893	0.7899	0.7906	0.7919	0.7932
82.1			0.9720	0.9726	0.9733	0.9740	0.9747	0.9755	0.9763	0.9772	0.9780	0.9796	0.9812
-191.05			0.9726	0.9733	0.9739	0.9746	0.9753	0.9761	0.9770	0.9778	0.9786	0.9802	0.9818
1.709			0.7853	0.7858	0.7864	0.7869	0.7875	0.7881	0.7888	0.7895	0.7901	0.7914	0.7927
82.2			0.9714	0.9720	0.9727	0.9734	0.9741	0.9748	0.9756	0.9764	0.9772	0.9788	0.9806
-190.95			0.9720	0.9727	0.9733	0.9740	0.9747	0.9754	0.9762	0.9770	0.9778	0.9794	0.9813
1.727			0.7848	0.7853	0.7859	0.7864	0.7870	0.7877	0.7883	0.7890	0.7897	0.7910	0.7923
82.3			0.9708	0.9714	0.9721	0.9728	0.9735	0.9743	0.9752	0.9760	0.9768	0.9785	0.9801
-190.85			0.9714	0.9721	0.9727	0.9734	0.9741	0.9749	0.9758	0.9766	0.9774	0.9791	0.9807
1.745			0.7843	0.7848	0.7854	0.7859	0.7865	0.7872	0.7879	0.7885	0.7892	0.7905	0.7918
82.4			0.9702	0.9708	0.9715	0.9722	0.9729	0.9737	0.9746	0.9754	0.9762	0.9779	0.9795
-190.75			0.9708	0.9715	0.9721	0.9728	0.9735	0.9744	0.9752	0.9760	0.9768	0.9785	0.9801
1.763			0.7838	0.7844	0.7849	0.7855	0.7860	0.7867	0.7874	0.7881	0.7887	0.7900	0.7913
82.5			0.9695	0.9702	0.9709	0.9716	0.9723	0.9732	0.9740	0.9748	0.9757	0.9773	0.9789
-190.65			0.9702	0.9709	0.9716	0.9722	0.9729	0.9738	0.9746	0.9755	0.9763	0.9779	0.9795
1.781			0.7833	0.7839	0.7844	0.7850	0.7855	0.7862	0.7868	0.7875	0.7883	0.7896	0.7909
82.6			0.9689	0.9696	0.9703	0.9710	0.9717	0.9726	0.9734	0.9743	0.9751	0.9767	0.9784
-190.55			0.9696	0.9703	0.9710	0.9716	0.9723	0.9732	0.9740	0.9748	0.9757	0.9774	0.9790
1.800			0.7828	0.7834	0.7840	0.7845	0.7851	0.7858	0.7864	0.7871	0.7878	0.7891	0.7904
82.7			0.9683	0.9690	0.9697	0.9704	0.9711	0.9720	0.9728	0.9737	0.9745	0.9762	0.9778
-190.45			0.9690	0.9697	0.9704	0.9710	0.9717	0.9726	0.9734	0.9743	0.9751	0.9768	0.9784
1.818			0.7823	0.7829	0.7835	0.7840	0.7846	0.7853	0.7860	0.7866	0.7873	0.7887	0.7900
82.8			0.9677	0.9684	0.9691	0.9698	0.9705	0.9714	0.9722	0.9731	0.9739	0.9756	0.9772
-190.35			0.9684	0.9691	0.9698	0.9705	0.9711	0.9720	0.9729	0.9737	0.9745	0.9762	0.9778
1.837			0.7819	0.7824	0.7830	0.7835	0.7841	0.7848	0.7855	0.7862	0.7869	0.7882	0.7895
82.9			0.9671	0.9678	0.9685	0.9692	0.9699	0.9708	0.9716	0.9725	0.9733	0.9750	0.9766
-190.25			0.9677	0.9685	0.9692	0.9699	0.9705	0.9714	0.9723	0.9731	0.9740	0.9756	0.9773
1.856			0.7814	0.7819	0.7825	0.7831	0.7836	0.7843	0.7850	0.7857	0.7864	0.7877	0.7890



TABLE 8 - CONTINUED

DENSITY OF COMPRESSED LIQUID NITROGEN - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, °C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>3</sup>											
BAR	0.800	1.000	2.000	4.000	6.000	8.000	10.000	12.500	15.000	17.500	20.000	25.000	30.000
KP/CM <sup>2</sup>	0.816	1.020	2.039	4.079	6.118	8.158	10.197	12.746	15.296	17.845	20.394	25.493	30.591
83.0			0.9665	0.9672	0.9679	0.9686	0.9693	0.9702	0.9711	0.9719	0.9728	0.9744	0.9761
-190.15			0.9671	0.9679	0.9686	0.9693	0.9700	0.9707	0.9717	0.9725	0.9734	0.9750	0.9767
1.675			0.7809	0.7814	0.7820	0.7826	0.7831	0.7838	0.7845	0.7852	0.7859	0.7873	0.7886
83.1			0.9659	0.9666	0.9673	0.9680	0.9687	0.9696	0.9705	0.9713	0.9722	0.9738	0.9755
-190.05			0.9665	0.9672	0.9680	0.9687	0.9694	0.9702	0.9711	0.9719	0.9728	0.9745	0.9761
1.894			0.7804	0.7810	0.7815	0.7821	0.7827	0.7834	0.7841	0.7847	0.7854	0.7868	0.7881
83.2			0.9653	0.9660	0.9667	0.9674	0.9681	0.9690	0.9699	0.9707	0.9716	0.9733	0.9749
-190.00			0.9659	0.9666	0.9674	0.9681	0.9688	0.9696	0.9705	0.9714	0.9722	0.9738	0.9755
1.913			0.7799	0.7805	0.7810	0.7816	0.7822	0.7828	0.7835	0.7843	0.7850	0.7863	0.7877
83.3			0.9647	0.9654	0.9661	0.9668	0.9676	0.9684	0.9693	0.9702	0.9710	0.9727	0.9744
-189.85			0.9653	0.9660	0.9668	0.9675	0.9682	0.9690	0.9699	0.9708	0.9716	0.9733	0.9750
1.932			0.7794	0.7800	0.7806	0.7812	0.7817	0.7824	0.7831	0.7838	0.7845	0.7859	0.7872
83.4			0.9641	0.9648	0.9655	0.9662	0.9670	0.9678	0.9687	0.9696	0.9704	0.9721	0.9738
-189.75			0.9647	0.9654	0.9661	0.9669	0.9676	0.9684	0.9693	0.9702	0.9710	0.9727	0.9744
1.952			0.7789	0.7795	0.7801	0.7806	0.7812	0.7815	0.7826	0.7833	0.7840	0.7854	0.7867
83.5			0.9635	0.9642	0.9649	0.9656	0.9664	0.9672	0.9681	0.9690	0.9698	0.9715	0.9732
-189.65			0.9641	0.9648	0.9655	0.9663	0.9670	0.9678	0.9687	0.9696	0.9705	0.9722	0.9738
1.971			0.7784	0.7790	0.7796	0.7802	0.7807	0.7814	0.7821	0.7828	0.7835	0.7845	0.7863
83.6			0.9629	0.9636	0.9643	0.9650	0.9658	0.9666	0.9675	0.9684	0.9692	0.9710	0.9726
-189.55			0.9635	0.9642	0.9649	0.9657	0.9664	0.9673	0.9681	0.9690	0.9699	0.9716	0.9733
1.991			0.7779	0.7785	0.7791	0.7797	0.7802	0.7810	0.7817	0.7824	0.7833	0.7844	0.7859
83.7			0.9623	0.9630	0.9637	0.9644	0.9652	0.9660	0.9669	0.9678	0.9687	0.9704	0.9721
-189.45			0.9630	0.9637	0.9644	0.9651	0.9658	0.9667	0.9675	0.9684	0.9693	0.9710	0.9727
2.011			0.7770	0.7776	0.7782	0.7792	0.7798	0.7805	0.7812	0.7819	0.7826	0.7840	0.7853
83.8			0.9624	0.9631	0.9638	0.9646	0.9654	0.9663	0.9672	0.9681	0.9690	0.9708	0.9715
-189.35			0.9630	0.9637	0.9644	0.9652	0.9660	0.9669	0.9678	0.9687	0.9696	0.9713	0.9730
2.031			0.7775	0.7781	0.7787	0.7793	0.7800	0.7807	0.7814	0.7821	0.7828	0.7835	0.7846
83.9			0.9618	0.9625	0.9632	0.9640	0.9648	0.9657	0.9666	0.9675	0.9684	0.9692	0.9709
-189.25			0.9624	0.9631	0.9638	0.9646	0.9655	0.9663	0.9672	0.9681	0.9690	0.9708	0.9715
2.052			0.7770	0.7776	0.7782	0.7788	0.7795	0.7802	0.7809	0.7816	0.7830	0.7844	0.7864
84.0			0.9612	0.9619	0.9626	0.9634	0.9643	0.9651	0.9660	0.9669	0.9678	0.9686	0.9703
-189.15			0.9618	0.9625	0.9632	0.9640	0.9648	0.9656	0.9665	0.9674	0.9683	0.9692	0.9710
2.072			0.7765	0.7771	0.7777	0.7783	0.7790	0.7798	0.7805	0.7812	0.7826	0.7836	0.7853
84.1			0.9605	0.9613	0.9620	0.9628	0.9637	0.9645	0.9654	0.9663	0.9672	0.9680	0.9699
-189.05			0.9611	0.9618	0.9626	0.9634	0.9643	0.9652	0.9660	0.9669	0.9678	0.9687	0.9705
2.092			0.7761	0.7766	0.7772	0.7778	0.7785	0.7793	0.7800	0.7807	0.7821	0.7834	0.7854
84.2			0.9600	0.9607	0.9614	0.9621	0.9631	0.9639	0.9648	0.9657	0.9667	0.9675	0.9692
-188.95			0.9606	0.9613	0.9620	0.9628	0.9637	0.9646	0.9655	0.9665	0.9674	0.9683	0.9698
2.113			0.7756	0.7762	0.7767	0.7773	0.7781	0.7788	0.7795	0.7802	0.7816	0.7830	0.7830
84.3			0.9593	0.9601	0.9608	0.9615	0.9625	0.9634	0.9642	0.9651	0.9660	0.9668	0.9686
-188.85			0.9599	0.9607	0.9614	0.9622	0.9631	0.9640	0.9649	0.9657	0.9666	0.9675	0.9692
2.134			0.7751	0.7757	0.7763	0.7768	0.7776	0.7783	0.7790	0.7797	0.7812	0.7825	0.7825
84.4			0.9587	0.9595	0.9602	0.9609	0.9619	0.9628	0.9637	0.9646	0.9655	0.9663	0.9680
-188.75			0.9593	0.9601	0.9608	0.9616	0.9625	0.9634	0.9643	0.9652	0.9661	0.9670	0.9686
2.155			0.7746	0.7752	0.7758	0.7764	0.7771	0.7779	0.7787	0.7795	0.7793	0.7807	0.7821
84.5			0.9581	0.9589	0.9596	0.9603	0.9613	0.9622	0.9631	0.9640	0.9649	0.9657	0.9674
-188.65			0.9587	0.9595	0.9602	0.9609	0.9619	0.9628	0.9637	0.9646	0.9655	0.9663	0.9681
2.176			0.7741	0.7747	0.7753	0.7759	0.7766	0.7773	0.7781	0.7789	0.7788	0.7802	0.7816
84.6			0.9575	0.9582	0.9590	0.9597	0.9606	0.9616	0.9625	0.9634	0.9643	0.9651	0.9669
-188.55			0.9581	0.9589	0.9596	0.9603	0.9613	0.9622	0.9631	0.9640	0.9649	0.9657	0.9675
2.197			0.7736	0.7742	0.7748	0.7754	0.7761	0.7769	0.7776	0.7783	0.7783	0.7797	0.7811
84.7			0.9569	0.9576	0.9584	0.9591	0.9600	0.9610	0.9619	0.9628	0.9637	0.9645	0.9663
-188.45			0.9575	0.9582	0.9590	0.9597	0.9607	0.9616	0.9625	0.9634	0.9643	0.9652	0.9669
2.219			0.7731	0.7737	0.7743	0.7749	0.7756	0.7764	0.7771	0.7771	0.7778	0.7793	0.7807
84.8			0.9563	0.9570	0.9578	0.9585	0.9594	0.9604	0.9613	0.9622	0.9631	0.9640	0.9657
-188.35			0.9569	0.9576	0.9584	0.9591	0.9601	0.9610	0.9619	0.9628	0.9637	0.9646	0.9663
2.241			0.7726	0.7732	0.7738	0.7744	0.7751	0.7759	0.7766	0.7766	0.7774	0.7788	0.7802
84.9			0.9557	0.9564	0.9572	0.9579	0.9588	0.9598	0.9607	0.9616	0.9625	0.9634	0.9651
-188.25			0.9563	0.9570	0.9578	0.9585	0.9594	0.9604	0.9613	0.9622	0.9631	0.9640	0.9657
2.262			0.7721	0.7727	0.7733	0.7739	0.7747	0.7754	0.7761	0.7761	0.7769	0.7783	0.7797

TABLE 8 - CONTINUED

## DENSITY OF COMPRESSED LIQUID NITROGEN - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, °C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TCRR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>3</sup>											
BAR KPa/cm <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.158	10.000 10.197	12.500 12.746	15.000 15.296	17.500 17.845	20.000 20.394	25.000 25.493	30.000 30.591
85.0				0.9550	0.9558	0.9566	0.9573	0.9582	0.9592	0.9601	0.9610	0.9620	0.9645
-188.15				0.9556	0.9564	0.9572	0.9579	0.9588	0.9598	0.9607	0.9616	0.9624	0.9652
2.284				0.7716	0.7722	0.7728	0.7734	0.7742	0.7749	0.7757	0.7764	0.7776	0.7793
85.1				0.9544	0.9552	0.9559	0.9567	0.9576	0.9586	0.9595	0.9604	0.9612	0.9640
-188.05				0.9550	0.9558	0.9565	0.9573	0.9582	0.9592	0.9601	0.9610	0.9618	0.9646
2.386				0.7711	0.7717	0.7723	0.7729	0.7737	0.7744	0.7752	0.7759	0.7774	0.7788
85.2				0.9538	0.9546	0.9553	0.9561	0.9570	0.9580	0.9589	0.9598	0.9616	0.9634
-187.95				0.9544	0.9552	0.9559	0.9567	0.9576	0.9586	0.9595	0.9604	0.9612	0.9640
2.329				0.7706	0.7712	0.7718	0.7724	0.7732	0.7739	0.7747	0.7754	0.7769	0.7783
85.3				0.9532	0.9540	0.9547	0.9555	0.9564	0.9574	0.9583	0.9592	0.9610	0.9628
-187.85				0.9538	0.9546	0.9553	0.9561	0.9570	0.9580	0.9589	0.9598	0.9616	0.9634
2.351				0.7701	0.7707	0.7713	0.7719	0.7727	0.7735	0.7742	0.7749	0.7764	0.7779
85.4				0.9526	0.9533	0.9541	0.9549	0.9558	0.9567	0.9577	0.9586	0.9604	0.9622
-187.75				0.9532	0.9539	0.9547	0.9555	0.9564	0.9574	0.9583	0.9592	0.9610	0.9628
2.374				0.7696	0.7702	0.7708	0.7714	0.7722	0.7730	0.7737	0.7744	0.7759	0.7774
85.5				0.9519	0.9527	0.9535	0.9543	0.9552	0.9561	0.9571	0.9580	0.9598	0.9616
-187.65				0.9525	0.9533	0.9541	0.9549	0.9558	0.9567	0.9577	0.9586	0.9604	0.9622
2.396				0.7691	0.7697	0.7703	0.7710	0.7717	0.7725	0.7732	0.7740	0.7755	0.7769
85.6				0.9513	0.9521	0.9529	0.9536	0.9546	0.9555	0.9565	0.9574	0.9592	0.9610
-187.55				0.9519	0.9527	0.9535	0.9542	0.9552	0.9561	0.9571	0.9580	0.9598	0.9617
2.419				0.7686	0.7692	0.7698	0.7705	0.7712	0.7720	0.7727	0.7735	0.7750	0.7764
85.7				0.9507	0.9515	0.9523	0.9530	0.9540	0.9549	0.9559	0.9568	0.9586	0.9605
-187.45				0.9513	0.9521	0.9529	0.9536	0.9546	0.9555	0.9565	0.9574	0.9592	0.9611
2.442				0.7681	0.7687	0.7693	0.7700	0.7707	0.7715	0.7723	0.7730	0.7745	0.7760
85.8				0.9501	0.9509	0.9516	0.9524	0.9534	0.9543	0.9553	0.9562	0.9581	0.9599
-187.35				0.9507	0.9515	0.9522	0.9530	0.9540	0.9549	0.9559	0.9568	0.9587	0.9605
2.465				0.7676	0.7682	0.7688	0.7695	0.7702	0.7710	0.7718	0.7726	0.7740	0.7755
85.9				0.9495	0.9502	0.9510	0.9518	0.9528	0.9537	0.9547	0.9556	0.9575	0.9593
-187.25				0.9501	0.9508	0.9516	0.9524	0.9534	0.9543	0.9553	0.9562	0.9581	0.9599
2.489				0.7671	0.7677	0.7683	0.7690	0.7698	0.7705	0.7713	0.7720	0.7735	0.7750
86.0				0.9488	0.9496	0.9504	0.9512	0.9522	0.9531	0.9541	0.9550	0.9569	0.9587
-187.15				0.9494	0.9502	0.9510	0.9518	0.9528	0.9537	0.9547	0.9556	0.9575	0.9593
2.512				0.7666	0.7672	0.7678	0.7685	0.7693	0.7700	0.7708	0.7716	0.7731	0.7745
86.1				0.9482	0.9490	0.9498	0.9506	0.9516	0.9525	0.9535	0.9544	0.9563	0.9581
-187.05				0.9488	0.9496	0.9504	0.9512	0.9522	0.9531	0.9541	0.9550	0.9569	0.9587
2.536				0.7661	0.7667	0.7673	0.7680	0.7688	0.7695	0.7703	0.7711	0.7726	0.7741
86.2				0.9476	0.9484	0.9492	0.9500	0.9510	0.9519	0.9529	0.9538	0.9557	0.9575
-186.95				0.9482	0.9490	0.9498	0.9506	0.9516	0.9525	0.9535	0.9544	0.9563	0.9581
2.560				0.7656	0.7662	0.7668	0.7675	0.7683	0.7690	0.7698	0.7706	0.7721	0.7736
86.3				0.9469	0.9477	0.9485	0.9493	0.9503	0.9513	0.9522	0.9532	0.9551	0.9569
-186.85				0.9475	0.9484	0.9491	0.9499	0.9509	0.9519	0.9528	0.9538	0.9557	0.9575
2.584				0.7651	0.7657	0.7663	0.7670	0.7678	0.7686	0.7693	0.7701	0.7716	0.7731
86.4				0.9463	0.9471	0.9479	0.9487	0.9497	0.9507	0.9516	0.9526	0.9545	0.9563
-186.75				0.9469	0.9477	0.9485	0.9493	0.9503	0.9513	0.9522	0.9532	0.9551	0.9569
2.608				0.7645	0.7652	0.7658	0.7665	0.7673	0.7681	0.7688	0.7696	0.7711	0.7726
86.5				0.9457	0.9465	0.9473	0.9481	0.9491	0.9501	0.9510	0.9520	0.9539	0.9558
-186.65				0.9463	0.9471	0.9479	0.9487	0.9497	0.9507	0.9516	0.9526	0.9545	0.9563
2.633				0.7640	0.7647	0.7653	0.7660	0.7668	0.7676	0.7684	0.7691	0.7707	0.7722
86.6				0.9451	0.9459	0.9467	0.9475	0.9485	0.9494	0.9504	0.9514	0.9533	0.9552
-186.55				0.9457	0.9465	0.9473	0.9481	0.9491	0.9501	0.9510	0.9520	0.9539	0.9558
2.657				0.7635	0.7642	0.7648	0.7655	0.7663	0.7671	0.7679	0.7686	0.7702	0.7717
86.7				0.9444	0.9452	0.9461	0.9469	0.9479	0.9488	0.9498	0.9508	0.9527	0.9546
-186.45				0.9450	0.9458	0.9467	0.9475	0.9485	0.9494	0.9504	0.9514	0.9533	0.9552
2.682				0.7630	0.7637	0.7643	0.7650	0.7658	0.7666	0.7674	0.7681	0.7697	0.7712
86.8				0.9438	0.9446	0.9454	0.9462	0.9472	0.9482	0.9492	0.9502	0.9521	0.9540
-186.35				0.9444	0.9452	0.9460	0.9468	0.9478	0.9488	0.9498	0.9508	0.9527	0.9546
2.707				0.7625	0.7632	0.7638	0.7645	0.7653	0.7661	0.7669	0.7677	0.7692	0.7707
86.9				0.9432	0.9440	0.9448	0.9456	0.9466	0.9476	0.9486	0.9496	0.9515	0.9534
-186.25				0.9438	0.9446	0.9454	0.9462	0.9472	0.9482	0.9492	0.9502	0.9521	0.9540
2.732				0.7620	0.7627	0.7633	0.7640	0.7648	0.7656	0.7664	0.7672	0.7687	0.7703

TABLE 8 - CONTINUED

DENSITY OF COMPRESSED LIQUID NITROGEN - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/DM <sup>3</sup>											
BAR KPa/cm <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.158	10.000 10.197	12.500 12.546	15.000 15.296	17.500 17.845	20.000 20.394	25.000 25.493	30.000 30.591
87.0				0.9425	0.9434	0.9442	0.9450	0.9466	0.9470	0.9480	0.9490	0.9509	0.9528
-186.15				0.9431	0.9440	0.9448	0.9456	0.9466	0.9476	0.9486	0.9496	0.9515	0.9534
2.757				0.7615	0.7622	0.7628	0.7635	0.7643	0.7651	0.7659	0.7667	0.7682	0.7698
87.1				0.9419	0.9427	0.9436	0.9444	0.9454	0.9464	0.9474	0.9484	0.9503	0.9522
-186.05				0.9425	0.9433	0.9441	0.9450	0.9460	0.9470	0.9480	0.9490	0.9509	0.9528
2.783				0.7610	0.7616	0.7623	0.7630	0.7638	0.7646	0.7654	0.7662	0.7678	0.7693
87.2				0.9413	0.9421	0.9429	0.9437	0.9448	0.9458	0.9468	0.9477	0.9497	0.9516
-185.95				0.9419	0.9427	0.9435	0.9443	0.9454	0.9464	0.9474	0.9483	0.9503	0.9522
2.808				0.7605	0.7611	0.7618	0.7625	0.7633	0.7641	0.7649	0.7657	0.7673	0.7688
87.3				0.9406	0.9415	0.9423	0.9431	0.9441	0.9451	0.9461	0.9471	0.9491	0.9510
-185.85				0.9412	0.9421	0.9429	0.9437	0.9447	0.9457	0.9467	0.9477	0.9497	0.9516
2.834				0.7600	0.7606	0.7613	0.7620	0.7628	0.7636	0.7644	0.7652	0.7668	0.7683
87.4				0.9400	0.9408	0.9417	0.9425	0.9435	0.9445	0.9455	0.9465	0.9485	0.9504
-185.75				0.9406	0.9414	0.9423	0.9431	0.9441	0.9451	0.9461	0.9471	0.9491	0.9510
2.860				0.7594	0.7601	0.7608	0.7615	0.7623	0.7631	0.7639	0.7647	0.7663	0.7679
87.5				0.9394	0.9402	0.9410	0.9419	0.9428	0.9439	0.9449	0.9459	0.9479	0.9498
-185.65				0.9400	0.9408	0.9416	0.9425	0.9435	0.9445	0.9455	0.9465	0.9485	0.9504
2.886				0.7589	0.7596	0.7603	0.7609	0.7618	0.7626	0.7634	0.7642	0.7658	0.7674
87.6				0.9387	0.9396	0.9404	0.9412	0.9423	0.9433	0.9443	0.9453	0.9473	0.9492
-185.55				0.9393	0.9402	0.9410	0.9418	0.9428	0.9439	0.9449	0.9459	0.9479	0.9498
2.912				0.7584	0.7591	0.7598	0.7604	0.7613	0.7621	0.7629	0.7637	0.7653	0.7669
87.7				0.9381	0.9389	0.9398	0.9406	0.9416	0.9427	0.9437	0.9447	0.9467	0.9486
-185.45				0.9387	0.9395	0.9404	0.9412	0.9422	0.9433	0.9443	0.9453	0.9473	0.9492
2.939				0.7579	0.7586	0.7593	0.7599	0.7608	0.7616	0.7624	0.7632	0.7648	0.7664
87.8				0.9374	0.9383	0.9391	0.9400	0.9410	0.9420	0.9431	0.9441	0.9461	0.9480
-185.35				0.9380	0.9389	0.9397	0.9405	0.9416	0.9426	0.9437	0.9447	0.9467	0.9486
2.965				0.7574	0.7581	0.7587	0.7594	0.7603	0.7611	0.7619	0.7627	0.7643	0.7659
87.9				0.9368	0.9377	0.9385	0.9394	0.9404	0.9414	0.9424	0.9435	0.9455	0.9474
-185.25				0.9374	0.9383	0.9391	0.9399	0.9410	0.9420	0.9430	0.9441	0.9461	0.9480
2.992				0.7569	0.7576	0.7582	0.7589	0.7598	0.7606	0.7614	0.7622	0.7635	0.7654
88.0				0.9362	0.9370	0.9379	0.9387	0.9398	0.9409	0.9418	0.9428	0.9449	0.9468
-185.15				0.9368	0.9376	0.9385	0.9393	0.9404	0.9414	0.9424	0.9434	0.9455	0.9474
3.019				0.7563	0.7570	0.7577	0.7584	0.7593	0.7601	0.7609	0.7617	0.7634	0.7650
88.1				0.9355	0.9364	0.9372	0.9381	0.9391	0.9402	0.9412	0.9422	0.9442	0.9462
-185.05				0.9361	0.9370	0.9378	0.9387	0.9397	0.9408	0.9418	0.9428	0.9448	0.9468
3.046				0.7558	0.7565	0.7572	0.7579	0.7587	0.7595	0.7604	0.7612	0.7625	0.7645
88.2				0.9349	0.9357	0.9366	0.9375	0.9385	0.9396	0.9406	0.9416	0.9436	0.9456
-184.95				0.9355	0.9363	0.9372	0.9381	0.9391	0.9402	0.9412	0.9422	0.9442	0.9462
3.074				0.7553	0.7560	0.7567	0.7574	0.7582	0.7591	0.7599	0.7607	0.7624	0.7640
88.3				0.9342	0.9351	0.9360	0.9368	0.9378	0.9389	0.9400	0.9410	0.9430	0.9450
-184.85				0.9348	0.9357	0.9366	0.9374	0.9385	0.9395	0.9406	0.9416	0.9436	0.9456
3.101				0.7548	0.7555	0.7562	0.7569	0.7577	0.7586	0.7594	0.7602	0.7619	0.7635
88.4				0.9336	0.9345	0.9353	0.9362	0.9372	0.9383	0.9394	0.9404	0.9424	0.9444
-184.75				0.9342	0.9351	0.9359	0.9368	0.9378	0.9389	0.9399	0.9410	0.9430	0.9450
3.129				0.7543	0.7550	0.7557	0.7564	0.7572	0.7581	0.7589	0.7598	0.7614	0.7630
88.5				0.9329	0.9338	0.9347	0.9356	0.9366	0.9377	0.9387	0.9398	0.9418	0.9438
-184.65				0.9335	0.9344	0.9353	0.9361	0.9372	0.9383	0.9393	0.9404	0.9424	0.9444
3.157				0.7537	0.7545	0.7552	0.7559	0.7567	0.7576	0.7584	0.7593	0.7609	0.7625
88.6				0.9323	0.9332	0.9341	0.9349	0.9360	0.9371	0.9381	0.9391	0.9412	0.9432
-184.55				0.9329	0.9338	0.9346	0.9355	0.9366	0.9376	0.9387	0.9397	0.9418	0.9438
3.185				0.7532	0.7539	0.7546	0.7553	0.7562	0.7571	0.7579	0.7588	0.7604	0.7620
88.7				0.9317	0.9325	0.9334	0.9343	0.9354	0.9364	0.9375	0.9385	0.9406	0.9426
-184.45				0.9322	0.9331	0.9340	0.9349	0.9360	0.9370	0.9381	0.9391	0.9412	0.9432
3.213				0.7527	0.7534	0.7541	0.7548	0.7557	0.7566	0.7574	0.7583	0.7595	0.7615
88.8				0.9310	0.9319	0.9328	0.9336	0.9347	0.9358	0.9369	0.9379	0.9400	0.9420
-184.35				0.9316	0.9325	0.9334	0.9342	0.9353	0.9364	0.9375	0.9385	0.9406	0.9426
3.242				0.7522	0.7529	0.7536	0.7543	0.7552	0.7560	0.7569	0.7577	0.7594	0.7611
88.9				0.9304	0.9312	0.9321	0.9330	0.9341	0.9352	0.9362	0.9373	0.9394	0.9414
-184.25				0.9309	0.9318	0.9327	0.9336	0.9347	0.9358	0.9368	0.9379	0.9400	0.9420
3.270				0.7516	0.7524	0.7531	0.7538	0.7547	0.7555	0.7564	0.7572	0.7589	0.7606

TABLE 6 - CONTINUED

## DENSITY OF COMPRESSED LIQUID NITROGEN - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, °C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/DM <sup>3</sup>												
BAR	°C	0.000	1.000	2.000	4.000	6.000	8.000	10.000	12.500	15.000	17.500	20.000	25.000	30.000
KP/CM <sup>2</sup>		0.016	1.020	2.039	4.079	6.118	8.158	10.197	12.746	15.296	17.845	20.394	25.493	30.591
89.0					0.9297	0.9306	0.9315	0.9324	0.9335	0.9345	0.9356	0.9367	0.9377	0.9408
-184.15					0.9303	0.9312	0.9321	0.9330	0.9341	0.9351	0.9362	0.9373	0.9383	0.9414
3.299					0.7511	0.7516	0.7526	0.7533	0.7542	0.7550	0.7559	0.7567	0.7584	0.7601
89.1					0.9291	0.9300	0.9308	0.9317	0.9328	0.9339	0.9350	0.9360	0.9371	0.9402
-184.05					0.9296	0.9305	0.9314	0.9323	0.9334	0.9345	0.9356	0.9366	0.9377	0.9408
3.328					0.7506	0.7513	0.7520	0.7528	0.7536	0.7545	0.7554	0.7562	0.7579	0.7596
89.2					0.9284	0.9293	0.9302	0.9311	0.9322	0.9333	0.9344	0.9354	0.9375	0.9396
-183.95					0.9290	0.9299	0.9308	0.9317	0.9327	0.9338	0.9349	0.9360	0.9381	0.9402
3.357					0.7501	0.7508	0.7515	0.7522	0.7531	0.7540	0.7549	0.7557	0.7574	0.7591
89.3					0.9277	0.9287	0.9296	0.9304	0.9316	0.9326	0.9337	0.9348	0.9369	0.9390
-183.85					0.9283	0.9292	0.9301	0.9310	0.9321	0.9332	0.9343	0.9354	0.9375	0.9396
3.387					0.7495	0.7503	0.7510	0.7517	0.7526	0.7535	0.7544	0.7552	0.7569	0.7586
89.4					0.9271	0.9280	0.9289	0.9298	0.9309	0.9320	0.9331	0.9342	0.9363	0.9384
-183.75					0.9277	0.9286	0.9295	0.9304	0.9315	0.9326	0.9337	0.9348	0.9369	0.9390
3.416					0.7490	0.7498	0.7505	0.7512	0.7521	0.7530	0.7539	0.7547	0.7564	0.7581
89.5					0.9264	0.9274	0.9283	0.9292	0.9303	0.9314	0.9325	0.9335	0.9357	0.9378
-183.65					0.9270	0.9279	0.9289	0.9298	0.9309	0.9320	0.9331	0.9341	0.9363	0.9384
3.446					0.7485	0.7492	0.7500	0.7507	0.7516	0.7525	0.7534	0.7542	0.7559	0.7576
89.6					0.9258	0.9267	0.9276	0.9285	0.9296	0.9307	0.9318	0.9329	0.9351	0.9371
-183.55					0.9264	0.9273	0.9282	0.9291	0.9302	0.9313	0.9324	0.9335	0.9356	0.9377
3.476					0.7480	0.7487	0.7494	0.7502	0.7511	0.7520	0.7528	0.7537	0.7554	0.7571
89.7					0.9251	0.9261	0.9270	0.9279	0.9290	0.9301	0.9312	0.9323	0.9344	0.9365
-183.45					0.9257	0.9266	0.9276	0.9285	0.9296	0.9307	0.9318	0.9329	0.9350	0.9371
3.506					0.7474	0.7482	0.7489	0.7496	0.7505	0.7514	0.7523	0.7532	0.7549	0.7566
89.8					0.9245	0.9254	0.9263	0.9272	0.9284	0.9295	0.9306	0.9317	0.9338	0.9359
-183.35					0.9251	0.9260	0.9269	0.9278	0.9289	0.9301	0.9312	0.9323	0.9344	0.9365
3.536					0.7469	0.7476	0.7484	0.7491	0.7500	0.7508	0.7518	0.7527	0.7544	0.7561
89.9					0.9238	0.9247	0.9257	0.9266	0.9277	0.9288	0.9299	0.9310	0.9332	0.9353
-183.25					0.9244	0.9253	0.9263	0.9272	0.9283	0.9294	0.9305	0.9316	0.9338	0.9359
3.567					0.7464	0.7471	0.7479	0.7486	0.7495	0.7504	0.7513	0.7522	0.7539	0.7557
90.0					0.9232	0.9241	0.9250	0.9259	0.9271	0.9282	0.9293	0.9304	0.9326	0.9347
-183.15					0.9237	0.9247	0.9257	0.9266	0.9277	0.9288	0.9299	0.9310	0.9332	0.9353
3.598					0.7458	0.7466	0.7473	0.7481	0.7490	0.7499	0.7508	0.7517	0.7534	0.7552
90.1					0.9225	0.9234	0.9244	0.9253	0.9264	0.9276	0.9287	0.9298	0.9320	0.9341
-183.05					0.9231	0.9240	0.9249	0.9259	0.9270	0.9281	0.9293	0.9304	0.9326	0.9347
3.629					0.7453	0.7461	0.7468	0.7476	0.7485	0.7494	0.7503	0.7512	0.7529	0.7547
90.2					0.9218	0.9228	0.9237	0.9246	0.9258	0.9269	0.9280	0.9291	0.9313	0.9335
-182.95					0.9224	0.9234	0.9243	0.9252	0.9264	0.9275	0.9286	0.9297	0.9319	0.9341
3.660					0.7448	0.7455	0.7463	0.7470	0.7480	0.7489	0.7498	0.7507	0.7524	0.7542
90.3					0.9212	0.9221	0.9231	0.9240	0.9251	0.9263	0.9274	0.9285	0.9307	0.9329
-182.85					0.9218	0.9227	0.9236	0.9246	0.9257	0.9268	0.9280	0.9291	0.9313	0.9334
3.691					0.7442	0.7450	0.7457	0.7465	0.7474	0.7483	0.7493	0.7502	0.7519	0.7537
90.4					0.9205	0.9215	0.9224	0.9233	0.9244	0.9256	0.9267	0.9279	0.9301	0.9322
-182.75					0.9211	0.9220	0.9229	0.9238	0.9249	0.9260	0.9272	0.9283	0.9305	0.9326
3.722					0.7437	0.7445	0.7452	0.7460	0.7469	0.7478	0.7487	0.7496	0.7514	0.7532
90.5					0.9198	0.9208	0.9217	0.9227	0.9238	0.9250	0.9261	0.9272	0.9295	0.9316
-182.65					0.9204	0.9214	0.9223	0.9233	0.9244	0.9256	0.9267	0.9278	0.9300	0.9322
3.754					0.7432	0.7439	0.7447	0.7454	0.7464	0.7473	0.7482	0.7491	0.7509	0.7527
90.6					0.9192	0.9201	0.9211	0.9220	0.9232	0.9243	0.9255	0.9266	0.9288	0.9310
-182.55					0.9198	0.9207	0.9217	0.9226	0.9238	0.9249	0.9261	0.9272	0.9294	0.9316
3.786					0.7426	0.7434	0.7442	0.7449	0.7458	0.7468	0.7477	0.7486	0.7504	0.7522
90.7					0.9185	0.9195	0.9204	0.9214	0.9225	0.9237	0.9248	0.9260	0.9282	0.9304
-182.45					0.9191	0.9201	0.9210	0.9220	0.9231	0.9243	0.9254	0.9266	0.9288	0.9310
3.818					0.7421	0.7429	0.7436	0.7444	0.7453	0.7463	0.7472	0.7481	0.7499	0.7517
90.8					0.9178	0.9188	0.9198	0.9207	0.9218	0.9231	0.9242	0.9253	0.9276	0.9298
-182.35					0.9184	0.9194	0.9203	0.9213	0.9224	0.9236	0.9248	0.9259	0.9282	0.9304
3.850					0.7415	0.7423	0.7431	0.7439	0.7448	0.7457	0.7467	0.7476	0.7494	0.7512
90.9					0.9172	0.9181	0.9191	0.9201	0.9212	0.9224	0.9236	0.9247	0.9270	0.9292
-182.25					0.9178	0.9187	0.9197	0.9206	0.9217	0.9229	0.9241	0.9252	0.9275	0.9297
3.883					0.7410	0.7418	0.7426	0.7433	0.7443	0.7452	0.7462	0.7471	0.7488	0.7507



TABLE 8 - CONTINUED

DENSITY OF COMPRESSED LIQUID NITROGEN - CONTINUED

1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR		TABLE ENTRIES												
		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS			2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS									
BAR	°C	0.800	1.000	2.000	4.000	6.000	8.000	10.000	12.500	15.000	17.500	20.000	25.000	30.000
KP/CM <sup>2</sup>		0.616	1.020	2.039	4.079	6.118	8.158	10.197	12.746	15.295	17.845	20.394	25.493	30.591
91.0					0.9165	0.9175	0.9184	0.9194	0.9206	0.9218	0.9229	0.9241	0.9263	0.9285
-182.15					0.9171	0.9181	0.9190	0.9200	0.9212	0.9223	0.9235	0.9247	0.9269	0.9291
3.916					0.7495	0.7412	0.7420	0.7428	0.7438	0.7447	0.7456	0.7466	0.7484	0.7502
91.1					0.9158	0.9168	0.9178	0.9187	0.9196	0.9211	0.9223	0.9234	0.9257	0.9279
-182.05					0.9164	0.9174	0.9184	0.9193	0.9205	0.9217	0.9229	0.9240	0.9263	0.9285
3.949					0.7399	0.7407	0.7415	0.7423	0.7432	0.7442	0.7451	0.7461	0.7479	0.7497
91.2					0.9152	0.9161	0.9171	0.9181	0.9193	0.9205	0.9216	0.9228	0.9251	0.9273
-181.55					0.9157	0.9167	0.9177	0.9187	0.9196	0.9210	0.9222	0.9234	0.9257	0.9279
3.982					0.7394	0.7402	0.7410	0.7417	0.7427	0.7437	0.7446	0.7455	0.7474	0.7492
91.3					0.9155	0.9165	0.9174	0.9186	0.9198	0.9210	0.9221	0.9232	0.9254	0.9276
-181.85					0.9161	0.9170	0.9180	0.9190	0.9202	0.9214	0.9226	0.9238	0.9261	0.9283
4.015					0.7396	0.7404	0.7412	0.7422	0.7432	0.7441	0.7451	0.7460	0.7479	0.7497
91.4					0.9148	0.9158	0.9168	0.9180	0.9192	0.9203	0.9215	0.9228	0.9249	0.9270
-181.75					0.9154	0.9164	0.9173	0.9184	0.9197	0.9209	0.9221	0.9234	0.9256	0.9278
4.048					0.7391	0.7399	0.7407	0.7416	0.7426	0.7436	0.7445	0.7454	0.7474	0.7492
91.5					0.9141	0.9151	0.9161	0.9173	0.9185	0.9197	0.9209	0.9222	0.9244	0.9266
-181.65					0.9147	0.9157	0.9167	0.9178	0.9191	0.9203	0.9215	0.9227	0.9250	0.9273
4.082					0.7385	0.7393	0.7401	0.7411	0.7421	0.7430	0.7440	0.7450	0.7468	0.7487
91.6					0.9135	0.9145	0.9154	0.9167	0.9179	0.9191	0.9202	0.9214	0.9236	0.9258
-181.55					0.9140	0.9150	0.9160	0.9172	0.9184	0.9196	0.9208	0.9221	0.9243	0.9265
4.116					0.7380	0.7388	0.7396	0.7406	0.7416	0.7425	0.7435	0.7453	0.7472	0.7492
91.7					0.9128	0.9138	0.9148	0.9160	0.9172	0.9184	0.9196	0.9218	0.9240	0.9262
-181.45					0.9134	0.9144	0.9154	0.9166	0.9178	0.9190	0.9202	0.9214	0.9236	0.9258
4.150					0.7375	0.7383	0.7391	0.7400	0.7410	0.7420	0.7429	0.7448	0.7467	0.7487
91.8					0.9121	0.9131	0.9141	0.9153	0.9166	0.9178	0.9189	0.9213	0.9235	0.9257
-181.35					0.9127	0.9137	0.9147	0.9159	0.9171	0.9183	0.9195	0.9219	0.9241	0.9263
4.185					0.7369	0.7377	0.7385	0.7395	0.7405	0.7415	0.7424	0.7443	0.7461	0.7481
91.9					0.9114	0.9124	0.9134	0.9147	0.9159	0.9171	0.9183	0.9206	0.9228	0.9250
-181.25					0.9120	0.9130	0.9140	0.9152	0.9164	0.9177	0.9189	0.9212	0.9234	0.9256
4.219					0.7364	0.7372	0.7380	0.7390	0.7400	0.7409	0.7419	0.7438	0.7456	0.7475
92.0					0.9108	0.9118	0.9128	0.9140	0.9152	0.9164	0.9176	0.9200	0.9222	0.9244
-181.15					0.9113	0.9124	0.9134	0.9146	0.9158	0.9170	0.9182	0.9206	0.9228	0.9250
4.254					0.7358	0.7366	0.7374	0.7384	0.7394	0.7404	0.7414	0.7433	0.7451	0.7471
92.1					0.9101	0.9111	0.9121	0.9134	0.9146	0.9158	0.9170	0.9194	0.9216	0.9238
-181.05					0.9107	0.9117	0.9127	0.9139	0.9152	0.9164	0.9176	0.9200	0.9222	0.9244
4.289					0.7353	0.7361	0.7369	0.7379	0.7389	0.7399	0.7409	0.7428	0.7446	0.7466
92.2					0.9094	0.9104	0.9114	0.9127	0.9139	0.9151	0.9163	0.9187	0.9210	0.9232
-180.95					0.9100	0.9110	0.9120	0.9133	0.9145	0.9157	0.9169	0.9193	0.9216	0.9238
4.324					0.7347	0.7355	0.7364	0.7374	0.7384	0.7394	0.7403	0.7422	0.7441	0.7461
92.3					0.9087	0.9097	0.9108	0.9120	0.9133	0.9145	0.9157	0.9181	0.9204	0.9226
-180.85					0.9093	0.9103	0.9113	0.9126	0.9138	0.9151	0.9163	0.9187	0.9210	0.9232
4.359					0.7342	0.7350	0.7358	0.7368	0.7378	0.7388	0.7398	0.7417	0.7436	0.7455
92.4					0.9080	0.9091	0.9101	0.9114	0.9126	0.9138	0.9151	0.9174	0.9197	0.9219
-180.75					0.9086	0.9097	0.9107	0.9119	0.9132	0.9144	0.9156	0.9180	0.9204	0.9226
4.395					0.7336	0.7345	0.7353	0.7363	0.7373	0.7383	0.7393	0.7412	0.7431	0.7451
92.5					0.9074	0.9084	0.9094	0.9107	0.9119	0.9132	0.9144	0.9168	0.9191	0.9213
-180.65					0.9079	0.9090	0.9100	0.9113	0.9125	0.9138	0.9150	0.9174	0.9197	0.9219
4.431					0.7331	0.7339	0.7347	0.7357	0.7368	0.7378	0.7388	0.7407	0.7426	0.7446
92.6					0.9067	0.9077	0.9088	0.9100	0.9113	0.9125	0.9137	0.9161	0.9184	0.9206
-180.55					0.9073	0.9083	0.9093	0.9106	0.9119	0.9131	0.9143	0.9167	0.9190	0.9212
4.467					0.7325	0.7334	0.7342	0.7352	0.7362	0.7372	0.7382	0.7401	0.7420	0.7441
92.7					0.9060	0.9070	0.9081	0.9094	0.9106	0.9119	0.9131	0.9155	0.9178	0.9200
-180.45					0.9066	0.9076	0.9087	0.9099	0.9112	0.9124	0.9137	0.9161	0.9184	0.9206
4.503					0.7320	0.7328	0.7336	0.7347	0.7357	0.7367	0.7377	0.7397	0.7416	0.7435
92.8					0.9053	0.9064	0.9074	0.9087	0.9100	0.9112	0.9124	0.9148	0.9171	0.9194
-180.35					0.9059	0.9069	0.9080	0.9093	0.9105	0.9118	0.9130	0.9154	0.9177	0.9200
4.540					0.7314	0.7323	0.7331	0.7341	0.7352	0.7362	0.7372	0.7391	0.7411	0.7431
92.9					0.9046	0.9057	0.9067	0.9080	0.9093	0.9105	0.9118	0.9142	0.9165	0.9188
-180.25					0.9052	0.9063	0.9073	0.9086	0.9099	0.9111	0.9124	0.9148	0.9171	0.9194
4.576					0.7309	0.7317	0.7326	0.7336	0.7346	0.7356	0.7366	0.7386	0.7408	0.7429



TABLE 8 - CONTINUED

DENSITY OF COMPRESSED LIQUID NITROGEN - CONTINUED

1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR			TABLE ENTRIES												
			1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS 3. DENSITY, KG/DM <sup>3</sup>												
BAR K/P/CM <sup>2</sup>	0.800 0.616	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.198	10.000 10.197	12.500 12.746	15.000 15.296	17.500 17.845	20.000 20.394	25.000 25.493	30.000 30.591		
93.0 -180.15 4.613	0.9039 0.9056 0.7303	0.9050 0.9066 0.7312	0.9060 0.9076 0.7320	0.9073 0.9088 0.7331	0.9086 0.9100 0.7341	0.9098 0.9111 0.7351	0.9111 0.9127 0.7361	0.9126 0.9141 0.7371	0.9140 0.9157 0.7381	0.9155 0.9171 0.7391	0.9170 0.9187 0.7401	0.9185 0.9202 0.7411	0.9200 0.9217 0.7421		
93.1 -180.05 4.650	0.9032 0.9038 0.7297	0.9043 0.9049 0.7306	0.9054 0.9059 0.7315	0.9067 0.9072 0.7325	0.9079 0.9085 0.7335	0.9090 0.9097 0.7345	0.9102 0.9109 0.7355	0.9114 0.9121 0.7365	0.9126 0.9134 0.7375	0.9138 0.9146 0.7385	0.9150 0.9158 0.7395	0.9162 0.9170 0.7405	0.9174 0.9182 0.7415		
93.2 -179.95 4.688	0.9026 0.9031 0.7292	0.9036 0.9042 0.7301	0.9047 0.9053 0.7309	0.9058 0.9064 0.7318	0.9068 0.9074 0.7326	0.9078 0.9084 0.7334	0.9088 0.9094 0.7342	0.9098 0.9104 0.7350	0.9108 0.9114 0.7358	0.9118 0.9124 0.7366	0.9128 0.9134 0.7374	0.9138 0.9144 0.7382	0.9148 0.9154 0.7390		
93.3 -179.85 4.725	0.9019 0.9024 0.7286	0.9029 0.9035 0.7295	0.9040 0.9046 0.7304	0.9053 0.9058 0.7314	0.9065 0.9071 0.7323	0.9076 0.9082 0.7332	0.9087 0.9093 0.7341	0.9098 0.9104 0.7350	0.9109 0.9115 0.7358	0.9120 0.9126 0.7366	0.9131 0.9137 0.7374	0.9142 0.9148 0.7382	0.9153 0.9159 0.7390		
93.4 -179.75 4.763	0.9012 0.9017 0.7281	0.9023 0.9028 0.7289	0.9033 0.9039 0.7298	0.9044 0.9050 0.7305	0.9054 0.9060 0.7313	0.9064 0.9070 0.7321	0.9074 0.9080 0.7329	0.9084 0.9090 0.7337	0.9094 0.9100 0.7345	0.9104 0.9110 0.7353	0.9114 0.9120 0.7361	0.9124 0.9130 0.7369	0.9134 0.9140 0.7377		
93.5 -179.65 4.801	0.9005 0.9011 0.7275	0.9016 0.9021 0.7284	0.9026 0.9032 0.7293	0.9036 0.9042 0.7303	0.9046 0.9052 0.7311	0.9055 0.9061 0.7319	0.9064 0.9070 0.7327	0.9073 0.9079 0.7335	0.9082 0.9088 0.7343	0.9091 0.9097 0.7351	0.9100 0.9106 0.7359	0.9109 0.9115 0.7367	0.9118 0.9124 0.7375		
93.6 -179.55 4.839	0.8998 0.9004 0.7270	0.9009 0.9014 0.7278	0.9020 0.9025 0.7287	0.9030 0.9035 0.7295	0.9040 0.9045 0.7303	0.9049 0.9054 0.7311	0.9058 0.9063 0.7319	0.9067 0.9072 0.7327	0.9076 0.9081 0.7335	0.9085 0.9090 0.7343	0.9094 0.9100 0.7351	0.9103 0.9109 0.7359	0.9112 0.9118 0.7367		
93.7 -179.45 4.877	0.8991 0.8997 0.7264	0.9002 0.9008 0.7273	0.9013 0.9018 0.7281	0.9023 0.9028 0.7289	0.9033 0.9038 0.7297	0.9042 0.9047 0.7305	0.9051 0.9056 0.7313	0.9060 0.9065 0.7321	0.9069 0.9074 0.7329	0.9078 0.9083 0.7337	0.9087 0.9092 0.7345	0.9096 0.9101 0.7353	0.9105 0.9110 0.7361		
93.8 -179.35 4.916	0.8984 0.8990 0.7258	0.8995 0.9001 0.7267	0.9006 0.9012 0.7276	0.9015 0.9021 0.7284	0.9024 0.9030 0.7292	0.9033 0.9038 0.7300	0.9042 0.9047 0.7308	0.9050 0.9055 0.7316	0.9059 0.9064 0.7324	0.9068 0.9073 0.7332	0.9076 0.9081 0.7340	0.9085 0.9090 0.7348	0.9094 0.9099 0.7356		
93.9 -179.25 4.952	0.8977 0.8983 0.7253	0.8988 0.8994 0.7262	0.8999 0.9005 0.7270	0.9008 0.9014 0.7278	0.9017 0.9022 0.7286	0.9026 0.9031 0.7294	0.9034 0.9039 0.7302	0.9043 0.9048 0.7310	0.9051 0.9056 0.7318	0.9060 0.9065 0.7326	0.9068 0.9073 0.7334	0.9077 0.9082 0.7342	0.9085 0.9090 0.7350		
94.0 -179.15 4.994	0.8970 0.8976 0.7247	0.8981 0.8987 0.7256	0.8992 0.8998 0.7265	0.9000 0.9006 0.7273	0.9008 0.9013 0.7281	0.9016 0.9021 0.7289	0.9024 0.9029 0.7297	0.9032 0.9037 0.7305	0.9040 0.9045 0.7313	0.9048 0.9053 0.7321	0.9056 0.9061 0.7329	0.9064 0.9069 0.7337	0.9072 0.9077 0.7345		
94.1 -179.05 5.033	0.8963 0.7241	0.8974 0.7250	0.8985 0.7259	0.8995 0.7267	0.8995 0.7276	0.9005 0.7285	0.9014 0.7295	0.9023 0.7305	0.9032 0.7317	0.9041 0.7329	0.9050 0.7341	0.9059 0.7353	0.9068 0.7365		
94.2 -178.95 5.073	0.8956 0.8962 0.7236	0.8967 0.8973 0.7245	0.8978 0.8984 0.7254	0.8987 0.8993 0.7262	0.8997 0.9003 0.7270	0.9006 0.9011 0.7278	0.9015 0.9020 0.7286	0.9024 0.9029 0.7294	0.9033 0.9038 0.7302	0.9042 0.9047 0.7310	0.9051 0.9056 0.7318	0.9060 0.9065 0.7326	0.9069 0.9074 0.7334		
94.3 -178.85 5.113	0.8949 0.8955 0.7230	0.8960 0.8966 0.7239	0.8971 0.8977 0.7248	0.8980 0.8986 0.7256	0.8989 0.8995 0.7264	0.8998 0.9004 0.7272	0.9007 0.9012 0.7280	0.9016 0.9021 0.7288	0.9025 0.9030 0.7296	0.9034 0.9039 0.7304	0.9043 0.9048 0.7312	0.9052 0.9057 0.7320	0.9061 0.9066 0.7328		
94.4 -178.75 5.153	0.8942 0.8947 0.7224	0.8953 0.8959 0.7233	0.8964 0.8970 0.7242	0.8973 0.8979 0.7250	0.8982 0.8988 0.7258	0.8991 0.8997 0.7266	0.8999 0.9004 0.7274	0.9008 0.9013 0.7282	0.9017 0.9022 0.7290	0.9026 0.9031 0.7298	0.9035 0.9040 0.7306	0.9044 0.9049 0.7314	0.9053 0.9058 0.7322		
94.5 -178.65 5.193	0.8935 0.8940 0.7215	0.8946 0.8952 0.7224	0.8957 0.8963 0.7232	0.8967 0.8973 0.7240	0.8975 0.8981 0.7248	0.8983 0.8989 0.7256	0.8991 0.8996 0.7264	0.8999 0.9004 0.7272	0.9007 0.9012 0.7280	0.9015 0.9020 0.7288	0.9024 0.9029 0.7296	0.9032 0.9037 0.7304	0.9041 0.9046 0.7312		
94.6 -178.55 5.233	0.8928 0.8933 0.7213	0.8939 0.8945 0.7222	0.8950 0.8956 0.7231	0.8960 0.8966 0.7239	0.8969 0.8975 0.7247	0.8978 0.8984 0.7255	0.8987 0.8992 0.7263	0.8995 0.9000 0.7271	0.9004 0.9009 0.7279	0.9012 0.9017 0.7287	0.9021 0.9026 0.7295	0.9030 0.9035 0.7303	0.9039 0.9044 0.7311		
94.7 -178.45 5.274	0.8921 0.8926 0.7207	0.8932 0.8938 0.7216	0.8943 0.8949 0.7224	0.8952 0.8958 0.7232	0.8961 0.8967 0.7240	0.8970 0.8976 0.7248	0.8979 0.8984 0.7256	0.8987 0.8992 0.7264	0.8995 0.9000 0.7272	0.9004 0.9009 0.7280	0.9012 0.9017 0.7288	0.9021 0.9026 0.7296	0.9030 0.9035 0.7304		
94.8 -178.35 5.315	0.8913 0.8919 0.7201	0.8925 0.8931 0.7211	0.8936 0.8942 0.7220	0.8945 0.8951 0.7228	0.8954 0.8960 0.7236	0.8963 0.8969 0.7244	0.8971 0.8977 0.7252	0.8979 0.8984 0.7260	0.8987 0.8992 0.7268	0.8995 0.9000 0.7276	0.9004 0.9009 0.7284	0.9012 0.9017 0.7292	0.9021 0.9026 0.7300		
94.9 -178.25 5.356	0.8906 0.8912 0.7196	0.8918 0.8924 0.7204	0.8929 0.8935 0.7214	0.8938 0.8944 0.7222	0.8947 0.8953 0.7230	0.8955 0.8961 0.7238	0.8963 0.8969 0.7246	0.8971 0.8976 0.7254	0.8979 0.8984 0.7262	0.8987 0.8992 0.7270	0.8995 0.9000 0.7278	0.9004 0.9009 0.7286	0.9012 0.9017 0.7294		

TABLE 8 - CONTINUED

DENSITY OF COMPRESSED LIQUID NITROGEN - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS 3. DENSITY, KG/D <sup>3</sup>											
BAR Kp/cm <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.158	10.000 10.197	12.500 12.744	15.000 15.296	17.500 17.845	20.000 20.394	25.000 25.453	30.000 30.591
95.0 -176.15 5.397				0.8899 0.8905 0.7190	0.8911 0.8917 0.7199	0.8922 0.8928 0.7209	0.8937 0.8942 0.7220	0.8951 0.8956 0.7231	0.8964 0.8970 0.7243	0.8978 0.8984 0.7254	0.9005 0.9011 0.7275	0.9031 0.9037 0.7296	
95.1 -176.05 5.439				0.8892 0.8898 0.7184	0.8904 0.8908 0.7194	0.8915 0.8921 0.7203	0.8930 0.8935 0.7214	0.8944 0.8949 0.7226	0.8958 0.8963 0.7237	0.8971 0.8977 0.7248	0.8998 0.9004 0.7270	0.9024 0.9030 0.7291	
95.2 -177.95 5.481				0.8885 0.8891 0.7178	0.8897 0.8902 0.7188	0.8908 0.8914 0.7197	0.8923 0.8928 0.7209	0.8937 0.8943 0.7220	0.8951 0.8956 0.7231	0.8965 0.8970 0.7243	0.8995 0.8997 0.7264	0.9018 0.9024 0.7286	
95.3 -177.85 5.523				0.8878 0.8883 0.7172	0.8890 0.8895 0.7182	0.8901 0.8907 0.7191	0.8916 0.8921 0.7203	0.8930 0.8935 0.7215	0.8944 0.8950 0.7226	0.8958 0.8963 0.7237	0.8985 0.8991 0.7259	0.9011 0.9017 0.7280	
95.4 -177.75 5.565				0.8871 0.8876 0.7167	0.8882 0.8888 0.7176	0.8894 0.8900 0.7186	0.8909 0.8914 0.7197	0.8923 0.8929 0.7209	0.8937 0.8943 0.7220	0.8951 0.8957 0.7232	0.8978 0.8984 0.7254	0.9005 0.9010 0.7275	
95.5 -177.65 5.608				0.8863 0.8869 0.7161	0.8875 0.8881 0.7170	0.8887 0.8893 0.7180	0.8902 0.8907 0.7192	0.8916 0.8922 0.7203	0.8930 0.8936 0.7215	0.8944 0.8950 0.7226	0.8972 0.8977 0.7248	0.8998 0.9004 0.7270	
95.6 -177.55 5.650				0.8856 0.8862 0.7155	0.8868 0.8874 0.7165	0.8880 0.8886 0.7174	0.8895 0.8901 0.7186	0.8909 0.8915 0.7198	0.8923 0.8929 0.7209	0.8937 0.8943 0.7221	0.8965 0.8970 0.7243	0.8992 0.8997 0.7264	
95.7 -177.45 5.693				0.8849 0.8855 0.7149	0.8861 0.8867 0.7159	0.8873 0.8879 0.7169	0.8888 0.8893 0.7180	0.8902 0.8908 0.7192	0.8916 0.8922 0.7204	0.8931 0.8936 0.7215	0.8958 0.8964 0.7237	0.8985 0.8991 0.7259	
95.8 -177.35 5.737				0.8842 0.8847 0.7143	0.8854 0.8859 0.7153	0.8866 0.8871 0.7163	0.8881 0.8886 0.7175	0.8895 0.8901 0.7187	0.8910 0.8915 0.7198	0.8924 0.8929 0.7210	0.8951 0.8957 0.7232	0.8978 0.8984 0.7254	
95.9 -177.25 5.780				0.8834 0.8840 0.7137	0.8847 0.8852 0.7147	0.8859 0.8864 0.7157	0.8874 0.8879 0.7168	0.8888 0.8893 0.7180	0.8903 0.8908 0.7192	0.8917 0.8922 0.7204	0.8944 0.8950 0.7226	0.8972 0.8977 0.7248	
96.0 -177.15 5.824				0.8827 0.8833 0.7132	0.8839 0.8845 0.7141	0.8852 0.8857 0.7151	0.8866 0.8872 0.7163	0.8881 0.8887 0.7175	0.8896 0.8901 0.7187	0.8910 0.8916 0.7198	0.8938 0.8944 0.7221	0.8965 0.8971 0.7243	
96.1 -177.05 5.868				0.8820 0.8825 0.7126	0.8832 0.8838 0.7136	0.8844 0.8850 0.7145	0.8859 0.8865 0.7157	0.8874 0.8880 0.7170	0.8889 0.8894 0.7181	0.8903 0.8908 0.7193	0.8931 0.8937 0.7216	0.8958 0.8964 0.7238	
96.2 -176.95 5.912				0.8813 0.8818 0.7120	0.8825 0.8831 0.7130	0.8837 0.8843 0.7140	0.8852 0.8858 0.7152	0.8867 0.8873 0.7164	0.8882 0.8887 0.7176	0.8896 0.8902 0.7187	0.8924 0.8930 0.7210	0.8952 0.8958 0.7232	
96.3 -176.85 5.957				0.8805 0.8811 0.7114	0.8818 0.8823 0.7124	0.8830 0.8836 0.7134	0.8845 0.8851 0.7146	0.8860 0.8866 0.7158	0.8875 0.8881 0.7170	0.8890 0.8895 0.7182	0.8918 0.8924 0.7205	0.8945 0.8951 0.7227	
96.4 -176.75 6.001				0.8800 0.8806 0.7110	0.8812 0.8818 0.7120	0.8823 0.8829 0.7130	0.8838 0.8844 0.7142	0.8853 0.8859 0.7154	0.8868 0.8873 0.7166	0.8882 0.8888 0.7177	0.8911 0.8916 0.7199	0.8939 0.8944 0.7222	
96.5 -176.65 6.046				0.8803 0.8809 0.7112	0.8816 0.8821 0.7122	0.8827 0.8833 0.7132	0.8842 0.8848 0.7144	0.8857 0.8863 0.7156	0.8872 0.8878 0.7168	0.8887 0.8893 0.7179	0.8915 0.8921 0.7202	0.8943 0.8949 0.7224	
96.6 -176.55 6.091				0.8796 0.8801 0.7106	0.8808 0.8814 0.7116	0.8824 0.8830 0.7126	0.8839 0.8845 0.7138	0.8854 0.8860 0.7150	0.8868 0.8874 0.7162	0.8883 0.8889 0.7174	0.8912 0.8918 0.7197	0.8940 0.8946 0.7220	
96.7 -176.45 6.137				0.8789 0.8794 0.7100	0.8807 0.8813 0.7111	0.8824 0.8830 0.7121	0.8840 0.8846 0.7133	0.8855 0.8861 0.7145	0.8870 0.8876 0.7157	0.8885 0.8891 0.7169	0.8914 0.8920 0.7192	0.8942 0.8948 0.7215	
96.8 -176.35 6.182				0.8782 0.8787 0.7094	0.8794 0.8799 0.7105	0.8805 0.8811 0.7115	0.8820 0.8826 0.7127	0.8835 0.8841 0.7139	0.8850 0.8856 0.7151	0.8865 0.8871 0.7163	0.8894 0.8899 0.7186	0.8922 0.8928 0.7209	
96.9 -176.25 6.228				0.8774 0.8779 0.7088	0.8787 0.8792 0.7099	0.8802 0.8808 0.7111	0.8818 0.8824 0.7124	0.8833 0.8839 0.7136	0.8848 0.8854 0.7148	0.8863 0.8869 0.7160	0.8892 0.8898 0.7183	0.8920 0.8926 0.7205	

TABLE 8 - CONTINUED

## DENSITY OF COMPRESSED LIQUID NITROGEN - CONTINUED

			TABLE ENTRIES																			
1. TEMPERATURE, K			1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS																			
2. TEMPERATURE, C			2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TCMM, DIMENSIONLESS																			
3. VAPOR PRESSURE, BAR			3. DENSITY, KG/DM <sup>3</sup>																			
BAR	0.000	1.000	2.000	4.000	6.000	8.000	10.000	12.500	15.000	17.500	20.000	25.000	30.000	0.8766	0.8779	0.8795	0.8810	0.8826	0.8841	0.8857	0.8874	0.8890
KP/CM <sup>2</sup>	0.016	1.020	2.039	4.079	6.118	8.158	10.197	12.746	15.296	17.846	20.394	25.493	30.591	0.8772	0.8785	0.8801	0.8816	0.8831	0.8846	0.8862	0.8877	0.8893
														0.7083	0.7093	0.7106	0.7118	0.7130	0.7142	0.7156	0.7169	0.7189
97.0														0.8759	0.8772	0.8788	0.8803	0.8819	0.8834	0.8853	0.8863	0.8892
-176.15														0.8765	0.8777	0.8793	0.8809	0.8824	0.8839	0.8855	0.8871	0.8897
6.321														0.7077	0.7087	0.7100	0.7112	0.7125	0.7137	0.7151	0.7164	0.7184
97.2														0.8752	0.8765	0.8780	0.8796	0.8811	0.8827	0.8856	0.8865	0.8895
-175.95														0.8757	0.8770	0.8786	0.8802	0.8817	0.8832	0.8862	0.8870	0.8899
6.368														0.7071	0.7081	0.7094	0.7106	0.7119	0.7131	0.7145	0.7159	0.7178
97.3														0.8744	0.8757	0.8773	0.8789	0.8804	0.8820	0.8840	0.8850	0.8878
-175.85														0.8750	0.8763	0.8779	0.8794	0.8810	0.8825	0.8855	0.8864	0.8894
6.414														0.7065	0.7075	0.7088	0.7101	0.7113	0.7125	0.7140	0.7154	0.7173
97.4														0.8737	0.8750	0.8766	0.8782	0.8797	0.8812	0.8842	0.8851	0.8881
-175.75														0.8742	0.8755	0.8771	0.8787	0.8803	0.8818	0.8848	0.8857	0.8887
6.462														0.7059	0.7069	0.7082	0.7095	0.7107	0.7120	0.7134	0.7148	0.7167
97.5														0.8729	0.8743	0.8759	0.8774	0.8790	0.8805	0.8835	0.8844	0.8875
-175.65														0.8735	0.8748	0.8764	0.8780	0.8795	0.8811	0.8841	0.8850	0.8881
6.509														0.7053	0.7063	0.7076	0.7089	0.7102	0.7114	0.7128	0.7143	0.7162
97.6														0.8722	0.8735	0.8751	0.8767	0.8783	0.8798	0.8828	0.8837	0.8868
-175.55														0.8727	0.8741	0.8757	0.8773	0.8789	0.8804	0.8834	0.8843	0.8874
6.557														0.7047	0.7057	0.7070	0.7083	0.7096	0.7108	0.7122	0.7137	0.7156
97.7														0.8714	0.8728	0.8744	0.8760	0.8776	0.8791	0.8822	0.8831	0.8862
-175.45														0.8720	0.8733	0.8750	0.8766	0.8781	0.8797	0.8827	0.8836	0.8867
6.605														0.7041	0.7051	0.7064	0.7077	0.7090	0.7103	0.7117	0.7131	0.7151
97.8														0.8707	0.8720	0.8737	0.8753	0.8769	0.8784	0.8815	0.8824	0.8855
-175.35														0.8713	0.8726	0.8742	0.8758	0.8774	0.8790	0.8820	0.8829	0.8860
6.653														0.7035	0.7045	0.7058	0.7072	0.7084	0.7097	0.7111	0.7125	0.7145
97.9														0.8699	0.8713	0.8729	0.8746	0.8761	0.8777	0.8808	0.8817	0.8848
-175.25														0.8705	0.8718	0.8735	0.8751	0.8767	0.8783	0.8813	0.8822	0.8853
6.701														0.7028	0.7039	0.7053	0.7066	0.7078	0.7091	0.7116	0.7130	0.7149
98.0														0.8692	0.8705	0.8722	0.8738	0.8754	0.8770	0.8801	0.8810	0.8841
-175.15														0.8697	0.8711	0.8727	0.8744	0.8760	0.8776	0.8806	0.8815	0.8846
6.750														0.7022	0.7033	0.7047	0.7060	0.7073	0.7085	0.7110	0.7124	0.7143
98.1														0.8684	0.8698	0.8715	0.8731	0.8747	0.8763	0.8794	0.8803	0.8834
-175.05														0.8690	0.8703	0.8720	0.8736	0.8753	0.8768	0.8799	0.8808	0.8839
6.799														0.7016	0.7027	0.7041	0.7054	0.7067	0.7080	0.7105	0.7119	0.7129
98.2														0.8677	0.8690	0.8707	0.8724	0.8740	0.8756	0.8787	0.8796	0.8827
-174.95														0.8682	0.8695	0.8712	0.8729	0.8745	0.8761	0.8792	0.8801	0.8832
6.848														0.7010	0.7021	0.7035	0.7048	0.7061	0.7074	0.7099	0.7113	0.7133
98.3														0.8669	0.8683	0.8700	0.8716	0.8733	0.8749	0.8780	0.8789	0.8820
-174.85														0.8675	0.8688	0.8705	0.8722	0.8738	0.8754	0.8785	0.8794	0.8825
6.897														0.7004	0.7015	0.7029	0.7042	0.7055	0.7068	0.7093	0.7118	0.7138
98.4														0.8662	0.8675	0.8692	0.8709	0.8725	0.8741	0.8773	0.8782	0.8813
-174.75														0.8667	0.8681	0.8698	0.8714	0.8731	0.8747	0.8778	0.8787	0.8818
6.947														0.6998	0.7009	0.7023	0.7036	0.7049	0.7062	0.7087	0.7101	0.7121
98.5														0.8654	0.8668	0.8685	0.8702	0.8718	0.8734	0.8766	0.8775	0.8806
-174.65														0.8660	0.8673	0.8690	0.8707	0.8724	0.8740	0.8771	0.8780	0.8811
6.997														0.6992	0.7003	0.7017	0.7030	0.7043	0.7056	0.7082	0.7107	0.7127
98.6														0.8646	0.8660	0.8677	0.8694	0.8711	0.8727	0.8759	0.8768	0.8799
-174.55														0.8652	0.8666	0.8683	0.8700	0.8717	0.8732	0.8764	0.8773	0.8804
7.047														0.6986	0.6997	0.7011	0.7024	0.7038	0.7051	0.7076	0.7091	0.7111
98.7														0.8639	0.8653	0.8670	0.8687	0.8703	0.8720	0.8752	0.8761	0.8792
-174.45														0.8644	0.8658	0.8675	0.8692	0.8709	0.8725	0.8757	0.8766	0.8797
7.098														0.6979	0.6991	0.7005	0.7018	0.7032	0.7045	0.7070	0.7085	0.7095
98.8														0.8631	0.8645	0.8662	0.8679	0.8696	0.8713	0.8744	0.8753	0.8784
-174.35														0.8637	0.8651	0.8668	0.8685	0.8702	0.8718	0.8750	0.8759	0.8790
7.148														0.6973	0.6985	0.6999	0.7012	0.7026	0.7039	0.7064	0.7079	0.7099
98.9														0.8623	0.8638	0.8655	0.8672	0.8689	0.8705	0.8737	0.8746	0.8777
-174.25														0.8629	0.8643	0.8660	0.8678	0.8694	0.8711	0.8743	0.8752	0.8783
7.199														0.6967	0.6978	0.6992	0.7006	0.7020	0.7033	0.7059	0.7074	0.7094

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>3</sup>											
BAR	0.600	1.000	2.000	4.000	6.000	8.000	10.000	12.500	15.000	17.500	20.000	25.000	30.000
KP/CM <sup>2</sup>	0.616	1.020	2.039	4.079	6.118	8.158	10.197	12.746	15.296	17.845	20.394	25.493	30.591
99.0						0.8616	0.8630	0.8647	0.8665	0.8681	0.8698	0.8730	0.8761
-174.15						0.8621	0.8635	0.8653	0.8673	0.8687	0.8704	0.8736	0.8767
7.251						0.6961	0.6972	0.6986	0.7000	0.7014	0.7027	0.7053	0.7075
100.0						0.8538	0.8553	0.8571	0.8589	0.8607	0.8625	0.8659	0.8691
-173.15						0.8543	0.8558	0.8577	0.8595	0.8613	0.8630	0.8664	0.8697
7.776						0.6898	0.6910	0.6925	0.6939	0.6954	0.6968	0.6995	0.7022
101.0						0.8474	0.8493	0.8512	0.8531	0.8551	0.8568	0.8598	0.8620
-172.15						0.8479	0.8499	0.8518	0.8537	0.8555	0.8572	0.8601	0.8625
8.332						0.6846	0.6862	0.6877	0.6892	0.6907	0.6936	0.6964	0.6994
102.0						0.8392	0.8413	0.8433	0.8453	0.8473	0.8511	0.8547	0.8584
-171.15						0.8398	0.8418	0.8439	0.8459	0.8478	0.8516	0.8552	0.8589
8.914						0.6780	0.6797	0.6814	0.6830	0.6845	0.6876	0.6905	0.6935
103.0						0.8309	0.8331	0.8352	0.8374	0.8394	0.8434	0.8473	0.8513
-170.15						0.8314	0.8336	0.8356	0.8379	0.8400	0.8440	0.8478	0.8518
9.525						0.6713	0.6731	0.6748	0.6765	0.6782	0.6814	0.6845	0.6885
104.0						0.8246	0.8269	0.8292	0.8314	0.8336	0.8386	0.8427	0.8468
-169.15						0.8251	0.8274	0.8297	0.8319	0.8341	0.8381	0.8421	0.8462
10.165						0.6662	0.6681	0.6699	0.6717	0.6735	0.6771	0.6801	0.6841
105.0						0.8158	0.8183	0.8207	0.8231	0.8254	0.8305	0.8346	0.8387
-168.15						0.8163	0.8188	0.8212	0.8236	0.8259	0.8299	0.8339	0.8380
10.836						0.6591	0.6611	0.6631	0.6650	0.6669	0.6706	0.6736	0.6776
106.0						0.8066	0.8094	0.8120	0.8145	0.8169	0.8221	0.8261	0.8301
-167.15						0.8073	0.8099	0.8125	0.8150	0.8174	0.8214	0.8254	0.8294
11.536						0.6518	0.6539	0.6560	0.6581	0.6601	0.6639	0.6676	0.6714
107.0						0.7973	0.8002	0.8030	0.8057	0.8082	0.8134	0.8174	0.8214
-166.15						0.7978	0.8007	0.8035	0.8062	0.8087	0.8127	0.8167	0.8207
12.271						0.6442	0.6465	0.6488	0.6509	0.6529	0.6565	0.6599	0.6633
108.0						0.7906	0.7936	0.7966	0.7996	0.8021	0.8073	0.8113	0.8153
-165.15						0.7911	0.7941	0.7971	0.8001	0.8026	0.8066	0.8106	0.8146
13.036						0.6388	0.6412	0.6435	0.6458	0.6480	0.6522	0.6556	0.6590
109.0						0.7806	0.7839	0.7871	0.7901	0.7930	0.7981	0.8021	0.8061
-164.15						0.7811	0.7844	0.7876	0.7905	0.7934	0.7974	0.8014	0.8054
13.836						0.6307	0.6333	0.6359	0.6384	0.6407	0.6452	0.6496	0.6540
110.0						0.7701	0.7737	0.7772	0.7806	0.7836	0.7886	0.7926	0.7966
-163.15						0.7706	0.7742	0.7776	0.7804	0.7831	0.7871	0.7911	0.7951
14.672						0.6222	0.6251	0.6279	0.6307	0.6331	0.6376	0.6419	0.6463
111.0						0.7638	0.7673	0.7708	0.7743	0.7773	0.7823	0.7863	0.7903
-162.15						0.7643	0.7673	0.7703	0.7733	0.7758	0.7798	0.7838	0.7878
15.542						0.6164	0.6195	0.6225	0.6255	0.6280	0.6325	0.6369	0.6413
112.0						0.7517	0.7559	0.7601	0.7641	0.7677	0.7727	0.7767	0.7807
-161.15						0.7521	0.7563	0.7604	0.7641	0.7677	0.7727	0.7767	0.7807
16.446						0.6073	0.6107	0.6140	0.6172	0.6203	0.6253	0.6297	0.6340
113.0						0.7396	0.7443	0.7489	0.7535	0.7579	0.7629	0.7679	0.7729
-160.15						0.7401	0.7448	0.7494	0.7534	0.7574	0.7624	0.7674	0.7724
17.392						0.5975	0.6033	0.6083	0.6133	0.6183	0.6233	0.6283	0.6333
114.0						0.7319	0.7415	0.7501	0.7587	0.7673	0.7759	0.7845	0.7931
-159.15						0.7324	0.7420	0.7506	0.7592	0.7678	0.7764	0.7850	0.7936
18.373						0.5913	0.5991	0.6069	0.6147	0.6225	0.6303	0.6381	0.6459
115.0						0.7186	0.7295	0.7389	0.7483	0.7577	0.7671	0.7765	0.7859
-158.15						0.7190	0.7299	0.7394	0.7489	0.7584	0.7679	0.7774	0.7869
19.394						0.5806	0.5893	0.5980	0.6067	0.6154	0.6241	0.6328	0.6415
116.0						0.7165	0.7272	0.7366	0.7460	0.7554	0.7648	0.7742	0.7836
-157.15						0.7170	0.7277	0.7371	0.7466	0.7560	0.7654	0.7748	0.7842
20.455						0.5789	0.5876	0.5963	0.6050	0.6137	0.6224	0.6311	0.6398
117.0						0.7025	0.7144	0.7248	0.7352	0.7456	0.7559	0.7663	0.7767
-156.15						0.7029	0.7151	0.7255	0.7359	0.7463	0.7567	0.7671	0.7775
21.598						0.5675	0.5762	0.5849	0.5936	0.6023	0.6110	0.6197	0.6284
118.0						0.6870	0.7011	0.7131	0.7251	0.7371	0.7491	0.7611	0.7731
-155.15						0.6874	0.7016	0.7136	0.7256	0.7376	0.7496	0.7616	0.7736
22.704						0.5550	0.5665	0.5780	0.5895	0.6010	0.6125	0.6240	0.6355

TABLE B - CONTINUED

## DENSITY OF COMPRESSED LIQUID NITROGEN - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/DM <sup>3</sup>												
BAR	0.800	1.000	2.000	4.000	6.000	8.000	10.000	12.500	15.000	17.500	20.000	25.000	30.000	
KP/CM <sup>2</sup>	0.816	1.020	2.039	4.079	6.118	8.158	10.197	12.746	15.296	17.845	20.394	25.493	30.591	
119.0													0.6695	0.6864
-154.15													0.6699	0.6868
23.693													0.5409	0.5545
120.0														0.6701
-153.15														0.6705
25.128														0.5414
121.0														0.6515
-152.15														0.6519
26.410														0.5264
122.0														0.6297
-151.15														0.6301
27.741														0.5087
123.0														0.6021
-150.15														0.6025
29.122														0.4864



## 8. ARGON

The data for argon given here are from Gosman, et al. (1969). The entire PVT tabulations were calculated by a simultaneous solution of the vapor pressure equation and the equation of state reported by these authors. The calculation of each point was performed by solving the vapor pressure equation for either P or T depending on which was the integral value input. Using the P and T so obtained, a corresponding density was found from the equation of state.

Values near room temperature are given in table 9, uncertainties for the data in table 10, values for the saturated liquid are given in table 11 and values for the compressed liquid are shown in table 12. The values differ from those in the CGA pamphlet P-6

Table 9

Density of Argon Near Atmospheric Pressure and Room Temperature

Temperature	Pressure	Density		Volume	
		gram-mole/cm <sup>3</sup>	kg/dm <sup>3</sup>	cm <sup>3</sup> /gram-mole	dm <sup>3</sup> /kg
0° C	1 bar	4.4074x10 <sup>-5</sup>	1.7606x10 <sup>-3</sup>	22689.	567.96
	760 torr	4.4659x10 <sup>-5</sup>	1.7840x10 <sup>-3</sup>	22392.	560.53
15° C	1 bar	4.1772x10 <sup>-5</sup>	1.6687x10 <sup>-3</sup>	23940.	599.27
	760 torr	4.2326x10 <sup>-5</sup>	1.6908x10 <sup>-3</sup>	23626.	591.43
Density Ratios - Dimensionless					
Liquid Density at a boiling pressure of 1 bar <sup>*</sup> /density at 1 bar and 0° C					792.13
Liquid Density at a boiling pressure of 1 bar/density at 1 bar and 15° C					835.79
Liquid Density at a boiling pressure of 760 torr <sup>†</sup> /density at 760 torr and 0° C					781.34
Liquid Density at a boiling pressure of 760 torr/density at 760 torr and 15° C					824.40

\* Liquid density at a boiling pressure of 1 bar                    1.3947 kg/dm<sup>3</sup>

† Liquid density at a boiling pressure of 760 torr                1.3939 kg/dm<sup>3</sup>

by about 0.02% primarily because a higher order interpolation is used here. The value of the density at the boiling point at 760 torr differs from that in the CGA pamphlet P-6 by 0.4%. The new correlation includes quite recent data, both on PVT and on the temperature scale corrections, and should, therefore, be more accurate.

Table 10  
Uncertainties in the Data for Argon

variable	uncertainty	range of temperature
temperature	0.08%	84 to 87 K
	0.02%	87 to 154 K
	0.015 K	room temperature
volume	0.1%	triple point to 145 K
	increase to 1%	linearly from 145 K to critical
	0.01%	room temperature
pressure	0.1%	84 to 87 K
	0.02%	87 to 154 K
	0.01%	room temperature

TABLE 11

## SATURATED LIQUID ARGON

BAR	PRESSURE		TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	VOLUME CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG	DENSITY RATIOS -		DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
	KP/CM <sup>2</sup>	BAR	KELVIN	CELSIUS				LIQUID DENSITY/ DENSITY AT 1 BAR	LIQUID DENSITY/ DENSITY AT A BOIL.	
0.689	0.702	83.800	-189.350	0.035413	1.4147	28.239	0.7069	1.0143	1.0149	
0.705	0.719	84.000	-189.150	0.035383	1.4135	28.262	0.7075	1.0135	1.0140	
0.717	0.731	84.150	-188.900	0.035361	1.4126	28.279	0.7079	1.0129	1.0134	
0.790	0.805	85.000	-188.150	0.035236	1.4076	28.380	0.7104	1.0093	1.0098	
0.800	0.816	85.115	-188.035	0.035219	1.4067	28.394	0.7108	1.0088	1.0093	
0.803	0.819	85.150	-188.000	0.035214	1.4066	28.398	0.7109	1.0086	1.0092	
0.882	0.900	86.000	-187.150	0.035087	1.4017	28.500	0.7134	1.0050	1.0056	
0.897	0.915	86.150	-187.000	0.035065	1.4008	28.519	0.7139	1.0044	1.0049	
0.981	1.000	86.977	-186.173	0.034940	1.3958	28.620	0.7164	1.0008	1.0013	
0.983	1.002	87.000	-186.150	0.034937	1.3956	28.623	0.7165	1.0007	1.0012	
0.999	1.019	87.150	-186.000	0.034914	1.3947	28.642	0.7170	1.0000	1.0006	
1.000	1.020	87.160	-185.990	0.034912	1.3947	28.643	0.7170	1.0000	1.0005	
1.013	1.033	87.284	-185.866	0.034893	1.3939	28.659	0.7174	0.9995	1.0000	
1.092	1.114	88.000	-185.150	0.034784	1.3896	28.749	0.7197	0.9963	0.9969	
1.110	1.131	88.150	-185.000	0.034761	1.3886	28.768	0.7201	0.9957	0.9962	
1.200	1.224	88.911	-184.239	0.034644	1.3839	28.865	0.7226	0.9923	0.9928	
1.211	1.235	89.000	-184.150	0.034630	1.3834	28.877	0.7229	0.9919	0.9924	
1.229	1.254	89.150	-184.000	0.034607	1.3825	28.896	0.7233	0.9912	0.9918	
1.339	1.365	90.000	-183.150	0.034474	1.3772	29.007	0.7261	0.9875	0.9880	
1.359	1.386	90.150	-183.000	0.034451	1.3762	29.027	0.7266	0.9868	0.9873	
1.400	1.428	90.452	-182.698	0.034403	1.3743	29.067	0.7276	0.9854	0.9860	
1.477	1.506	91.000	-182.150	0.034317	1.3709	29.140	0.7295	0.9829	0.9835	
1.498	1.528	91.150	-182.000	0.034293	1.3699	29.160	0.7300	0.9823	0.9828	
1.600	1.632	91.834	-181.316	0.034185	1.3656	29.253	0.7323	0.9792	0.9797	
1.625	1.657	92.000	-181.150	0.034158	1.3645	29.276	0.7328	0.9784	0.9789	
1.649	1.681	92.150	-181.000	0.034134	1.3636	29.296	0.7334	0.9777	0.9782	
1.785	1.820	93.000	-180.150	0.033994	1.3581	29.414	0.7363	0.9738	0.9743	
1.800	1.835	93.091	-180.059	0.033983	1.3576	29.426	0.7366	0.9734	0.9739	
1.810	1.846	93.150	-180.000	0.033974	1.3572	29.435	0.7368	0.9731	0.9736	
1.956	1.995	94.000	-179.150	0.033836	1.3517	29.554	0.7398	0.9692	0.9697	
1.961	2.000	94.030	-179.120	0.033831	1.3515	29.559	0.7399	0.9690	0.9696	
1.983	2.022	94.150	-179.000	0.033812	1.3507	29.576	0.7404	0.9685	0.9690	
2.000	2.039	94.247	-178.903	0.033796	1.3501	29.589	0.7407	0.9680	0.9685	
2.139	2.191	95.000	-178.150	0.033673	1.3452	29.698	0.7434	0.9645	0.9650	
2.168	2.210	95.150	-178.000	0.033648	1.3442	29.719	0.7440	0.9638	0.9643	
2.200	2.243	95.319	-177.831	0.033620	1.3431	29.744	0.7446	0.9630	0.9635	
2.335	2.391	96.000	-177.150	0.033508	1.3386	29.844	0.7471	0.9598	0.9603	
2.365	2.412	96.150	-177.000	0.033483	1.3376	29.866	0.7476	0.9591	0.9596	
2.600	2.647	96.321	-176.829	0.033455	1.3365	29.891	0.7482	0.9583	0.9588	
2.543	2.593	97.000	-176.150	0.033342	1.3319	29.992	0.7508	0.9550	0.9555	

TABLE 11 CONTINUED

## SATURATED LIQUID ARGON

BAR	PRESSURE		TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	VOLUME CM <sup>3</sup> / GRAM-MOLE	DN <sup>3</sup> / KG	DENSITY RATIOS -	
	KP/CM <sup>2</sup>	BAR	KELVIN	CELSIUS				LIQUID DENSITY/ DENSITY AT A BOIL PRESS. OF 1 BAR	DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL PRESS. OF 760 TORR
2.576	2.626	97.450	-176.000	0.033317	1.3309	30.015	0.7514	0.9543	0.9548
2.600	2.651	97.562	-175.888	0.033298	1.3302	30.032	0.7518	0.9538	0.9543
2.765	2.820	98.000	-175.150	0.033174	1.3252	30.144	0.7546	0.9507	0.9507
2.800	2.855	98.150	-175.000	0.033149	1.3242	30.167	0.7552	0.9495	0.9500
2.800	2.855	98.151	-174.999	0.033149	1.3242	30.167	0.7552	0.9495	0.9500
2.942	3.000	98.754	-174.396	0.033047	1.3201	30.260	0.7575	0.9471	0.9471
3.000	3.059	98.994	-174.156	0.033006	1.3185	30.268	0.7584	0.9464	0.9459
3.001	3.061	99.000	-174.150	0.033005	1.3185	30.269	0.7584	0.9464	0.9459
3.038	3.098	99.150	-174.000	0.032979	1.3175	30.322	0.7590	0.9466	0.9461
3.200	3.263	99.796	-173.354	0.032869	1.3131	30.424	0.7616	0.9445	0.9420
3.252	3.316	100.000	-173.150	0.032834	1.3116	30.480	0.7620	0.9435	0.9410
3.291	3.357	100.150	-173.000	0.032808	1.3106	30.546	0.7626	0.9428	0.9402
3.400	3.467	100.563	-172.587	0.032738	1.3078	30.641	0.7654	0.9405	0.9382
3.518	3.588	101.000	-172.000	0.032662	1.3048	30.667	0.7664	0.9395	0.9360
3.559	3.630	101.150	-171.850	0.032636	1.3037	30.661	0.7670	0.9388	0.9360
3.600	3.671	101.297	-171.653	0.032611	1.3027	30.665	0.7676	0.9381	0.9346
3.600	3.671	101.297	-171.653	0.032611	1.3027	30.665	0.7676	0.9381	0.9346
3.800	3.875	102.001	-171.149	0.032488	1.2978	30.780	0.7705	0.9306	0.9311
3.843	3.919	102.150	-171.000	0.032462	1.2968	30.785	0.7711	0.9298	0.9303
3.923	4.000	102.420	-170.730	0.032359	1.2949	30.850	0.7723	0.9285	0.9290
4.000	4.079	102.879	-170.171	0.032283	1.2911	30.883	0.7733	0.9277	0.9277
4.097	4.178	103.000	-170.150	0.032286	1.2908	30.947	0.7747	0.9255	0.9262
4.143	4.225	103.150	-170.000	0.032261	1.2895	30.973	0.7757	0.9248	0.9253
4.200	4.283	103.333	-169.486	0.032142	1.2885	31.014	0.7768	0.9239	0.9244
4.412	4.499	104.000	-169.150	0.032109	1.2857	31.118	0.7790	0.9215	0.9212
4.460	4.548	104.150	-169.000	0.032116	1.2838	31.144	0.7796	0.9205	0.9210
4.600	4.691	104.574	-168.576	0.032033	1.2767	31.292	0.7814	0.9175	0.9180
4.743	4.837	105.000	-168.150	0.031937	1.2756	31.287	0.7833	0.9154	0.9159
4.794	4.889	105.150	-168.000	0.031930	1.2756	31.318	0.7840	0.9146	0.9151
4.800	4.890	105.156	-167.984	0.031927	1.2754	31.321	0.7840	0.9146	0.9150
4.903	5.000	105.466	-167.685	0.031874	1.2733	31.374	0.7854	0.9130	0.9135
5.000	5.099	105.740	-167.410	0.031824	1.2713	31.423	0.7866	0.9112	0.9120
5.093	5.193	106.000	-167.150	0.031770	1.2694	31.469	0.7878	0.9099	0.9107
5.147	5.248	106.150	-167.000	0.031750	1.2683	31.466	0.7884	0.9094	0.9099
5.200	5.303	106.297	-166.853	0.031723	1.2673	31.523	0.7891	0.9086	0.9091
5.460	5.506	106.840	-166.150	0.031595	1.2624	31.652	0.7923	0.9053	0.9063
5.517	5.568	107.150	-166.000	0.031574	1.2614	31.651	0.7923	0.9050	0.9055
5.800	5.910	107.882	-165.268	0.031433	1.2557	31.719	0.7950	0.9030	0.9035
5.847	5.962	108.000	-165.150	0.031431	1.2548	31.814	0.7964	0.9033	0.9038
5.884	6.000	108.150	-165.000	0.031431	1.2538	31.886	0.7969	0.8997	0.9002
5.906	6.023	108.150	-165.000	0.031433	1.2537	31.884	0.7974	0.8990	0.8994
6.000	6.118	108.383	-164.767	0.031330	1.2520	31.995	0.7988	0.8977	0.8982

TABLE 11 CONTINUED

## SATURATED LIQUID ARGON

BAR	PRESSURE		TEMPERATURE		DENSITY		VOLUME		DENSITY RATIOS -		DIMENSIONLESS	
	MP/CM <sup>2</sup>	KELVIN	CEL SIUS	GRAM-MOLE/CM <sup>3</sup>	KG <sub>2</sub> DMS	GRAM-MOLE/CM <sup>3</sup>	DM <sup>3</sup> /KG	DENSITY AT A BOIL. PRESS. OF 1 BAR	DENSITY AT A BOIL. PRESS. OF 760 TORR	DENSITY AT A BOIL. PRESS. OF 1 BAR	DENSITY AT A BOIL. PRESS. OF 760 TORR	DENSITY AT A BOIL. PRESS. OF 1 BAR
6.200	6.322	108.873	-164.277	0.031248	1.2483	32.002	0.8011	0.8951	0.8955			
6.253	6.376	109.000	-164.150	0.031225	1.2474	32.026	0.8017	0.8936	0.8949			
6.315	6.440	109.150	-164.000	0.031197	1.2462	32.055	0.8024	0.8936	0.8941			
6.400	6.526	109.352	-163.798	0.031159	1.2447	32.094	0.8034	0.8925	0.8930			
6.600	6.730	109.820	-163.330	0.031071	1.2412	32.184	0.8057	0.8900	0.8905			
6.678	6.810	110.000	-163.150	0.031037	1.2399	32.220	0.8065	0.8890	0.8895			
6.744	6.877	110.150	-163.000	0.031008	1.2387	32.249	0.8073	0.8882	0.8887			
6.800	6.934	110.277	-162.873	0.030984	1.2378	32.274	0.8079	0.8875	0.8880			
6.865	7.000	110.423	-162.727	0.030957	1.2367	32.303	0.8086	0.8867	0.8872			
7.000	7.268	111.0725	-162.425	0.030899	1.2344	32.363	0.8101	0.8851	0.8855			
7.125	7.385	111.0000	-162.150	0.030847	1.2324	32.418	0.8115	0.8836	0.8840			
7.193	7.342	111.150	-162.000	0.030818	1.2311	32.448	0.8123	0.8827	0.8832			
7.200	7.342	111.164	-161.986	0.030815	1.2310	32.451	0.8123	0.8827	0.8831			
7.400	7.546	111.595	-161.555	0.030733	1.2277	32.538	0.8145	0.8803	0.8808			
7.592	7.742	112.000	-161.150	0.030655	1.2246	32.621	0.8166	0.8781	0.8785			
7.600	7.750	112.017	-161.133	0.030652	1.2245	32.625	0.8167	0.8780	0.8784			
7.664	7.815	112.150	-161.000	0.030626	1.2234	32.652	0.8174	0.8772	0.8777			
7.800	7.954	112.431	-160.719	0.030571	1.2213	32.710	0.8188	0.8757	0.8761			
7.845	8.000	112.524	-160.626	0.030553	1.2205	32.730	0.8193	0.8751	0.8756			
8.000	8.158	112.838	-160.312	0.030460	1.2181	32.795	0.8210	0.8734	0.8739			
8.156	8.317	113.150	-160.000	0.030414	1.2157	32.830	0.8218	0.8725	0.8730			
8.200	8.362	113.237	-159.913	0.030411	1.2157	32.861	0.8226	0.8716	0.8721			
8.400	8.566	113.629	-159.521	0.030337	1.2119	32.963	0.8231	0.8712	0.8716			
8.592	8.761	114.015	-159.135	0.030264	1.2090	33.043	0.8271	0.8689	0.8694			
8.600	8.770	114.015	-159.135	0.030261	1.2089	33.046	0.8271	0.8688	0.8672			
8.671	8.842	114.150	-159.000	0.030234	1.2078	33.075	0.8280	0.8660	0.8665			
8.800	8.974	114.395	-158.755	0.030185	1.2058	33.129	0.8293	0.8646	0.8651			
8.826	9.000	114.444	-158.706	0.030176	1.2055	33.139	0.8296	0.8643	0.8648			
9.000	9.177	114.768	-158.382	0.030111	1.2029	33.211	0.8313	0.8625	0.8629			
9.126	9.300	115.000	-158.150	0.030065	1.2010	33.262	0.8326	0.8611	0.8616			
9.200	9.381	115.136	-158.014	0.030037	1.1999	33.292	0.8334	0.8604	0.8608			
9.400	9.589	115.487	-157.653	0.029965	1.1970	33.395	0.8335	0.8583	0.8587			
9.600	9.789	115.854	-157.296	0.029892	1.1941	33.473	0.8374	0.8562	0.8567			
9.683	9.874	116.000	-157.100	0.029863	1.1930	33.486	0.8383	0.8554	0.8558			
9.800	9.961	116.150	-157.000	0.029832	1.1917	33.521	0.8391	0.8545	0.8550			
9.800	9.993	116.216	-156.914	0.029821	1.1912	33.533	0.8394	0.8542	0.8546			
10.000	10.197	116.551	-156.539	0.029819	1.1912	33.536	0.8395	0.8541	0.8546			
10.200	10.401	116.832	-156.258	0.029751	1.1885	33.613	0.8414	0.8522	0.8526			
10.264	10.466	117.000	-156.150	0.029681	1.1848	33.717	0.8434	0.8501	0.8506			
10.353	10.557	117.150	-156.000	0.029658	1.1836	33.752	0.8440	0.8495	0.8491			
10.400	10.605	117.228	-155.922	0.029611	1.1829	33.771	0.8454	0.8486	0.8486			
10.600	10.809	117.560	-155.530	0.029543	1.1802	33.849	0.8473	0.8462	0.8467			



TABLE 11 CONTINUED

## SATURATED LIQUID ARGON

BAR	PRESSURE		TEMPERATURE		GRAM-MOLE/ CM <sup>3</sup>	DENSITY KG/ DM <sup>3</sup>	GRAM-HOLE	VOLUME DM <sup>3</sup> / KG	DENSITY RATIOS - DIMENSIONLESS	
	KP/CM <sup>2</sup>	BAR	KELVIN	CELSIUS					LIQUID DENSITY/ DENSITY AT A BOIL PRESS. OF 1 BAR	LIQUID DENSITY/ DENSITY AT A BOIL PRESS. OF 760 TORR
10.787	11.000	117.867	-155.283	0.029479	1.7776	33.923	0.8492	0.8444	0.8448	
10.800	11.013	117.867	-155.283	0.029475	1.7775	33.927	0.8493	0.8442	0.8447	
10.870	11.084	118.000	-155.000	0.029451	1.7765	33.955	0.8500	0.8436	0.8440	
10.962	11.179	118.150	-155.000	0.029420	1.7753	33.951	0.8509	0.8427	0.8431	
11.000	11.217	118.210	-154.940	0.029407	1.7748	34.005	0.8512	0.8428	0.8428	
11.200	11.421	118.529	-154.651	0.029340	1.7721	34.083	0.8532	0.8404	0.8409	
11.400	11.625	118.844	-154.306	0.029274	1.4694	34.160	0.8551	0.8385	0.8390	
11.500	11.727	119.000	-154.150	0.029244	1.4681	34.199	0.8561	0.8376	0.8380	
11.597	11.826	119.155	-154.000	0.029209	1.4668	34.236	0.8570	0.8366	0.8371	
11.600	11.826	119.155	-154.000	0.029208	1.4668	34.237	0.8570	0.8366	0.8371	
11.768	12.000	119.433	-153.737	0.029153	1.4646	34.302	0.8587	0.8350	0.8355	
11.800	12.033	119.462	-153.688	0.029143	1.4642	34.314	0.8590	0.8347	0.8352	
12.000	12.287	119.765	-153.385	0.029078	1.4596	34.350	0.8609	0.8329	0.8333	
12.156	12.396	120.000	-153.150	0.029027	1.4561	34.450	0.8624	0.8314	0.8319	
12.200	12.441	120.065	-153.085	0.029013	1.4590	34.467	0.8628	0.8310	0.8315	
12.257	12.499	120.150	-152.789	0.028995	1.4583	34.489	0.8637	0.8305	0.8310	
12.400	12.644	120.361	-152.499	0.028949	1.4565	34.543	0.8647	0.8292	0.8297	
12.600	12.848	120.654	-152.436	0.028886	1.4539	34.619	0.8666	0.8274	0.8278	
12.749	13.000	120.870	-152.280	0.028839	1.4521	34.675	0.8680	0.8260	0.8265	
12.800	13.052	120.944	-152.206	0.028823	1.4514	34.695	0.8685	0.8256	0.8260	
12.839	13.092	121.000	-152.150	0.028811	1.4509	34.709	0.8689	0.8252	0.8257	
12.944	13.199	121.150	-152.000	0.028778	1.4496	34.749	0.8699	0.8243	0.8247	
13.000	13.256	121.230	-151.920	0.028760	1.4489	34.770	0.8704	0.8238	0.8242	
13.200	13.460	121.514	-151.636	0.028698	1.4464	34.846	0.8723	0.8220	0.8224	
13.400	13.614	121.794	-151.356	0.028636	1.4420	34.921	0.8742	0.8202	0.8207	
13.548	13.815	122.000	-151.150	0.028590	1.4421	34.977	0.8756	0.8189	0.8194	
13.600	13.868	122.071	-151.079	0.028575	1.4415	34.996	0.8760	0.8185	0.8189	
13.657	13.926	122.150	-151.000	0.028557	1.4408	35.018	0.8766	0.8180	0.8184	
13.729	14.000	122.249	-150.901	0.028535	1.4399	35.045	0.8773	0.8173	0.8178	
13.800	14.072	122.346	-150.804	0.028513	1.4391	35.071	0.8779	0.8167	0.8172	
14.000	14.276	122.616	-150.533	0.028452	1.4366	35.146	0.8798	0.8150	0.8154	
14.200	14.480	122.866	-150.264	0.028392	1.4342	35.221	0.8817	0.8132	0.8137	
14.285	14.567	123.000	-150.150	0.028366	1.4332	35.253	0.8825	0.8125	0.8129	
14.400	14.684	123.150	-150.000	0.028332	1.4318	35.296	0.8835	0.8115	0.8120	
14.400	14.684	123.152	-149.988	0.028332	1.4318	35.296	0.8835	0.8115	0.8120	
14.600	14.888	123.416	-149.734	0.028272	1.4294	35.371	0.8854	0.8098	0.8102	
14.710	15.000	123.560	-149.590	0.028239	1.4281	35.442	0.8864	0.8089	0.8093	
14.800	15.092	123.677	-149.473	0.028212	1.4270	35.442	0.8873	0.8081	0.8085	
15.000	15.296	123.935	-149.215	0.028135	1.4247	35.520	0.8892	0.8064	0.8068	
15.051	15.347	124.000	-149.150	0.028138	1.4241	35.539	0.8896	0.8060	0.8064	
15.168	15.467	124.150	-149.000	0.028104	1.4227	35.583	0.8907	0.8054	0.8058	
15.200	15.500	124.131	-148.959	0.028094	1.4223	35.585	0.8910	0.8047	0.8051	
15.400	15.704	124.445	-148.705	0.028035	1.4200	35.669	0.8929	0.8030	0.8034	
15.600	15.908	124.636	-148.454	0.027977	1.4176	35.744	0.8948	0.8016	0.8020	
15.691	16.000	124.809	-148.341	0.027951	1.4166	35.777	0.8956	0.8006	0.8010	

TABLE 11 CONTINUED

## SATURATED LIQUID ARGON

BAR	PRESSURE KP/CM <sup>2</sup>	TEMPERATURE		DENSITY KG/ DM <sup>3</sup>	VOLUME		LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR	DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
		CELSIUS	KELVIN		GRAM-MOLE/ CM <sup>3</sup>	DM <sup>3</sup> / GRAM-MOLE		
15.800	16.112	124.945	148.205	1.1153	35.818	0.8956	0.7997	0.8001
15.845	16.157	125.000	148.150	1.1148	35.835	0.8970	0.7993	0.7997
15.866	16.281	125.150	148.000	1.1134	35.880	0.8982	0.7980	0.7987
15.900	16.315	125.192	147.958	1.1130	35.863	0.8985	0.7980	0.7985
15.900	16.723	125.636	147.714	1.1107	35.967	0.9003	0.7968	0.7968
15.900	16.723	125.678	147.472	1.1084	36.042	0.9022	0.7947	0.7952
15.900	16.927	125.919	147.231	1.1061	36.116	0.9041	0.7931	0.7935
15.968	16.997	126.000	147.166	1.1053	36.142	0.9047	0.7929	0.7930
15.974	17.000	126.004	147.146	1.1053	36.149	0.9047	0.7929	0.7929
15.974	17.125	126.150	147.000	1.1039	36.199	0.9059	0.7915	0.7919
15.900	17.335	126.393	146.993	1.1038	36.191	0.9059	0.7915	0.7915
17.000	17.538	126.627	146.757	1.1015	36.330	0.9078	0.7882	0.7886
17.000	17.543	126.660	146.523	1.0993	36.345	0.9097	0.7882	0.7886
17.000	17.743	126.860	146.290	1.0970	36.445	0.9115	0.7865	0.7870
17.822	17.867	127.000	146.150	1.0957	36.460	0.9127	0.7865	0.7865
17.806	17.967	127.090	146.060	1.0958	36.489	0.9134	0.7850	0.7850
17.852	18.000	127.149	146.000	1.0942	36.506	0.9139	0.7846	0.7850
17.852	18.000	127.150	146.000	1.0942	36.509	0.9139	0.7846	0.7850
17.906	18.151	127.318	145.832	1.0925	36.554	0.9153	0.7834	0.7838
18.000	18.355	127.545	145.605	1.0903	36.659	0.9172	0.7818	0.7822
18.200	18.555	127.775	145.380	1.0881	36.774	0.9190	0.7802	0.7806
18.400	18.763	127.993	145.157	1.0859	36.790	0.9209	0.7786	0.7790
18.406	18.769	128.000	145.150	1.0859	36.791	0.9210	0.7786	0.7790
18.342	18.907	128.150	145.000	1.0837	36.842	0.9223	0.7775	0.7779
18.500	19.067	128.214	144.936	1.0833	36.862	0.9228	0.7775	0.7779
18.533	19.000	128.250	144.900	1.0833	36.882	0.9228	0.7775	0.7779
18.800	19.171	128.434	144.716	1.0833	36.939	0.9247	0.7764	0.7768
19.000	19.375	128.652	144.458	1.0816	37.002	0.9266	0.7742	0.7756
19.200	19.579	128.866	144.282	1.0792	37.059	0.9285	0.7723	0.7727
19.322	19.703	129.000	144.150	1.0780	37.137	0.9298	0.7717	0.7721
19.400	19.782	129.083	144.067	1.0770	37.157	0.9298	0.7717	0.7721
19.463	19.846	129.150	144.000	1.0765	37.166	0.9304	0.7713	0.7717
19.500	19.886	129.196	143.954	1.0762	37.180	0.9310	0.7702	0.7706
19.613	20.000	129.310	143.854	1.0742	37.242	0.9330	0.7681	0.7685
19.600	20.190	129.508	143.642	1.0725	37.287	0.9324	0.7676	0.7680
19.613	20.190	129.510	143.642	1.0725	37.318	0.9324	0.7676	0.7680
20.000	20.394	129.718	143.432	1.0683	37.394	0.9361	0.7660	0.7664
20.000	20.598	129.926	143.224	1.0661	37.470	0.9380	0.7644	0.7648
20.271	20.671	130.000	143.150	1.0654	37.497	0.9386	0.7639	0.7643
20.400	20.802	130.133	143.017	1.0640	37.546	0.9399	0.7629	0.7633
20.416	20.819	130.150	143.000	1.0639	37.552	0.9400	0.7628	0.7632
20.594	21.000	130.333	142.817	1.0618	37.620	0.9447	0.7614	0.7618
20.600	21.006	130.339	142.811	1.0618	37.620	0.9447	0.7614	0.7618
20.600	21.210	130.543	142.607	1.0596	37.699	0.9437	0.7598	0.7602
21.000	21.414	130.746	142.404	1.0575	37.776	0.9456	0.7582	0.7586
21.200	21.618	130.947	142.203	1.0553	37.853	0.9476	0.7567	0.7571

TABLE 11 CONTINUED

## SATURATED LIQUID ARGON

BAR	PRESSURE KP/CN <sup>2</sup>	TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	VOLUME CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG	DENSITY RATIOS - -		DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
		KELVIN	CELSIUS				LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 1 BAR	LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR	
21.553	21.672	151.000	-142.150	0.026404	37.874	0.9481	0.7563	0.7567	
21.400	21.822	151.147	-142.003	1.026364	37.831	0.9495	0.7551	0.7556	
21.400	21.825	151.150	-142.000	0.026363	37.832	0.9495	0.7551	0.7556	
21.575	22.000	151.321	-141.829	1.026317	37.998	0.9512	0.7538	0.7542	
21.600	22.226	151.346	-141.804	0.026310	38.008	0.9514	0.7536	0.7540	
21.800	22.420	151.543	-141.607	1.026257	38.086	0.9534	0.7521	0.7525	
22.000	22.434	151.739	-141.411	0.026203	38.164	0.9553	0.7509	0.7509	
22.200	22.638	151.934	-141.216	1.026149	38.242	0.9573	0.7490	0.7494	
22.268	22.707	152.000	-141.150	0.026131	38.242	0.9573	0.7490	0.7494	
22.400	22.842	152.128	-141.022	1.026056	38.320	0.9593	0.7475	0.7479	
22.423	22.865	152.150	-141.000	0.026050	38.329	0.9593	0.7473	0.7477	
22.555	23.000	152.277	-140.873	1.026054	38.381	0.9608	0.7463	0.7467	
22.600	23.046	152.321	-140.839	0.026042	38.399	0.9612	0.7459	0.7463	
22.800	23.250	152.511	-140.639	1.025989	38.478	0.9632	0.7444	0.7448	
23.000	23.453	152.701	-140.449	0.025936	38.557	0.9652	0.7429	0.7433	
23.200	23.657	152.889	-140.261	1.025882	38.636	0.9663	0.7418	0.7422	
23.318	23.778	153.000	-140.150	0.025851	38.683	0.9668	0.7405	0.7409	
23.400	23.861	153.000	-140.073	1.025829	38.716	0.9692	0.7398	0.7402	
23.479	23.942	153.150	-140.000	0.025808	38.748	0.9700	0.7392	0.7396	
23.536	24.000	153.203	-139.947	1.025793	38.771	0.9705	0.7388	0.7392	
23.600	24.065	153.263	-139.887	0.025776	38.796	0.9712	0.7383	0.7387	
23.800	24.269	153.448	-139.702	1.025723	38.876	0.9732	0.7368	0.7372	
24.000	24.473	153.632	-139.518	0.025669	38.957	0.9752	0.7352	0.7356	
24.200	24.677	153.815	-139.335	1.025616	39.038	0.9772	0.7337	0.7341	
24.400	24.881	153.997	-139.153	0.025563	39.119	0.9793	0.7322	0.7326	
24.600	25.085	154.180	-138.973	1.025510	39.121	0.9793	0.7322	0.7326	
24.800	25.289	154.357	-138.793	0.025457	39.167	0.9804	0.7313	0.7317	
25.000	25.493	154.536	-138.614	1.025403	39.201	0.9813	0.7301	0.7311	
25.200	25.697	154.713	-138.437	0.025350	39.265	0.9854	0.7285	0.7285	
25.400	25.901	154.890	-138.260	1.025297	39.331	0.9895	0.7261	0.7265	
25.600	26.105	155.065	-138.085	0.025244	39.397	0.9936	0.7246	0.7250	
25.800	26.309	155.240	-137.910	1.025190	39.464	0.9977	0.7231	0.7234	
26.000	26.513	155.416	-137.737	0.025137	39.498	0.9988	0.7215	0.7219	
26.200	26.717	155.586	-137.564	1.025084	39.566	0.9958	0.7200	0.7204	
26.400	26.921	155.758	-137.392	0.025031	39.631	0.9989	0.7185	0.7189	
26.600	27.124	155.928	-137.222	1.024977	39.694	1.0009	0.7170	0.7173	
26.800	27.328	156.098	-137.052	0.024924	40.037	1.0022	0.7154	0.7158	
27.000	27.532	156.268	-136.882	1.024870	40.122	1.0034	0.7139	0.7143	

TABLE 11 CONTINUED

## SATURATED LIQUID ARGON

BAR	PRESSURE MP/CM <sup>2</sup>	TEMPERATURE		GRAM-MOLE/ CM <sup>3</sup>	DENSITY KG/DM <sup>3</sup>	GRAM-MOLE GRAM-MOLE	CM <sup>3</sup> / GRAM-MOLE	VOLUME		DENSITY RATIOS - DIMENSIONLESS	
		KELVIN	CELSIUS					DM <sup>3</sup> / KG	LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 1 BAR	LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 760 TORR	
26.862	27.391	136.150	-137.000	0.024907	0.9950	40.149	1.0050	0.7134	0.7138		
27.000	27.532	136.267	-136.883	0.024870	0.9935	40.209	1.0065	0.7124	0.7127		
27.140	27.673	136.435	-136.715	0.024817	0.9914	40.295	1.0087	0.7108	0.7112		
27.400	27.940	136.602	-136.548	0.024763	0.9892	40.383	1.0109	0.7093	0.7097		
27.459	28.000	136.650	-136.500	0.024747	0.9886	40.408	1.0115	0.7088	0.7092		
27.600	28.144	136.768	-136.382	0.024710	0.9871	40.4470	1.0131	0.7078	0.7081		
27.800	28.348	136.933	-136.217	0.024656	0.9850	40.558	1.0153	0.7062	0.7066		
27.882	28.431	137.000	-136.150	0.024634	0.9844	40.594	1.0162	0.7060	0.7064		
28.000	28.552	137.097	-136.053	0.024602	0.9828	40.647	1.0175	0.7047	0.7051		
28.065	28.618	137.150	-136.000	0.024585	0.9821	40.676	1.0182	0.7042	0.7046		
28.200	28.756	137.261	-135.889	0.024548	0.9807	40.736	1.0197	0.7031	0.7035		
28.400	28.960	137.423	-135.727	0.024494	0.9785	40.826	1.0220	0.7016	0.7020		
28.459	29.016	137.455	-135.695	0.024484	0.9781	40.843	1.0224	0.7013	0.7017		
28.600	29.164	137.585	-135.565	0.024440	0.9763	40.916	1.0242	0.7000	0.7004		
28.800	29.368	137.746	-135.404	0.024386	0.9742	41.007	1.0265	0.6985	0.6989		
29.000	29.572	137.906	-135.244	0.024332	0.9720	41.098	1.0288	0.6969	0.6973		
29.118	29.692	138.000	-135.150	0.024300	0.9707	41.152	1.0301	0.6960	0.6964		
29.307	29.885	138.065	-135.085	0.024278	0.9687	41.190	1.0311	0.6954	0.6958		
29.400	29.980	138.150	-135.000	0.024249	0.9677	41.239	1.0323	0.6946	0.6949		
29.420	30.000	138.224	-134.926	0.024218	0.9677	41.283	1.0336	0.6937	0.6940		
29.600	30.184	138.382	-134.768	0.024169	0.9655	41.292	1.0357	0.6923	0.6926		
29.800	30.388	138.538	-134.612	0.024114	0.9633	41.376	1.0381	0.6907	0.6911		
30.000	30.591	138.695	-134.455	0.024059	0.9611	41.454	1.0405	0.6891	0.6895		
30.200	30.795	138.850	-134.300	0.024004	0.9589	41.659	1.0428	0.6876	0.6879		
30.354	30.993	139.000	-134.145	0.023951	0.9568	41.752	1.0452	0.6860	0.6864		
30.400	31.000	139.005	-134.145	0.023949	0.9567	41.755	1.0452	0.6860	0.6864		
30.569	31.192	139.150	-134.000	0.023919	0.9546	41.846	1.0475	0.6844	0.6848		
30.600	31.203	139.158	-133.992	0.023897	0.9545	41.851	1.0476	0.6844	0.6848		
30.800	31.407	139.312	-133.838	0.023839	0.9523	41.948	1.0501	0.6812	0.6816		
31.000	31.611	139.464	-133.686	0.023778	0.9501	42.046	1.0525	0.6812	0.6816		
31.200	31.815	139.616	-133.534	0.023728	0.9479	42.145	1.0550	0.6796	0.6800		
31.341	32.000	139.752	-133.398	0.023672	0.9459	42.235	1.0572	0.6786	0.6788		
31.400	32.019	139.767	-133.384	0.023672	0.9456	42.244	1.0570	0.6780	0.6784		
31.600	32.223	139.917	-133.250	0.023616	0.9434	42.344	1.0600	0.6764	0.6768		
31.711	32.337	140.000	-133.150	0.023595	0.9422	42.400	1.0614	0.6755	0.6759		
31.800	32.427	140.066	-133.084	0.023580	0.9412	42.445	1.0625	0.6748	0.6752		
31.912	32.542	140.150	-133.000	0.023558	0.9399	42.502	1.0639	0.6739	0.6743		
32.000	32.631	140.215	-132.935	0.023544	0.9399	42.517	1.0651	0.6732	0.6736		
32.200	32.835	140.363	-132.787	0.023447	0.9378	42.649	1.0676	0.6716	0.6720		
32.362	33.000	140.483	-132.660	0.023401	0.9348	42.733	1.0697	0.6703	0.6706		
32.400	33.039	140.511	-132.639	0.023390	0.9344	42.733	1.0702	0.6703	0.6706		
32.600	33.243	140.657	-132.493	0.023333	0.9321	42.857	1.0728	0.6683	0.6687		
32.800	33.447	140.803	-132.347	0.023276	0.9298	42.952	1.0755	0.6667	0.6671		



TABLE 11 CONTINUED

## SATURATED LIQUID ARGON

BAR	PRESSURE		TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	VOLUME CM <sup>3</sup> GRAM-HOLE	DENSITY RATIOS -		DIMENSIONLESS LIQUID DENSITY/ LIQUID DENSITY AT A BOIL. PRESS. OF 760 TORR
	KP/CM <sup>2</sup>	BAR	KELVIN	CEL SIUS			LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 1 BAR	DM <sup>3</sup> / KG	
33.000	33.651	140.949	-132.201	0.92776	43.068	1.0781	0.66551	0.6654	
33.071	33.723	141.000	-132.150	0.92677	43.106	1.0791	0.66445	0.6648	
33.142	33.855	141.094	-132.056	0.92533	43.175	1.0808	0.66328	0.6638	
33.278	33.934	141.150	-132.000	0.92339	43.217	1.0818	0.66204	0.6631	
33.343	34.000	141.196	-131.954	0.92120	43.252	1.0827	0.66072	0.6626	
33.400	34.059	141.238	-131.912	0.92310	43.283	1.0835	0.6618	0.6621	
33.600	34.262	141.381	-131.769	0.92046	43.392	1.0862	0.6601	0.6605	
33.800	34.466	141.524	-131.626	0.92287	43.482	1.0890	0.6584	0.6588	
34.000	34.670	141.666	-131.484	0.92229	43.562	1.0918	0.6567	0.6571	
34.200	34.874	141.808	-131.342	0.92270	43.614	1.0946	0.6551	0.6554	
34.323	35.000	141.895	-131.255	0.92283	43.726	1.0976	0.6534	0.654	
34.400	35.078	141.949	-131.201	0.92281	43.839	1.0974	0.6534	0.6537	
34.473	35.153	142.000	-131.150	0.92278	43.881	1.0984	0.6517	0.6531	
34.600	35.282	142.089	-131.061	0.92275	43.954	1.1003	0.6517	0.6520	
34.687	35.371	142.150	-131.000	0.92272	44.004	1.1015	0.6509	0.6513	
34.800	35.486	142.229	-130.921	0.92269	44.041	1.1032	0.6500	0.6503	
35.000	35.690	142.368	-130.782	0.92253	44.186	1.1061	0.6482	0.6486	
35.200	35.894	142.506	-130.644	0.92251	44.304	1.1091	0.6465	0.6469	
35.304	36.000	142.578	-130.572	0.92250	44.366	1.1106	0.6456	0.6461	
35.400	36.098	142.644	-130.526	0.92249	44.424	1.1120	0.6448	0.6454	
35.600	36.302	142.782	-130.368	0.92238	44.545	1.1151	0.6430	0.644	
35.800	36.506	142.918	-130.232	0.92231	44.667	1.1181	0.6413	0.643	
35.920	36.628	143.000	-130.150	0.92235	44.740	1.1200	0.6406	0.6426	
36.000	36.710	143.055	-130.095	0.92232	44.819	1.1212	0.6395	0.6398	
36.141	36.853	143.150	-130.000	0.92228	44.878	1.1234	0.6382	0.6386	
36.200	36.914	143.190	-129.960	0.92226	44.915	1.1243	0.6377	0.6381	
36.285	37.000	143.227	-129.903	0.92238	44.969	1.1257	0.6370	0.6373	
36.400	37.118	143.325	-129.825	0.92239	45.042	1.1275	0.6359	0.6365	
36.600	37.322	143.460	-129.690	0.92219	45.170	1.1307	0.6341	0.6345	
36.800	37.526	143.594	-129.556	0.92215	45.299	1.1340	0.6323	0.6327	
37.000	37.729	143.727	-129.423	0.92212	45.431	1.1372	0.6305	0.6308	
37.200	37.933	143.860	-129.290	0.92194	45.564	1.1406	0.6286	0.6290	
37.265	38.000	143.903	-129.242	0.92186	45.607	1.1417	0.6280	0.6284	
37.400	38.137	143.992	-129.158	0.92182	45.698	1.1439	0.6268	0.6271	
37.442	38.150	144.000	-129.150	0.92179	45.705	1.1441	0.6267	0.6270	
37.600	38.341	144.124	-129.026	0.92181	45.806	1.1474	0.6249	0.6253	
37.640	38.382	144.150	-129.000	0.92180	45.862	1.1480	0.6245	0.6249	
37.800	38.545	144.255	-128.895	0.92175	45.973	1.1508	0.6230	0.6234	
38.000	38.749	144.386	-128.764	0.92168	46.114	1.1543	0.6211	0.6215	
38.200	38.953	144.516	-128.634	0.92169	46.256	1.1579	0.6192	0.6196	
38.246	39.000	144.546	-128.604	0.92163	46.289	1.1587	0.6188	0.6191	
38.400	39.157	144.646	-128.504	0.92151	46.401	1.1615	0.6173	0.6176	
38.600	39.361	144.775	-128.375	0.92148	46.527	1.1652	0.6154	0.6157	
38.800	39.565	144.903	-128.247	0.92145	46.656	1.1689	0.6134	0.6137	
38.951	39.719	145.000	-128.150	0.92143	46.810	1.1718	0.6119	0.6122	



TABLE 11 CONTINUED

## SATURATED LIQUID ARGON

BAR	PRESSURE KP/CM <sup>2</sup>	TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	KG/ DM <sup>3</sup>	CM <sup>3</sup> / GRAM-MOLE	VOLUME DM <sup>3</sup> / KG	DENSITY RATIOS -	
		KELVIN	CELSIUS					LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 1 BAR	DIMENSIONLESS LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
39.000	39.759	145.031	-128.119	0.821346	0.8527	46.847	1.1727	0.6114	0.6117
39.186	39.958	145.150	-128.000	0.821821	0.8501	46.990	1.1763	0.6096	0.6099
39.200	39.973	145.159	-127.991	0.821876	0.8499	47.001	1.1766	0.6094	0.6097
39.227	40.000	145.176	-127.974	0.821827	0.8496	47.022	1.1771	0.6091	0.6095
39.400	40.177	145.286	-127.864	0.821206	0.8471	47.157	1.1805	0.6074	0.6077
39.600	40.381	145.413	-127.737	0.821134	0.8443	47.316	1.1844	0.6054	0.6057
39.800	40.585	145.539	-127.611	0.821063	0.8414	47.478	1.1885	0.6033	0.6036
40.000	40.789	145.665	-127.485	0.820990	0.8385	47.642	1.1926	0.6012	0.6015
40.200	40.993	145.790	-127.360	0.820916	0.8356	47.809	1.1969	0.5991	0.5994
40.400	41.197	145.914	-127.236	0.820842	0.8326	47.980	1.2011	0.5970	0.5973
40.538	41.337	146.000	-127.111	0.820767	0.8305	48.153	1.2044	0.5958	0.5961
40.600	41.400	146.039	-127.100	0.820767	0.8296	48.153	1.2054	0.5958	0.5961
40.780	41.584	146.150	-127.000	0.820659	0.8269	48.330	1.2094	0.5929	0.5932
40.800	41.604	146.162	-126.988	0.820651	0.8266	48.330	1.2098	0.5927	0.5930
41.000	41.808	146.286	-126.864	0.820614	0.8235	48.511	1.2144	0.5904	0.5908
41.188	42.012	146.400	-126.749	0.820541	0.8206	48.684	1.2187	0.5883	0.5887
41.200	42.016	146.408	-126.749	0.820536	0.8204	48.684	1.2190	0.5882	0.5885
41.400	42.216	146.531	-126.619	0.820457	0.8172	48.883	1.2237	0.5859	0.5863
41.600	42.420	146.653	-126.497	0.820377	0.8140	49.076	1.2285	0.5837	0.5840
41.800	42.624	146.774	-126.376	0.820295	0.8108	49.272	1.2334	0.5813	0.5816
42.000	42.828	146.895	-126.255	0.820213	0.8075	49.473	1.2384	0.5790	0.5793
42.169	43.000	146.997	-126.153	0.820142	0.8047	49.646	1.2428	0.5769	0.5772
42.174	43.006	147.000	-126.150	0.820140	0.8046	49.652	1.2429	0.5766	0.5769
42.200	43.032	147.016	-126.134	0.820129	0.8041	49.679	1.2436	0.5763	0.5766
42.400	43.236	147.136	-126.014	0.820044	0.8007	49.890	1.2489	0.5741	0.5744
42.424	43.260	147.150	-126.000	0.820034	0.8003	49.915	1.2495	0.5738	0.5741
42.600	43.440	147.255	-125.895	0.819958	0.7973	50.106	1.2543	0.5714	0.5717
42.800	43.644	147.375	-125.775	0.819870	0.7938	50.328	1.2598	0.5691	0.5694
43.000	43.848	147.493	-125.657	0.819780	0.7902	50.555	1.2656	0.5666	0.5669
43.149	44.000	147.582	-125.568	0.819712	0.7875	50.729	1.2699	0.5643	0.5646
43.400	44.256	147.730	-125.438	0.819566	0.7865	50.789	1.2714	0.5640	0.5643
43.600	44.460	147.847	-125.303	0.819501	0.7790	51.030	1.2774	0.5616	0.5619
43.800	44.664	147.964	-125.186	0.819405	0.7752	51.234	1.2836	0.5593	0.5596
44.000	44.868	148.081	-125.069	0.819306	0.7712	51.478	1.2900	0.5568	0.5571
44.119	44.999	148.156	-125.000	0.819246	0.7688	51.959	1.2966	0.5550	0.5553
44.200	45.000	148.197	-124.994	0.819240	0.7686	51.974	1.2966	0.5550	0.5553
44.400	45.071	148.317	-124.950	0.819205	0.7672	52.071	1.2966	0.5533	0.5536
44.600	45.275	148.433	-124.837	0.819101	0.7630	52.471	1.3035	0.5511	0.5514
44.800	45.479	148.548	-124.722	0.819095	0.7588	52.953	1.3105	0.5471	0.5474
44.900	45.683	148.654	-124.607	0.818886	0.7545	53.950	1.3225	0.5441	0.5444
45.000	45.887	148.758	-124.492	0.818774	0.7500	53.566	1.3334	0.5412	0.5415
45.111	46.000	148.721	-124.429	0.818710	0.7474	53.446	1.3379	0.5380	0.5383

TABLE 11 CONTINUED

## SATURATED LIQUID ARGON

BAR	PRESSURE		TEMPERATURE		DENSITY		CM <sup>3</sup> /GRAM-MOLE	VOLUME	DENSITY RATIOS - DIMENSIONLESS	
	KP/CM <sup>2</sup>	MM HG	KELVIN	CELSIUS	GRAM-MOLE/CM <sup>3</sup>	KG/DM <sup>3</sup>			LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 1 BAR	LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 760 TORR
45.200	46.091	148.772	-124.378	0.018658	0.7454	53.595	1.3416	0.5344	0.5347	
45.400	46.295	148.866	-124.264	0.018539	0.7406	53.595	1.3502	0.5310	0.5313	
45.600	46.499	148.960	-124.150	0.018417	0.7357	53.595	1.3592	0.5275	0.5278	
45.800	46.703	149.054	-124.037	0.018299	0.7306	53.595	1.3687	0.5239	0.5241	
45.866	46.771	149.130	-124.000	0.018246	0.7289	53.595	1.3719	0.5226	0.5229	
46.000	47.007	149.225	-123.925	0.018157	0.7253	53.595	1.3787	0.5201	0.5204	
46.091	47.000	149.277	-123.873	0.018095	0.7229	53.595	1.3834	0.5183	0.5186	
46.200	47.111	149.338	-123.812	0.018050	0.7199	53.595	1.3882	0.5161	0.5164	
46.400	47.315	149.450	-123.700	0.017877	0.7141	53.595	1.4003	0.5120	0.5123	
46.600	47.519	149.561	-123.589	0.017726	0.7081	53.595	1.4122	0.5077	0.5080	
46.800	47.723	149.672	-123.478	0.017569	0.7018	53.595	1.4248	0.5032	0.5035	
47.000	47.927	149.783	-123.367	0.017402	0.6952	53.595	1.4385	0.4984	0.4987	
47.072	48.000	149.823	-123.327	0.017340	0.6927	53.595	1.4437	0.4969	0.4972	
47.394	48.131	149.893	-123.257	0.017225	0.6881	53.595	1.4533	0.4934	0.4936	
47.600	48.328	150.000	-123.150	0.017042	0.6808	53.595	1.4689	0.4882	0.4884	
47.600	48.335	150.003	-123.147	0.017036	0.6805	53.595	1.4694	0.4880	0.4882	
47.668	48.508	150.113	-123.037	0.016832	0.6724	53.595	1.4872	0.4821	0.4824	
47.800	48.742	150.222	-122.928	0.016659	0.6635	53.595	1.5071	0.4757	0.4760	
48.000	48.946	150.331	-122.819	0.016509	0.6537	60.207	1.5298	0.4687	0.4690	
48.053	49.000	150.360	-122.790	0.016363	0.6436	61.112	1.5363	0.4667	0.4670	
48.200	49.150	150.440	-122.710	0.016294	0.6346	61.112	1.5562	0.4608	0.4610	
48.400	49.354	150.548	-122.602	0.016086	0.6226	63.436	1.5680	0.4515	0.4518	
48.600	49.558	150.656	-122.494	0.015754	0.6297	63.436	1.5880	0.4402	0.4405	
48.800	49.762	150.763	-122.387	0.015370	0.6140	65.062	1.6287	0.4248	0.4250	
48.981	49.946	150.860	-122.290	0.014890	0.5924	67.431	1.6864	0.4064	0.4066	
				0.013412	0.5358	74.558	1.8664	0.3842	0.3844	

TABLE 12

## DENSITY OF COMPRESSED LIQUID ARGON

1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR		TABLE ENTRIES													
		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS							2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS						
BAR KPa/cm <sup>2</sup>	0.000 0.816	1.000 1.020	2.000 2.939	4.000 4.779	6.000 6.118	8.000 8.158	10.000 10.197	15.000 15.296	20.000 20.394	25.000 25.493	30.000 30.591	35.000 35.690	40.000 40.789		
85.0	1.0093	1.0093	1.0095	1.0100	1.0104	1.0108	1.0112	1.0123	1.0133	1.0143	1.0153	1.0163	1.0173		
-168.15	1.0078	1.0099	1.0101	1.0105	1.0109	1.0113	1.0116	1.0124	1.0138	1.0149	1.0159	1.0169	1.0179		
0.790	1.4076	1.4077	1.4080	1.4086	1.4092	1.4097	1.4103	1.4118	1.4132	1.4146	1.4160	1.4174	1.4188		
85.1	1.0089	1.0089	1.0091	1.0095	1.0100	1.0104	1.0108	1.0118	1.0129	1.0139	1.0149	1.0159	1.0169		
-168.05	1.0094	1.0094	1.0097	1.0101	1.0105	1.0109	1.0113	1.0124	1.0134	1.0144	1.0155	1.0165	1.0175		
0.799	1.4070	1.4071	1.4074	1.4080	1.4086	1.4092	1.4097	1.4112	1.4126	1.4141	1.4155	1.4169	1.4183		
85.2	1.0085	1.0087	1.0091	1.0095	1.0100	1.0104	1.0108	1.0114	1.0125	1.0135	1.0145	1.0155	1.0165		
-167.95	1.0090	1.0092	1.0097	1.0101	1.0105	1.0109	1.0112	1.0120	1.0130	1.0140	1.0150	1.0160	1.0170		
0.808	1.4065	1.4068	1.4074	1.4080	1.4086	1.4091	1.4096	1.4120	1.4135	1.4149	1.4163	1.4177	1.4191		
85.3	1.0080	1.0083	1.0087	1.0091	1.0095	1.0100	1.0104	1.0120	1.0131	1.0141	1.0151	1.0161	1.0161		
-167.85	1.0086	1.0088	1.0092	1.0097	1.0101	1.0105	1.0108	1.0126	1.0136	1.0146	1.0156	1.0166	1.0166		
0.817	1.4059	1.4062	1.4068	1.4074	1.4080	1.4086	1.4100	1.4115	1.4129	1.4143	1.4157	1.4171	1.4171		
85.4	1.0076	1.0078	1.0083	1.0087	1.0091	1.0095	1.0106	1.0116	1.0126	1.0137	1.0147	1.0157	1.0157		
-167.75	1.0082	1.0084	1.0088	1.0092	1.0097	1.0101	1.0111	1.0122	1.0132	1.0142	1.0152	1.0162	1.0162		
0.826	1.4053	1.4056	1.4062	1.4068	1.4074	1.4080	1.4094	1.4109	1.4123	1.4137	1.4151	1.4165	1.4165		
85.5	1.0072	1.0074	1.0078	1.0083	1.0087	1.0091	1.0102	1.0112	1.0122	1.0132	1.0143	1.0153	1.0153		
-167.65	1.0077	1.0079	1.0084	1.0088	1.0092	1.0097	1.0107	1.0117	1.0128	1.0138	1.0148	1.0158	1.0158		
0.835	1.4047	1.4050	1.4056	1.4062	1.4068	1.4074	1.4088	1.4103	1.4117	1.4132	1.4146	1.4160	1.4160		
85.6	1.0066	1.0070	1.0074	1.0078	1.0083	1.0087	1.0097	1.0108	1.0118	1.0128	1.0138	1.0148	1.0148		
-167.55	1.0073	1.0075	1.0079	1.0084	1.0088	1.0092	1.0103	1.0113	1.0124	1.0134	1.0144	1.0154	1.0154		
0.844	1.4041	1.4044	1.4050	1.4056	1.4062	1.4068	1.4083	1.4097	1.4111	1.4126	1.4140	1.4154	1.4154		
85.7	1.0063	1.0066	1.0070	1.0074	1.0078	1.0083	1.0093	1.0104	1.0114	1.0124	1.0134	1.0144	1.0144		
-167.45	1.0069	1.0071	1.0075	1.0079	1.0084	1.0088	1.0099	1.0109	1.0119	1.0130	1.0140	1.0150	1.0150		
0.854	1.4035	1.4038	1.4044	1.4050	1.4056	1.4062	1.4077	1.4091	1.4106	1.4120	1.4134	1.4148	1.4148		
85.8	1.0059	1.0061	1.0065	1.0070	1.0074	1.0078	1.0088	1.0099	1.0110	1.0120	1.0130	1.0140	1.0140		
-167.35	1.0064	1.0067	1.0071	1.0075	1.0079	1.0084	1.0094	1.0105	1.0115	1.0125	1.0136	1.0146	1.0146		
0.863	1.4029	1.4032	1.4038	1.4044	1.4050	1.4056	1.4071	1.4085	1.4100	1.4114	1.4128	1.4142	1.4142		
85.9	1.0055	1.0057	1.0061	1.0066	1.0070	1.0074	1.0085	1.0095	1.0106	1.0116	1.0126	1.0136	1.0136		
-167.25	1.0060	1.0062	1.0067	1.0071	1.0075	1.0079	1.0090	1.0101	1.0111	1.0121	1.0131	1.0141	1.0141		
0.873	1.4023	1.4026	1.4032	1.4038	1.4044	1.4050	1.4065	1.4079	1.4094	1.4108	1.4123	1.4137	1.4137		
86.0	1.0050	1.0053	1.0057	1.0061	1.0065	1.0070	1.0080	1.0091	1.0101	1.0111	1.0122	1.0132	1.0132		
-167.15	1.0056	1.0058	1.0062	1.0066	1.0071	1.0075	1.0086	1.0096	1.0107	1.0117	1.0127	1.0137	1.0137		
0.882	1.4017	1.4020	1.4026	1.4032	1.4038	1.4044	1.4059	1.4074	1.4088	1.4102	1.4117	1.4131	1.4131		
86.1	1.0046	1.0048	1.0053	1.0057	1.0061	1.0065	1.0076	1.0087	1.0097	1.0107	1.0118	1.0128	1.0128		
-167.05	1.0051	1.0054	1.0058	1.0062	1.0067	1.0071	1.0082	1.0092	1.0103	1.0113	1.0123	1.0133	1.0133		
0.892	1.4011	1.4014	1.4020	1.4026	1.4032	1.4038	1.4053	1.4068	1.4082	1.4097	1.4111	1.4125	1.4125		
86.2	1.0042	1.0044	1.0048	1.0053	1.0057	1.0061	1.0072	1.0082	1.0093	1.0103	1.0114	1.0124	1.0124		
-166.95	1.0047	1.0049	1.0054	1.0058	1.0062	1.0067	1.0077	1.0088	1.0098	1.0109	1.0119	1.0129	1.0129		
0.902	1.4005	1.4008	1.4014	1.4020	1.4026	1.4032	1.4047	1.4062	1.4076	1.4091	1.4105	1.4119	1.4119		
86.3	1.0037	1.0040	1.0044	1.0048	1.0053	1.0057	1.0068	1.0078	1.0089	1.0099	1.0109	1.0120	1.0120		
-166.85	1.0043	1.0045	1.0049	1.0054	1.0058	1.0062	1.0073	1.0084	1.0094	1.0104	1.0115	1.0125	1.0125		
0.912	1.3999	1.4002	1.4008	1.4014	1.4020	1.4026	1.4041	1.4056	1.4070	1.4085	1.4099	1.4113	1.4113		
86.4	1.0033	1.0035	1.0040	1.0044	1.0048	1.0053	1.0063	1.0074	1.0084	1.0095	1.0105	1.0115	1.0115		
-166.75	1.0039	1.0041	1.0045	1.0049	1.0054	1.0058	1.0069	1.0079	1.0089	1.0100	1.0110	1.0121	1.0121		
0.922	1.3993	1.3996	1.4002	1.4008	1.4014	1.4020	1.4035	1.4050	1.4065	1.4079	1.4093	1.4108	1.4108		
86.5	1.0029	1.0031	1.0035	1.0040	1.0044	1.0048	1.0059	1.0070	1.0080	1.0091	1.0101	1.0111	1.0111		
-166.65	1.0034	1.0036	1.0041	1.0045	1.0049	1.0054	1.0064	1.0075	1.0086	1.0096	1.0106	1.0116	1.0116		
0.932	1.3987	1.3990	1.3996	1.4002	1.4008	1.4014	1.4029	1.4044	1.4059	1.4073	1.4088	1.4102	1.4102		
86.6	1.0024	1.0027	1.0031	1.0035	1.0040	1.0044	1.0055	1.0066	1.0076	1.0086	1.0097	1.0107	1.0107		
-166.55	1.0030	1.0032	1.0036	1.0041	1.0045	1.0049	1.0060	1.0071	1.0081	1.0092	1.0102	1.0112	1.0112		
0.942	1.3981	1.3984	1.3990	1.3996	1.4002	1.4008	1.4023	1.4038	1.4053	1.4067	1.4082	1.4096	1.4096		
86.7	1.0020	1.0022	1.0027	1.0031	1.0035	1.0040	1.0050	1.0061	1.0072	1.0082	1.0093	1.0103	1.0103		
-166.45	1.0025	1.0028	1.0032	1.0036	1.0041	1.0045	1.0056	1.0067	1.0077	1.0088	1.0099	1.0109	1.0109		
0.952	1.3975	1.3978	1.3984	1.3990	1.3996	1.3996	1.4011	1.4026	1.4041	1.4056	1.4071	1.4086	1.4086		
86.8	1.0016	1.0018	1.0022	1.0027	1.0031	1.0035	1.0046	1.0057	1.0067	1.0077	1.0088	1.0098	1.0098		
-166.35	1.0021	1.0023	1.0028	1.0032	1.0036	1.0041	1.0052	1.0062	1.0073	1.0083	1.0094	1.0104	1.0104		
0.962	1.3969	1.3972	1.3978	1.3984	1.3990	1.3990	1.4011	1.4026	1.4041	1.4056	1.4071	1.4086	1.4086		
86.9	1.0011	1.0014	1.0018	1.0022	1.0027	1.0031	1.0042	1.0053	1.0063	1.0074	1.0084	1.0094	1.0094		
-166.25	1.0017	1.0019	1.0023	1.0028	1.0032	1.0037	1.0047	1.0058	1.0069	1.0079	1.0090	1.0100	1.0100		
0.973	1.3963	1.3966	1.3972	1.3978	1.3984	1.3990	1.4005	1.4020	1.4035	1.4050	1.4064	1.4079	1.4079		

TABLE 12 - CONTINUED

## DENSITY OF COMPRESSED LIQUID ARGON - CONTINUED

		TABLE ENTRIES												
		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
		3. DENSITY, KG/DM <sup>3</sup>												
BAR	K	0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
K/CM <sup>2</sup>	°C	0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789
87.0		1.0007	1.0009	1.0014	1.0018	1.0022	1.0027	1.0031	1.0036	1.0040	1.0045	1.0050	1.0055	1.0060
-165.15		1.0012	1.0015	1.0019	1.0023	1.0028	1.0032	1.0037	1.0043	1.0048	1.0054	1.0064	1.0075	1.0085
0.983		1.3957	1.3960	1.3966	1.3972	1.3978	1.3984	1.3989	1.4014	1.4029	1.4044	1.4058	1.4074	1.4073
87.1		1.0003	1.0005	1.0009	1.0014	1.0018	1.0022	1.0033	1.0044	1.0055	1.0065	1.0076	1.0086	1.0086
-166.05		1.0008	1.0010	1.0015	1.0019	1.0023	1.0028	1.0035	1.0049	1.0060	1.0071	1.0081	1.0091	1.0092
0.994		1.3950	1.3954	1.3960	1.3966	1.3972	1.3978	1.3993	1.4008	1.4023	1.4038	1.4052	1.4067	1.4067
87.2		1.0000	1.0005	1.0009	1.0014	1.0018	1.0022	1.0025	1.0040	1.0050	1.0061	1.0072	1.0082	1.0082
-165.95		1.0006	1.0010	1.0015	1.0019	1.0024	1.0028	1.0034	1.0046	1.0056	1.0066	1.0077	1.0087	1.0087
1.004		1.3947	1.3954	1.3960	1.3966	1.3972	1.3978	1.3987	1.4002	1.4017	1.4032	1.4047	1.4061	1.4061
87.3		0.9996	1.0001	1.0005	1.0009	1.0014	1.0019	1.0025	1.0035	1.0046	1.0057	1.0067	1.0078	1.0078
-165.85		1.0001	1.0006	1.0010	1.0015	1.0019	1.0023	1.0030	1.0041	1.0052	1.0062	1.0073	1.0083	1.0083
1.015		1.3941	1.3948	1.3954	1.3960	1.3966	1.3972	1.3981	1.3996	1.4011	1.4026	1.4041	1.4055	1.4055
87.4		0.9992	0.9996	1.0001	1.0005	1.0009	1.0014	1.0020	1.0031	1.0042	1.0053	1.0063	1.0073	1.0073
-165.75		0.9997	1.0002	1.0006	1.0010	1.0015	1.0019	1.0026	1.0037	1.0048	1.0058	1.0068	1.0078	1.0078
1.026		1.3935	1.3941	1.3948	1.3954	1.3960	1.3966	1.3975	1.3990	1.4005	1.4020	1.4035	1.4049	1.4049
87.5		0.9987	0.9992	0.9996	1.0001	1.0005	1.0010	1.0016	1.0027	1.0038	1.0048	1.0059	1.0069	1.0069
-165.65		0.9993	0.9997	1.0002	1.0006	1.0010	1.0015	1.0021	1.0032	1.0043	1.0054	1.0064	1.0074	1.0074
1.037		1.3929	1.3935	1.3942	1.3948	1.3954	1.3959	1.3968	1.3984	1.3999	1.4014	1.4029	1.4043	1.4043
87.6		0.9983	0.9987	0.9992	0.9996	1.0001	1.0005	1.0012	1.0023	1.0033	1.0044	1.0055	1.0065	1.0065
-165.55		0.9988	0.9993	0.9997	1.0002	1.0006	1.0010	1.0017	1.0028	1.0039	1.0049	1.0059	1.0069	1.0069
1.046		1.3923	1.3929	1.3935	1.3942	1.3948	1.3954	1.3963	1.3978	1.3993	1.4008	1.4023	1.4037	1.4037
87.7		0.9979	0.9983	0.9988	0.9992	0.9996	0.9999	1.0007	1.0018	1.0029	1.0040	1.0050	1.0061	1.0061
-165.45		0.9984	0.9988	0.9993	0.9997	0.9999	1.0002	1.0013	1.0024	1.0035	1.0045	1.0056	1.0066	1.0066
1.059		1.3917	1.3923	1.3929	1.3935	1.3942	1.3948	1.3957	1.3972	1.3987	1.4002	1.4017	1.4032	1.4032
87.8		0.9974	0.9979	0.9983	0.9988	0.9992	0.9997	1.0003	1.0014	1.0025	1.0036	1.0046	1.0057	1.0057
-165.35		0.9980	0.9984	0.9988	0.9993	0.9997	0.9999	1.0006	1.0015	1.0026	1.0036	1.0046	1.0056	1.0056
1.070		1.3911	1.3917	1.3923	1.3929	1.3935	1.3942	1.3951	1.3966	1.3981	1.3996	1.4011	1.4026	1.4026
87.9		0.9970	0.9974	0.9979	0.9983	0.9988	0.9993	0.9999	1.0010	1.0021	1.0031	1.0042	1.0052	1.0052
-165.25		0.9975	0.9980	0.9984	0.9989	0.9993	0.9998	1.0004	1.0015	1.0026	1.0037	1.0047	1.0057	1.0057
1.081		1.3905	1.3911	1.3917	1.3923	1.3929	1.3935	1.3946	1.3960	1.3975	1.3990	1.4005	1.4020	1.4020
88.0		0.9965	0.9970	0.9974	0.9979	0.9983	0.9988	0.9994	1.0005	1.0016	1.0027	1.0038	1.0048	1.0048
-165.15		0.9971	0.9975	0.9980	0.9984	0.9989	0.9993	1.0000	1.0011	1.0022	1.0032	1.0043	1.0054	1.0054
1.092		1.3898	1.3905	1.3911	1.3917	1.3923	1.3929	1.3936	1.3954	1.3969	1.3984	1.3999	1.4014	1.4014
88.1		0.9961	0.9965	0.9970	0.9974	0.9979	0.9983	0.9989	1.0001	1.0012	1.0023	1.0033	1.0044	1.0044
-165.05		0.9966	0.9971	0.9975	0.9980	0.9984	0.9989	0.9995	1.0006	1.0017	1.0028	1.0038	1.0049	1.0049
1.104		1.3892	1.3899	1.3905	1.3911	1.3917	1.3923	1.3933	1.3948	1.3963	1.3978	1.3993	1.4008	1.4008
88.2		0.9956	0.9961	0.9966	0.9970	0.9975	0.9979	0.9986	0.9997	1.0008	1.0018	1.0029	1.0040	1.0040
-164.95		0.9962	0.9966	0.9971	0.9975	0.9980	0.9984	0.9991	1.0002	1.0013	1.0024	1.0035	1.0045	1.0045
1.115		1.3886	1.3892	1.3899	1.3905	1.3911	1.3917	1.3927	1.3942	1.3957	1.3972	1.3987	1.4002	1.4002
88.3		0.9952	0.9957	0.9961	0.9966	0.9970	0.9974	0.9981	0.9992	1.0003	1.0014	1.0025	1.0035	1.0035
-164.85		0.9957	0.9962	0.9966	0.9971	0.9975	0.9979	0.9986	0.9997	1.0008	1.0019	1.0030	1.0041	1.0041
1.127		1.3880	1.3886	1.3893	1.3899	1.3905	1.3911	1.3921	1.3936	1.3951	1.3966	1.3981	1.3996	1.3996
88.4		0.9948	0.9952	0.9957	0.9961	0.9965	0.9970	0.9980	0.9990	1.0001	1.0012	1.0023	1.0033	1.0033
-164.75		0.9953	0.9958	0.9962	0.9967	0.9971	0.9975	0.9982	0.9993	1.0004	1.0015	1.0026	1.0037	1.0037
1.139		1.3874	1.3880	1.3886	1.3893	1.3899	1.3905	1.3915	1.3930	1.3945	1.3960	1.3975	1.3990	1.3990
88.5		0.9943	0.9948	0.9952	0.9957	0.9961	0.9966	0.9977	0.9988	0.9999	1.0010	1.0021	1.0032	1.0032
-164.65		0.9949	0.9953	0.9958	0.9962	0.9967	0.9971	0.9978	0.9989	1.0000	1.0011	1.0022	1.0033	1.0033
1.150		1.3868	1.3874	1.3880	1.3887	1.3893	1.3900	1.3910	1.3924	1.3939	1.3954	1.3969	1.3984	1.3984
88.6		0.9939	0.9943	0.9948	0.9952	0.9957	0.9962	0.9973	0.9984	0.9995	1.0006	1.0017	1.0028	1.0028
-164.55		0.9944	0.9949	0.9953	0.9958	0.9962	0.9967	0.9974	0.9985	0.9996	1.0007	1.0017	1.0028	1.0028
1.162		1.3861	1.3868	1.3874	1.3880	1.3887	1.3893	1.3902	1.3916	1.3931	1.3946	1.3961	1.3976	1.3976
88.7		0.9934	0.9939	0.9943	0.9948	0.9953	0.9958	0.9969	0.9979	0.9990	1.0001	1.0012	1.0023	1.0023
-164.45		0.9940	0.9944	0.9949	0.9953	0.9958	0.9963	0.9970	0.9981	0.9992	1.0003	1.0014	1.0025	1.0025
1.174		1.3855	1.3862	1.3868	1.3874	1.3881	1.3888	1.3898	1.3912	1.3927	1.3942	1.3957	1.3972	1.3972
88.8		0.9930	0.9934	0.9939	0.9944	0.9948	0.9954	0.9965	0.9975	0.9986	0.9997	1.0008	1.0019	1.0019
-164.35		0.9935	0.9940	0.9944	0.9949	0.9954	0.9959	0.9966	0.9977	0.9988	0.9999	1.0010	1.0021	1.0021
1.186		1.3849	1.3855	1.3862	1.3868	1.3874	1.3881	1.3890	1.3906	1.3921	1.3936	1.3951	1.3966	1.3966
88.9		0.9925	0.9930	0.9935	0.9939	0.9944	0.9949	0.9960	0.9970	0.9981	0.9992	1.0003	1.0014	1.0014
-164.25		0.9931	0.9935	0.9940	0.9945	0.9950	0.9955	0.9962	0.9973	0.9984	0.9995	1.0006	1.0017	1.0017
1.199		1.3843	1.3849	1.3856	1.3862	1.3868	1.3874	1.3884	1.3900	1.3915	1.3930	1.3946	1.3961	1.3961



TABLE 12 - CONTINUED

## DENSITY OF COMPRESSED LIQUID ARGON - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/CM <sup>3</sup>											
BAR KPa/Cm <sup>2</sup>	0.800 0.016	1.000 0.020	2.000 0.039	4.000 0.079	6.000 0.118	8.000 0.158	10.000 0.197	15.000 0.296	20.000 0.394	25.000 0.493	30.000 0.591	35.000 0.690	40.000 0.789
89.0 -184.15 1.211	0.9921 0.9926 1.3837	0.9926 0.9931 1.3843	0.9930 0.9936 1.3849	0.9935 0.9940 1.3856	0.9939 0.9945 1.3862	0.9951 0.9956 1.3878	0.9962 0.9967 1.3894	0.9973 0.9978 1.3909	0.9984 0.9989 1.3924	0.9995 1.0000 1.3940	1.0006 1.0011 1.3955	1.0017 1.0022 1.3970	1.0028 1.0033 1.3985
89.1 -184.05 1.253	0.9916 0.9922 1.3830	0.9921 0.9926 1.3837	0.9926 0.9931 1.3843	0.9930 0.9936 1.3850	0.9935 0.9940 1.3856	0.9946 0.9952 1.3872	0.9957 0.9963 1.3887	0.9968 0.9974 1.3902	0.9979 0.9985 1.3917	0.9990 0.9995 1.3932	1.0001 1.0006 1.3947	1.0012 1.0017 1.3962	1.0023 1.0028 1.3977
89.2 -183.95 1.236	0.9912 0.9917 1.3824	0.9917 0.9922 1.3831	0.9921 0.9927 1.3837	0.9926 0.9931 1.3843	0.9930 0.9936 1.3850	0.9942 0.9947 1.3866	0.9953 0.9958 1.3881	0.9964 0.9970 1.3897	0.9975 0.9981 1.3912	0.9986 0.9991 1.3927	0.9997 1.0002 1.3942	1.0008 1.0013 1.3957	1.0019 1.0024 1.3972
89.3 -183.85 1.246	0.9908 0.9913 1.3818	0.9912 0.9918 1.3824	0.9917 0.9922 1.3831	0.9921 0.9927 1.3837	0.9926 0.9931 1.3844	0.9937 0.9943 1.3860	0.9948 0.9954 1.3875	0.9959 0.9965 1.3891	0.9970 0.9976 1.3906	0.9981 0.9987 1.3921	0.9992 0.9997 1.3936	0.9993 1.0002 1.3951	1.0004 1.0009 1.3966
89.4 -183.75 1.261	0.9903 0.9908 1.3812	0.9908 0.9913 1.3818	0.9912 0.9918 1.3825	0.9917 0.9922 1.3831	0.9922 0.9927 1.3837	0.9933 0.9938 1.3853	0.9944 0.9950 1.3869	0.9956 0.9961 1.3885	0.9967 0.9972 1.3901	0.9978 0.9983 1.3916	0.9989 0.9994 1.3931	0.9990 0.9999 1.3946	1.0001 1.0006 1.3961
89.5 -183.65 1.274	0.9899 0.9904 1.3805	0.9903 0.9909 1.3812	0.9908 0.9913 1.3818	0.9913 0.9918 1.3825	0.9917 0.9923 1.3831	0.9925 0.9931 1.3847	0.9940 0.9945 1.3863	0.9951 0.9957 1.3879	0.9962 0.9968 1.3894	0.9973 0.9979 1.3910	0.9984 0.9989 1.3925	0.9995 1.0000 1.3940	1.0006 1.0011 1.3955
89.6 -183.55 1.286	0.9894 0.9899 1.3799	0.9899 0.9904 1.3806	0.9903 0.9909 1.3812	0.9908 0.9913 1.3819	0.9913 0.9918 1.3825	0.9924 0.9930 1.3841	0.9936 0.9941 1.3857	0.9947 0.9952 1.3873	0.9958 0.9963 1.3888	0.9969 0.9974 1.3903	0.9980 0.9985 1.3919	0.9991 0.9996 1.3934	1.0002 1.0007 1.3949
89.7 -183.45 1.299	0.9890 0.9895 1.3793	0.9894 0.9900 1.3799	0.9899 0.9904 1.3806	0.9904 0.9909 1.3812	0.9908 0.9913 1.3819	0.9920 0.9925 1.3835	0.9931 0.9937 1.3851	0.9942 0.9948 1.3866	0.9953 0.9959 1.3882	0.9964 0.9970 1.3897	0.9975 0.9981 1.3913	0.9986 0.9991 1.3928	0.9997 1.0002 1.3943
89.8 -183.35 1.312	0.9885 0.9890 1.3787	0.9889 0.9895 1.3793	0.9894 0.9900 1.3800	0.9899 0.9905 1.3806	0.9904 0.9909 1.3813	0.9915 0.9921 1.3829	0.9927 0.9932 1.3845	0.9938 0.9944 1.3860	0.9949 0.9955 1.3876	0.9960 0.9966 1.3891	0.9971 0.9977 1.3907	0.9982 0.9987 1.3922	0.9993 0.9998 1.3937
89.9 -183.25 1.326	0.9881 0.9886 1.3780	0.9885 0.9891 1.3787	0.9890 0.9895 1.3793	0.9895 0.9900 1.3800	0.9899 0.9905 1.3806	0.9911 0.9917 1.3823	0.9922 0.9928 1.3839	0.9933 0.9939 1.3854	0.9944 0.9950 1.3870	0.9955 0.9961 1.3885	0.9966 0.9972 1.3901	0.9977 0.9983 1.3916	0.9988 0.9994 1.3931
90.0 -183.15 1.339	0.9876 0.9881 1.3774	0.9881 0.9886 1.3781	0.9886 0.9891 1.3787	0.9890 0.9896 1.3794	0.9895 0.9900 1.3800	0.9906 0.9912 1.3816	0.9918 0.9923 1.3832	0.9929 0.9935 1.3848	0.9941 0.9946 1.3864	0.9952 0.9958 1.3879	0.9963 0.9969 1.3895	0.9974 0.9980 1.3910	0.9985 0.9991 1.3926
90.1 -183.05 1.352	0.9872 0.9877 1.3768	0.9876 0.9882 1.3774	0.9881 0.9886 1.3781	0.9886 0.9891 1.3787	0.9890 0.9896 1.3794	0.9902 0.9907 1.3810	0.9914 0.9919 1.3826	0.9925 0.9930 1.3842	0.9936 0.9942 1.3857	0.9947 0.9953 1.3873	0.9958 0.9964 1.3888	0.9969 0.9975 1.3904	0.9980 0.9986 1.3919
90.2 -182.95 1.366	0.9867 0.9872 1.3761	0.9872 0.9877 1.3768	0.9877 0.9882 1.3775	0.9881 0.9887 1.3781	0.9886 0.9891 1.3788	0.9896 0.9903 1.3804	0.9908 0.9914 1.3820	0.9919 0.9926 1.3836	0.9930 0.9937 1.3852	0.9941 0.9948 1.3867	0.9952 0.9959 1.3883	0.9963 0.9970 1.3898	0.9974 0.9981 1.3914
90.3 -182.85 1.379	0.9863 0.9868 1.3759	0.9867 0.9873 1.3765	0.9872 0.9877 1.3772	0.9877 0.9882 1.3779	0.9881 0.9887 1.3785	0.9893 0.9900 1.3801	0.9905 0.9911 1.3817	0.9916 0.9922 1.3833	0.9927 0.9934 1.3848	0.9938 0.9945 1.3864	0.9949 0.9956 1.3880	0.9960 0.9967 1.3895	0.9971 0.9978 1.3911
90.4 -182.75 1.393	0.9858 0.9863 1.3749	0.9863 0.9868 1.3755	0.9868 0.9873 1.3762	0.9872 0.9878 1.3769	0.9877 0.9882 1.3775	0.9889 0.9896 1.3792	0.9900 0.9906 1.3808	0.9912 0.9919 1.3824	0.9923 0.9928 1.3840	0.9934 0.9940 1.3855	0.9945 0.9951 1.3871	0.9956 0.9962 1.3886	0.9967 0.9973 1.3902
90.5 -182.65 1.407	0.9853 0.9859 1.3742	0.9858 0.9864 1.3748	0.9863 0.9868 1.3755	0.9868 0.9873 1.3762	0.9872 0.9878 1.3769	0.9884 0.9891 1.3785	0.9896 0.9903 1.3801	0.9907 0.9914 1.3817	0.9918 0.9925 1.3833	0.9929 0.9936 1.3848	0.9940 0.9947 1.3864	0.9951 0.9958 1.3880	0.9962 0.9969 1.3895
90.6 -182.55 1.428	0.9849 0.9854 1.3736	0.9854 0.9859 1.3743	0.9859 0.9864 1.3750	0.9863 0.9869 1.3756	0.9868 0.9873 1.3763	0.9880 0.9887 1.3779	0.9891 0.9898 1.3795	0.9902 0.9909 1.3811	0.9913 0.9920 1.3827	0.9924 0.9931 1.3842	0.9935 0.9942 1.3858	0.9946 0.9953 1.3874	0.9957 0.9964 1.3889
90.7 -182.45 1.434	0.9840 0.9850 1.3730	0.9844 0.9855 1.3736	0.9849 0.9859 1.3743	0.9854 0.9864 1.3750	0.9859 0.9869 1.3756	0.9871 0.9878 1.3773	0.9882 0.9890 1.3789	0.9893 0.9901 1.3805	0.9904 0.9911 1.3821	0.9915 0.9922 1.3837	0.9926 0.9933 1.3852	0.9937 0.9944 1.3868	0.9948 0.9955 1.3884
90.8 -182.35 1.448	0.9840 0.9845 1.3723	0.9845 0.9850 1.3730	0.9849 0.9855 1.3737	0.9854 0.9860 1.3743	0.9859 0.9864 1.3750	0.9871 0.9878 1.3766	0.9882 0.9890 1.3782	0.9893 0.9901 1.3798	0.9904 0.9911 1.3814	0.9915 0.9922 1.3830	0.9926 0.9933 1.3845	0.9937 0.9944 1.3861	0.9948 0.9955 1.3876
90.9 -182.25 1.463	0.9835 0.9841 1.3717	0.9840 0.9845 1.3724	0.9845 0.9850 1.3731	0.9850 0.9855 1.3737	0.9854 0.9860 1.3744	0.9866 0.9872 1.3760	0.9878 0.9883 1.3776	0.9889 0.9896 1.3792	0.9900 0.9907 1.3808	0.9911 0.9918 1.3824	0.9922 0.9929 1.3839	0.9933 0.9940 1.3855	0.9944 0.9951 1.3871



TABLE 12 - CONTINUED

DENSITY OF COMPRESSED LIQUID ARGON - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, °C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/CM <sup>3</sup>											
BAR	0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KP/CM <sup>2</sup>	0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789
91.0			0.9831	0.9836	0.9840	0.9845	0.9850	0.9862	0.9874	0.9885	0.9897	0.9908	0.9919
-182.15			0.9836	0.9841	0.9846	0.9851	0.9855	0.9867	0.9879	0.9891	0.9902	0.9913	0.9925
1.477			1.3711	1.3717	1.3724	1.3731	1.3738	1.3754	1.3770	1.3787	1.3803	1.3819	1.3834
91.1			0.9834	0.9831	0.9836	0.9841	0.9845	0.9857	0.9869	0.9881	0.9892	0.9904	0.9915
-182.05			0.9831	0.9834	0.9841	0.9846	0.9851	0.9863	0.9874	0.9886	0.9898	0.9909	0.9920
1.491			1.3704	1.3711	1.3718	1.3725	1.3731	1.3746	1.3764	1.3780	1.3797	1.3812	1.3828
91.2			0.9822	0.9826	0.9831	0.9836	0.9841	0.9853	0.9865	0.9876	0.9888	0.9899	0.9911
-181.95			0.9827	0.9832	0.9837	0.9841	0.9846	0.9858	0.9870	0.9882	0.9893	0.9905	0.9916
1.566			1.3658	1.3705	1.3712	1.3718	1.3725	1.3742	1.3760	1.3774	1.3790	1.3806	1.3822
91.3			0.9817	0.9822	0.9827	0.9832	0.9836	0.9848	0.9860	0.9872	0.9883	0.9895	0.9906
-181.85			0.9822	0.9827	0.9832	0.9837	0.9842	0.9854	0.9866	0.9877	0.9889	0.9900	0.9912
1.570			1.3692	1.3698	1.3705	1.3712	1.3719	1.3735	1.3752	1.3768	1.3784	1.3800	1.3816
91.4			0.9812	0.9817	0.9822	0.9827	0.9832	0.9844	0.9856	0.9867	0.9879	0.9890	0.9902
-181.75			0.9816	0.9823	0.9828	0.9832	0.9837	0.9849	0.9861	0.9873	0.9884	0.9896	0.9907
1.535			1.3685	1.3692	1.3699	1.3706	1.3712	1.3729	1.3746	1.3763	1.3778	1.3794	1.3810
91.5			0.9808	0.9813	0.9818	0.9823	0.9827	0.9839	0.9851	0.9863	0.9875	0.9886	0.9897
-181.65			0.9809	0.9814	0.9823	0.9828	0.9833	0.9845	0.9857	0.9868	0.9880	0.9891	0.9903
1.550			1.3679	1.3686	1.3692	1.3699	1.3706	1.3723	1.3739	1.3756	1.3772	1.3788	1.3804
91.6			0.9803	0.9808	0.9813	0.9818	0.9823	0.9835	0.9847	0.9859	0.9870	0.9882	0.9893
-181.55			0.9809	0.9814	0.9818	0.9823	0.9828	0.9840	0.9852	0.9864	0.9875	0.9887	0.9898
1.565			1.3672	1.3679	1.3686	1.3693	1.3700	1.3714	1.3733	1.3749	1.3766	1.3782	1.3798
91.7			0.9799	0.9804	0.9809	0.9813	0.9818	0.9830	0.9842	0.9854	0.9866	0.9877	0.9889
-181.45			0.9804	0.9809	0.9814	0.9819	0.9824	0.9836	0.9848	0.9859	0.9871	0.9883	0.9894
1.580			1.3666	1.3673	1.3680	1.3687	1.3693	1.3710	1.3727	1.3743	1.3760	1.3776	1.3792
91.8			0.9794	0.9799	0.9804	0.9809	0.9814	0.9826	0.9838	0.9850	0.9861	0.9873	0.9884
-181.35			0.9799	0.9804	0.9809	0.9814	0.9819	0.9831	0.9843	0.9855	0.9866	0.9878	0.9889
1.595			1.3659	1.3667	1.3673	1.3680	1.3687	1.3704	1.3721	1.3737	1.3753	1.3769	1.3785
91.9			0.9790	0.9794	0.9799	0.9804	0.9809	0.9821	0.9833	0.9845	0.9857	0.9868	0.9880
-181.25			0.9795	0.9800	0.9805	0.9810	0.9814	0.9827	0.9839	0.9850	0.9862	0.9874	0.9885
1.610			1.3653	1.3660	1.3667	1.3674	1.3681	1.3698	1.3714	1.3731	1.3747	1.3763	1.3779
92.0			0.9785	0.9790	0.9795	0.9800	0.9805	0.9817	0.9829	0.9841	0.9852	0.9864	0.9876
-181.15			0.9790	0.9795	0.9800	0.9805	0.9810	0.9822	0.9834	0.9845	0.9856	0.9868	0.9879
1.625			1.3647	1.3654	1.3661	1.3667	1.3674	1.3691	1.3708	1.3725	1.3741	1.3757	1.3773
92.1			0.9780	0.9785	0.9790	0.9795	0.9800	0.9812	0.9824	0.9836	0.9848	0.9860	0.9871
-181.05			0.9786	0.9791	0.9796	0.9800	0.9805	0.9818	0.9830	0.9841	0.9853	0.9865	0.9876
1.641			1.3640	1.3647	1.3654	1.3661	1.3668	1.3685	1.3702	1.3718	1.3735	1.3751	1.3767
92.2			0.9776	0.9781	0.9786	0.9791	0.9795	0.9808	0.9820	0.9832	0.9843	0.9855	0.9867
-180.95			0.9781	0.9786	0.9791	0.9795	0.9799	0.9812	0.9824	0.9835	0.9846	0.9858	0.9870
1.656			1.3634	1.3641	1.3648	1.3655	1.3662	1.3679	1.3695	1.3712	1.3729	1.3745	1.3761
92.3			0.9771	0.9776	0.9781	0.9786	0.9791	0.9803	0.9815	0.9827	0.9839	0.9851	0.9862
-180.85			0.9776	0.9781	0.9786	0.9791	0.9796	0.9808	0.9821	0.9833	0.9844	0.9856	0.9868
1.672			1.3627	1.3634	1.3641	1.3648	1.3655	1.3672	1.3689	1.3706	1.3722	1.3739	1.3755
92.4			0.9766	0.9771	0.9776	0.9781	0.9786	0.9798	0.9811	0.9823	0.9835	0.9846	0.9858
-180.75			0.9772	0.9777	0.9782	0.9787	0.9792	0.9804	0.9816	0.9827	0.9838	0.9850	0.9862
1.688			1.3621	1.3628	1.3635	1.3642	1.3649	1.3666	1.3683	1.3700	1.3716	1.3732	1.3749
92.5			0.9762	0.9767	0.9772	0.9777	0.9782	0.9794	0.9806	0.9818	0.9830	0.9842	0.9854
-180.65			0.9767	0.9772	0.9777	0.9782	0.9787	0.9799	0.9812	0.9824	0.9835	0.9847	0.9859
1.704			1.3615	1.3622	1.3629	1.3636	1.3642	1.3660	1.3677	1.3693	1.3710	1.3726	1.3742
92.6			0.9757	0.9762	0.9767	0.9772	0.9777	0.9789	0.9802	0.9814	0.9826	0.9837	0.9849
-180.55			0.9762	0.9767	0.9772	0.9777	0.9782	0.9794	0.9807	0.9819	0.9831	0.9843	0.9854
1.720			1.3609	1.3615	1.3622	1.3629	1.3636	1.3653	1.3670	1.3687	1.3704	1.3720	1.3736
92.7			0.9753	0.9758	0.9763	0.9768	0.9773	0.9785	0.9797	0.9809	0.9821	0.9833	0.9845
-180.45			0.9758	0.9763	0.9768	0.9773	0.9778	0.9790	0.9802	0.9815	0.9826	0.9838	0.9850
1.736			1.3602	1.3609	1.3616	1.3623	1.3630	1.3647	1.3664	1.3681	1.3697	1.3714	1.3730
92.8			0.9748	0.9753	0.9758	0.9763	0.9768	0.9780	0.9793	0.9805	0.9817	0.9829	0.9840
-180.35			0.9753	0.9758	0.9763	0.9768	0.9773	0.9785	0.9798	0.9810	0.9822	0.9834	0.9846
1.752			1.3595	1.3602	1.3609	1.3616	1.3623	1.3640	1.3658	1.3675	1.3691	1.3708	1.3724
92.9			0.9743	0.9748	0.9753	0.9758	0.9763	0.9775	0.9788	0.9800	0.9812	0.9824	0.9836
-180.25			0.9749	0.9754	0.9759	0.9764	0.9769	0.9781	0.9793	0.9806	0.9818	0.9830	0.9841
1.768			1.3589	1.3596	1.3603	1.3610	1.3617	1.3634	1.3651	1.3668	1.3685	1.3701	1.3718

TABLE 12 - CONTINUED

## DENSITY OF COMPRESSED LIQUID ARGON - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>3</sup>												
BAR		0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KP/CM <sup>2</sup>		0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789
93.0				0.9739	0.9744	0.9749	0.9754	0.9759	0.9771	0.9784	0.9796	0.9808	0.9820	0.9831
-180.15				0.9744	0.9749	0.9754	0.9759	0.9764	0.9777	0.9789	0.9801	0.9813	0.9825	0.9837
1.795				1.3582	1.3589	1.3596	1.3603	1.3610	1.3628	1.3645	1.3662	1.3679	1.3693	1.3712
93.1				0.9734	0.9739	0.9744	0.9749	0.9754	0.9767	0.9779	0.9791	0.9803	0.9815	0.9827
-180.05				0.9739	0.9744	0.9749	0.9754	0.9759	0.9772	0.9784	0.9796	0.9809	0.9820	0.9832
1.801				1.3876	1.3883	1.3890	1.3897	1.3904	1.3921	1.3939	1.3956	1.3972	1.3989	1.3705
93.2				0.9729	0.9734	0.9739	0.9745	0.9750	0.9762	0.9774	0.9787	0.9799	0.9811	0.9823
-179.95				0.9735	0.9740	0.9745	0.9750	0.9755	0.9767	0.9780	0.9792	0.9804	0.9816	0.9828
1.810				1.3569	1.3576	1.3583	1.3591	1.3598	1.3615	1.3632	1.3649	1.3666	1.3683	1.3699
93.3				0.9725	0.9730	0.9735	0.9740	0.9745	0.9758	0.9770	0.9782	0.9794	0.9806	0.9818
-179.85				0.9730	0.9735	0.9740	0.9745	0.9750	0.9763	0.9775	0.9787	0.9800	0.9812	0.9823
1.835				1.3563	1.3570	1.3577	1.3584	1.3591	1.3609	1.3626	1.3643	1.3660	1.3677	1.3693
93.4				0.9720	0.9725	0.9730	0.9735	0.9740	0.9753	0.9765	0.9778	0.9790	0.9802	0.9814
-179.75				0.9725	0.9730	0.9735	0.9741	0.9746	0.9758	0.9771	0.9783	0.9795	0.9807	0.9819
1.852				1.3556	1.3563	1.3570	1.3578	1.3585	1.3602	1.3619	1.3637	1.3654	1.3670	1.3687
93.5				0.9715	0.9720	0.9726	0.9731	0.9736	0.9748	0.9761	0.9773	0.9785	0.9797	0.9809
-179.65				0.9721	0.9726	0.9731	0.9736	0.9741	0.9754	0.9766	0.9778	0.9791	0.9803	0.9814
1.869				1.3550	1.3557	1.3564	1.3571	1.3578	1.3596	1.3613	1.3630	1.3647	1.3664	1.3681
93.6				0.9711	0.9716	0.9721	0.9726	0.9731	0.9744	0.9756	0.9769	0.9781	0.9793	0.9805
-179.55				0.9716	0.9721	0.9726	0.9731	0.9736	0.9748	0.9761	0.9774	0.9786	0.9798	0.9810
1.886				1.3543	1.3550	1.3558	1.3565	1.3572	1.3589	1.3607	1.3624	1.3641	1.3658	1.3674
93.7				0.9706	0.9711	0.9716	0.9721	0.9726	0.9738	0.9752	0.9764	0.9776	0.9788	0.9800
-179.45				0.9711	0.9716	0.9721	0.9727	0.9732	0.9744	0.9757	0.9769	0.9782	0.9794	0.9806
1.903				1.3537	1.3544	1.3551	1.3558	1.3565	1.3583	1.3600	1.3618	1.3635	1.3652	1.3668
93.8				0.9701	0.9706	0.9712	0.9717	0.9722	0.9735	0.9747	0.9759	0.9772	0.9784	0.9796
-179.35				0.9706	0.9712	0.9717	0.9722	0.9727	0.9740	0.9752	0.9765	0.9777	0.9789	0.9801
1.921				1.3530	1.3537	1.3545	1.3552	1.3559	1.3577	1.3594	1.3611	1.3628	1.3645	1.3661
93.9				0.9697	0.9702	0.9707	0.9712	0.9717	0.9730	0.9742	0.9755	0.9767	0.9779	0.9791
-179.25				0.9702	0.9707	0.9712	0.9717	0.9722	0.9735	0.9748	0.9760	0.9772	0.9785	0.9797
1.938				1.3524	1.3531	1.3538	1.3545	1.3552	1.3570	1.3588	1.3605	1.3622	1.3639	1.3656
94.0				0.9692	0.9697	0.9702	0.9707	0.9713	0.9725	0.9738	0.9750	0.9763	0.9775	0.9787
-179.15				0.9697	0.9702	0.9707	0.9713	0.9718	0.9731	0.9743	0.9756	0.9768	0.9780	0.9792
1.956				1.3517	1.3524	1.3531	1.3539	1.3546	1.3564	1.3581	1.3599	1.3616	1.3633	1.3650
94.1				0.9687	0.9692	0.9698	0.9703	0.9708	0.9721	0.9733	0.9746	0.9758	0.9770	0.9782
-179.05				0.9692	0.9698	0.9703	0.9708	0.9713	0.9726	0.9739	0.9751	0.9763	0.9776	0.9788
1.974				1.3510	1.3518	1.3525	1.3532	1.3539	1.3557	1.3575	1.3592	1.3609	1.3626	1.3643
94.2				0.9682	0.9688	0.9693	0.9698	0.9703	0.9717	0.9729	0.9741	0.9754	0.9766	0.9778
-178.95				0.9688	0.9693	0.9698	0.9703	0.9708	0.9721	0.9734	0.9746	0.9759	0.9771	0.9783
1.992				1.3504	1.3511	1.3518	1.3526	1.3533	1.3551	1.3568	1.3586	1.3603	1.3620	1.3637
94.3				0.9683	0.9688	0.9693	0.9699	0.9704	0.9717	0.9729	0.9742	0.9754	0.9767	0.9779
-178.85				0.9688	0.9693	0.9699	0.9704	0.9709	0.9722	0.9734	0.9747	0.9759	0.9772	0.9784
2.010				1.3505	1.3512	1.3519	1.3526	1.3534	1.3552	1.3569	1.3587	1.3604	1.3621	1.3638
94.4				0.9678	0.9683	0.9689	0.9694	0.9700	0.9713	0.9725	0.9737	0.9749	0.9761	0.9773
-178.75				0.9683	0.9689	0.9694	0.9699	0.9704	0.9717	0.9729	0.9741	0.9753	0.9765	0.9777
2.028				1.3458	1.3465	1.3473	1.3480	1.3488	1.3506	1.3523	1.3540	1.3557	1.3574	1.3591
94.5				0.9674	0.9679	0.9684	0.9689	0.9695	0.9708	0.9720	0.9732	0.9744	0.9756	0.9768
-178.65				0.9679	0.9684	0.9689	0.9694	0.9699	0.9712	0.9724	0.9736	0.9748	0.9760	0.9772
2.046				1.3491	1.3499	1.3506	1.3513	1.3521	1.3539	1.3556	1.3573	1.3590	1.3607	1.3624
94.6				0.9669	0.9674	0.9679	0.9685	0.9691	0.9704	0.9716	0.9728	0.9740	0.9752	0.9764
-178.55				0.9674	0.9679	0.9685	0.9690	0.9695	0.9708	0.9720	0.9732	0.9744	0.9756	0.9768
2.064				1.3485	1.3492	1.3500	1.3507	1.3515	1.3532	1.3549	1.3566	1.3583	1.3599	1.3616
94.7				0.9664	0.9669	0.9675	0.9680	0.9686	0.9699	0.9711	0.9723	0.9735	0.9747	0.9759
-178.45				0.9669	0.9675	0.9680	0.9685	0.9690	0.9703	0.9715	0.9727	0.9739	0.9751	0.9763
2.083				1.3478	1.3486	1.3493	1.3500	1.3507	1.3525	1.3542	1.3559	1.3576	1.3593	1.3610
94.8				0.9659	0.9665	0.9670	0.9675	0.9681	0.9694	0.9706	0.9718	0.9730	0.9742	0.9754
-178.35				0.9665	0.9670	0.9675	0.9680	0.9685	0.9698	0.9710	0.9722	0.9734	0.9746	0.9758
2.101				1.3472	1.3479	1.3486	1.3494	1.3501	1.3519	1.3536	1.3553	1.3570	1.3587	1.3599
94.9				0.9655	0.9660	0.9665	0.9670	0.9676	0.9688	0.9700	0.9712	0.9724	0.9736	0.9748
-178.25				0.9660	0.9665	0.9670	0.9675	0.9680	0.9693	0.9705	0.9717	0.9729	0.9741	0.9753
2.120				1.3465	1.3473	1.3480	1.3487	1.3495	1.3512	1.3529	1.3546	1.3563	1.3580	1.3593

TABLE 12 - CONTINUED

## DENSITY OF COMPRESSED LIQUID ARGON - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		3. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/M <sup>3</sup>												
BAR		0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KP/CH <sup>2</sup>		0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.592	35.690	40.789
95.0				0.9650	0.9655	0.9663	0.9666	0.9675	0.9692	0.9705	0.9717	0.9730	0.9742	
-176.15				0.9655	0.9660	0.9666	0.9671	0.9680	0.9697	0.9710	0.9722	0.9735	0.9747	
2.139				1.3459	1.3466	1.3473	1.3481	1.3495	1.3517	1.3535	1.3552	1.3570	1.3587	
95.1				0.9645	0.9651	0.9656	0.9661	0.9674	0.9687	0.9700	0.9713	0.9725	0.9737	
-176.85				0.9650	0.9656	0.9661	0.9666	0.9675	0.9692	0.9705	0.9718	0.9730	0.9743	
2.158				1.3452	1.3459	1.3467	1.3474	1.3492	1.3510	1.3528	1.3546	1.3563	1.3581	
95.2				0.9640	0.9646	0.9651	0.9656	0.9670	0.9683	0.9695	0.9708	0.9721	0.9733	
-177.75				0.9646	0.9651	0.9656	0.9662	0.9675	0.9688	0.9701	0.9713	0.9725	0.9738	
2.177				1.3445	1.3453	1.3460	1.3468	1.3486	1.3504	1.3522	1.3540	1.3557	1.3574	
95.3				0.9636	0.9641	0.9646	0.9652	0.9665	0.9678	0.9691	0.9703	0.9716	0.9728	
-177.85				0.9641	0.9646	0.9652	0.9657	0.9670	0.9683	0.9696	0.9709	0.9721	0.9734	
2.196				1.3439	1.3446	1.3454	1.3461	1.3475	1.3498	1.3519	1.3533	1.3551	1.3568	
95.4				0.9631	0.9636	0.9642	0.9647	0.9660	0.9673	0.9686	0.9699	0.9711	0.9724	
-177.75				0.9636	0.9642	0.9647	0.9652	0.9665	0.9678	0.9691	0.9704	0.9717	0.9729	
2.216				1.3432	1.3440	1.3447	1.3454	1.3473	1.3491	1.3509	1.3527	1.3544	1.3562	
95.5				0.9626	0.9632	0.9637	0.9642	0.9656	0.9669	0.9682	0.9694	0.9707	0.9719	
-177.65				0.9631	0.9637	0.9642	0.9648	0.9661	0.9674	0.9687	0.9700	0.9712	0.9725	
2.235				1.3425	1.3433	1.3440	1.3448	1.3467	1.3485	1.3503	1.3520	1.3538	1.3555	
95.6				0.9621	0.9627	0.9632	0.9638	0.9651	0.9664	0.9677	0.9689	0.9702	0.9715	
-177.55				0.9627	0.9632	0.9637	0.9643	0.9656	0.9669	0.9682	0.9695	0.9708	0.9720	
2.255				1.3419	1.3426	1.3434	1.3441	1.3460	1.3478	1.3496	1.3514	1.3532	1.3549	
95.7				0.9617	0.9622	0.9627	0.9633	0.9646	0.9659	0.9672	0.9685	0.9698	0.9710	
-177.45				0.9622	0.9627	0.9633	0.9638	0.9651	0.9665	0.9678	0.9690	0.9703	0.9716	
2.275				1.3412	1.3420	1.3427	1.3435	1.3453	1.3472	1.3490	1.3508	1.3525	1.3543	
95.8				0.9612	0.9617	0.9623	0.9628	0.9641	0.9655	0.9668	0.9681	0.9693	0.9706	
-177.35				0.9617	0.9623	0.9628	0.9633	0.9647	0.9660	0.9673	0.9686	0.9698	0.9711	
2.294				1.3405	1.3413	1.3421	1.3428	1.3447	1.3465	1.3483	1.3501	1.3519	1.3536	
95.9				0.9607	0.9613	0.9618	0.9623	0.9637	0.9650	0.9663	0.9676	0.9689	0.9701	
-177.25				0.9612	0.9618	0.9623	0.9629	0.9642	0.9655	0.9668	0.9681	0.9694	0.9706	
2.314				1.3399	1.3406	1.3414	1.3422	1.3440	1.3459	1.3477	1.3495	1.3513	1.3530	
96.0				0.9602	0.9608	0.9613	0.9619	0.9632	0.9645	0.9658	0.9671	0.9684	0.9697	
-177.15				0.9608	0.9613	0.9618	0.9624	0.9637	0.9651	0.9664	0.9677	0.9689	0.9702	
2.335				1.3392	1.3400	1.3407	1.3415	1.3434	1.3452	1.3470	1.3488	1.3506	1.3524	
96.1				0.9598	0.9603	0.9608	0.9614	0.9627	0.9641	0.9654	0.9667	0.9680	0.9692	
-177.85				0.9603	0.9608	0.9614	0.9619	0.9633	0.9646	0.9659	0.9672	0.9685	0.9697	
2.355				1.3385	1.3393	1.3401	1.3408	1.3427	1.3446	1.3464	1.3482	1.3500	1.3517	
96.2				0.9593	0.9598	0.9604	0.9609	0.9623	0.9636	0.9649	0.9662	0.9675	0.9688	
-176.95				0.9598	0.9603	0.9609	0.9614	0.9628	0.9641	0.9654	0.9667	0.9680	0.9693	
2.375				1.3379	1.3386	1.3394	1.3402	1.3420	1.3439	1.3457	1.3476	1.3493	1.3511	
96.3				0.9588	0.9593	0.9599	0.9604	0.9618	0.9631	0.9644	0.9657	0.9670	0.9683	
-176.85				0.9593	0.9599	0.9604	0.9610	0.9624	0.9637	0.9650	0.9663	0.9676	0.9688	
2.396				1.3372	1.3380	1.3387	1.3395	1.3414	1.3433	1.3451	1.3469	1.3487	1.3505	
96.4				0.9583	0.9589	0.9594	0.9600	0.9613	0.9627	0.9640	0.9653	0.9666	0.9679	
-176.75				0.9588	0.9594	0.9599	0.9605	0.9618	0.9632	0.9645	0.9658	0.9671	0.9684	
2.416				1.3365	1.3373	1.3381	1.3388	1.3407	1.3426	1.3444	1.3463	1.3481	1.3498	
96.5				0.9578	0.9584	0.9589	0.9595	0.9608	0.9622	0.9635	0.9648	0.9661	0.9674	
-176.65				0.9584	0.9590	0.9595	0.9601	0.9614	0.9627	0.9640	0.9653	0.9666	0.9679	
2.437				1.3359	1.3366	1.3374	1.3382	1.3401	1.3419	1.3438	1.3456	1.3474	1.3492	
96.6				0.9574	0.9579	0.9585	0.9590	0.9604	0.9617	0.9630	0.9644	0.9657	0.9669	
-176.55				0.9579	0.9584	0.9590	0.9595	0.9609	0.9622	0.9635	0.9649	0.9662	0.9675	
2.458				1.3352	1.3360	1.3367	1.3375	1.3394	1.3413	1.3431	1.3450	1.3468	1.3486	
96.7				0.9569	0.9574	0.9580	0.9585	0.9599	0.9613	0.9626	0.9639	0.9652	0.9665	
-176.45				0.9574	0.9579	0.9585	0.9591	0.9604	0.9618	0.9631	0.9644	0.9657	0.9670	
2.479				1.3345	1.3353	1.3361	1.3368	1.3388	1.3406	1.3425	1.3443	1.3461	1.3479	
96.8				0.9564	0.9570	0.9575	0.9581	0.9594	0.9608	0.9621	0.9634	0.9647	0.9660	
-176.35				0.9569	0.9575	0.9580	0.9586	0.9599	0.9613	0.9626	0.9640	0.9653	0.9665	
2.500				1.3339	1.3346	1.3354	1.3362	1.3381	1.3400	1.3418	1.3437	1.3455	1.3473	
96.9				0.9559	0.9565	0.9570	0.9576	0.9589	0.9603	0.9616	0.9629	0.9643	0.9656	
-176.25				0.9564	0.9570	0.9575	0.9581	0.9594	0.9608	0.9622	0.9635	0.9648	0.9661	
2.522				1.3332	1.3340	1.3347	1.3355	1.3374	1.3393	1.3412	1.3430	1.3448	1.3467	

TABLE 12 - CONTINUED

DENSITY OF COMPRESSED LIQUID ARGON - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS											
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS											
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/CM <sup>3</sup>											
BAR KPF/CM <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.158	10.000 10.197	15.000 15.296	20.000 20.394	25.000 25.493	30.000 30.591	35.000 35.690	40.000 40.789
97.0				0.9554	0.9560	0.9565	0.9571	0.9585	0.9598	0.9612	0.9625	0.9638	0.9651
-176.15				0.9559	0.9565	0.9571	0.9576	0.9590	0.9604	0.9617	0.9630	0.9643	0.9656
2.543				1.3325	1.3333	1.3341	1.3348	1.3366	1.3384	1.3405	1.3428	1.3442	1.3460
97.1				0.9549	0.9555	0.9561	0.9566	0.9580	0.9594	0.9607	0.9620	0.9634	0.9646
-176.05				0.9555	0.9560	0.9566	0.9571	0.9585	0.9599	0.9612	0.9626	0.9639	0.9652
2.565				1.3318	1.3326	1.3334	1.3342	1.3361	1.3380	1.3399	1.3417	1.3436	1.3454
97.2				0.9545	0.9550	0.9556	0.9561	0.9575	0.9589	0.9602	0.9616	0.9629	0.9642
-175.95				0.9550	0.9555	0.9561	0.9567	0.9580	0.9594	0.9608	0.9621	0.9634	0.9647
2.586				1.3312	1.3319	1.3327	1.3335	1.3354	1.3373	1.3392	1.3411	1.3429	1.3447
97.3				0.9540	0.9545	0.9551	0.9557	0.9571	0.9584	0.9598	0.9611	0.9624	0.9637
-175.85				0.9545	0.9551	0.9556	0.9562	0.9576	0.9589	0.9603	0.9616	0.9629	0.9643
2.608				1.3305	1.3313	1.3321	1.3328	1.3348	1.3367	1.3386	1.3404	1.3423	1.3441
97.4				0.9535	0.9541	0.9546	0.9552	0.9566	0.9579	0.9593	0.9606	0.9620	0.9633
-175.75				0.9540	0.9546	0.9551	0.9557	0.9570	0.9585	0.9598	0.9612	0.9624	0.9637
2.630				1.3298	1.3306	1.3314	1.3322	1.3341	1.3360	1.3379	1.3398	1.3416	1.3435
97.5				0.9530	0.9536	0.9541	0.9547	0.9561	0.9575	0.9588	0.9602	0.9615	0.9628
-175.65				0.9535	0.9541	0.9547	0.9552	0.9566	0.9580	0.9594	0.9607	0.9620	0.9633
2.653				1.3291	1.3299	1.3307	1.3315	1.3334	1.3354	1.3373	1.3391	1.3410	1.3428
97.6				0.9525	0.9531	0.9537	0.9542	0.9556	0.9570	0.9584	0.9597	0.9610	0.9624
-175.55				0.9530	0.9536	0.9542	0.9547	0.9561	0.9575	0.9589	0.9602	0.9614	0.9627
2.675				1.3285	1.3293	1.3300	1.3308	1.3328	1.3347	1.3366	1.3385	1.3403	1.3422
97.7				0.9520	0.9526	0.9532	0.9537	0.9551	0.9565	0.9579	0.9592	0.9606	0.9619
-175.45				0.9525	0.9531	0.9537	0.9543	0.9557	0.9570	0.9584	0.9598	0.9611	0.9624
2.697				1.3278	1.3286	1.3294	1.3302	1.3321	1.3340	1.3360	1.3378	1.3397	1.3415
97.8				0.9515	0.9521	0.9527	0.9533	0.9547	0.9561	0.9574	0.9588	0.9601	0.9614
-175.35				0.9520	0.9526	0.9532	0.9538	0.9552	0.9566	0.9579	0.9592	0.9604	0.9617
2.720				1.3271	1.3279	1.3287	1.3295	1.3314	1.3334	1.3353	1.3372	1.3390	1.3409
97.9				0.9511	0.9516	0.9522	0.9528	0.9542	0.9556	0.9570	0.9583	0.9596	0.9610
-175.25				0.9516	0.9521	0.9527	0.9533	0.9547	0.9561	0.9575	0.9588	0.9602	0.9615
2.742				1.3264	1.3272	1.3280	1.3288	1.3308	1.3327	1.3346	1.3365	1.3384	1.3402
98.0				0.9506	0.9511	0.9517	0.9523	0.9537	0.9551	0.9565	0.9578	0.9592	0.9605
-175.15				0.9511	0.9517	0.9522	0.9528	0.9542	0.9556	0.9570	0.9584	0.9597	0.9610
2.765				1.3257	1.3265	1.3273	1.3281	1.3301	1.3321	1.3340	1.3359	1.3377	1.3395
98.1				0.9501	0.9507	0.9512	0.9518	0.9532	0.9546	0.9560	0.9574	0.9587	0.9600
-175.05				0.9506	0.9512	0.9518	0.9523	0.9537	0.9551	0.9565	0.9579	0.9592	0.9606
2.788				1.3251	1.3259	1.3267	1.3275	1.3294	1.3314	1.3333	1.3352	1.3371	1.3389
98.2				0.9496	0.9502	0.9508	0.9513	0.9527	0.9541	0.9555	0.9569	0.9582	0.9596
-174.95				0.9501	0.9507	0.9513	0.9518	0.9532	0.9547	0.9560	0.9574	0.9588	0.9601
2.811				1.3244	1.3252	1.3260	1.3268	1.3288	1.3307	1.3327	1.3346	1.3364	1.3383
98.3				0.9491	0.9497	0.9503	0.9508	0.9523	0.9537	0.9551	0.9564	0.9578	0.9591
-174.85				0.9496	0.9502	0.9508	0.9514	0.9528	0.9542	0.9556	0.9569	0.9583	0.9596
2.835				1.3237	1.3245	1.3253	1.3261	1.3281	1.3301	1.3320	1.3339	1.3358	1.3377
98.4				0.9486	0.9492	0.9498	0.9504	0.9518	0.9532	0.9546	0.9560	0.9573	0.9587
-174.75				0.9491	0.9497	0.9503	0.9509	0.9523	0.9537	0.9551	0.9564	0.9578	0.9592
2.858				1.3230	1.3238	1.3246	1.3254	1.3274	1.3294	1.3313	1.3333	1.3351	1.3370
98.5				0.9481	0.9487	0.9493	0.9499	0.9513	0.9527	0.9541	0.9555	0.9568	0.9582
-174.65				0.9486	0.9492	0.9498	0.9504	0.9518	0.9532	0.9546	0.9560	0.9574	0.9587
2.882				1.3223	1.3231	1.3240	1.3248	1.3268	1.3287	1.3307	1.3326	1.3345	1.3364
98.6				0.9476	0.9482	0.9488	0.9494	0.9508	0.9522	0.9536	0.9550	0.9564	0.9577
-174.55				0.9481	0.9487	0.9493	0.9499	0.9513	0.9528	0.9542	0.9556	0.9569	0.9582
2.905				1.3216	1.3225	1.3233	1.3241	1.3261	1.3281	1.3300	1.3319	1.3338	1.3357
98.7				0.9471	0.9477	0.9483	0.9489	0.9503	0.9518	0.9532	0.9545	0.9559	0.9573
-174.45				0.9477	0.9482	0.9488	0.9494	0.9508	0.9523	0.9537	0.9551	0.9564	0.9578
2.929				1.3210	1.3218	1.3226	1.3234	1.3254	1.3274	1.3294	1.3313	1.3332	1.3351
98.8				0.9466	0.9472	0.9478	0.9484	0.9498	0.9513	0.9527	0.9541	0.9554	0.9568
-174.35				0.9472	0.9478	0.9483	0.9489	0.9504	0.9518	0.9532	0.9546	0.9559	0.9573
2.953				1.3203	1.3211	1.3219	1.3227	1.3247	1.3267	1.3287	1.3306	1.3325	1.3344
98.9				0.9462	0.9467	0.9473	0.9479	0.9494	0.9508	0.9522	0.9536	0.9550	0.9564
-174.25				0.9467	0.9473	0.9478	0.9484	0.9498	0.9513	0.9527	0.9541	0.9555	0.9568
2.977				1.3196	1.3204	1.3212	1.3220	1.3241	1.3261	1.3280	1.3300	1.3319	1.3338



TABLE 12 - CONTINUED

## DENSITY OF COMPRESSED LIQUID ARGON - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A ROLLING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A ROLLING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>3</sup>												
BAR		0.000	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KP/CM <sup>2</sup>		0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789
99.0					0.9457	0.9463	0.9460	0.9474	0.9488	0.9503	0.9517	0.9531	0.9545	0.9559
-174.15					0.9462	0.9468	0.9474	0.9479	0.9494	0.9508	0.9522	0.9536	0.9550	0.9564
3.001					1.3189	1.3197	1.3205	1.3214	1.3234	1.3254	1.3274	1.3293	1.3312	1.3331
99.1					0.9452	0.9458	0.9464	0.9469	0.9484	0.9498	0.9513	0.9527	0.9540	0.9554
-174.05					0.9457	0.9463	0.9469	0.9475	0.9489	0.9504	0.9518	0.9532	0.9546	0.9559
3.026					1.3182	1.3190	1.3199	1.3207	1.3227	1.3247	1.3267	1.3286	1.3306	1.3325
99.2					0.9447	0.9453	0.9459	0.9465	0.9476	0.9494	0.9508	0.9522	0.9536	0.9549
-173.95					0.9452	0.9458	0.9464	0.9470	0.9484	0.9499	0.9513	0.9527	0.9541	0.9554
3.050					1.3175	1.3184	1.3192	1.3200	1.3220	1.3240	1.3260	1.3280	1.3299	1.3318
99.3					0.9442	0.9448	0.9454	0.9460	0.9474	0.9489	0.9503	0.9517	0.9531	0.9545
-173.85					0.9447	0.9453	0.9459	0.9465	0.9477	0.9494	0.9508	0.9522	0.9536	0.9550
3.075					1.3168	1.3177	1.3185	1.3193	1.3214	1.3234	1.3254	1.3273	1.3293	1.3312
99.4					0.9437	0.9443	0.9449	0.9455	0.9468	0.9484	0.9498	0.9512	0.9526	0.9540
-173.75					0.9442	0.9448	0.9454	0.9460	0.9475	0.9489	0.9503	0.9517	0.9531	0.9545
3.100					1.3161	1.3170	1.3178	1.3186	1.3207	1.3227	1.3247	1.3267	1.3286	1.3305
99.5					0.9432	0.9438	0.9444	0.9450	0.9465	0.9479	0.9493	0.9508	0.9522	0.9535
-173.65					0.9437	0.9443	0.9449	0.9455	0.9470	0.9484	0.9499	0.9513	0.9527	0.9540
3.125					1.3154	1.3163	1.3171	1.3180	1.3200	1.3220	1.3240	1.3260	1.3279	1.3299
99.6					0.9427	0.9433	0.9439	0.9445	0.9460	0.9474	0.9489	0.9503	0.9517	0.9531
-173.55					0.9432	0.9438	0.9444	0.9450	0.9465	0.9479	0.9494	0.9508	0.9522	0.9536
3.150					1.3148	1.3156	1.3164	1.3173	1.3193	1.3214	1.3234	1.3253	1.3273	1.3292
99.7					0.9422	0.9428	0.9434	0.9440	0.9455	0.9469	0.9484	0.9499	0.9512	0.9526
-173.45					0.9427	0.9433	0.9439	0.9445	0.9460	0.9475	0.9489	0.9503	0.9517	0.9531
3.175					1.3141	1.3149	1.3157	1.3166	1.3186	1.3207	1.3227	1.3247	1.3266	1.3285
99.8					0.9417	0.9423	0.9429	0.9435	0.9450	0.9465	0.9479	0.9493	0.9507	0.9521
-173.35					0.9422	0.9428	0.9434	0.9440	0.9455	0.9470	0.9484	0.9498	0.9513	0.9526
3.201					1.3134	1.3142	1.3151	1.3159	1.3180	1.3200	1.3220	1.3240	1.3260	1.3279
99.9					0.9412	0.9418	0.9424	0.9430	0.9445	0.9460	0.9474	0.9489	0.9503	0.9517
-173.25					0.9417	0.9423	0.9429	0.9435	0.9450	0.9465	0.9479	0.9494	0.9508	0.9522
3.227					1.3127	1.3135	1.3144	1.3152	1.3173	1.3193	1.3214	1.3233	1.3253	1.3273
100.0					0.9407	0.9413	0.9419	0.9425	0.9440	0.9455	0.9469	0.9484	0.9498	0.9512
-173.15					0.9412	0.9418	0.9424	0.9430	0.9445	0.9460	0.9475	0.9489	0.9503	0.9517
3.252					1.3120	1.3128	1.3137	1.3145	1.3166	1.3187	1.3207	1.3227	1.3247	1.3266
100.1					0.9402	0.9408	0.9414	0.9420	0.9435	0.9450	0.9465	0.9479	0.9493	0.9507
-173.05					0.9407	0.9413	0.9419	0.9425	0.9440	0.9455	0.9470	0.9484	0.9498	0.9512
3.278					1.3113	1.3121	1.3130	1.3138	1.3159	1.3180	1.3200	1.3220	1.3240	1.3259
100.2					0.9397	0.9403	0.9409	0.9415	0.9430	0.9445	0.9460	0.9474	0.9488	0.9502
-172.95					0.9402	0.9408	0.9414	0.9420	0.9435	0.9450	0.9465	0.9479	0.9494	0.9508
3.304					1.3106	1.3114	1.3123	1.3131	1.3152	1.3173	1.3193	1.3214	1.3233	1.3253
100.3					0.9392	0.9398	0.9404	0.9410	0.9426	0.9440	0.9455	0.9469	0.9484	0.9499
-172.85					0.9397	0.9403	0.9409	0.9416	0.9431	0.9445	0.9460	0.9475	0.9489	0.9503
3.330					1.3099	1.3108	1.3116	1.3125	1.3146	1.3166	1.3187	1.3207	1.3227	1.3246
100.4					0.9387	0.9393	0.9399	0.9406	0.9421	0.9436	0.9450	0.9465	0.9479	0.9493
-172.75					0.9392	0.9398	0.9404	0.9411	0.9426	0.9441	0.9455	0.9470	0.9484	0.9498
3.357					1.3092	1.3101	1.3109	1.3118	1.3139	1.3159	1.3180	1.3200	1.3220	1.3240
100.5					0.9382	0.9388	0.9394	0.9401	0.9416	0.9431	0.9445	0.9460	0.9474	0.9488
-172.65					0.9387	0.9393	0.9400	0.9408	0.9421	0.9436	0.9450	0.9465	0.9479	0.9493
3.383					1.3085	1.3094	1.3102	1.3111	1.3132	1.3153	1.3173	1.3193	1.3213	1.3233
100.6					0.9377	0.9383	0.9389	0.9396	0.9411	0.9426	0.9441	0.9455	0.9469	0.9484
-172.55					0.9382	0.9388	0.9395	0.9401	0.9415	0.9431	0.9446	0.9460	0.9475	0.9489
3.410					1.3078	1.3087	1.3095	1.3104	1.3125	1.3146	1.3166	1.3187	1.3207	1.3227
100.7					0.9372	0.9378	0.9384	0.9391	0.9406	0.9421	0.9436	0.9450	0.9465	0.9479
-172.45					0.9377	0.9383	0.9390	0.9398	0.9411	0.9426	0.9441	0.9455	0.9470	0.9484
3.437					1.3071	1.3080	1.3088	1.3097	1.3117	1.3139	1.3160	1.3180	1.3200	1.3220
100.8					0.9367	0.9373	0.9379	0.9386	0.9401	0.9416	0.9431	0.9445	0.9460	0.9474
-172.35					0.9372	0.9378	0.9385	0.9391	0.9406	0.9421	0.9436	0.9451	0.9465	0.9479
3.464					1.3064	1.3073	1.3081	1.3090	1.3111	1.3132	1.3153	1.3173	1.3194	1.3215
100.9					0.9362	0.9368	0.9375	0.9381	0.9396	0.9411	0.9426	0.9441	0.9455	0.9469
-172.25					0.9367	0.9373	0.9380	0.9386	0.9401	0.9416	0.9431	0.9446	0.9460	0.9475
3.491					1.3057	1.3066	1.3074	1.3083	1.3104	1.3125	1.3146	1.3167	1.3187	1.3207



TABLE 12 - CONTINUED

DENSITY OF COMPRESSED LIQUID APOGN - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/CM <sup>3</sup>												
BAR KPa/CM <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.158	10.000 10.197	15.000 15.296	20.000 20.394	25.000 25.493	30.000 30.591	35.000 35.690	40.000 40.789	
101.0				0.9357	0.9363	0.9370	0.9376	0.9391	0.9406	0.9421	0.9436	0.9450	0.9465	
-172.15				0.9362	0.9368	0.9375	0.9381	0.9396	0.9411	0.9426	0.9441	0.9455	0.9470	
3.518				1.3050	1.3059	1.3067	1.3076	1.3098	1.3119	1.3139	1.3160	1.3180	1.3200	
101.1				0.9352	0.9358	0.9365	0.9371	0.9386	0.9401	0.9416	0.9431	0.9446	0.9460	
-172.05				0.9357	0.9363	0.9370	0.9376	0.9391	0.9406	0.9421	0.9436	0.9451	0.9465	
3.546				1.3043	1.3052	1.3060	1.3069	1.3091	1.3112	1.3133	1.3153	1.3174	1.3194	
101.2				0.9347	0.9353	0.9359	0.9366	0.9381	0.9396	0.9411	0.9426	0.9441	0.9455	
-171.95				0.9352	0.9358	0.9365	0.9371	0.9386	0.9402	0.9417	0.9431	0.9446	0.9460	
3.573				1.3036	1.3045	1.3053	1.3062	1.3084	1.3105	1.3126	1.3147	1.3167	1.3187	
101.3				0.9342	0.9348	0.9354	0.9361	0.9376	0.9392	0.9407	0.9421	0.9436	0.9450	
-171.85				0.9347	0.9353	0.9360	0.9366	0.9381	0.9397	0.9412	0.9426	0.9441	0.9456	
3.601				1.3029	1.3038	1.3046	1.3055	1.3077	1.3098	1.3119	1.3140	1.3160	1.3180	
101.4				0.9337	0.9343	0.9349	0.9356	0.9371	0.9387	0.9402	0.9417	0.9431	0.9446	
-171.75				0.9342	0.9348	0.9355	0.9361	0.9376	0.9392	0.9407	0.9422	0.9436	0.9451	
3.629				1.3022	1.3031	1.3039	1.3048	1.3070	1.3091	1.3112	1.3133	1.3154	1.3174	
101.5				0.9332	0.9338	0.9344	0.9351	0.9366	0.9382	0.9397	0.9412	0.9426	0.9441	
-171.65				0.9337	0.9343	0.9349	0.9356	0.9371	0.9387	0.9402	0.9417	0.9432	0.9446	
3.657				1.3015	1.3024	1.3032	1.3041	1.3063	1.3084	1.3106	1.3126	1.3147	1.3167	
101.6				0.9327	0.9333	0.9339	0.9346	0.9361	0.9377	0.9392	0.9407	0.9422	0.9436	
-171.55				0.9332	0.9338	0.9344	0.9351	0.9366	0.9382	0.9397	0.9412	0.9427	0.9441	
3.685				1.3008	1.3017	1.3025	1.3034	1.3056	1.3078	1.3099	1.3120	1.3140	1.3160	
101.7				0.9322	0.9328	0.9334	0.9341	0.9356	0.9372	0.9387	0.9402	0.9417	0.9431	
-171.45				0.9327	0.9333	0.9339	0.9346	0.9361	0.9377	0.9392	0.9407	0.9422	0.9437	
3.714				1.3001	1.3010	1.3018	1.3027	1.3049	1.3071	1.3092	1.3113	1.3133	1.3154	
101.8				0.9316	0.9323	0.9329	0.9336	0.9351	0.9367	0.9382	0.9397	0.9412	0.9427	
-171.35				0.9322	0.9328	0.9334	0.9341	0.9356	0.9372	0.9387	0.9402	0.9417	0.9432	
3.742				1.2994	1.3002	1.3011	1.3020	1.3042	1.3064	1.3085	1.3106	1.3127	1.3147	
101.9				0.9311	0.9318	0.9324	0.9331	0.9346	0.9362	0.9377	0.9392	0.9407	0.9422	
-171.25				0.9316	0.9323	0.9329	0.9336	0.9351	0.9367	0.9382	0.9397	0.9412	0.9427	
3.771				1.2986	1.2995	1.3004	1.3013	1.3035	1.3057	1.3078	1.3099	1.3120	1.3140	
102.0				0.9306	0.9313	0.9319	0.9326	0.9341	0.9357	0.9372	0.9387	0.9402	0.9417	
-171.15				0.9311	0.9318	0.9324	0.9331	0.9347	0.9362	0.9377	0.9393	0.9407	0.9422	
3.800				1.2979	1.2988	1.2997	1.3006	1.3028	1.3050	1.3071	1.3093	1.3113	1.3134	
102.1				0.9301	0.9308	0.9314	0.9321	0.9336	0.9352	0.9367	0.9383	0.9398	0.9412	
-171.05				0.9306	0.9313	0.9319	0.9326	0.9342	0.9357	0.9373	0.9388	0.9403	0.9417	
3.829				1.2972	1.2981	1.2990	1.2999	1.3021	1.3043	1.3065	1.3086	1.3107	1.3127	
102.2				0.9296	0.9303	0.9309	0.9316	0.9331	0.9347	0.9363	0.9378	0.9393	0.9408	
-170.95				0.9301	0.9308	0.9314	0.9321	0.9337	0.9352	0.9368	0.9383	0.9398	0.9413	
3.858				1.2965	1.2974	1.2983	1.2992	1.3014	1.3036	1.3058	1.3079	1.3100	1.3120	
102.3				0.9291	0.9298	0.9304	0.9311	0.9326	0.9342	0.9358	0.9373	0.9388	0.9403	
-170.85				0.9296	0.9303	0.9309	0.9316	0.9332	0.9347	0.9363	0.9378	0.9393	0.9408	
3.887				1.2958	1.2967	1.2976	1.2985	1.3007	1.3029	1.3051	1.3072	1.3093	1.3114	
102.4				0.9286	0.9292	0.9299	0.9305	0.9321	0.9337	0.9353	0.9368	0.9383	0.9398	
-170.75				0.9291	0.9297	0.9304	0.9310	0.9326	0.9342	0.9358	0.9373	0.9388	0.9403	
3.917				1.2951	1.2960	1.2969	1.2978	1.3000	1.3022	1.3044	1.3065	1.3086	1.3107	
102.5				0.9281	0.9287	0.9294	0.9300	0.9316	0.9332	0.9348	0.9363	0.9378	0.9393	
-170.65				0.9286	0.9292	0.9299	0.9305	0.9321	0.9337	0.9353	0.9368	0.9383	0.9398	
3.946				1.2944	1.2953	1.2962	1.2971	1.2993	1.3015	1.3037	1.3059	1.3080	1.3100	
102.6				0.9276	0.9282	0.9289	0.9295	0.9311	0.9327	0.9343	0.9358	0.9373	0.9388	
-170.55				0.9281	0.9287	0.9294	0.9300	0.9316	0.9332	0.9348	0.9363	0.9378	0.9393	
3.976				1.2937	1.2946	1.2955	1.2964	1.2986	1.3008	1.3030	1.3052	1.3073	1.3094	
102.7				0.9271	0.9277	0.9284	0.9290	0.9306	0.9322	0.9338	0.9353	0.9369	0.9384	
-170.45				0.9276	0.9282	0.9289	0.9295	0.9311	0.9327	0.9343	0.9358	0.9374	0.9389	
4.006				1.2930	1.2939	1.2948	1.2957	1.2979	1.3001	1.3023	1.3045	1.3066	1.3087	
102.8				0.9267	0.9273	0.9280	0.9286	0.9302	0.9317	0.9333	0.9348	0.9364	0.9379	
-170.35				0.9272	0.9278	0.9285	0.9291	0.9307	0.9322	0.9338	0.9354	0.9369	0.9384	
4.036				1.2923	1.2931	1.2940	1.2949	1.2971	1.2993	1.3015	1.3036	1.3057	1.3078	
102.9				0.9262	0.9267	0.9274	0.9280	0.9296	0.9312	0.9328	0.9344	0.9359	0.9374	
-170.25				0.9267	0.9273	0.9280	0.9286	0.9302	0.9317	0.9333	0.9349	0.9364	0.9379	
4.067				1.2916	1.2924	1.2933	1.2942	1.2964	1.2986	1.3008	1.3030	1.3052	1.3073	

TABLE 12 - CONTINUED

DENSITY OF COMPRESSED LIQUID ARGON - CONTINUED

			TABLE ENTRIES										
1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR			1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS					2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS					
BAR KPa/cm <sup>2</sup>	0.800 0.016	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.110	8.000 8.158	10.000 10.197	15.000 15.296	20.000 20.394	25.000 25.493	30.000 30.591	35.000 35.690	40.000 40.789
103.0					0.9262	0.9268	0.9275	0.9291	0.9307	0.9323	0.9339	0.9354	0.9369
-170.15					0.9267	0.9273	0.9280	0.9296	0.9312	0.9328	0.9344	0.9359	0.9374
4.097					1.2917	1.2926	1.2936	1.2958	1.2981	1.3003	1.3024	1.3046	1.3067
103.1					0.9267	0.9263	0.9270	0.9286	0.9302	0.9318	0.9334	0.9349	0.9364
-170.05					0.9262	0.9258	0.9265	0.9281	0.9297	0.9313	0.9329	0.9344	0.9359
4.128					1.2910	1.2919	1.2929	1.2951	1.2974	1.2996	1.3018	1.3038	1.3060
103.2					0.9252	0.9258	0.9265	0.9281	0.9297	0.9313	0.9329	0.9344	0.9359
-169.95					0.9257	0.9263	0.9270	0.9286	0.9302	0.9318	0.9334	0.9349	0.9364
4.159					1.2903	1.2912	1.2921	1.2944	1.2967	1.2989	1.3011	1.3032	1.3053
103.3					0.9246	0.9253	0.9260	0.9276	0.9292	0.9308	0.9324	0.9339	0.9355
-169.85					0.9251	0.9258	0.9265	0.9281	0.9297	0.9313	0.9329	0.9344	0.9359
4.190					1.2096	1.2095	1.2914	1.2937	1.2960	1.2982	1.3004	1.3025	1.3047
103.4					0.9241	0.9248	0.9255	0.9271	0.9287	0.9303	0.9319	0.9335	0.9350
-169.75					0.9246	0.9253	0.9260	0.9276	0.9292	0.9308	0.9324	0.9340	0.9355
4.221					1.2885	1.2890	1.2907	1.2930	1.2953	1.2975	1.2997	1.3019	1.3040
103.5					0.9236	0.9243	0.9250	0.9266	0.9282	0.9298	0.9314	0.9330	0.9345
-169.65					0.9241	0.9240	0.9255	0.9271	0.9287	0.9303	0.9319	0.9335	0.9350
4.252					1.2081	1.2891	1.2900	1.2923	1.2946	1.2968	1.2990	1.3012	1.3033
103.6					0.9231	0.9230	0.9244	0.9261	0.9277	0.9293	0.9309	0.9325	0.9340
-169.55					0.9236	0.9243	0.9249	0.9266	0.9282	0.9298	0.9314	0.9330	0.9345
4.284					1.2074	1.2884	1.2893	1.2916	1.2939	1.2961	1.2983	1.3005	1.3026
103.7					0.9226	0.9233	0.9239	0.9256	0.9272	0.9288	0.9304	0.9320	0.9335
-169.45					0.9231	0.9230	0.9244	0.9261	0.9277	0.9293	0.9309	0.9325	0.9340
4.316					1.2867	1.2876	1.2886	1.2908	1.2932	1.2954	1.2976	1.2998	1.3020
103.8					0.9221	0.9227	0.9234	0.9251	0.9267	0.9283	0.9299	0.9315	0.9330
-169.35					0.9226	0.9232	0.9239	0.9256	0.9272	0.9288	0.9304	0.9320	0.9335
4.347					1.2866	1.2869	1.2879	1.2902	1.2925	1.2947	1.2970	1.2991	1.3013
103.9					0.9215	0.9222	0.9229	0.9246	0.9262	0.9278	0.9294	0.9310	0.9326
-169.25					0.9220	0.9227	0.9234	0.9251	0.9267	0.9283	0.9299	0.9315	0.9331
4.379					1.2853	1.2862	1.2871	1.2895	1.2918	1.2940	1.2963	1.2985	1.3006
104.0					0.9210	0.9217	0.9224	0.9241	0.9257	0.9273	0.9289	0.9305	0.9321
-169.15					0.9215	0.9222	0.9228	0.9246	0.9262	0.9278	0.9294	0.9310	0.9326
4.412					1.2845	1.2855	1.2864	1.2888	1.2911	1.2933	1.2956	1.2978	1.2999
104.1					0.9205	0.9212	0.9219	0.9236	0.9252	0.9268	0.9284	0.9300	0.9316
-169.05					0.9210	0.9217	0.9224	0.9241	0.9257	0.9273	0.9289	0.9305	0.9321
4.444					1.2838	1.2840	1.2857	1.2881	1.2904	1.2928	1.2949	1.2971	1.2993
104.2					0.9200	0.9207	0.9214	0.9230	0.9247	0.9263	0.9280	0.9295	0.9311
-168.95					0.9205	0.9212	0.9219	0.9236	0.9252	0.9268	0.9284	0.9300	0.9316
4.477					1.2831	1.2840	1.2850	1.2874	1.2897	1.2919	1.2942	1.2964	1.2986
104.3					0.9195	0.9202	0.9208	0.9225	0.9242	0.9258	0.9275	0.9290	0.9306
-168.85					0.9200	0.9207	0.9213	0.9230	0.9247	0.9263	0.9280	0.9295	0.9311
4.509					1.2824	1.2833	1.2843	1.2866	1.2889	1.2912	1.2935	1.2957	1.2979
104.4					0.9189	0.9196	0.9203	0.9220	0.9237	0.9253	0.9270	0.9286	0.9301
-168.75					0.9194	0.9201	0.9208	0.9225	0.9242	0.9258	0.9275	0.9291	0.9306
4.542					1.2816	1.2826	1.2836	1.2859	1.2883	1.2905	1.2928	1.2950	1.2972
104.5					0.9184	0.9191	0.9198	0.9215	0.9232	0.9248	0.9265	0.9281	0.9296
-168.65					0.9189	0.9196	0.9203	0.9220	0.9237	0.9253	0.9270	0.9286	0.9301
4.575					1.2809	1.2819	1.2828	1.2852	1.2875	1.2898	1.2921	1.2943	1.2965
104.6					0.9179	0.9186	0.9193	0.9210	0.9227	0.9243	0.9260	0.9276	0.9291
-168.55					0.9184	0.9191	0.9198	0.9215	0.9232	0.9248	0.9265	0.9281	0.9296
4.609					1.2802	1.2811	1.2821	1.2845	1.2868	1.2891	1.2914	1.2937	1.2959
104.7					0.9174	0.9181	0.9188	0.9205	0.9222	0.9238	0.9255	0.9271	0.9287
-168.45					0.9179	0.9186	0.9193	0.9210	0.9227	0.9243	0.9260	0.9276	0.9292
4.642					1.2794	1.2804	1.2814	1.2838	1.2861	1.2884	1.2907	1.2930	1.2952
104.8					0.9169	0.9176	0.9183	0.9200	0.9217	0.9233	0.9250	0.9266	0.9282
-168.35					0.9173	0.9180	0.9187	0.9205	0.9222	0.9238	0.9255	0.9271	0.9286
4.676					1.2787	1.2797	1.2807	1.2831	1.2854	1.2877	1.2900	1.2923	1.2945
104.9					0.9163	0.9170	0.9177	0.9195	0.9212	0.9228	0.9245	0.9261	0.9277
-168.25					0.9168	0.9175	0.9182	0.9200	0.9217	0.9233	0.9250	0.9266	0.9282
4.709					1.2780	1.2790	1.2799	1.2823	1.2847	1.2870	1.2893	1.2916	1.2938

TABLE 12 - CONTINUED

DENSITY OF COMPRESSED LIQUID ARGON - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS 3. DENSITY, KG/CM <sup>3</sup>											
BAR KPa/cm <sup>2</sup>	0.000 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.158	10.000 10.197	15.000 15.296	20.000 20.394	25.000 25.493	30.000 30.591	35.000 35.690	40.000 40.789
105.0 -168.15 4.743					0.9158 0.9163 1.2773	0.9165 0.9170 1.2782	0.9172 0.9177 1.2792	0.9180 0.9184 1.2816	0.9206 0.9211 1.2840	0.9223 0.9228 1.2863	0.9240 0.9245 1.2886	0.9256 0.9261 1.2909	0.9272 0.9277 1.2931
105.1 -168.05 4.777					0.9153 0.9158 1.2765	0.9160 0.9165 1.2775	0.9167 0.9172 1.2785	0.9184 0.9189 1.2809	0.9201 0.9206 1.2833	0.9218 0.9223 1.2856	0.9235 0.9240 1.2879	0.9251 0.9256 1.2902	0.9267 0.9272 1.2924
105.2 -167.95 4.812					0.9148 0.9152 1.2758	0.9155 0.9160 1.2768	0.9162 0.9167 1.2778	0.9175 0.9184 1.2802	0.9196 0.9201 1.2826	0.9213 0.9218 1.2849	0.9230 0.9235 1.2872	0.9246 0.9251 1.2895	0.9262 0.9267 1.2918
105.3 -167.85 4.846					0.9142 0.9147 1.2751	0.9149 0.9154 1.2760	0.9156 0.9161 1.2770	0.9174 0.9179 1.2795	0.9191 0.9196 1.2819	0.9208 0.9213 1.2842	0.9225 0.9230 1.2865	0.9241 0.9246 1.2888	0.9257 0.9262 1.2911
105.4 -167.75 4.881					0.9137 0.9142 1.2743	0.9144 0.9149 1.2753	0.9151 0.9156 1.2763	0.9166 0.9174 1.2788	0.9186 0.9191 1.2812	0.9203 0.9208 1.2835	0.9220 0.9225 1.2858	0.9236 0.9241 1.2881	0.9252 0.9257 1.2904
105.5 -167.65 4.916					0.9132 0.9137 1.2736	0.9139 0.9144 1.2746	0.9146 0.9151 1.2756	0.9164 0.9169 1.2780	0.9181 0.9186 1.2804	0.9198 0.9203 1.2828	0.9215 0.9220 1.2851	0.9231 0.9236 1.2874	0.9247 0.9252 1.2897
105.6 -167.55 4.951					0.9126 0.9131 1.2728	0.9134 0.9139 1.2738	0.9141 0.9146 1.2748	0.9158 0.9163 1.2773	0.9176 0.9181 1.2797	0.9193 0.9198 1.2821	0.9210 0.9215 1.2844	0.9226 0.9231 1.2867	0.9242 0.9247 1.2890
105.7 -167.45 4.986					0.9121 0.9126 1.2721	0.9128 0.9133 1.2731	0.9136 0.9141 1.2741	0.9153 0.9158 1.2766	0.9171 0.9176 1.2790	0.9188 0.9193 1.2814	0.9205 0.9210 1.2837	0.9221 0.9226 1.2860	0.9237 0.9242 1.2883
105.8 -167.35 5.021					0.9116 0.9121 1.2714	0.9123 0.9128 1.2724	0.9130 0.9135 1.2734	0.9146 0.9153 1.2759	0.9165 0.9170 1.2783	0.9183 0.9188 1.2807	0.9200 0.9204 1.2830	0.9216 0.9221 1.2853	0.9232 0.9237 1.2876
105.9 -167.25 5.057					0.9111 0.9116 1.2706	0.9118 0.9123 1.2716	0.9125 0.9130 1.2726	0.9143 0.9148 1.2751	0.9160 0.9165 1.2776	0.9178 0.9183 1.2800	0.9194 0.9199 1.2823	0.9211 0.9216 1.2847	0.9227 0.9232 1.2870
106.0 -167.15 5.093					0.9105 0.9110 1.2699	0.9113 0.9117 1.2709	0.9120 0.9125 1.2719	0.9138 0.9143 1.2744	0.9155 0.9160 1.2769	0.9172 0.9177 1.2793	0.9189 0.9194 1.2816	0.9206 0.9211 1.2840	0.9222 0.9227 1.2862
106.1 -167.05 5.129					0.9100 1.2691	0.9107 1.2702	0.9115 1.2712	0.9132 1.2737	0.9150 1.2761	0.9167 1.2786	0.9184 1.2809	0.9201 1.2833	0.9218 1.2856
106.2 -166.95 5.165					0.9095 0.9100 1.2684	0.9102 0.9107 1.2694	0.9109 0.9114 1.2704	0.9127 0.9132 1.2730	0.9145 0.9150 1.2754	0.9162 0.9167 1.2778	0.9179 0.9184 1.2802	0.9196 0.9201 1.2826	0.9213 0.9218 1.2849
106.3 -166.85 5.201					0.9089 1.2677	0.9097 1.2687	0.9104 1.2697	0.9122 1.2722	0.9140 1.2747	0.9157 1.2771	0.9174 1.2795	0.9191 1.2815	0.9208 1.2842
106.4 -166.75 5.237					0.9084 0.9089 1.2669	0.9091 0.9096 1.2679	0.9099 0.9104 1.2689	0.9117 0.9122 1.2715	0.9135 0.9139 1.2740	0.9152 0.9157 1.2764	0.9169 0.9174 1.2788	0.9186 0.9191 1.2812	0.9203 0.9208 1.2835
106.5 -166.65 5.274					0.9079 0.9083 1.2662	0.9086 0.9091 1.2672	0.9093 0.9098 1.2682	0.9112 0.9116 1.2708	0.9129 0.9134 1.2733	0.9147 0.9152 1.2757	0.9164 0.9169 1.2781	0.9181 0.9186 1.2805	0.9198 0.9203 1.2828
106.6 -166.55 5.311					0.9073 0.9078 1.2654	0.9081 0.9086 1.2665	0.9088 0.9093 1.2675	0.9106 0.9111 1.2700	0.9124 0.9129 1.2725	0.9142 0.9147 1.2750	0.9159 0.9164 1.2774	0.9176 0.9181 1.2798	0.9193 0.9198 1.2821
106.7 -166.45 5.348					0.9068 0.9073 1.2647	0.9075 0.9080 1.2657	0.9083 0.9088 1.2668	0.9101 0.9106 1.2693	0.9118 0.9123 1.2718	0.9137 0.9142 1.2743	0.9154 0.9159 1.2767	0.9171 0.9176 1.2791	0.9188 0.9193 1.2814
106.8 -166.35 5.385					0.9063 0.9067 1.2635	0.9070 0.9075 1.2645	0.9077 0.9082 1.2655	0.9096 0.9101 1.2686	0.9114 0.9119 1.2711	0.9131 0.9136 1.2735	0.9149 0.9154 1.2760	0.9166 0.9171 1.2784	0.9183 0.9188 1.2807
106.9 -166.25 5.423					0.9057 0.9062 1.2632	0.9065 0.9070 1.2642	0.9072 0.9077 1.2652	0.9091 0.9096 1.2677	0.9109 0.9114 1.2704	0.9126 0.9131 1.2728	0.9144 0.9149 1.2753	0.9161 0.9166 1.2777	0.9178 0.9183 1.2800

TABLE 12 - CONTINUED

## DENSITY OF COMPRESSED LIQUID ARGON - CONTINUED

				TABLE ENTRIES										
1. TEMPERATURE, K				1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS										
2. TEMPERATURE, °C				2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS										
3. VAPOR PRESSURE, BAR				3. DENSITY, KG/DM <sup>3</sup>										
BAR	0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	
KP/CM <sup>2</sup>	0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.296	20.394	25.493	30.591	35.690	40.789	
107.0						0.9052	0.9058	0.9067	0.9085	0.9103	0.9121	0.9139	0.9156	0.9173
-166.15						0.9057	0.9064	0.9072	0.9090	0.9108	0.9126	0.9144	0.9161	0.9178
5.460						1.2624	1.2635	1.2645	1.2671	1.2686	1.2721	1.2745	1.2759	1.2783
107.1						0.9046	0.9054	0.9061	0.9080	0.9098	0.9116	0.9134	0.9151	0.9168
-166.05						0.9051	0.9059	0.9066	0.9085	0.9103	0.9121	0.9138	0.9156	0.9173
5.498						1.2617	1.2627	1.2638	1.2664	1.2689	1.2714	1.2738	1.2762	1.2786
107.2						0.9041	0.9049	0.9056	0.9075	0.9093	0.9111	0.9128	0.9146	0.9163
-165.95						0.9046	0.9053	0.9061	0.9080	0.9098	0.9116	0.9133	0.9151	0.9168
5.536						1.2609	1.2620	1.2630	1.2656	1.2682	1.2707	1.2731	1.2755	1.2779
107.3						0.9036	0.9043	0.9051	0.9069	0.9088	0.9106	0.9123	0.9141	0.9158
-165.85						0.9040	0.9048	0.9056	0.9074	0.9093	0.9111	0.9128	0.9146	0.9163
5.574						1.2602	1.2612	1.2623	1.2645	1.2674	1.2699	1.2724	1.2748	1.2772
107.4						0.9030	0.9038	0.9045	0.9064	0.9082	0.9101	0.9118	0.9136	0.9153
-165.75						0.9035	0.9043	0.9050	0.9069	0.9087	0.9105	0.9123	0.9141	0.9158
5.613						1.2594	1.2605	1.2615	1.2642	1.2667	1.2692	1.2717	1.2741	1.2765
107.5						0.9025	0.9032	0.9040	0.9059	0.9077	0.9095	0.9113	0.9131	0.9148
-165.65						0.9030	0.9037	0.9045	0.9064	0.9082	0.9100	0.9118	0.9135	0.9153
5.651						1.2587	1.2597	1.2608	1.2634	1.2660	1.2685	1.2710	1.2734	1.2758
107.6						0.9019	0.9027	0.9035	0.9054	0.9072	0.9090	0.9108	0.9125	0.9143
-165.55						0.9024	0.9032	0.9040	0.9059	0.9077	0.9095	0.9113	0.9130	0.9148
5.630						1.2579	1.2590	1.2600	1.2627	1.2653	1.2678	1.2703	1.2727	1.2751
107.7						0.9014	0.9022	0.9029	0.9048	0.9067	0.9085	0.9103	0.9120	0.9138
-165.45						0.9019	0.9027	0.9034	0.9053	0.9072	0.9090	0.9108	0.9125	0.9143
5.729						1.2572	1.2582	1.2593	1.2619	1.2645	1.2671	1.2695	1.2720	1.2744
107.8						0.9009	0.9016	0.9024	0.9043	0.9061	0.9080	0.9098	0.9115	0.9133
-165.35						0.9013	0.9021	0.9029	0.9048	0.9066	0.9085	0.9103	0.9120	0.9138
5.768						1.2564	1.2575	1.2585	1.2611	1.2638	1.2663	1.2688	1.2713	1.2737
107.9						0.9003	0.9011	0.9019	0.9038	0.9056	0.9074	0.9093	0.9110	0.9128
-165.25						0.9008	0.9016	0.9023	0.9042	0.9061	0.9079	0.9097	0.9115	0.9132
5.807						1.2556	1.2567	1.2578	1.2605	1.2631	1.2656	1.2681	1.2706	1.2730
108.0						0.8998	0.9005	0.9013	0.9032	0.9051	0.9069	0.9087	0.9105	0.9123
-165.15						0.9002	0.9010	0.9018	0.9037	0.9056	0.9074	0.9092	0.9110	0.9127
5.847						1.2549	1.2560	1.2570	1.2597	1.2623	1.2649	1.2674	1.2699	1.2723
108.1						0.8992	0.9000	0.9008	0.9027	0.9046	0.9064	0.9082	0.9100	0.9117
-165.05						0.8997	0.9005	0.9013	0.9032	0.9051	0.9069	0.9087	0.9105	0.9122
5.886						1.2541	1.2552	1.2563	1.2590	1.2616	1.2642	1.2667	1.2692	1.2716
108.2						0.8987	0.8995	0.9002	0.9022	0.9040	0.9059	0.9077	0.9095	0.9112
-164.95						0.8992	0.8999	0.9007	0.9026	0.9045	0.9064	0.9082	0.9100	0.9117
5.926						1.2534	1.2545	1.2555	1.2582	1.2609	1.2634	1.2660	1.2684	1.2709
108.3						0.8981	0.8989	0.8997	0.9016	0.9035	0.9054	0.9072	0.9090	0.9107
-164.85						0.8986	0.8994	0.9002	0.9021	0.9040	0.9059	0.9077	0.9095	0.9112
5.966						1.2526	1.2537	1.2548	1.2575	1.2601	1.2627	1.2652	1.2677	1.2702
108.4						0.8984	0.8992	0.9001	0.9020	0.9038	0.9056	0.9074	0.9092	0.9109
-164.75						0.8989	0.8996	0.9004	0.9023	0.9042	0.9061	0.9079	0.9097	0.9114
6.007						1.2529	1.2540	1.2550	1.2577	1.2603	1.2628	1.2653	1.2678	1.2702
108.5						0.8978	0.8986	0.8995	0.9014	0.9032	0.9051	0.9069	0.9087	0.9104
-164.65						0.8983	0.8991	0.9000	0.9019	0.9038	0.9056	0.9074	0.9092	0.9109
6.047						1.2522	1.2533	1.2543	1.2570	1.2596	1.2621	1.2646	1.2671	1.2695
108.6						0.8973	0.8981	0.8990	0.9009	0.9027	0.9045	0.9063	0.9081	0.9098
-164.55						0.8978	0.8985	0.8993	0.9012	0.9030	0.9048	0.9066	0.9084	0.9101
6.088						1.2514	1.2525	1.2535	1.2562	1.2587	1.2612	1.2637	1.2661	1.2685
108.7						0.8967	0.8975	0.8983	0.9002	0.9020	0.9038	0.9056	0.9074	0.9091
-164.45						0.8972	0.8980	0.8988	0.9007	0.9025	0.9043	0.9061	0.9079	0.9096
6.129						1.2506	1.2516	1.2525	1.2552	1.2577	1.2602	1.2627	1.2651	1.2675
108.8						0.8962	0.8970	0.8978	0.8997	0.9015	0.9032	0.9050	0.9067	0.9084
-164.35						0.8967	0.8975	0.8983	0.9002	0.9020	0.9037	0.9054	0.9071	0.9088
6.170						1.2499	1.2510	1.2519	1.2546	1.2571	1.2596	1.2621	1.2645	1.2669
108.9						0.8956	0.8964	0.8972	0.8991	0.9008	0.9025	0.9042	0.9059	0.9076
-164.25						0.8961	0.8969	0.8977	0.8996	0.9013	0.9030	0.9047	0.9064	0.9081
6.211						1.2491	1.2502	1.2511	1.2538	1.2563	1.2588	1.2613	1.2637	1.2661

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/DH <sup>3</sup>												
BAR	K	0.800	1.000	2.000	4.000	6.000	8.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000
KP/CM <sup>2</sup>		0.816	1.020	2.039	4.079	6.118	8.158	10.197	15.236	20.274	25.313	30.351	35.390	40.429
109.0							0.8951	0.8959	0.8979	0.8998	0.9017	0.9036	0.9054	0.9072
-164.15							0.8956	0.8964	0.8983	0.9003	0.9022	0.9040	0.9059	0.9077
6.253							1.2484	1.2495	1.2522	1.2549	1.2576	1.2602	1.2627	1.2652
109.1							0.8945	0.8953	0.8973	0.8993	0.9012	0.9030	0.9049	0.9067
-164.05							0.8950	0.8958	0.8978	0.8997	0.9016	0.9035	0.9054	0.9072
6.294							1.2476	1.2487	1.2515	1.2542	1.2568	1.2594	1.2620	1.2645
109.2							0.8940	0.8948	0.8968	0.8987	0.9006	0.9025	0.9043	0.9062
-163.95							0.8945	0.8953	0.8973	0.8992	0.9011	0.9030	0.9048	0.9066
6.336							1.2468	1.2479	1.2507	1.2534	1.2561	1.2587	1.2613	1.2638
109.3							0.8934	0.8942	0.8962	0.8982	0.9001	0.9020	0.9038	0.9056
-163.85							0.8939	0.8947	0.8967	0.8987	0.9006	0.9025	0.9043	0.9061
6.378							1.2460	1.2472	1.2500	1.2527	1.2554	1.2580	1.2606	1.2631
109.4							0.8929	0.8937	0.8957	0.8977	0.8996	0.9015	0.9033	0.9051
-163.75							0.8934	0.8942	0.8962	0.8981	0.9001	0.9019	0.9038	0.9056
6.420							1.2453	1.2464	1.2492	1.2519	1.2546	1.2572	1.2598	1.2624
109.5							0.8923	0.8931	0.8951	0.8971	0.8990	0.9009	0.9028	0.9046
-163.65							0.8928	0.8936	0.8956	0.8976	0.8995	0.9014	0.9033	0.9051
6.463							1.2445	1.2456	1.2484	1.2511	1.2538	1.2565	1.2591	1.2617
109.6							0.8918	0.8926	0.8946	0.8966	0.8985	0.9004	0.9023	0.9041
-163.55							0.8923	0.8931	0.8951	0.8971	0.8990	0.9009	0.9028	0.9046
6.506							1.2437	1.2449	1.2477	1.2504	1.2531	1.2558	1.2584	1.2609
109.7							0.8912	0.8920	0.8941	0.8960	0.8980	0.8999	0.9018	0.9036
-163.45							0.8917	0.8925	0.8945	0.8965	0.8985	0.9004	0.9022	0.9041
6.548							1.2430	1.2441	1.2469	1.2497	1.2524	1.2551	1.2577	1.2602
109.8							0.8907	0.8915	0.8935	0.8955	0.8975	0.8994	0.9012	0.9031
-163.35							0.8911	0.8920	0.8940	0.8960	0.8979	0.8998	0.9017	0.9036
6.592							1.2422	1.2433	1.2462	1.2489	1.2517	1.2543	1.2569	1.2595
109.9							0.8901	0.8909	0.8929	0.8950	0.8969	0.8988	0.9007	0.9025
-163.25							0.8906	0.8914	0.8935	0.8954	0.8974	0.8993	0.9012	0.9031
6.635							1.2414	1.2426	1.2454	1.2482	1.2509	1.2536	1.2562	1.2588
110.0							0.8895	0.8904	0.8924	0.8944	0.8964	0.8983	0.9002	0.9020
-163.15							0.8900	0.8909	0.8929	0.8949	0.8969	0.8988	0.9007	0.9025
6.678							1.2406	1.2418	1.2446	1.2474	1.2502	1.2528	1.2555	1.2581
110.1							0.8890	0.8898	0.8918	0.8938	0.8958	0.8978	0.8997	0.9015
-163.05							0.8895	0.8903	0.8923	0.8944	0.8963	0.8983	0.9002	0.9020
6.722							1.2399	1.2410	1.2438	1.2467	1.2494	1.2521	1.2548	1.2573
110.2							0.8884	0.8893	0.8913	0.8933	0.8953	0.8973	0.8992	0.9010
-162.95							0.8889	0.8897	0.8918	0.8938	0.8958	0.8977	0.8996	0.9015
6.766							1.2391	1.2402	1.2431	1.2459	1.2487	1.2514	1.2540	1.2566
110.3							0.8879	0.8887	0.8908	0.8928	0.8948	0.8967	0.8986	0.9005
-162.85							0.8884	0.8892	0.8913	0.8933	0.8953	0.8972	0.8991	0.9010
6.810							1.2383	1.2395	1.2423	1.2452	1.2479	1.2506	1.2533	1.2559
110.4							0.8873	0.8882	0.8902	0.8923	0.8942	0.8962	0.8981	0.9000
-162.75							0.8878	0.8886	0.8907	0.8927	0.8947	0.8967	0.8986	0.9005
6.854							1.2375	1.2387	1.2416	1.2444	1.2472	1.2499	1.2526	1.2552
110.5							0.8867	0.8876	0.8897	0.8917	0.8937	0.8957	0.8976	0.8995
-162.65							0.8872	0.8881	0.8902	0.8922	0.8942	0.8961	0.8981	0.9000
6.899							1.2367	1.2379	1.2408	1.2437	1.2464	1.2492	1.2518	1.2545
110.6							0.8862	0.8870	0.8891	0.8912	0.8932	0.8951	0.8971	0.8990
-162.55							0.8867	0.8875	0.8896	0.8917	0.8937	0.8956	0.8975	0.8994
6.944							1.2359	1.2371	1.2400	1.2429	1.2457	1.2484	1.2511	1.2537
110.7							0.8856	0.8865	0.8886	0.8906	0.8926	0.8946	0.8965	0.8984
-162.45							0.8861	0.8870	0.8891	0.8911	0.8931	0.8951	0.8970	0.8989
6.989							1.2352	1.2363	1.2393	1.2421	1.2449	1.2477	1.2504	1.2531
110.8							0.8851	0.8859	0.8880	0.8901	0.8921	0.8941	0.8960	0.8979
-162.35							0.8855	0.8864	0.8885	0.8906	0.8926	0.8946	0.8965	0.8984
7.034							1.2344	1.2356	1.2385	1.2414	1.2442	1.2469	1.2496	1.2523
110.9							0.8845	0.8854	0.8875	0.8895	0.8916	0.8935	0.8955	0.8974
-162.25							0.8850	0.8859	0.8879	0.8900	0.8920	0.8940	0.8959	0.8978
7.079							1.2336	1.2348	1.2377	1.2406	1.2434	1.2462	1.2489	1.2516

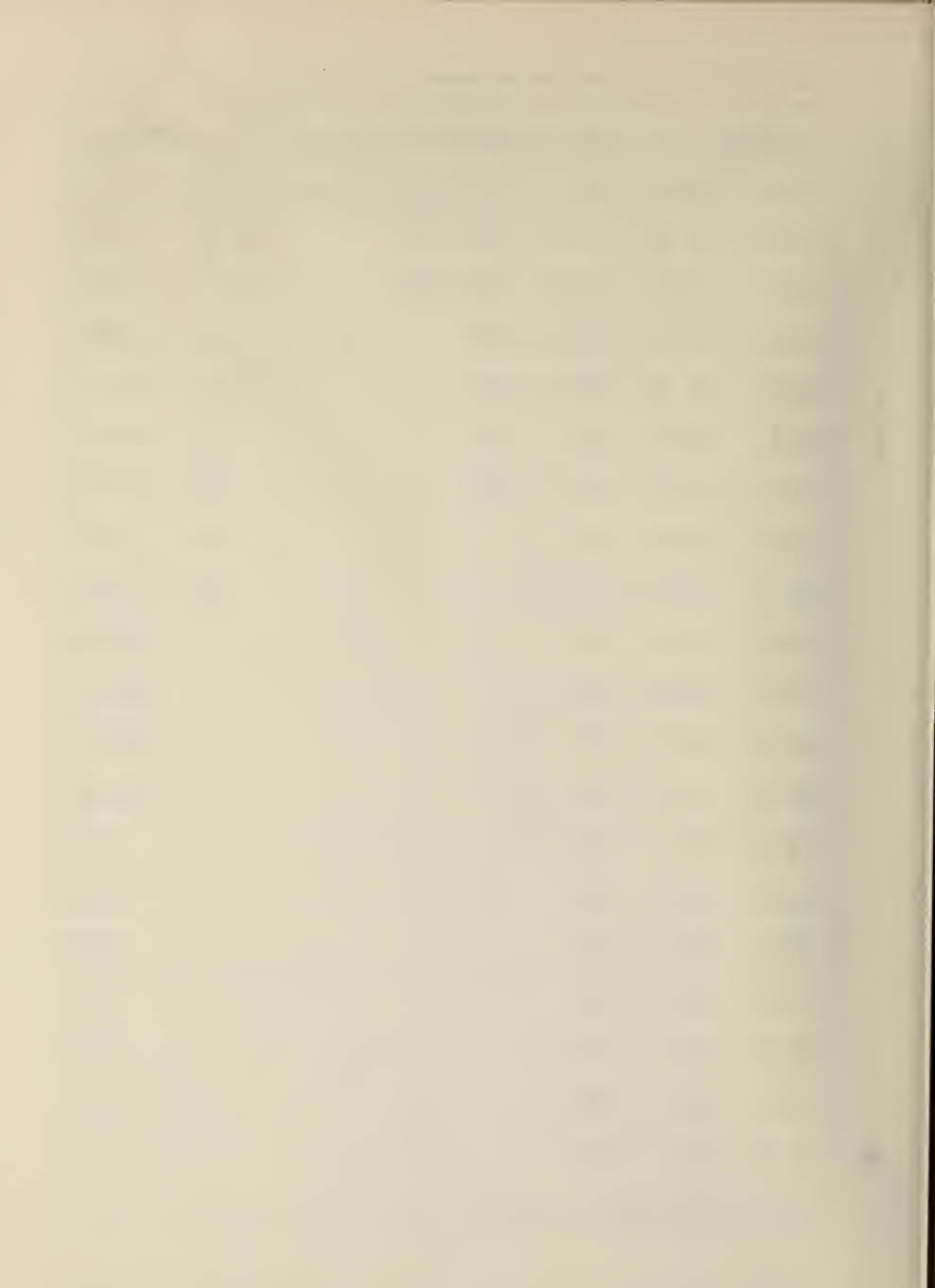


TABLE 12 - CONTINUED

DENSITY OF COMPRESSED LIQUID APGON - CONTINUED

		TABLE ENTRIES											
1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TCOR, DIMENSIONLESS 3. DENSITY, KG/DM <sup>3</sup>											
BAR K/P/C	0.000 0.016 1.020	1.000 1.020 2.039	2.000 2.039 4.079	4.000 4.079 8.116	6.000 6.116 12.232	8.000 8.158 16.314	10.000 10.197 20.394	15.000 15.296 30.591	20.000 20.394 40.789	25.000 25.493 50.986	30.000 30.591 61.183	35.000 35.690 71.380	40.000 40.789 81.577
111.0 -142.15 7.125					0.8839 0.8844 1.2328	0.8848 0.8853 1.2340	0.8869 0.8874 1.2370	0.8890 0.8895 1.2398	0.8910 0.8915 1.2427	0.8930 0.8935 1.2455	0.8950 0.8954 1.2482	0.8969 0.8973 1.2508	
112.0 -161.15 7.592					0.8782 0.8787 1.2249	0.8791 0.8796 1.2261	0.8813 0.8818 1.2292	0.8835 0.8840 1.2322	0.8856 0.8861 1.2351	0.8876 0.8881 1.2380	0.8896 0.8901 1.2408	0.8916 0.8921 1.2435	
113.0 -160.15 8.081					0.8734 0.8738 1.2181	0.8757 0.8761 1.2213	0.8779 0.8784 1.2244	0.8801 0.8805 1.2274	0.8822 0.8827 1.2304	0.8843 0.8848 1.2333	0.8863 0.8868 1.2361		
114.0 -159.15 8.592							0.8675 0.8680 1.2099	0.8699 0.8704 1.2132	0.8722 0.8727 1.2165	0.8745 0.8750 1.2196	0.8767 0.8772 1.2227	0.8788 0.8793 1.2257	0.8810 0.8814 1.2286
115.0 -158.15 9.126							0.8616 0.8620 1.2016	0.8641 0.8645 1.2051	0.8665 0.8669 1.2084	0.8688 0.8693 1.2117	0.8711 0.8716 1.2149	0.8733 0.8738 1.2180	0.8755 0.8760 1.2211
116.0 -157.15 9.683							0.8555 0.8560 1.1932	0.8581 0.8586 1.2003	0.8606 0.8611 1.2037	0.8631 0.8636 1.2070	0.8654 0.8659 1.2102	0.8676 0.8681 1.2134	0.8700 0.8705 1.2164
117.0 -156.15 10.264								0.8521 0.8525 1.1883	0.8547 0.8551 1.1920	0.8572 0.8577 1.1955	0.8597 0.8601 1.1990	0.8621 0.8626 1.2023	0.8644 0.8649 1.2056
118.0 -155.15 10.876								0.8455 0.8463 1.1797	0.8486 0.8491 1.1836	0.8513 0.8517 1.1872	0.8538 0.8543 1.1908	0.8563 0.8568 1.1943	0.8588 0.8593 1.1977
119.0 -154.15 11.500								0.8396 0.8401 1.1710	0.8425 0.8429 1.1750	0.8452 0.8457 1.1788	0.8479 0.8484 1.1825	0.8505 0.8510 1.1862	0.8530 0.8535 1.1897
120.0 -153.15 12.156								0.8332 0.8336 1.1620	0.8362 0.8366 1.1662	0.8391 0.8395 1.1702	0.8419 0.8423 1.1741	0.8446 0.8450 1.1779	0.8472 0.8477 1.1816
121.0 -152.15 12.839								0.8266 0.8271 1.1529	0.8294 0.8298 1.1572	0.8328 0.8332 1.1615	0.8357 0.8362 1.1655	0.8385 0.8390 1.1695	0.8413 0.8417 1.1733
122.0 -151.15 13.548								0.8195 0.8203 1.1435	0.8232 0.8236 1.1481	0.8264 0.8268 1.1525	0.8294 0.8299 1.1568	0.8324 0.8328 1.1609	0.8353 0.8357 1.1649
123.0 -150.15 14.285								0.8130 0.8134 1.1335	0.8165 0.8169 1.1387	0.8198 0.8203 1.1434	0.8230 0.8235 1.1479	0.8261 0.8266 1.1522	0.8291 0.8296 1.1564
124.0 -149.15 15.051								0.8066 0.8100 1.1251	0.8131 0.8136 1.1340	0.8165 0.8169 1.1387	0.8197 0.8202 1.1433	0.8229 0.8234 1.1476	
125.0 -148.15 15.845								0.8025 0.8030 1.1193	0.8062 0.8067 1.1245	0.8098 0.8102 1.1294	0.8132 0.8136 1.1342	0.8165 0.8169 1.1387	
126.0 -147.15 16.668								0.7953 0.7957 1.1091	0.7992 0.7996 1.1146	0.8029 0.8034 1.1198	0.8065 0.8070 1.1249	0.8100 0.8104 1.1297	
127.0 -146.15 17.522								0.7878 0.7882 1.0987	0.7919 0.7924 1.1045	0.7959 0.7963 1.1100	0.7997 0.8001 1.1153	0.8033 0.8038 1.1204	
128.0 -145.15 18.407								0.7800 0.7804 1.0879	0.7845 0.7849 1.0941	0.7887 0.7891 1.0999	0.7927 0.7931 1.1055	0.7965 0.7969 1.1109	
129.0 -144.15 19.322								0.7720 0.7724 1.0766	0.7767 0.7771 1.0833	0.7812 0.7816 1.0895	0.7855 0.7859 1.0955	0.7895 0.7899 1.1011	
130.0 -143.15 20.271									0.7667 0.7691 1.0721	0.7735 0.7739 1.0788	0.7788 0.7793 1.0851	0.7823 0.7828 1.0911	

1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR			TABLE ENTRIES											
			1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TCRR, DIMENSIONLESS 3. DENSITY, KG/DM <sup>3</sup>											
BAR KPa/CH <sup>2</sup>	0.800 0.816	1.000 1.020	2.000 2.039	4.000 4.079	6.000 6.118	8.000 8.158	10.000 10.197	15.000 15.296	20.000 20.394	25.000 25.493	30.000 30.592	35.000 35.690	40.000 40.789	
131.0										0.7604	0.7656	0.7704	0.7749	
-142.15										0.7608	0.7660	0.7708	0.7754	
21.253										1.9605	1.9677	1.0744	1.0808	
132.0										0.7517	0.7573	0.7625	0.7673	
-141.15										0.7521	0.7577	0.7629	0.7677	
22.268										1.0484	1.0562	1.0634	1.0702	
133.0										0.7426	0.7486	0.7542	0.7594	
-140.15										0.7430	0.7491	0.7546	0.7599	
23.318										1.0357	1.0442	1.0519	1.0592	
134.0										0.7338	0.7396	0.7457	0.7513	
-139.15										0.7334	0.7400	0.7461	0.7517	
24.404										1.0223	1.0315	1.0400	1.0478	
135.0											0.7301	0.7367	0.7428	
-138.15											0.7305	0.7371	0.7432	
25.525											1.0183	1.0275	1.0359	
136.0											0.7261	0.7273	0.7339	
-137.15											0.7284	0.7277	0.7343	
26.685											1.0043	1.0144	1.0236	
137.0											0.7093	0.7174	0.7246	
-136.15											0.7097	0.7178	0.7250	
27.882											0.9893	1.0005	1.0106	
138.0											0.6978	0.7069	0.7149	
-135.15											0.6981	0.7072	0.7152	
29.118											0.9732	0.9858	0.9970	
139.0												0.6955	0.7045	
-134.15												0.6955	0.7049	
30.394												0.9708	0.9825	
140.0												0.6832	0.6934	
-133.15												0.6836	0.6938	
31.711												0.9529	0.9671	
141.0												0.6697	0.6814	
-132.15												0.6701	0.6818	
33.071												0.9340	0.9504	
142.0												0.6544	0.6664	
-131.15												0.6548	0.6667	
34.473												0.9127	0.9322	
143.0													0.6538	
-130.15													0.6542	
35.920													0.9119	
144.0														0.6372
-129.15														0.6375
37.412														0.8957
145.0														0.6173
-128.15														0.6177
38.951														0.8610



## 9. PARAHYDROGEN

The data for parahydrogen tabulated here are based on the monograph by Roder, et al. (1965). Additional, extensive tables of values based on this source were prepared by McCarty and Weber (1972) for NASA. The tables for the saturated liquid were calculated using the explicit equations for vapor pressure (Weber, et al., 1962) and saturated liquid density (Roder, et al., 1963) which were incorporated unchanged into the final compilation (Roder, et al., 1965). The values for temperatures near room temperature were taken from Hilsenrath, et al. (1955), using a high order interpolation. This is the source used by the experimenters in their determination of the liquid densities. The CGA pamphlet P-6 cites Dean (1961), who also presents a high order interpolation of Hilsenrath's values.

Values near room temperature are given in table 13, uncertainties for the data in table 14, values for the saturated liquid are given in table 15, and values for the compressed liquid are shown in table 16. As stated before, these values do not differ from those presented in

Table 13

Density of Parahydrogen Near Atmospheric Pressure and Room Temperature

Temperature	Pressure	Density		Volume	
		gram-mole/cm <sup>3</sup>	kg/dm <sup>3</sup>	cm <sup>3</sup> /gram-mole	dm <sup>3</sup> kg
0° C	1 bar	4.4004x10 <sup>-5</sup>	8.8709x10 <sup>-5</sup>	22725.	11273.
	760 torr	4.4588x10 <sup>-5</sup>	8.9885x10 <sup>-5</sup>	22428.	11125.
15° C	1 bar	4.1716x10 <sup>-5</sup>	8.4097x10 <sup>-5</sup>	23972.	11891.
	760 torr	4.2268x10 <sup>-5</sup>	8.5210x10 <sup>-5</sup>	23658.	11735.
Density Ratios - Dimensionless					
Liquid Density at a boiling pressure of 1 bar <sup>*</sup> /density at 1 bar and 0° C					798.52
Liquid Density at a boiling pressure of 1 bar/density at 1 bar and 15° C					842.31
Liquid Density at a boiling pressure of 760 torr <sup>†</sup> /density at 760 torr and 0° C					787.50
Liquid Density at a boiling pressure of 760 torr/density at 760 torr and 15° C					830.73

\* Liquid density at a boiling pressure of 1 bar                      0.07084 kg/dm<sup>3</sup>

† Liquid density at a boiling pressure of 760 torr                    0.07079 kg/dm<sup>3</sup>

the CGA pamphlet P-6. An astute observer may detect a difference of one part in 4000 in the density at the boiling point at 760 torr between this table and pamphlet P-6, but that difference is caused only by accumulative rounding errors.

The properties presented here pertain to parahydrogen. Specifications for delivery of parahydrogen are usually stated as 95% parahydrogen with the remainder being ortho-hydrogen. As a matter of fact, producers do not send less than 97% parahydrogen to storage tanks, and the liquid when shipped is, or is very close to being, equilibrium hydrogen. Equilibrium parahydrogen is 99.79% para at the boiling point at 760 torr, and the difference between it and 95% parahydrogen amounts to about 0.008 K or about 2 mm in pressure. It is easy to see that sophisticated equipment is required to detect ortho-para composition. The matter of composition is mentioned because the amount of orthohydrogen present has a very pronounced effect on the length of storage but only a very slight effect on the density.

Table 14  
Uncertainties in the Data for Parahydrogen

variable	uncertainty	range of temperature
temperature	0.02 K 0.015 K	triple point to critical point room temperature
volume	0.1% increases to 0.3% 0.01%	triple point to 32 K near critical room temperature
pressure	0.05% 0.01%	triple point to critical point room temperature





TABLE 15 CONTINUED

## SATURATED LIQUID PARAMYDROGEN

PRESSURE BAR	TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	DENSITY KG/ DN <sup>3</sup>	CH <sub>3</sub> - GRAM-MOLE	DN <sup>3</sup> / KG	DENSITY RATIOS -		OTMSTONLESS LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 1 BAR
	KELVIN	CELSIUS					LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 1 BAR	LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 1 BAR	
2.000	22.605	-250.345	0.033571	0.06768	29.788	14.776	0.9554	0.5561	
2.096	23.000	-250.150	0.033441	0.06741	29.903	14.834	0.9517	0.5574	
2.100	23.007	-250.143	0.033436	0.06741	29.908	14.836	0.9516	0.5572	
2.173	23.150	-250.000	0.033340	0.06721	29.994	14.879	0.9488	0.5495	
2.200	23.202	-249.948	0.033305	0.06714	30.026	14.894	0.9478	0.5485	
2.300	23.390	-249.760	0.033175	0.06688	30.143	14.952	0.9444	0.5448	
2.400	23.573	-249.577	0.033048	0.06662	30.259	15.010	0.9405	0.5412	
2.500	23.751	-249.399	0.032923	0.06637	30.374	15.067	0.9370	0.5376	
2.600	23.924	-249.226	0.032800	0.06612	30.488	15.124	0.9335	0.5341	
2.645	23.924	-249.226	0.032745	0.06610	30.539	15.149	0.9319	0.5325	
2.700	24.092	-249.058	0.032678	0.06588	30.602	15.180	0.9300	0.9307	
2.735	24.150	-249.000	0.032635	0.06579	30.642	15.200	0.9288	0.9294	
2.800	24.255	-248.895	0.032558	0.06564	30.714	15.236	0.9266	0.9272	
2.850	24.351	-248.745	0.032439	0.06540	30.827	15.291	0.9232	0.9239	
2.942	3.000	24.681	0.032390	0.06530	30.874	15.315	0.9218	0.9224	
3.000	3.059	24.671	0.032322	0.06516	30.938	15.347	0.9199	0.9205	
3.100	3.161	24.723	0.032206	0.06493	31.050	15.402	0.9166	0.9172	
3.200	3.263	24.871	0.032051	0.06469	31.161	15.457	0.9133	0.9139	
3.288	3.365	25.000	0.031991	0.06449	31.259	15.506	0.9104	0.9111	
3.300	3.365	25.017	0.031978	0.06447	31.272	15.512	0.9101	0.9104	
3.393	3.460	25.150	0.031872	0.06425	31.375	15.564	0.9077	0.9077	
3.400	3.467	25.159	0.031865	0.06424	31.383	15.567	0.9068	0.9075	
3.500	3.569	25.299	0.031753	0.06401	31.493	15.622	0.9037	0.9043	
3.600	3.671	25.435	0.031642	0.06379	31.603	15.677	0.9005	0.9011	
3.700	3.773	25.569	0.031532	0.06357	31.714	15.732	0.8974	0.8980	
3.800	3.875	25.701	0.031423	0.06335	31.824	15.786	0.8943	0.8949	
3.900	3.977	25.830	0.031314	0.06313	31.935	15.841	0.8912	0.8918	
3.923	4.000	25.859	0.031289	0.06308	31.960	15.854	0.8905	0.8911	
4.000	4.079	25.957	0.031206	0.06291	32.045	15.896	0.8881	0.8887	
4.035	4.114	26.000	0.031168	0.06283	32.084	15.915	0.8870	0.8877	
4.100	4.181	26.081	0.031098	0.06269	32.156	15.951	0.8850	0.8857	
4.156	4.238	26.150	0.031038	0.06257	32.218	15.982	0.8830	0.8840	
4.200	4.283	26.204	0.030991	0.06248	32.267	16.006	0.8820	0.8826	
4.300	4.385	26.324	0.030885	0.06226	32.378	16.061	0.8800	0.8796	
4.400	4.487	26.443	0.030779	0.06205	32.490	16.117	0.8759	0.8766	
4.500	4.589	26.559	0.030673	0.06184	32.602	16.172	0.8699	0.8736	
4.600	4.691	26.674	0.030568	0.06162	32.714	16.228	0.8670	0.8706	
4.700	4.793	26.787	0.030463	0.06141	32.826	16.284	0.8640	0.8648	
4.800	4.895	26.898	0.030359	0.06120	32.940	16.340	0.8612	0.8618	
4.892	4.997	27.008	0.030262	0.06100	33.045	16.392	0.8581	0.8615	
4.900	5.000	27.012	0.030254	0.06098	33.057	16.398	0.8581	0.8615	
5.000	5.099	27.116	0.030150	0.06077	33.167	16.452	0.8557	0.8587	
5.031	5.131	27.150	0.030118	0.06072	33.203	16.470	0.8551	0.8577	
5.100	5.201	27.223	0.030046	0.06057	33.282	16.509	0.8551	0.8557	

## SATURATED LIQUID PARAHYDROGEN

TABLE 15 CONTINUED

BAR	PRESSURE KP/CM <sup>2</sup>	TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	KG/ DM <sup>3</sup>	VOLUME		DENSITY RATIOS -		DIMENSIONLESS LIQUID DENSITY/ LIQUID DENSITY/ PRESS. OF 760 TORR
		KELVIN	CELSIUS			CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG	LIQUID DENSITY/ DENSITY AT A BOIL. PRESS. OF 1 BAR	DENSITY RATIO - LIQUID DENSITY/ LIQUID DENSITY/ PRESS. OF 760 TORR	
5.000	5.303	27.328	-245.622	0.029943	0.06036	33.397	16.566	0.8531	0.8528	0.8498
5.300	5.404	27.432	-245.716	0.029839	0.06015	33.583	16.664	0.8532	0.8492	0.8469
5.600	5.506	27.535	-245.815	0.029736	0.05995	33.629	16.682	0.8533	0.8463	0.8440
5.900	5.608	27.636	-245.914	0.029633	0.05974	33.747	16.780	0.8534	0.8404	0.8410
5.600	5.710	27.736	-246.014	0.029529	0.05953	33.865	16.798	0.8535	0.8374	0.8380
5.800	5.812	27.834	-246.116	0.029426	0.05932	33.983	16.857	0.8536	0.8345	0.8351
5.600	5.914	27.932	-246.218	0.029323	0.05911	34.103	16.917	0.8537	0.8315	0.8320
5.800	6.016	28.000	-246.319	0.029220	0.05890	34.188	16.959	0.8538	0.8286	0.8292
5.800	6.118	28.013	-246.422	0.029117	0.05869	34.204	16.967	0.8539	0.8257	0.8263
6.000	6.220	28.123	-246.527	0.029014	0.05848	34.223	16.976	0.8540	0.8228	0.8234
6.000	6.322	28.217	-246.633	0.028911	0.05828	34.345	17.037	0.8541	0.8198	0.8174
6.200	6.424	28.310	-246.748	0.028806	0.05807	34.379	17.081	0.8542	0.8169	0.8145
6.400	6.526	28.402	-246.867	0.028703	0.05786	34.467	17.142	0.8543	0.8139	0.8115
6.600	6.628	28.493	-246.987	0.028600	0.05765	34.566	17.203	0.8544	0.8110	0.8085
6.600	6.730	28.572	-247.107	0.028495	0.05744	34.666	17.264	0.8545	0.8080	0.8056
6.700	6.832	28.660	-247.230	0.028391	0.05723	34.772	17.325	0.8546	0.8055	0.8031
6.800	6.934	28.747	-247.357	0.028286	0.05702	34.888	17.386	0.8547	0.8030	0.8006
6.865	7.000	28.847	-247.497	0.028181	0.05681	35.000	17.447	0.8548	0.8005	0.8002
6.900	7.036	28.933	-247.647	0.028076	0.05660	35.118	17.508	0.8549	0.7999	0.7996
6.978	7.116	29.019	-247.807	0.027971	0.05639	35.242	17.569	0.8550	0.7978	0.7956
7.000	7.138	29.019	-247.833	0.027866	0.05618	35.371	17.630	0.8551	0.7957	0.7933
7.100	7.240	29.103	-248.000	0.027761	0.05597	35.506	17.691	0.8552	0.7936	0.7910
7.156	7.297	29.150	-248.077	0.027656	0.05576	35.646	17.752	0.8553	0.7915	0.7885
7.200	7.342	29.187	-248.160	0.027551	0.05555	35.791	17.813	0.8554	0.7894	0.7864
7.300	7.444	29.270	-248.333	0.027446	0.05534	35.941	17.874	0.8555	0.7873	0.7844
7.400	7.546	29.352	-248.517	0.027341	0.05513	36.096	17.935	0.8556	0.7852	0.7823
7.500	7.648	29.433	-248.707	0.027236	0.05492	36.256	17.996	0.8557	0.7831	0.7802
7.600	7.750	29.513	-248.900	0.027131	0.05471	36.421	18.057	0.8558	0.7810	0.7778
7.700	7.852	29.593	-249.097	0.027026	0.05450	36.591	18.118	0.8559	0.7789	0.7752
7.845	7.954	29.672	-249.300	0.026921	0.05429	36.766	18.179	0.8560	0.7768	0.7733
7.900	8.000	29.708	-249.344	0.026816	0.05408	36.946	18.240	0.8561	0.7747	0.7711
7.900	8.058	29.750	-249.400	0.026711	0.05387	37.131	18.301	0.8562	0.7726	0.7684
8.000	8.156	29.828	-249.522	0.026606	0.05366	37.326	18.362	0.8563	0.7705	0.7658
8.100	8.254	29.905	-249.649	0.026501	0.05345	37.521	18.423	0.8564	0.7684	0.7631
8.200	8.352	29.981	-249.787	0.026396	0.05324	37.726	18.484	0.8565	0.7663	0.7619
8.225	8.397	30.000	-249.833	0.026291	0.05303	37.931	18.545	0.8566	0.7642	0.7595
8.300	8.464	30.056	-249.900	0.026186	0.05282	38.146	18.606	0.8567	0.7621	0.7563
8.400	8.556	30.134	-249.999	0.026081	0.05261	38.361	18.667	0.8568	0.7600	0.7535
8.425	8.591	30.150	-249.999	0.025976	0.05240	38.586	18.728	0.8569	0.7579	0.7512
8.500	8.668	30.205	-250.045	0.025871	0.05219	38.821	18.789	0.8570	0.7558	0.7483
8.600	8.770	30.279	-250.181	0.025766	0.05198	39.066	18.850	0.8571	0.7537	0.7458
8.700	8.872	30.352	-250.322	0.025661	0.05177	39.321	18.911	0.8572	0.7516	0.7430

TABLE 15 CONTINUED

## SATURATED LIQUID PARAHYDROGEN

BAR	PRESSURE		TEMPERATURE		DENSITY GRAM-MOLE/ CM <sup>3</sup>	VOLUME CM <sup>3</sup> / GRAM-MOLE	DM <sup>3</sup> / KG	DENSITY RATIOS -	
	KP/CM <sup>2</sup>	KELVIN	CELSIUS	GRAM-MOLE/ CM <sup>3</sup>				LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 1 BAR	LIQUID DENSITY/ DENSITY AT A BOIL- PRESS. OF 760 TORR
8.800	8.974	30.424	-242.726	0.026097	0.05261	38.378	19.008	0.7427	0.7432
8.826	9.000	30.443	-242.707	0.026067	0.05256	38.383	19.030	0.7418	0.7424
8.850	9.075	30.496	-242.654	0.025980	0.05237	38.481	19.093	0.7394	0.7399
9.000	9.177	30.567	-242.582	0.025862	0.05214	38.667	19.180	0.7360	0.7365
9.100	9.279	30.638	-242.512	0.025743	0.05190	38.846	19.269	0.7326	0.7331
9.200	9.381	30.708	-242.442	0.025623	0.05165	39.028	19.360	0.7292	0.7297
9.300	9.483	30.777	-242.373	0.025504	0.05141	39.214	19.452	0.7257	0.7263
9.400	9.585	30.846	-242.304	0.025378	0.05116	39.404	19.546	0.7222	0.7228
9.500	9.687	30.914	-242.236	0.025254	0.05091	39.588	19.642	0.7187	0.7192
9.627	9.789	31.002	-242.168	0.025128	0.05066	39.769	19.741	0.7152	0.7157
9.760	9.891	31.090	-242.101	0.025002	0.05041	39.949	19.841	0.7117	0.7122
9.800	9.933	31.116	-242.034	0.024872	0.05014	40.126	19.941	0.7082	0.7087
9.837	10.000	31.121	-242.029	0.024863	0.05012	40.250	19.951	0.7076	0.7081
9.854	10.045	31.150	-242.000	0.024806	0.05001	40.314	19.997	0.7059	0.7064
9.900	10.095	31.162	-241.968	0.024741	0.04986	40.418	20.049	0.7041	0.7046
10.000	10.197	31.248	-241.902	0.024609	0.04961	40.636	20.157	0.7003	0.7008
10.100	10.299	31.314	-241.836	0.024474	0.04934	40.860	20.268	0.6965	0.6970
10.200	10.401	31.378	-241.772	0.024337	0.04906	41.093	20.382	0.6926	0.6931
10.300	10.503	31.443	-241.707	0.024199	0.04878	41.325	20.499	0.6887	0.6892
10.400	10.605	31.507	-241.643	0.024057	0.04850	41.569	20.620	0.6846	0.6851
10.500	10.707	31.570	-241.580	0.023913	0.04821	41.813	20.744	0.6805	0.6810
10.600	10.809	31.633	-241.517	0.023766	0.04791	42.078	20.872	0.6764	0.6769
10.700	10.911	31.695	-241.455	0.023616	0.04761	42.345	21.005	0.6721	0.6726
10.787	11.000	31.750	-241.400	0.023462	0.04730	42.596	21.124	0.6683	0.6688
10.800	11.013	31.758	-241.392	0.0234462	0.04730	42.621	21.162	0.6677	0.6682
10.900	11.115	31.819	-241.331	0.023306	0.04698	42.908	21.284	0.6633	0.6638
11.000	11.217	31.880	-241.270	0.023145	0.04666	43.208	21.432	0.6587	0.6592
11.100	11.319	31.941	-241.209	0.022980	0.04633	43.516	21.586	0.6540	0.6545
11.188	11.419	32.000	-241.150	0.022814	0.04599	43.832	21.743	0.6493	0.6497
11.200	11.421	32.001	-241.149	0.022811	0.04599	43.859	21.746	0.6492	0.6496
11.300	11.523	32.061	-241.089	0.022636	0.04563	44.177	21.914	0.6442	0.6447
11.400	11.625	32.121	-241.029	0.022456	0.04527	44.514	22.090	0.6391	0.6395
11.450	11.675	32.150	-241.000	0.022364	0.04508	44.774	22.180	0.6365	0.6369
11.500	11.727	32.180	-240.970	0.022270	0.04489	45.084	22.275	0.6328	0.6332
11.600	11.829	32.238	-240.912	0.022076	0.04450	45.298	22.470	0.6283	0.6287
11.700	11.931	32.296	-240.854	0.021875	0.04410	45.614	22.676	0.6225	0.6230
11.768	12.000	32.336	-240.814	0.021733	0.04381	45.831	22.865	0.6185	0.6189
11.800	12.033	32.354	-240.796	0.021665	0.04367	46.158	22.957	0.6166	0.6170
11.900	12.135	32.411	-240.739	0.021444	0.04323	46.4634	23.132	0.6103	0.6107
12.000	12.237	32.468	-240.682	0.021211	0.04276	47.446	23.367	0.6036	0.6041
12.0749	13.000	32.881	-240.269	0.0218570	0.03744	43.885	26.712	0.5285	0.5289
12.928	13.183	32.976	-240.174	0.0215590	0.03443	64.144	31.818	0.4437	0.4440



BAR KPa/cm <sup>2</sup>	TABLE ENTRIES												
	1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR			1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS 3. DENSITY, KG/DM <sup>3</sup>									
19.5 -253.65 0.801	0.830 0.816	1.000 1.020	2.000 2.039	3.000 3.059	4.000 4.079	5.000 5.099	6.000 6.118	7.000 7.138	8.000 8.158	9.000 9.203	10.000 10.197	11.000 11.217	12.000 12.237
19.6 -253.55 0.827	1.0116 1.0124 0.07166	1.0135 1.0142 0.07179	1.0153 1.0160 0.07192	1.0171 1.0178 0.07205	1.0189 1.0196 0.07217	1.0206 1.0214 0.07230	1.0224 1.0231 0.07242	1.0241 1.0248 0.07254	1.0258 1.0265 0.07266	1.0274 1.0282 0.07278	1.0291 1.0298 0.07290	1.0307 1.0314 0.07304	1.0323 1.0330 0.07318
19.7 -253.45 0.853	1.0101 1.0095 0.07144	1.0114 1.0104 0.07157	1.0122 1.0112 0.07170	1.0140 1.0140 0.07183	1.0158 1.0166 0.07196	1.0176 1.0184 0.07208	1.0194 1.0201 0.07221	1.0211 1.0218 0.07233	1.0228 1.0236 0.07245	1.0245 1.0252 0.07257	1.0262 1.0269 0.07269	1.0279 1.0286 0.07281	1.0296 1.0303 0.07293
19.8 -253.35 0.880	1.0069 1.0076 0.07133	1.0088 1.0095 0.07146	1.0107 1.0114 0.07159	1.0125 1.0132 0.07172	1.0143 1.0150 0.07185	1.0161 1.0168 0.07198	1.0179 1.0186 0.07210	1.0196 1.0204 0.07223	1.0214 1.0221 0.07235	1.0231 1.0238 0.07247	1.0247 1.0254 0.07259	1.0264 1.0271 0.07271	1.0281 1.0288 0.07283
19.9 -253.25 0.907	1.0053 1.0060 0.07121	1.0072 1.0079 0.07134	1.0091 1.0098 0.07147	1.0109 1.0117 0.07161	1.0128 1.0135 0.07174	1.0146 1.0153 0.07187	1.0164 1.0171 0.07200	1.0181 1.0189 0.07212	1.0199 1.0206 0.07224	1.0216 1.0223 0.07236	1.0233 1.0240 0.07248	1.0250 1.0257 0.07260	1.0267 1.0274 0.07272
20.0 -253.15 0.935	1.0037 1.0044 0.07110	1.0056 1.0063 0.07123	1.0075 1.0082 0.07137	1.0094 1.0101 0.07150	1.0112 1.0119 0.07163	1.0131 1.0138 0.07176	1.0149 1.0156 0.07189	1.0166 1.0173 0.07201	1.0184 1.0191 0.07214	1.0201 1.0208 0.07226	1.0218 1.0225 0.07238	1.0235 1.0242 0.07250	1.0252 1.0259 0.07262
20.1 -253.05 0.964	1.0021 1.0028 0.07098	1.0040 1.0047 0.07112	1.0059 1.0066 0.07126	1.0078 1.0085 0.07139	1.0097 1.0104 0.07152	1.0115 1.0122 0.07165	1.0133 1.0140 0.07177	1.0151 1.0158 0.07191	1.0169 1.0176 0.07203	1.0186 1.0193 0.07215	1.0204 1.0211 0.07228	1.0221 1.0228 0.07240	1.0238 1.0245 0.07252
20.2 -252.95 0.993	1.0004 1.0011 0.07087	1.0024 1.0031 0.07101	1.0043 1.0050 0.07114	1.0062 1.0069 0.07128	1.0081 1.0088 0.07141	1.0100 1.0107 0.07154	1.0118 1.0125 0.07167	1.0136 1.0143 0.07180	1.0154 1.0161 0.07192	1.0171 1.0178 0.07205	1.0188 1.0195 0.07217	1.0205 1.0212 0.07229	1.0222 1.0229 0.07241
20.3 -252.85 1.023	1.0008 1.0015 0.07089	1.0027 1.0034 0.07103	1.0046 1.0053 0.07116	1.0065 1.0072 0.07130	1.0084 1.0091 0.07143	1.0102 1.0109 0.07156	1.0121 1.0128 0.07169	1.0138 1.0145 0.07181	1.0156 1.0163 0.07194	1.0174 1.0181 0.07207	1.0191 1.0198 0.07219	1.0208 1.0215 0.07231	1.0225 1.0232 0.07243
20.4 -252.75 1.053	0.9991 0.9998 0.07077	1.0011 1.0018 0.07091	1.0030 1.0037 0.07105	1.0049 1.0056 0.07119	1.0068 1.0075 0.07132	1.0087 1.0094 0.07145	1.0105 1.0112 0.07158	1.0123 1.0130 0.07171	1.0141 1.0148 0.07184	1.0159 1.0166 0.07196	1.0177 1.0184 0.07209	1.0195 1.0202 0.07221	1.0212 1.0219 0.07233
20.5 -252.65 1.084	0.9975 0.9982 0.07066	0.9994 1.0002 0.07080	1.0014 1.0021 0.07094	1.0033 1.0040 0.07107	1.0052 1.0059 0.07121	1.0071 1.0078 0.07134	1.0090 1.0097 0.07147	1.0109 1.0116 0.07160	1.0127 1.0134 0.07173	1.0146 1.0153 0.07185	1.0164 1.0171 0.07198	1.0182 1.0189 0.07210	1.0200 1.0207 0.07222
20.6 -252.55 1.116	0.9958 0.9965 0.07054	0.9978 0.9985 0.07068	0.9998 1.0005 0.07082	1.0017 1.0024 0.07096	1.0036 1.0043 0.07109	1.0055 1.0062 0.07123	1.0074 1.0081 0.07136	1.0092 1.0099 0.07149	1.0111 1.0118 0.07162	1.0129 1.0136 0.07175	1.0147 1.0154 0.07188	1.0165 1.0172 0.07200	1.0183 1.0190 0.07212
20.7 -252.45 1.149	0.9941 0.9948 0.07042	0.9961 0.9968 0.07056	0.9981 0.9988 0.07070	1.0001 1.0008 0.07084	1.0020 1.0027 0.07098	1.0039 1.0046 0.07111	1.0058 1.0065 0.07125	1.0077 1.0084 0.07138	1.0095 1.0102 0.07151	1.0114 1.0121 0.07164	1.0132 1.0139 0.07177	1.0150 1.0157 0.07190	1.0168 1.0175 0.07202
20.8 -252.35 1.182	0.9931 0.07030	0.9951 0.07044	0.9972 0.07058	0.9992 0.07072	1.0012 0.07086	1.0032 0.07100	1.0052 0.07114	1.0072 0.07127	1.0091 0.07140	1.0111 0.07153	1.0131 0.07166	1.0151 0.07179	1.0171 0.07191
20.9 -252.25 1.216	0.9937 0.9914 0.07018	0.9927 0.9935 0.07032	0.9944 0.9955 0.07047	0.9968 0.9975 0.07061	0.9988 0.9995 0.07075	1.0007 1.0014 0.07089	1.0026 1.0033 0.07102	1.0045 1.0052 0.07115	1.0064 1.0071 0.07128	1.0083 1.0090 0.07141	1.0102 1.0109 0.07154	1.0121 1.0128 0.07167	1.0140 1.0147 0.07179
21.0 -252.15 1.250	0.9889 0.9826 0.07005	0.9810 0.9848 0.07020	0.9931 0.9970 0.07035	0.9951 1.0009 0.07049	0.9971 1.0049 0.07063	0.9991 1.0097 0.07077	1.0010 1.0149 0.07091	1.0029 1.0209 0.07104	1.0048 1.0304 0.07117	1.0067 1.0552 0.07131	1.0086 1.0891 0.07148	1.0105 1.1011 0.07171	1.0124 1.1027 0.07194
21.1 -252.05 1.285	0.9872 0.9879 0.06993	0.9893 0.9900 0.07008	0.9914 0.9921 0.07023	0.9935 0.9942 0.07037	0.9955 0.9962 0.07051	0.9975 0.9982 0.07065	0.9994 1.0001 0.07079	1.0013 1.0020 0.07092	1.0032 1.0039 0.07105	1.0051 1.0058 0.07118	1.0070 1.0077 0.07131	1.0089 1.0096 0.07143	1.0107 1.0114 0.07155
21.2 -251.95 1.321	0.9862 0.06981	0.9876 0.06996	0.9897 0.07011	0.9918 0.07025	0.9938 0.07040	0.9958 0.07054	0.9978 0.07068	0.9997 0.07082	1.0017 0.07096	1.0036 0.07110	1.0055 0.07124	1.0074 0.07138	1.0093 0.07151
21.3 -251.85 1.397	0.9837 0.9844 0.06968	0.9859 0.9866 0.06983	0.9880 0.9887 0.06999	0.9901 0.9908 0.07013	0.9921 0.9928 0.07028	0.9942 0.9949 0.07042	0.9961 0.9968 0.07056	0.9981 0.9988 0.07069	1.0000 1.0007 0.07082	1.0019 1.0027 0.07095	1.0038 1.0047 0.07108	1.0057 1.0066 0.07121	1.0076 1.0085 0.07133
21.4 -251.75 1.395	0.9819 0.06956	0.9841 0.06971	0.9863 0.06986	0.9884 0.06999	0.9904 0.07015	0.9924 0.07030	0.9944 0.07045	0.9964 0.07059	0.9984 0.07073	1.0003 0.07085	1.0022 0.07099	1.0041 0.07112	1.0060 0.07124



TABLE 16 - CONTINUED

DENSITY OF COMPRESSED LIQUID HYDROGEN - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TCPR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/DM <sup>3</sup>												
BAR		0.800	1.000	2.008	3.008	4.008	5.000	6.000	7.000	8.000	9.800	10.000	11.000	12.000
K/FC	BAR	0.816	1.020	2.039	3.059	4.079	5.099	6.118	7.138	8.158	9.177	10.197	11.217	12.237
21.5				0.9802	0.9823	0.9845	0.9866	0.9887	0.9908	0.9928	0.9948	0.9968	0.9987	1.0007
-251.65				0.9808	0.9830	0.9852	0.9873	0.9894	0.9915	0.9935	0.9955	0.9975	0.9994	1.0014
1.433				0.06943	0.06959	0.06974	0.06989	0.07004	0.07018	0.07033	0.07047	0.07061	0.07075	0.07088
21.6				0.9784	0.9806	0.9828	0.9849	0.9870	0.9891	0.9912	0.9932	0.9952	0.9971	0.9991
-251.95				0.9799	0.9813	0.9835	0.9856	0.9877	0.9898	0.9919	0.9939	0.9959	0.9978	0.9998
1.471				0.06930	0.06946	0.06961	0.06977	0.06992	0.07008	0.07023	0.07038	0.07053	0.07068	0.07077
21.7				0.9765	0.9788	0.9810	0.9832	0.9853	0.9874	0.9895	0.9915	0.9935	0.9955	0.9974
-251.45				0.9772	0.9795	0.9817	0.9839	0.9860	0.9881	0.9902	0.9922	0.9942	0.9962	0.9981
1.511				0.06917	0.06933	0.06949	0.06964	0.06980	0.06994	0.07009	0.07024	0.07038	0.07052	0.07065
21.8				0.9747	0.9770	0.9792	0.9814	0.9835	0.9857	0.9878	0.9898	0.9919	0.9939	0.9958
-251.35				0.9754	0.9777	0.9799	0.9821	0.9843	0.9864	0.9885	0.9905	0.9926	0.9946	0.9965
1.551				0.06905	0.06921	0.06936	0.06952	0.06967	0.06982	0.06997	0.07012	0.07026	0.07040	0.07054
21.9				0.9729	0.9752	0.9774	0.9796	0.9818	0.9840	0.9861	0.9882	0.9902	0.9922	0.9942
-251.25				0.9736	0.9759	0.9781	0.9803	0.9825	0.9847	0.9868	0.9889	0.9909	0.9929	0.9949
1.592				0.06891	0.06908	0.06924	0.06939	0.06955	0.06970	0.06985	0.07000	0.07014	0.07028	0.07042
22.0				0.9710	0.9733	0.9755	0.9777	0.9800	0.9822	0.9844	0.9865	0.9885	0.9906	0.9926
-251.15				0.9717	0.9740	0.9763	0.9785	0.9808	0.9829	0.9851	0.9872	0.9892	0.9913	0.9933
1.634				0.06878	0.06895	0.06911	0.06927	0.06942	0.06958	0.06973	0.06988	0.07002	0.07017	0.07031
22.1				0.9691	0.9715	0.9738	0.9761	0.9783	0.9805	0.9826	0.9847	0.9868	0.9889	0.9909
-251.05				0.9698	0.9722	0.9745	0.9768	0.9790	0.9812	0.9833	0.9854	0.9875	0.9896	0.9916
1.677				0.06865	0.06882	0.06898	0.06914	0.06930	0.06945	0.06961	0.06976	0.06990	0.07005	0.07019
22.2				0.9672	0.9696	0.9720	0.9742	0.9765	0.9787	0.9809	0.9830	0.9851	0.9872	0.9892
-250.95				0.9679	0.9703	0.9726	0.9749	0.9772	0.9794	0.9816	0.9837	0.9858	0.9879	0.9899
1.720				0.06851	0.06868	0.06885	0.06901	0.06917	0.06933	0.06949	0.06965	0.06980	0.06995	0.07009
22.3				0.9653	0.9678	0.9701	0.9724	0.9747	0.9769	0.9791	0.9813	0.9834	0.9855	0.9876
-250.85				0.9660	0.9684	0.9708	0.9731	0.9754	0.9776	0.9798	0.9820	0.9841	0.9862	0.9883
1.764				0.06838	0.06855	0.06872	0.06888	0.06904	0.06920	0.06936	0.06951	0.06966	0.06981	0.06996
22.4				0.9634	0.9658	0.9682	0.9705	0.9729	0.9751	0.9774	0.9795	0.9817	0.9838	0.9859
-250.75				0.9641	0.9665	0.9689	0.9713	0.9736	0.9759	0.9782	0.9803	0.9824	0.9845	0.9866
1.809				0.06824	0.06842	0.06859	0.06875	0.06891	0.06907	0.06923	0.06939	0.06954	0.06969	0.06984
22.5				0.9614	0.9639	0.9663	0.9687	0.9710	0.9733	0.9755	0.9778	0.9799	0.9821	0.9844
-250.65				0.9621	0.9646	0.9670	0.9694	0.9717	0.9740	0.9762	0.9784	0.9806	0.9828	0.9849
1.855				0.06810	0.06828	0.06845	0.06862	0.06879	0.06895	0.06911	0.06926	0.06942	0.06957	0.06972
22.6				0.9595	0.9620	0.9644	0.9668	0.9692	0.9715	0.9738	0.9760	0.9782	0.9803	0.9825
-250.55				0.9601	0.9626	0.9651	0.9675	0.9699	0.9722	0.9745	0.9767	0.9789	0.9810	0.9832
1.902				0.06796	0.06814	0.06832	0.06849	0.06866	0.06883	0.06899	0.06916	0.06932	0.06948	0.06964
22.7				0.9575	0.9600	0.9625	0.9649	0.9673	0.9697	0.9720	0.9742	0.9764	0.9786	0.9807
-250.45				0.9581	0.9607	0.9632	0.9656	0.9680	0.9704	0.9727	0.9749	0.9771	0.9793	0.9814
1.949				0.06782	0.06800	0.06818	0.06835	0.06852	0.06869	0.06885	0.06901	0.06917	0.06932	0.06947
22.8				0.9555	0.9580	0.9606	0.9630	0.9654	0.9678	0.9701	0.9724	0.9747	0.9769	0.9790
-250.35				0.9561	0.9587	0.9612	0.9637	0.9661	0.9685	0.9708	0.9731	0.9753	0.9775	0.9797
1.997				0.06768	0.06786	0.06804	0.06822	0.06839	0.06856	0.06873	0.06889	0.06906	0.06922	0.06938
22.9				0.9560	0.9586	0.9611	0.9635	0.9659	0.9683	0.9706	0.9728	0.9750	0.9771	0.9793
-250.25				0.9567	0.9593	0.9618	0.9642	0.9666	0.9689	0.9712	0.9734	0.9756	0.9777	0.9799
2.047				0.06752	0.06770	0.06788	0.06805	0.06822	0.06839	0.06855	0.06871	0.06887	0.06902	0.06917
23.0				0.9540	0.9566	0.9592	0.9616	0.9641	0.9664	0.9687	0.9709	0.9731	0.9753	0.9775
-250.15				0.9547	0.9573	0.9599	0.9623	0.9647	0.9671	0.9694	0.9717	0.9740	0.9762	0.9784
2.096				0.06758	0.06776	0.06794	0.06812	0.06829	0.06846	0.06862	0.06878	0.06894	0.06909	0.06924
23.1				0.9520	0.9546	0.9572	0.9597	0.9622	0.9646	0.9669	0.9692	0.9714	0.9736	0.9757
-250.05				0.9527	0.9553	0.9579	0.9604	0.9628	0.9652	0.9675	0.9697	0.9720	0.9742	0.9764
2.147				0.06744	0.06762	0.06780	0.06798	0.06816	0.06833	0.06850	0.06867	0.06883	0.06899	0.06915
23.2				0.9500	0.9526	0.9552	0.9578	0.9602	0.9626	0.9649	0.9671	0.9693	0.9715	0.9737
-249.95				0.9507	0.9533	0.9559	0.9584	0.9609	0.9634	0.9657	0.9680	0.9702	0.9724	0.9746
2.199				0.06729	0.06748	0.06766	0.06784	0.06802	0.06820	0.06838	0.06855	0.06872	0.06889	0.06906
23.3				0.9479	0.9506	0.9532	0.9558	0.9583	0.9608	0.9632	0.9656	0.9679	0.9702	0.9725
-249.85				0.9486	0.9513	0.9539	0.9565	0.9590	0.9615	0.9639	0.9662	0.9685	0.9708	0.9731
2.252				0.06715	0.06734	0.06752	0.06770	0.06788	0.06806	0.06824	0.06841	0.06858	0.06875	0.06892
23.4				0.9458	0.9486	0.9513	0.9539	0.9564	0.9589	0.9613	0.9637	0.9660	0.9683	0.9706
-249.75				0.9465	0.9492	0.9519	0.9545	0.9570	0.9595	0.9620	0.9644	0.9667	0.9690	0.9713
2.305				0.06700	0.06719	0.06738	0.06756	0.06774	0.06792	0.06810	0.06828	0.06845	0.06863	0.06880

		TABLE ENTRIES												
1. TEMPERATURE, K		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>3</sup>												
BAR	KG/CM <sup>3</sup>	0.800	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000	11.000	12.000
		0.816	1.020	2.039	3.059	4.079	5.099	6.118	7.138	8.156	9.177	10.197	11.217	12.237
23.5					0.9437	0.9465	0.9492	0.9518	0.9544	0.9569	0.9594	0.9618	0.9642	0.9665
-249.45					0.9444	0.9472	0.9499	0.9525	0.9551	0.9577	0.9601	0.9625	0.9649	0.9673
2.360					0.06645	0.06705	0.06724	0.06742	0.06761	0.06778	0.06796	0.06813	0.06830	0.06846
23.6					0.9416	0.9444	0.9471	0.9498	0.9524	0.9550	0.9575	0.9600	0.9623	0.9647
-249.55					0.9423	0.9451	0.9478	0.9505	0.9531	0.9556	0.9582	0.9609	0.9630	0.9654
2.415					0.06670	0.06690	0.06709	0.06728	0.06747	0.06765	0.06782	0.06800	0.06817	0.06833
23.7					0.9395	0.9423	0.9451	0.9478	0.9504	0.9530	0.9555	0.9580	0.9604	0.9628
-249.65					0.9401	0.9430	0.9457	0.9484	0.9511	0.9537	0.9562	0.9587	0.9611	0.9635
2.471					0.06655	0.06675	0.06695	0.06714	0.06732	0.06751	0.06769	0.06786	0.06803	0.06820
23.8					0.9373	0.9402	0.9430	0.9457	0.9484	0.9510	0.9536	0.9561	0.9586	0.9610
-249.35					0.9380	0.9408	0.9437	0.9464	0.9491	0.9517	0.9543	0.9568	0.9592	0.9616
2.528					0.06639	0.06660	0.06680	0.06699	0.06718	0.06737	0.06755	0.06773	0.06790	0.06807
23.9					0.9351	0.9380	0.9409	0.9437	0.9464	0.9490	0.9516	0.9542	0.9566	0.9591
-249.25					0.9358	0.9387	0.9416	0.9443	0.9470	0.9497	0.9523	0.9548	0.9573	0.9598
2.586					0.06624	0.06645	0.06665	0.06685	0.06704	0.06723	0.06741	0.06759	0.06777	0.06794
24.0					0.9329	0.9359	0.9387	0.9416	0.9443	0.9470	0.9496	0.9522	0.9547	0.9572
-249.15					0.9336	0.9365	0.9394	0.9422	0.9450	0.9477	0.9503	0.9529	0.9554	0.9579
2.645					0.06608	0.06629	0.06650	0.06670	0.06689	0.06708	0.06727	0.06745	0.06763	0.06780
24.1					0.9307	0.9337	0.9366	0.9395	0.9423	0.9450	0.9476	0.9502	0.9528	0.9553
-249.05					0.9313	0.9343	0.9373	0.9401	0.9428	0.9456	0.9483	0.9509	0.9535	0.9560
2.705					0.06592	0.06614	0.06634	0.06655	0.06675	0.06694	0.06713	0.06731	0.06749	0.06767
24.2					0.9284	0.9315	0.9344	0.9373	0.9402	0.9429	0.9456	0.9483	0.9508	0.9534
-248.95					0.9291	0.9321	0.9351	0.9380	0.9408	0.9436	0.9463	0.9489	0.9515	0.9540
2.766					0.06576	0.06598	0.06619	0.06640	0.06660	0.06679	0.06698	0.06717	0.06735	0.06753
24.3					0.9261	0.9292	0.9322	0.9352	0.9380	0.9409	0.9436	0.9462	0.9488	0.9514
-248.85					0.9268	0.9298	0.9329	0.9358	0.9387	0.9415	0.9443	0.9469	0.9495	0.9521
2.828					0.06560	0.06582	0.06604	0.06624	0.06645	0.06665	0.06684	0.06703	0.06721	0.06739
24.4					0.9238	0.9270	0.9300	0.9330	0.9359	0.9387	0.9415	0.9442	0.9469	0.9495
-248.75					0.9244	0.9276	0.9307	0.9337	0.9366	0.9394	0.9422	0.9449	0.9475	0.9501
2.891					0.06544	0.06566	0.06588	0.06609	0.06630	0.06650	0.06669	0.06688	0.06707	0.06726
24.5					0.9214	0.9246	0.9278	0.9308	0.9338	0.9366	0.9395	0.9422	0.9449	0.9475
-248.65					0.9221	0.9253	0.9284	0.9315	0.9344	0.9373	0.9401	0.9429	0.9455	0.9482
2.954					0.06527	0.06550	0.06572	0.06593	0.06614	0.06635	0.06655	0.06674	0.06693	0.06712
24.6					0.9223	0.9255	0.9286	0.9316	0.9345	0.9373	0.9401	0.9428	0.9455	0.9485
-248.55					0.9230	0.9262	0.9293	0.9322	0.9352	0.9380	0.9408	0.9435	0.9462	0.9492
3.019					0.06533	0.06556	0.06578	0.06599	0.06620	0.06640	0.06660	0.06679	0.06697	0.06716
24.7					0.9200	0.9232	0.9264	0.9294	0.9323	0.9352	0.9380	0.9408	0.9436	0.9465
-248.45					0.9206	0.9239	0.9270	0.9301	0.9330	0.9359	0.9387	0.9415	0.9442	0.9472
3.085					0.06517	0.06540	0.06562	0.06583	0.06604	0.06625	0.06645	0.06665	0.06684	0.06703
24.8					0.9176	0.9209	0.9241	0.9272	0.9302	0.9331	0.9359	0.9387	0.9415	0.9445
-248.35					0.9183	0.9215	0.9247	0.9278	0.9308	0.9338	0.9366	0.9394	0.9421	0.9451
3.152					0.06500	0.06523	0.06546	0.06568	0.06589	0.06610	0.06630	0.06650	0.06669	0.06688
24.9					0.9152	0.9186	0.9218	0.9248	0.9278	0.9308	0.9337	0.9365	0.9393	0.9421
-248.25					0.9159	0.9192	0.9224	0.9255	0.9286	0.9316	0.9345	0.9373	0.9401	0.9430
3.220					0.06483	0.06507	0.06530	0.06552	0.06574	0.06595	0.06615	0.06635	0.06654	0.06673
25.0					0.9126	0.9162	0.9195	0.9227	0.9258	0.9288	0.9317	0.9346	0.9374	0.9403
-248.15					0.9135	0.9169	0.9201	0.9233	0.9264	0.9294	0.9324	0.9352	0.9380	0.9408
3.288					0.06466	0.06490	0.06513	0.06536	0.06558	0.06579	0.06600	0.06620	0.06640	0.06660
25.1					0.9104	0.9138	0.9171	0.9204	0.9235	0.9266	0.9296	0.9324	0.9353	0.9381
-248.05					0.9110	0.9145	0.9178	0.9210	0.9241	0.9272	0.9302	0.9331	0.9360	0.9389
3.356					0.06449	0.06473	0.06497	0.06521	0.06545	0.06568	0.06590	0.06612	0.06633	0.06654
25.2					0.9079	0.9114	0.9148	0.9181	0.9212	0.9243	0.9274	0.9304	0.9333	0.9362
-247.95					0.9085	0.9120	0.9154	0.9187	0.9219	0.9250	0.9280	0.9310	0.9338	0.9367
3.429					0.06431	0.06456	0.06480	0.06503	0.06526	0.06549	0.06571	0.06593	0.06614	0.06635
25.3					0.9054	0.9089	0.9124	0.9157	0.9190	0.9221	0.9252	0.9282	0.9311	0.9340
-247.85					0.9060	0.9096	0.9130	0.9164	0.9196	0.9227	0.9258	0.9288	0.9317	0.9346
3.501					0.06413	0.06439	0.06463	0.06487	0.06510	0.06532	0.06554	0.06575	0.06595	0.06615
25.4					0.9028	0.9065	0.9100	0.9134	0.9167	0.9199	0.9230	0.9260	0.9289	0.9318
-247.75					0.9035	0.9071	0.9106	0.9140	0.9173	0.9205	0.9236	0.9265	0.9294	0.9323
3.574					0.06395	0.06421	0.06446	0.06470	0.06493	0.06515	0.06537	0.06558	0.06578	0.06598

TABLE 16 - CONTINUED

DENSITY OF COMPRESSED LIQUID HYDROGEN - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/D <sup>3</sup>												
BAR		0.800	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000	11.000	12.000
K/PC <sup>2</sup>		0.816	1.020	2.039	3.059	4.079	5.099	6.118	7.138	8.158	9.177	10.197	11.217	12.237
25.6					0.9083	0.9040	0.8975	0.8910	0.9143	0.9176	0.9207	0.9238	0.9268	
-247.65					0.9099	0.9045	0.8982	0.8916	0.9153	0.9187	0.9214	0.9244	0.9274	
3.648					0.06377	0.06403	0.06428	0.06453	0.06477	0.06500	0.06522	0.06544	0.06565	
25.6					0.8977	0.9014	0.9050	0.9085	0.9120	0.9153	0.9185	0.9216	0.9246	
-247.55					0.8983	0.9021	0.9057	0.9092	0.9126	0.9159	0.9191	0.9222	0.9252	
3.723					0.06359	0.06385	0.06411	0.06436	0.06460	0.06483	0.06506	0.06528	0.06549	
25.7					0.8950	0.8989	0.9025	0.9061	0.9096	0.9129	0.9162	0.9193	0.9224	
-247.45					0.8956	0.8995	0.9032	0.9068	0.9102	0.9136	0.9168	0.9200	0.9230	
3.799					0.06340	0.06367	0.06393	0.06419	0.06443	0.06467	0.06490	0.06512	0.06534	
25.8					0.8923	0.8962	0.9000	0.9036	0.9072	0.9105	0.9139	0.9171	0.9202	
-247.35					0.8929	0.8968	0.9007	0.9043	0.9078	0.9112	0.9145	0.9177	0.9208	
3.877					0.06321	0.06348	0.06375	0.06401	0.06426	0.06450	0.06473	0.06496	0.06518	
25.9					0.8896	0.8936	0.8975	0.9012	0.9047	0.9082	0.9115	0.9148	0.9180	
-247.25					0.8902	0.8942	0.8981	0.9017	0.9054	0.9088	0.9122	0.9154	0.9186	
3.955					0.06301	0.06328	0.06357	0.06383	0.06409	0.06433	0.06457	0.06480	0.06502	
26.0					0.8869	0.8908	0.8946	0.8982	0.9018	0.9054	0.9089	0.9123	0.9157	
-247.15					0.8875	0.8915	0.8954	0.8993	0.9032	0.9066	0.9098	0.9131	0.9164	
4.035					0.06281	0.06308	0.06336	0.06363	0.06391	0.06416	0.06440	0.06464	0.06486	
26.1					0.8842	0.8882	0.8922	0.8958	0.8995	0.9033	0.9068	0.9101	0.9134	
-247.05					0.8848	0.8888	0.8928	0.8966	0.9004	0.9040	0.9074	0.9108	0.9141	
4.115					0.06262	0.06290	0.06317	0.06343	0.06370	0.06399	0.06423	0.06447	0.06470	
26.2					0.8815	0.8855	0.8894	0.8932	0.8970	0.9009	0.9044	0.9078	0.9111	
-246.95					0.8821	0.8861	0.8901	0.8940	0.8979	0.9015	0.9050	0.9084	0.9118	
4.197					0.06242	0.06270	0.06297	0.06324	0.06356	0.06381	0.06406	0.06430	0.06454	
26.3					0.8787	0.8828	0.8868	0.8908	0.8946	0.8984	0.9020	0.9054	0.9088	
-246.85					0.8793	0.8834	0.8874	0.8914	0.8953	0.8990	0.9026	0.9061	0.9094	
4.280					0.06222	0.06250	0.06278	0.06305	0.06337	0.06364	0.06389	0.06414	0.06437	
26.4					0.8760	0.8801	0.8841	0.8882	0.8922	0.8958	0.8995	0.9030	0.9064	
-246.75					0.8766	0.8807	0.8847	0.8888	0.8927	0.8964	0.9001	0.9037	0.9071	
4.364					0.06202	0.06230	0.06259	0.06289	0.06319	0.06344	0.06372	0.06397	0.06421	
26.5					0.8733	0.8774	0.8814	0.8854	0.8894	0.8933	0.8970	0.9006	0.9041	
-246.65					0.8739	0.8780	0.8821	0.8861	0.8901	0.8939	0.8977	0.9012	0.9047	
4.449					0.06181	0.06210	0.06239	0.06268	0.06298	0.06328	0.06354	0.06380	0.06404	
26.6					0.8706	0.8747	0.8787	0.8828	0.8868	0.8907	0.8945	0.8981	0.9017	
-246.55					0.8712	0.8753	0.8793	0.8833	0.8874	0.8913	0.8951	0.8988	0.9023	
4.535					0.06161	0.06190	0.06219	0.06248	0.06278	0.06309	0.06336	0.06362	0.06387	
26.7					0.8679	0.8720	0.8760	0.8801	0.8841	0.8881	0.8919	0.8956	0.8993	
-246.45					0.8685	0.8726	0.8766	0.8807	0.8847	0.8887	0.8925	0.8963	0.8999	
4.623					0.06140	0.06170	0.06199	0.06229	0.06259	0.06291	0.06318	0.06344	0.06370	
26.8					0.8652	0.8693	0.8733	0.8774	0.8814	0.8854	0.8893	0.8931	0.8968	
-246.35					0.8658	0.8699	0.8739	0.8780	0.8821	0.8861	0.8900	0.8937	0.8974	
4.712					0.06120	0.06150	0.06181	0.06211	0.06241	0.06272	0.06300	0.06326	0.06353	
26.9					0.8625	0.8666	0.8706	0.8747	0.8788	0.8828	0.8867	0.8906	0.8943	
-246.25					0.8631	0.8672	0.8712	0.8753	0.8794	0.8834	0.8874	0.8912	0.8949	
4.801					0.06100	0.06130	0.06161	0.06191	0.06222	0.06253	0.06281	0.06309	0.06335	
27.0					0.8600	0.8641	0.8681	0.8722	0.8763	0.8804	0.8844	0.8884	0.8924	
-246.15					0.8606	0.8647	0.8687	0.8728	0.8769	0.8810	0.8850	0.8889	0.8928	
4.892					0.06080	0.06110	0.06141	0.06171	0.06201	0.06231	0.06263	0.06290	0.06317	
27.1					0.8573	0.8614	0.8654	0.8695	0.8736	0.8777	0.8817	0.8857	0.8897	
-246.05					0.8579	0.8620	0.8660	0.8701	0.8742	0.8782	0.8822	0.8862	0.8901	
4.985					0.06060	0.06091	0.06121	0.06151	0.06181	0.06211	0.06243	0.06272	0.06299	
27.2					0.8546	0.8587	0.8627	0.8668	0.8709	0.8750	0.8790	0.8830	0.8870	
-245.95					0.8552	0.8593	0.8633	0.8674	0.8715	0.8756	0.8796	0.8836	0.8876	
5.078					0.06040	0.06071	0.06101	0.06131	0.06161	0.06194	0.06224	0.06253	0.06281	
27.3					0.8519	0.8560	0.8600	0.8641	0.8682	0.8723	0.8763	0.8803	0.8843	
-245.85					0.8525	0.8566	0.8606	0.8647	0.8688	0.8729	0.8769	0.8809	0.8849	
5.173					0.06020	0.06051	0.06081	0.06111	0.06141	0.06174	0.06205	0.06234	0.06263	
27.4					0.8492	0.8533	0.8573	0.8614	0.8655	0.8696	0.8736	0.8776	0.8816	
-245.75					0.8498	0.8539	0.8579	0.8620	0.8661	0.8702	0.8742	0.8782	0.8822	
5.269					0.06000	0.06031	0.06061	0.06091	0.06121	0.06154	0.06185	0.06215	0.06244	

		TABLE ENTRIES													
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS													
2. TEMPERATURE, °C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS													
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/DM <sup>3</sup>													
BAR		0.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000	11.000	12.000	
KP/CM <sup>2</sup>		0.816	1.020	2.039	3.059	4.079	5.099	6.118	7.138	8.158	9.177	10.197	11.217	12.237	
27.5									0.8507	0.8561	0.8610	0.8658	0.8703	0.8746	0.8788
-245.05									0.8513	0.8567	0.8617	0.8664	0.8709	0.8753	0.8794
5.366									0.06026	0.06064	0.06099	0.06133	0.06165	0.06196	0.06225
27.6									0.8473	0.8527	0.8580	0.8628	0.8674	0.8719	0.8761
-245.95									0.8479	0.8533	0.8586	0.8634	0.8680	0.8725	0.8767
5.466									0.06002	0.06040	0.06078	0.06112	0.06144	0.06176	0.06206
27.7									0.8439	0.8495	0.8548	0.8598	0.8645	0.8691	0.8734
-245.45									0.8445	0.8501	0.8555	0.8604	0.8651	0.8697	0.8740
5.564									0.05978	0.06017	0.06055	0.06090	0.06124	0.06156	0.06187
27.8									0.8404	0.8462	0.8515	0.8567	0.8616	0.8662	0.8706
-245.35									0.8410	0.8466	0.8522	0.8574	0.8622	0.8666	0.8712
5.665									0.05953	0.05994	0.06032	0.06069	0.06103	0.06136	0.06167
27.9									0.8368	0.8428	0.8483	0.8535	0.8586	0.8633	0.8678
-245.25									0.8374	0.8434	0.8489	0.8541	0.8592	0.8639	0.8684
5.767									0.05928	0.05970	0.06009	0.06046	0.06082	0.06115	0.06147
28.0									0.8332	0.8393	0.8450	0.8504	0.8555	0.8604	0.8650
-245.15									0.8338	0.8396	0.8456	0.8510	0.8561	0.8610	0.8656
5.871									0.05902	0.05945	0.05986	0.06024	0.06060	0.06094	0.06127
28.1									0.8295	0.8358	0.8417	0.8472	0.8524	0.8574	0.8621
-245.05									0.8301	0.8364	0.8423	0.8478	0.8530	0.8580	0.8627
5.976									0.05876	0.05920	0.05962	0.06001	0.06038	0.06073	0.06107
28.2									0.8322	0.8382	0.8439	0.8492	0.8544	0.8594	0.8640
-244.95									0.8328	0.8388	0.8445	0.8499	0.8550	0.8600	0.8646
6.083									0.05895	0.05939	0.05978	0.06016	0.06052	0.06086	0.06119
28.3									0.8285	0.8347	0.8406	0.8461	0.8512	0.8562	0.8608
-244.85									0.8291	0.8353	0.8412	0.8467	0.8518	0.8568	0.8614
6.189									0.05866	0.05913	0.05954	0.05993	0.06030	0.06065	0.06100
28.4									0.8246	0.8312	0.8372	0.8428	0.8481	0.8531	0.8578
-244.75									0.8252	0.8318	0.8378	0.8434	0.8487	0.8537	0.8584
6.298									0.05841	0.05888	0.05930	0.05970	0.06008	0.06043	0.06078
28.5									0.8202	0.8275	0.8337	0.8395	0.8450	0.8501	0.8548
-244.65									0.8214	0.8281	0.8343	0.8401	0.8456	0.8507	0.8554
6.406									0.05814	0.05862	0.05906	0.05947	0.05985	0.06022	0.06058
28.6									0.8159	0.8237	0.8312	0.8361	0.8417	0.8470	0.8519
-244.55									0.8174	0.8243	0.8308	0.8367	0.8423	0.8476	0.8525
6.519									0.05786	0.05835	0.05881	0.05923	0.05963	0.06000	0.06036
28.7									0.8122	0.8199	0.8266	0.8327	0.8384	0.8439	0.8493
-244.45									0.8134	0.8205	0.8272	0.8333	0.8390	0.8445	0.8498
6.632									0.05752	0.05803	0.05855	0.05903	0.05949	0.05993	0.06037
28.8									0.8086	0.8166	0.8228	0.8292	0.8351	0.8407	0.8461
-244.35									0.8092	0.8166	0.8234	0.8298	0.8357	0.8413	0.8467
6.746									0.05722	0.05781	0.05829	0.05874	0.05916	0.05955	0.05995
28.9									0.8043	0.8121	0.8191	0.8257	0.8317	0.8374	0.8428
-244.25									0.8046	0.8126	0.8197	0.8262	0.8323	0.8380	0.8434
6.861									0.05698	0.05752	0.05802	0.05849	0.05892	0.05932	0.05972
29.0									0.7995	0.8079	0.8152	0.8220	0.8283	0.8341	0.8394
-244.15									0.8005	0.8085	0.8159	0.8225	0.8289	0.8347	0.8400
6.978									0.05666	0.05723	0.05775	0.05822	0.05867	0.05909	0.05950
29.1									0.8037	0.8113	0.8183	0.8247	0.8306	0.8360	0.8413
-244.05									0.8043	0.8119	0.8188	0.8248	0.8305	0.8358	0.8410
7.096									0.05633	0.05747	0.05796	0.05842	0.05884	0.05925	0.05965
29.2									0.7984	0.8072	0.8145	0.8211	0.8271	0.8327	0.8380
-243.95									0.8000	0.8078	0.8150	0.8217	0.8279	0.8336	0.8390
7.216									0.05663	0.05718	0.05769	0.05816	0.05861	0.05906	0.05951
29.3									0.7949	0.8031	0.8106	0.8174	0.8234	0.8290	0.8344
-243.85									0.7954	0.8037	0.8111	0.8180	0.8244	0.8304	0.8360
7.337									0.05631	0.05689	0.05742	0.05790	0.05836	0.05881	0.05926
29.4									0.7902	0.7986	0.8066	0.8137	0.8203	0.8266	0.8327
-243.75									0.7908	0.7994	0.8071	0.8143	0.8210	0.8274	0.8336
7.459									0.05598	0.05659	0.05713	0.05764	0.05811	0.05858	0.05904

TABLE 16 - CONTINUED

## DENSITY OF COMPRESSED LIQUID HYDROGEN - CONTINUED

		TABLE ENTRIES												
1. TEMPERATURE, K		1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS												
2. TEMPERATURE, C		2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS												
3. VAPOR PRESSURE, BAR		3. DENSITY, KG/DM <sup>3</sup>												
BAR		0.800	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000	11.000	12.000
KP/CM <sup>2</sup>		0.816	1.020	2.039	3.059	4.079	5.099	6.118	7.138	8.158	9.177	10.197	11.217	12.237
29.5										0.7855	0.7944	0.8025	0.8098	0.8166
-243.65										0.7860	0.7950	0.8031	0.8104	0.8172
7.583										0.05964	0.05627	0.05685	0.05737	0.05785
29.6										0.7805	0.7899	0.7983	0.8059	0.8130
-243.55										0.7811	0.7905	0.7989	0.8065	0.8135
7.709										0.05529	0.05595	0.05655	0.05709	0.05759
29.7										0.7754	0.7852	0.7940	0.8019	0.8092
-243.45										0.7759	0.7858	0.7946	0.8025	0.8097
7.836										0.05492	0.05562	0.05624	0.05680	0.05737
29.8										0.7700	0.7804	0.7896	0.7978	0.8053
-243.35										0.7706	0.7810	0.7901	0.7984	0.8059
7.964										0.05454	0.05528	0.05593	0.05651	0.05704
29.9											0.7754	0.7950	0.7936	0.8014
-243.25										0.7760	0.7856	0.7941	0.7984	0.8019
8.094										0.05493	0.05561	0.05621	0.05682	0.05766
30.0											0.7782	0.7883	0.7892	0.7973
-243.15										0.7708	0.7809	0.7898	0.7979	0.8053
8.225										0.05456	0.05528	0.05591	0.05648	0.05704
30.1											0.7649	0.7755	0.7848	0.7932
-243.05										0.7655	0.7760	0.7853	0.7937	0.8019
8.358										0.05418	0.05493	0.05559	0.05619	0.05679
30.2											0.7593	0.7704	0.7802	0.7889
-242.95										0.7598	0.7710	0.7808	0.7895	0.7982
8.493										0.05378	0.05457	0.05527	0.05588	0.05648
30.3											0.7536	0.7653	0.7755	0.7846
-242.85										0.7541	0.7658	0.7760	0.7851	0.7937
8.629										0.05338	0.05421	0.05493	0.05556	0.05619
30.4											0.7474	0.7598	0.7706	0.7801
-242.75										0.7479	0.7604	0.7711	0.7807	0.7892
8.766										0.05294	0.05382	0.05459	0.05526	0.05588
30.5											0.7488	0.7642	0.7856	0.7755
-242.65										0.7413	0.7587	0.7865	0.7760	0.7850
8.906										0.05248	0.05342	0.05423	0.05493	0.05556
30.6											0.7484	0.7604	0.7708	0.7808
-242.55										0.7490	0.7609	0.7709	0.7813	0.7913
9.047										0.05302	0.05386	0.05460	0.05526	0.05588
30.7												0.7422	0.7540	0.7659
-242.45										0.7427	0.7555	0.7664	0.7760	0.7850
9.189										0.05257	0.05348	0.05425	0.05493	0.05556
30.8												0.7358	0.7494	0.7608
-242.35										0.7363	0.7495	0.7614	0.7714	0.7813
9.333										0.05212	0.05308	0.05389	0.05460	0.05526
30.9												0.7288	0.7435	0.7556
-242.25										0.7293	0.7440	0.7561	0.7656	0.7750
9.479										0.05163	0.05266	0.05352	0.05425	0.05493
31.0												0.7215	0.7373	0.7507
-242.15										0.7220	0.7375	0.7508	0.7608	0.7708
9.627										0.05112	0.05223	0.05314	0.05389	0.05460
31.1												0.7135	0.7308	0.7446
-242.05										0.7140	0.7313	0.7451	0.7551	0.7650
9.776										0.05054	0.05177	0.05274	0.05352	0.05425
31.2												0.7053	0.7240	0.7387
-241.95										0.7058	0.7245	0.7393	0.7493	0.7592
9.927										0.04996	0.05129	0.05233	0.05314	0.05389
31.3													0.7166	0.7326
-241.85												0.7171	0.7331	0.7431
10.079												0.05076	0.05189	0.05266
31.4													0.7091	0.7261
-241.75												0.7096	0.7266	0.7366
10.234												0.05023	0.05143	0.05220



TABLE 16 - CONTINUED

## DENSITY OF COMPRESSED LIQUID HYDROGEN - CONTINUED

1. TEMPERATURE, K 2. TEMPERATURE, C 3. VAPOR PRESSURE, BAR			TABLE ENTRIES 1. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 1 BAR, DIMENSIONLESS 2. DENSITY RATIO, LIQUID DENSITY/DENSITY AT A BOILING PRESSURE OF 760 TORR, DIMENSIONLESS 3. DENSITY, KG/DW <sup>3</sup>										
BAR	0.800	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000	11.000	12.000
KP/CM <sup>2</sup>	0.816	1.020	2.039	3.059	4.079	5.099	6.118	7.138	8.158	9.177	10.197	11.217	12.237
31.5												0.7007	0.7193
-241.65												0.7012	0.7198
10.390												0.04663	0.05095
31.6												0.6916	0.7121
-241.95												0.6921	0.7126
10.548												0.04699	0.05044
31.7												0.6816	0.7046
-241.45												0.6821	0.7051
10.707												0.04828	0.04991
31.8												0.6700	0.6965
-241.35												0.6705	0.6970
10.869												0.04746	0.04934
31.9												0.6875	0.6880
-241.25												0.6880	0.6880
11.032												0.04870	0.04870
32.0												0.6779	0.6784
-241.15												0.6784	0.6784
11.198												0.04802	0.04802

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## APPENDIX

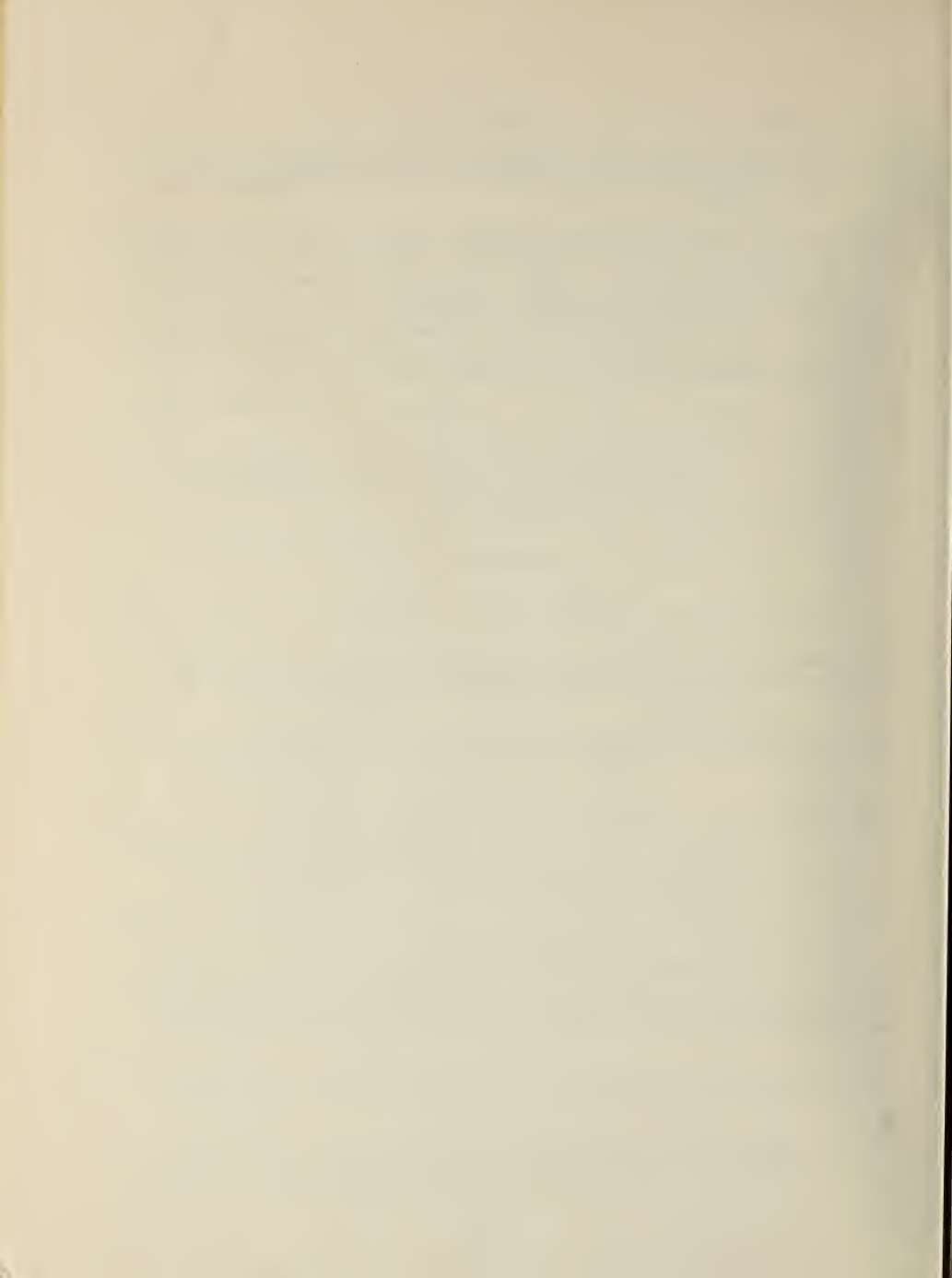
### Units and Conversions

The calculations for all fluids were performed with equations whose units were atmospheres, Kelvin, and molar volumes. The various units presented in the tables involved the following conversion factors (IUPAC 1961 and Mechtly 1969):

Molecular Weight		Conversion Factors	
Parahydrogen	2.01594	1 atm	= 1.01325 bar
Oxygen	31.9988	760 torr	= 1.01325 bar
Nitrogen	28.016	1 atm	= 1.033227453 kp/cm <sup>2</sup>
Argon	39.948	1 kp/cm <sup>2</sup>	= 1 kgf/cm <sup>2</sup>
		1 kg/dm <sup>3</sup>	= 1 kg/litre
		°C	= K - 273.15

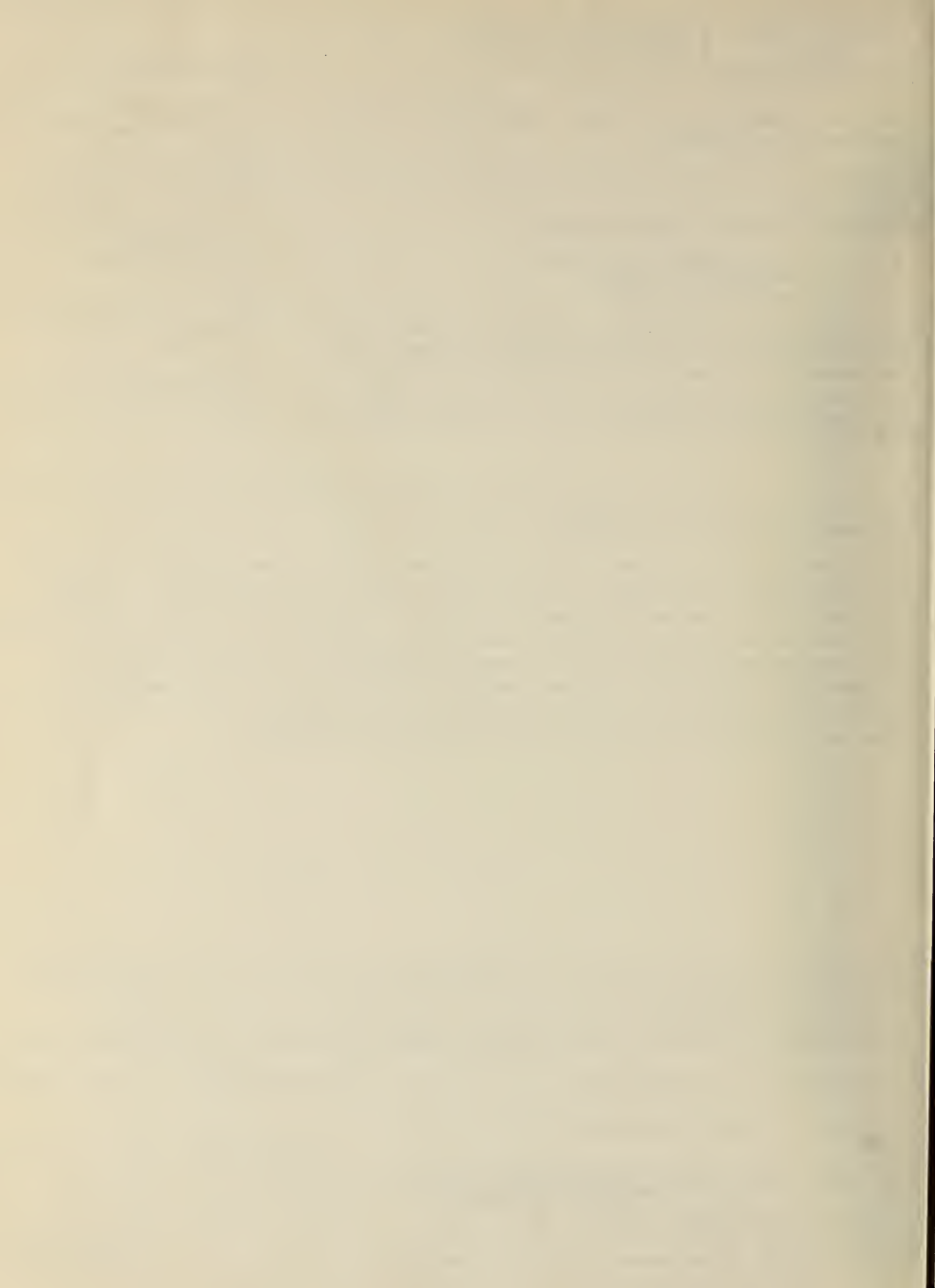
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<p>Tables of pressure, volume, density and temperature for the saturated liquid and for compressed liquid states from the triple point to the critical point, of oxygen, nitrogen, argon, and parahydrogen are presented. The table entries of temperature are in Kelvin and degrees Celsius, table entries in pressure are in bars and <math>\text{kp}/\text{cm}^2</math>. Volumes or densities are given in several different units, and density ratios are tabulated for each entry. Estimates of the uncertainty for the tabulated data are given. The tables were prepared in the style and in the units preferred by the users. They are intended as source for both technician and engineer.</p>			
17. KEY WORDS ( <i>six to twelve entries; alphabetical order; capitalize only the first letter of the first key word unless a proper name; separated by semicolons</i> )			
Argon; compressed liquid; density; density ratios; liquid; nitrogen, oxygen; parahydrogen; pressure; saturated liquid; tables; temperature; uncertainties; volume.			
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