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**An Empirical Model for Calculating
Vapor-Liquid Equilibrium and Associated
Phase Enthalpy for the CO₂-O₂-Kr-Xe
System for Application to the
KALC Process**

R. W. Glass
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OAK RIDGE NATIONAL LABORATORY

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TO THE KALC PROCESS

R. W. Class, T. M. Gilliam, and V. L. Fowler

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ABSTRACT

An empirical model is presented for vapor-liquid equilibria and enthalpy for the CO₂-O₂ system. In the model, krypton and xenon in very low concentrations are combined with the CO₂-O₂ system, thereby representing the total system of primary interest in the High-Temperature Gas-Cooled Reactor program for removing krypton from off-gas generated during the reprocessing of spent fuel.

Selected properties of the individual and combined components being considered are presented in the form of tables and empirical equations.

1. INTRODUCTION

Successful commercial operation of high-temperature gas-cooled reactors (HTGRs) requires reprocessing of the spent fuel for recovery of the fuel values and subsequent refabrication. During the reprocessing of an HTGR fuel element, which consists of a graphite matrix surrounding the actual fuel particles, large quantities of CO₂ are produced during the burning away of the matrix. While the spent fuel is "cooled" for several months after being discharged from the reactor to allow for

short-lived fission products to decay, the ultimate gas cleanup during reprocessing will require that ^{85}Kr be removed in a concentrated form before the bulk of the off-gas can be released to the atmosphere. Of course, other components may be present in the off-gas throughout the reprocessing train; eventually, however, the final cleanup problem will involve removing part-per-million quantities of krypton from the off-gas, which will consist mainly of CO_2 but will also contain (5 to 15%) lighter gases such as O_2 , CO , and N_2 .

The KALC (Krypton Absorption in Liquid C O_2) process is being developed specifically for the final cleanup step. As such, KALC must essentially remove and concentrate the krypton from the off-gas despite the presence of the other lighter gases.

Figure 1 shows a simplified KALC flowsheet. After particulates, water, iodine, and radon have been removed from the reprocessing off-gas, the latter becomes the feed gas to the KALC system. The feed gas is compressed to about 20 atm and chilled to about -30°C . Next, the noncondensed portion of the feed gas is countercurrently scrubbed in a packed absorption column with liquid CO_2 . The condensed portion of the feed passes directly to the fractionation step discussed below. Krypton, being more soluble in liquid CO_2 than the other light gases, is quantitatively and preferentially absorbed from the feed gas, which after decontamination, is routed to the usual site stack or atmospheric protection system. Some of the other light gases, principally O_2 , are coabsorbed with the krypton during this absorption process and must be fractionated (i.e., separated from the liquid

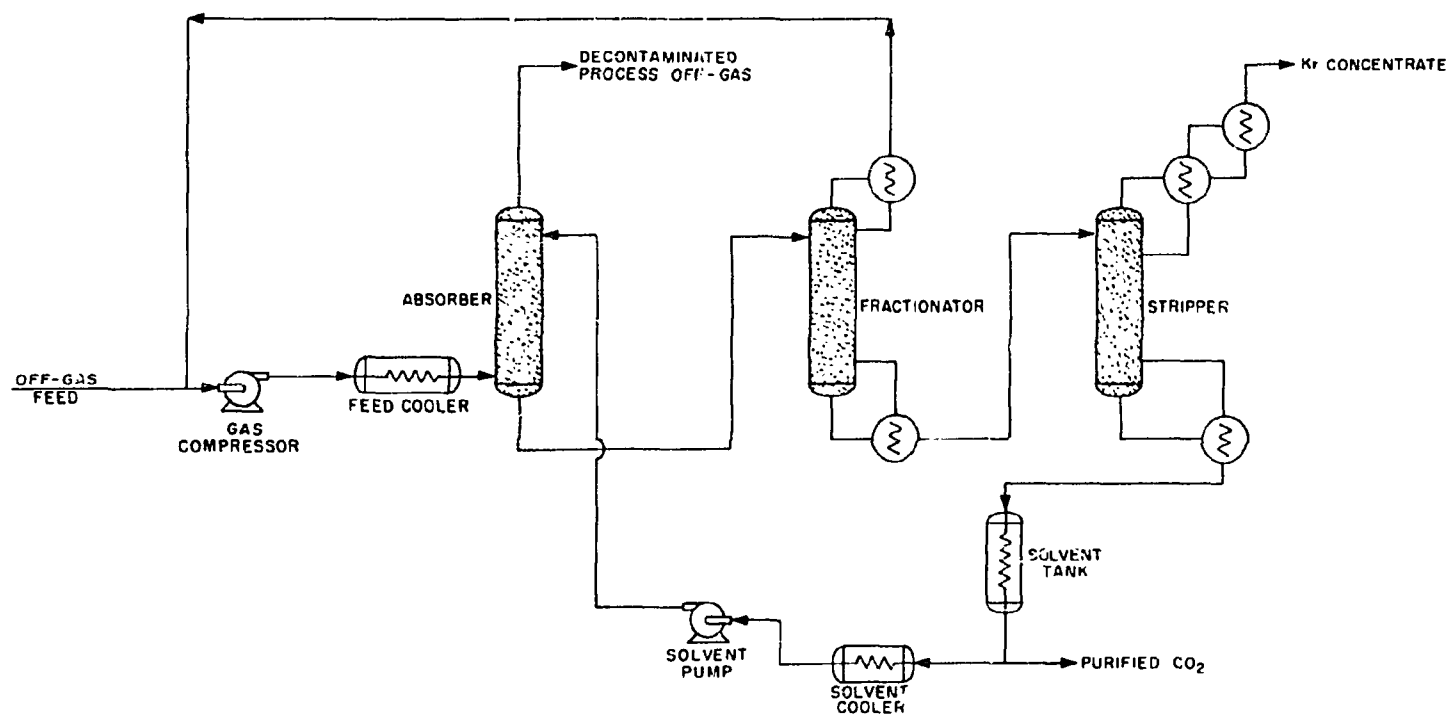


Fig. 1. Simplified flowsheet for the KALC process.

leaving the absorber). Some krypton must be caught up with the oxygen during fractionation in order for this step to be effective in the overall concentration of krypton; therefore, the fractionator off-gas, although high (~40%) in O_2 concentration, will contain some krypton and must thus be recycled to the absorption portion of the process.

During the absorption and fractionation steps, the most important variable will be the liquid/vapor ratio. If this ratio is excessively high in the absorber, too much oxygen will be coabsorbed. If the ratio is extremely low in the fractionator, too much krypton will be recycled to the absorber and concentration will be hindered.

To complete the major processing steps in the general KALC process, the liquid leaving the fractionator, which is assumed to be essentially free of gases lighter than krypton, is routed to the stripper column where concentrated krypton (1 to 5%) is taken overhead and purified liquid CO_2 is removed as a bottom product. General operation will produce more liquid CO_2 bottom product from the stripper than is required for use in the absorption process; however, since it will be purified, it will eventually be exhausted to the atmosphere as is the absorber off-gas.

2. PURPOSE AND SCOPE

As stated earlier, light gases other than O_2 are likely to be present in the off-gas to be treated by the KALC process. In 1973, M. E. Whatley¹ correlated available data into a model of the KALC

system. This model described the multicomponent system adequately to allow early column calculations to assess feasibility of the process. While the model was sufficient for this purpose, it incorporates assumptions which limit its accuracy, and a more accurate representation is now required to permit interpretation of performance data presently being generated in the Experimental Engineering Section Off-Gas Decontamination Facility. The work presented in this report corrects some of the inadequacies of the early model and thereby provides the accuracy needed to develop an improved model.

Treatment of the KALC process essentially as a two-component system (viz., $\text{CO}_2\text{-O}_2$) is believed to be the most expedient means for providing a meaningful model of the system on a timely basis. Krypton (and xenon as well) will be present in such low concentrations that a full multicomponent treatment at this early stage seems unrealistic. As will be noted later, we are in the position of having considerable (P,T,x,y) data for $\text{CO}_2\text{-O}_2$ but much less information concerning other components. In the case of krypton and xenon, for example, only (y/x) ratios at infinite dilution in liquid CO_2 have been reported.

The purpose of this report is to describe the development of an empirical vapor-liquid equilibrium model for the $\text{CO}_2\text{-O}_2$ system throughout the range of interest of the KALC process. Moreover, the enthalpy values for the gas and liquid phases are represented with an associated model. Krypton and xenon are treated as extremely

dilute quantities throughout, enabling us to cover the entire CO_2 - O_2 -Kr-Xe system as it relates to the KALC process. Appended to this report are data values used, tables, and graphs for the various items of interest in general KALC calculations.

Several theoretical and practical considerations have led to the model equations that are presented here. We have intentionally avoided including an extremely detailed discussion since the reasoning is, in some instances, circumstantial and by no means rigorous. In the final analysis the equations must be considered empirical, and their justification must rest on the extent to which they reflect what is known by direct experimentation.

3. CALCULATION OF GAS-LIQUID EQUILIBRIA FOR THE CO_2 - O_2 SYSTEM

A simple plot of the available (P-x) data for the CO_2 - O_2 system (see Fig. 2) indicates that an equation of the following form should suffice for predictive purposes:*

$$\pi - P_{\text{CO}_2}^* = a + bx + cx^2, \quad (1)$$

where

π = total system pressure, atm,

$P_{\text{CO}_2}^*$ = saturated vapor pressure of CO_2 at the system temperature, atm,

x = mole fraction of solute (O_2) in the liquid phase.

* Data and respective references are given in Appendix A.

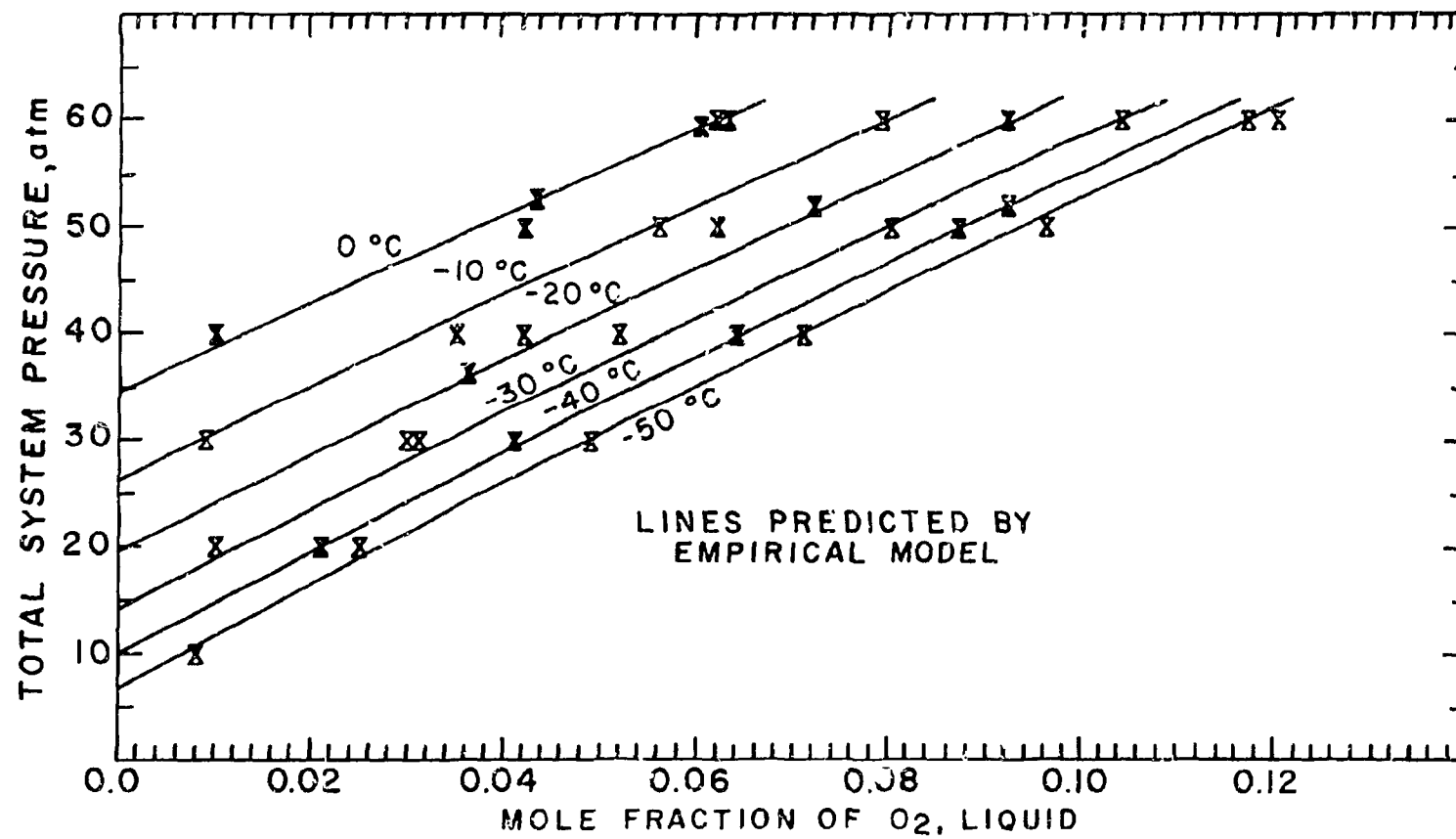


Fig. 2. Curve showing total pressure vs mole fraction of liquid O₂ for the CO₂-O₂ system.

Indeed, the available data can be "fit" fairly well using such a model; however, a more suitable form was found for the curves shown in Fig. 2. In simple form,

$$\pi = xH_{O_2} + (1 - x)P_{CO_2}^*, \quad (2)$$

where

π = total system pressure, atm,

x = mole fraction of solute (O_2) in the liquid phase,

H_{O_2} = Henry's constant for O_2 at system temperature, atm,

$P_{CO_2}^*$ = vapor pressure of the solvent (CO_2), saturated, atm.

Two points which must be noted are: (1) the CO_2 , which is usually considered to be a solute, is the solvent in the KALC process; and (2) although the solubility of O_2 in liquid CO_2 is low under the conditions of interest (i.e., we are dealing with dilute solutions), these dilute solutions are subjected to moderately high pressures in the KALC process.

The availability of data for the CO_2 - O_2 system makes it unnecessary to restrict the total-pressure equation [i.e., Eq. (2)]. The following empirical equation, which is similar to Eq. (2), was found to provide a more realistic representation of data over a wider range (and, hopefully, more nearly accurately over the range of interest to the KALC process):

$$\pi = (a + cx)x + (1 + bx)P_{CO_2}^*, \quad (3)$$

where a , b , and c are the constants of optimization using the actual CO_2 - O_2 ($P - x$) data. Equation (3) represents the data quite

adequately and, for a given T and π , allows straightforward calculation of the quadratic in terms of x . However, the effect of total pressure on the vapor pressure of the pure, saturated component, when taken into account, was found to improve the data representation. The effect of total pressure on the vapor pressure of a single, saturated component is discussed elsewhere,² and is generally obtained from:

$$\ln \left[\frac{P_{\text{CO}_2}^{\pi}(T)}{P_{\text{CO}_2}^*(T)} \right] = \frac{v_{\beta}}{RT} (\pi - P_{\text{CO}_2}^*), \quad (4)$$

where

$P_{\text{CO}_2}^*$ = vapor pressure of the solvent (CO_2) at a total system pressure of π and temperature T ,

$P_{\text{CO}_2}^{\pi}$ = saturated vapor pressure of CO_2 at conditions of π and T (see above),

v_{β} = molar volume of the condensed phase (CO_2),

π = total system pressure, atm,

T = system temperature, °K,

R = gas constant.

Further modification of Eq. (4) derives from a consideration of the variability of v_{β} , the molar volume of the CO_2 liquid, with pressure; thus,

$$v_{\beta} = v_o (1 + m \pi), \quad (5)$$

where

v_{β} = molar volume of the CO_2 phase at pressure,

v_o, m = constants,

π = total system pressure.

The combination of Eqs. (4) and (5) leads to the following expression for the "effective" vapor pressure, $P_{\text{CO}_2}^\pi$, of CO_2 at system temperature T and pressure π :

$$P_{\text{CO}_2}^\pi = P_{\text{CO}_2}^* \exp \left[a \left(\pi - P_{\text{CO}_2}^* \right) (1 + b\pi) / T \right], \quad (6)$$

where a and b are empirically determined constants. Therefore, the final empirical form used to represent the (P, T, x) data is:

$$\pi = (a + cx)x + (1 + bx)P_{\text{CO}_2}^* \exp \left[n \left(\pi - P_{\text{CO}_2}^* \right) (1 + m\pi) / T \right], \quad (7)$$

where

π = total system pressure, atm,

x = mole fraction of O_2 in the liquid phase,

$P_{\text{CO}_2}^*$ = saturated vapor pressure of CO_2 at T , atm,

T = system temperature, $^\circ\text{K}$,

a, b, c, n, m = empirically determined constants with the following values:

$$a = 513.6303370623966,$$

$$b = -1.791124477315243,$$

$$c = -363.1411222175902,$$

$$n = -0.3753900546621806,$$

$$m = 7.059022969361788 \times 10^{-5}$$

Equation (7) may be solved explicitly for x if π and T are given.

Iteration is required for T when π and x are given. In all of the

above equations as well as succeeding ones, the expression for

$P_{CO_2}^*$ was taken from Michels et al.,³ as follows:

$$\log_{10} P_{CO_2}^* = a + \frac{b}{T} + c \log_{10} T + eT, \quad (8)$$

in which

$$T = ^\circ K,$$

$$a = 24.61930,$$

$$b = -1353.202,$$

$$c = -8.142537,$$

$$e = 0.006259156.$$

The resulting fit of the (P,T,x) data from the model Eqs. (7) and (8) is shown in Fig. 2.

Once the empirical form for the (P,T,x) data was suitably fixed, the remaining task was to find the associated y value (the mole fraction of O₂ in the gas phase). King⁴ presents several theoretical forms for associating x and y. The form finally chosen for inclusion into the model is, in reality, a pseudo-Kritchevsky-Kasarnovsky⁵ equation as modified by Lachowiz et al.⁶

The actual Kritchevsky-Kasarnovsky equation may be written as follows (for dilute solutions):

$$\ln \frac{f_i^G}{x_i^L} = \ln Q + \frac{\pi \bar{V}_i^L}{RT}, \quad (9)$$

in which

f_i^G = fugacity of component i (O₂) in the gas phase, atm,

x_i^L = mole fraction of component i (O₂) in the liquid phase,

Q = a constant at a given T, sometimes known as the modified Henry's law constant, atm,

- π = total system pressure, atm,
 $\bar{v}_i^L$ = partial molar volume of the solute gas i (O_2) in the liquid phase,
 R = gas constant,
 T = system temperature, °K.

Because of the moderately high system pressures involved, the Lachowicz⁷ modification has been included in the model to allow for changes in $\bar{v}_i^L$ with total pressure. Hence

$$\bar{v}_i^L = \bar{v}_i^0 (1 + a\pi), \quad (10)$$

where

- $\bar{v}_i^L$ = partial molar volume of component i (O_2) in the liquid phase at system pressure π , ft³/lb · mole,
 $\bar{v}_i^0$ = same as $\bar{v}_i^L$ except at low system pressures,
 a = empirical constant,
 π = total system pressure.

The pseudo-Kritchevsky-Masarnovsky equation with the noted $\bar{v}_i^L$ modification then may be written as follows:

$$\ln \frac{y\pi}{xQ} = \frac{\pi}{T} (A + B\pi), \quad (11)$$

where

- y = vapor mole fraction of O_2 ,
 x = liquid mole fraction of O_2 ,
 π = total system pressure, atm,
 Q = constant depending only on T , atm,

T = system temperature, °K,

A, B = empirical constants.

The form chosen for Q was that used by Michels et al.³ for the vapor pressure of CO_2 , namely:

$$\log_{10} Q = a + \frac{b}{T} + c \log_{10} T + e T. \quad (12)$$

Once the (P, T, x) equation was fixed empirically, the x values provided by Eq. (7) from given values of P and T (actual data values) were used in conjunction with the associated data value of y to optimize Eqs. (11) and (12) to provide the "best" overall values of x and y , given P and T . The empirical constants for Eqs. (11) and (12) are as follows:

$$A = 5.894059811222597 \times 10^{-2},$$

$$B = -5.776542100509821 \times 10^{-3},$$

$$a = 28.97388844292291,$$

$$b = -557.8868642887729,$$

$$c = -10.80849820337748,$$

$$e = 6.997919533272977 \times 10^{-3}.$$

The resulting fit of (P, T, y) data from the model Eqs. (11) and (12) is shown in Fig. 3.

Equations (7), (8), (11), and (12) in combination with their associated empirically determined constants thus provide for singular and explicit determination of x and y , when P and T are given, or for singular but implicit determination of the following variations:

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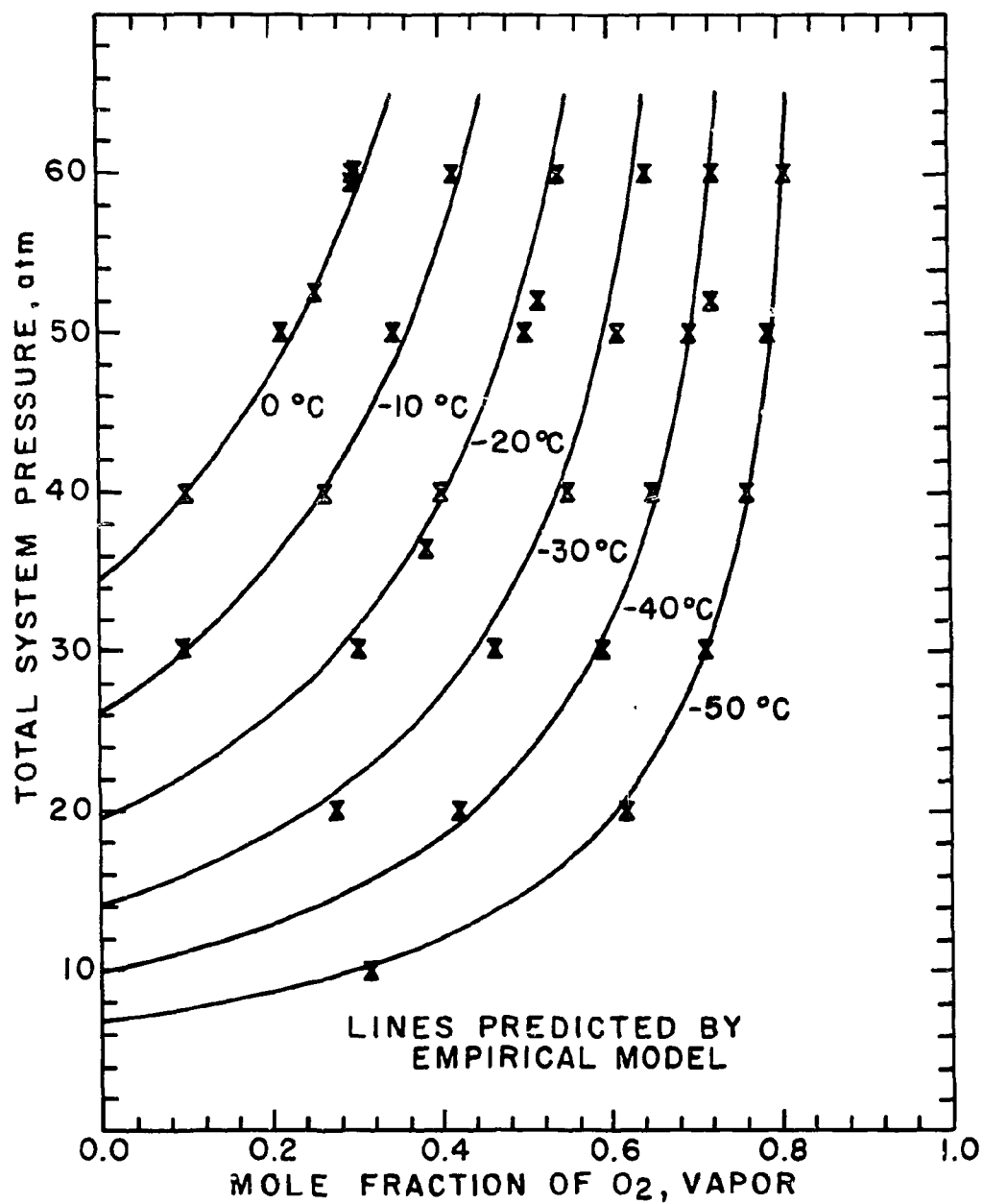


Fig. 3. Curves showing total pressure vs vapor mole fraction for the CO₂-O₂ system.

x and P, when y and T are given,

x and T, when y and P are given,

y and T, when x and P are given.

4. INTRODUCTION OF TRACER-LEVEL KRYPTON AND XENON INTO THE CO₂-O₂ SYSTEM

Krypton and xenon will be present at very low levels (i.e. << 1 mole %) in the KALC process streams. For this reason, neither component will have any appreciable effect on the CO₂-O₂ system equilibrium or on the associated enthalpy for the various phases. Moreover, the data available for krypton and xenon in liquid CO₂ (ref. 8) are expressed as (y/x) equilibrium ratios at infinite dilution (see Appendix A for krypton and xenon data).

In dilute solutions, the behavior of krypton and xenon should be expected to follow the Valentine⁹ equation for solubility. Thus, the (y/x) ratios given were fitted to the Valentine equation. The form of the Valentine equation is as follows:

$$\log_{10} \frac{y P_{\text{CO}_2}^*}{x} = a + b \log_{10} T + \frac{c}{T}, \quad (13)$$

where

y = vapor mole fraction of krypton or xenon,

x = liquid mole fraction of krypton or xenon,

$P_{\text{CO}_2}^*$ = saturated vapor pressure of liquid CO₂ at the system
temperature T [see Eq. (8)],

a, b, c = empirical constants,

T = °K.

The empirical constants determined for each of the minor components are as follows:

for krypton,

$$a = 66.43677404376719,$$

$$b = -9.389310262469535,$$

$$c = -2340.344748279833;$$

for xenon,

$$a = 9.680429875375295$$

$$b = -0.4242850336971706$$

$$c = -799.7966693737438.$$

Equation (13) estimates the experimental values quite satisfactorily for the range of data available, as shown in Fig. 4.

Since the amounts of krypton or xenon are small, the assumption that Henry's constant for each is a function only of system temperature has been made as follows:

$$\left. \frac{y^{P^*}_{\text{CO}_2}(T)}{x} \right|_{\infty \text{ dilution}} = H(T) = \left. \frac{y^{\pi}}{x} \right|_{\text{small values of } y \text{ and } x}. \quad (14)$$

Thus, for model considerations at a given system temperature and pressure, (y/x) for krypton or xenon is calculated using Eqs. (13) and (14) appropriately. Only if either x or y for krypton or xenon is known (e.g., by experiment), can the absolute value of y or x , respectively, be determined. Combination of the $\text{CO}_2\text{-O}_2$ and (y/x) ratio equations at infinite dilution yields Henry's constants for O_2 , krypton, and xenon, as shown in Fig. 5.

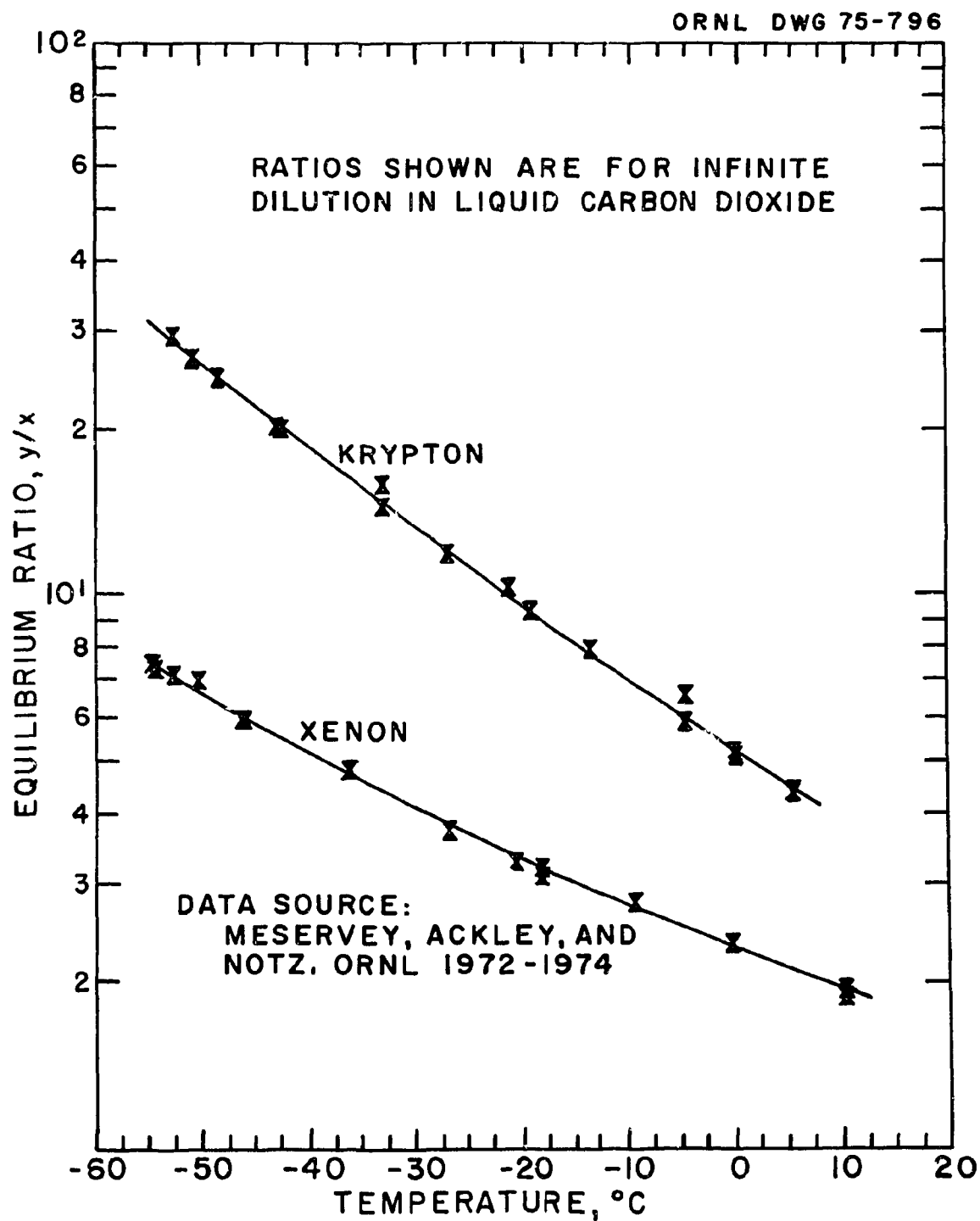


Fig. 4. Equilibrium ratios at infinite dilution for krypton and xenon in liquid CO_2 .

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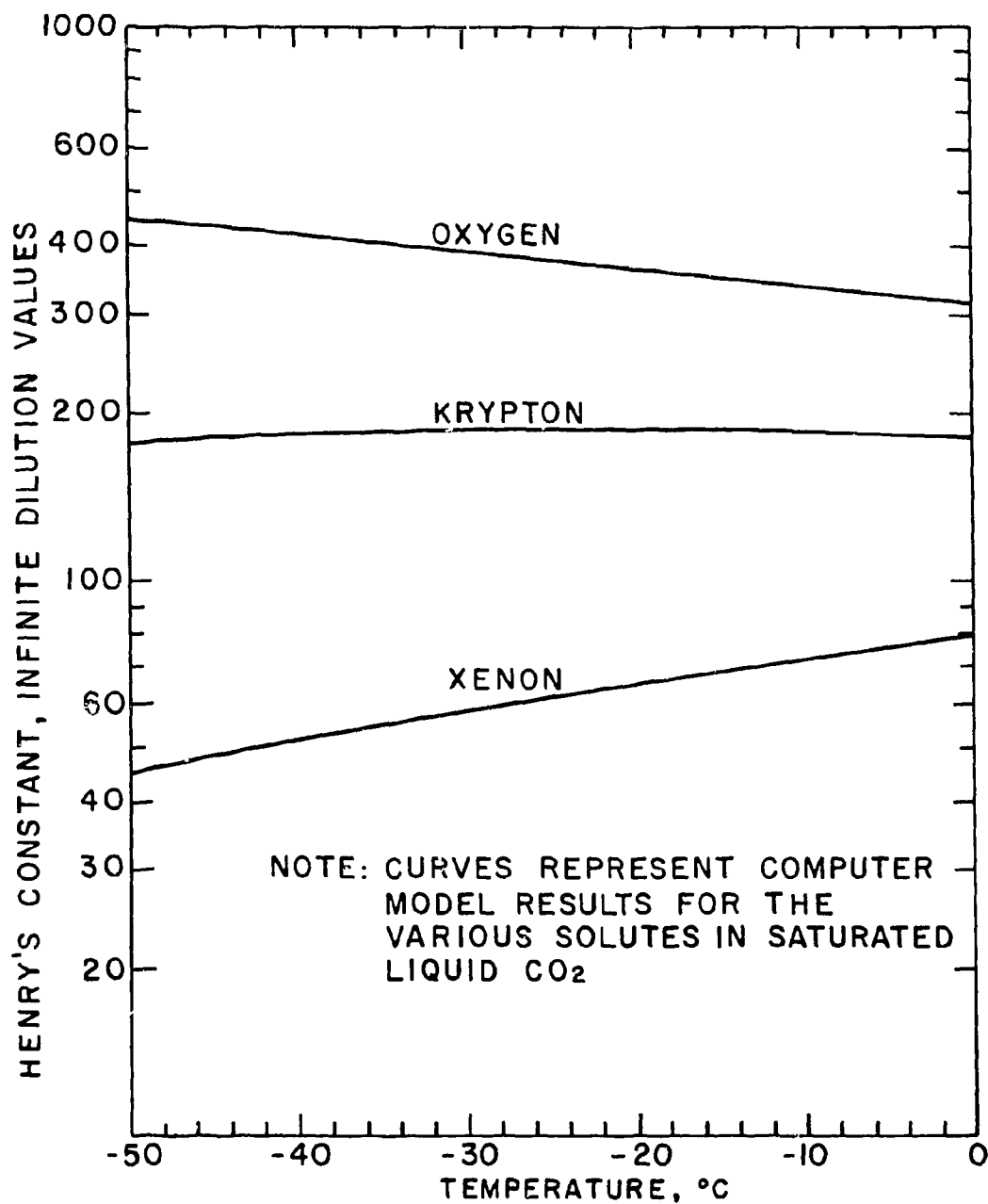


Fig. 5. Henry's law constants calculated for oxygen, krypton, and xenon in liquid CO₂ by using enthalpy model of Mullins.

5. CALCULATION OF VAPOR AND LIQUID ENTHALPIES FOR THE CO₂-O₂ SYSTEM

In the CO₂-O₂ system specifically considered here, the presence of small quantities of krypton and xenon will have very little effect on either equilibrium or phase enthalpies. Calculations of the vapor- and liquid-phase enthalpies require the use of the equilibrium model for values of x and y at a given T and P.

5.1 Calculation of O₂ Enthalpies

The enthalpy model used in this study is taken from the work of Mullins¹⁰ (later used by Mobley¹¹); the basic equation is as follows:

$$\frac{d \ln H_{O_2}}{d (1/T)} = \frac{\bar{H}_{O_2}^{\infty} - h_{O_2}^g}{R} - \frac{\bar{V}_{O_2}^{\infty} T}{R} \frac{d P_{CO_2}^*}{dT}, \quad (15)$$

where

H_{O_2} = Henry's law constant for O₂ in liquid CO₂, atm,

T = temperature, °K,

$\bar{H}_{O_2}^{\infty}$ = partial molar enthalpy of O₂, Btu/lb · mole,

$h_{O_2}^g$ = enthalpy of O₂ in the associated gas phase, Btu/lb · mole,

$\bar{V}_{O_2}^{\infty}$ = partial molar volume of dissolved O₂ at infinite dilution,
ft³/lb · mole,

$P_{CO_2}^*$ = saturated vapor pressure of CO₂ at temperature T, atm,

R = gas constant.

It should be noted that Eq. (15) is written strictly for infinite dilution but does not necessarily imply ideal solution behavior (see ref. 2). The value of $h_{O_2}^g$ is obtained by use of the following equation:

$$h_{O_2}^g = h_{O_2}^{T_0} + \int_{T_0}^T C_p^* dT, \quad (16)$$

where

$h_{O_2}^g$ = enthalpy of O_2 in the gas phase, Btu/lb · mole,

$h_{O_2}^{T_0}$ = base enthalpy of O_2 in the gas phase, Btu/lb · mole,

T_0 = base temperature, °K,

C_p^* = ideal gas heat capacity, Btu/lb · mole · °K,

T = system temperature, °K.

The use of Eqs. (15) and (16) in combination with the (P,T,x,y) model described earlier is straightforward but tedious. First, Eq. (15) is used to find a value of $h_{O_2}^{T_0}$ at a reference temperature, T_0 , of -40°C. To do this, it is necessary to make the assumption that

$$\bar{H}_{O_2}(-40^\circ) = 0. \quad (17)$$

Equation (15) is then solved for $h_{O_2}^g$, with values of other terms being evaluated at -40°C and at infinite dilution. The evaluation of $h_{O_2}^g(-40^\circ\text{C})$ is very important in that it will be used in conjunction with Eqs. (15) and (16) to determine, at a given temperature T , the value of $\bar{H}_{O_2}^\infty(T)$ which is, in turn, used as the value of the O_2 enthalpy in the liquid phase. Equation (17) merely references the O_2 enthalpy to -40°C, which is the same reference temperature chosen for liquid and vapor CO_2 .

Since the determination of $h_{O_2}^g$ (-40°C) is important, its actual evaluation will be shown in the paragraphs that follow. The evaluation of $\bar{H}_{O_2}^\infty(T)$, as the second application of Eq. (15), will be very similar; thus the exercise of determining $h_{O_2}^g$ (-40°C) will serve to illustrate the utility of Eq. (15) in general.

Noting Eq. (17) and rearranging Eq. (15) results in:

$$h_{O_2}^g (-40^\circ\text{C}) = \left[1.314 T^2 \frac{d \ln H_{O_2}}{dT} - \bar{V}_{O_2}^\infty T \frac{d P_{CO_2}^*}{dT} \right] \frac{1.986}{0.7302}, \quad (18)$$

where certain constants have been inserted for dimensional consistency;

if

$$T = ^\circ\text{K},$$

$$\bar{V}_{O_2}^\infty = \text{ft}^3/\text{lb} \cdot \text{mole},$$

$$P_{CO_2}^* = \text{atm},$$

then

$$h_{O_2}^g = \text{Btu}/\text{lb} \cdot \text{mole}.$$

Three terms,

$$\frac{d \ln H_{O_2}}{dT}, \bar{V}_{O_2}^\infty, \text{ and } \frac{d P_{CO_2}^*}{dT},$$

are to be evaluated at -40°C in Eq. (18).

From the empirical equilibrium model [Eq. (11)],

$$\ln H = \ln Q + \frac{\pi}{T} (A + B\pi). \quad (19)$$

Thus, at infinite dilution,

$$\frac{d \ln H_{O_2}}{dT} = \frac{d \ln Q}{dT} + \frac{P_{CO_2}^*}{T} \left[B \frac{d P_{CO_2}^*}{dT} \right] + \left[A + B P_{CO_2}^* \right] \left[\frac{T \frac{d P_{CO_2}^*}{dT} - P_{CO_2}^*}{T^2} \right]. \quad (20)$$

It is noted here that all terms on the right-hand side of Eq. (20) must be evaluated at -40°C (233.2°K) in order to provide $\left. \frac{d \ln H_{\text{O}_2}}{dT} \right|_{-40^{\circ}\text{C}}$ for Eq. (18). Since temperature-dependent equations have been presented for Q and $P_{\text{CO}_2}^x$ [Eqs. (12) and (8), respectively] and values for the various constants have been stated elsewhere, the evaluation of $\left. \frac{d \ln H_{\text{O}_2}}{dT} \right|_{-40^{\circ}\text{C}}$ is straightforward.

By actual calculation

$$\left. \frac{d \ln H_{\text{O}_2}}{dT} \right|_{-40^{\circ}\text{C}} = -0.0067015915^{\circ}\text{K}^{-1},$$

with:

$$\left. \frac{d \ln Q}{dT} \right|_{-40^{\circ}\text{C}} = -0.0066139641^{\circ}\text{K}^{-1},$$

$$P_{\text{CO}_2}^x \bigg|_{-40^{\circ}\text{C}} = 9.92807111 \text{ atm},$$

$$\left. \frac{d P_{\text{CO}_2}^x}{dT} \right|_{-40^{\circ}\text{C}} = 0.365266582 \text{ atm}/^{\circ}\text{K},$$

and

$$A = 5.894059811222597 \times 10^{-2},$$

$$B = -5.776542100509821 \times 10^{-3},$$

$$T = 233.2^{\circ}\text{K}.$$

The only other term necessary for the evaluation of $h_{\text{O}_2}^g$ (-40°C) is $\bar{V}_{\text{O}_2}^{\infty}$. Referring again to the equilibrium model [Eq. (19)], we see that it states the following:

$$\ln \frac{y_{\text{CO}_2}^x}{xQ} = \frac{P_{\text{CO}_2}^x}{T} (A + B P_{\text{CO}_2}^x), \quad (21)$$

and the pseudo-theoretical complementary equation states that

$$\ln \frac{y_{CO_2}^x}{x_{O_2}} = \frac{\bar{V}_{O_2}^\infty P_{CO_2}^x}{RT} \quad (22)$$

By comparison,

$$\bar{V}_{O_2}^\infty = RA \left(1 + \frac{B}{A} P_{CO_2}^x \right), \quad (23)$$

where

$\bar{V}_{O_2}^\infty$ = partial molar volume of dissolved O_2 at infinite dilution,
ft³/lb · mole,

R = gas constant = $1.314 \frac{\text{atm} \cdot \text{ft}^3}{\text{lb} \cdot \text{mole} \cdot ^\circ\text{K}}$,

A = $5.894059811222597 \times 10^{-2}$,

B = $-5.776542100509821 \times 10^{-3}$,

$P_{CO_2}^x$ = saturated vapor pressure of CO_2 , atm,

so that, by evaluation,

$$\bar{V}_{O_2}^\infty \bigg|_{-40^\circ\text{C}} = 0.00209015006 \frac{\text{ft}^3}{\text{lb} \cdot \text{mole}}.$$

Finally, grouping of individual terms in Eq. (18) yields:

$$h_{O_2}^g \bigg|_{-40^\circ\text{C}} = -1302.95452 \text{ Btu/lb} \cdot \text{mole}.$$

As already noted, since the value of $h_{O_2}^{T_O = -40^\circ\text{C}}$ is known, Eq. (16)

can be used to calculate the O_2 enthalpy in the gas phase. Values of Cp^x (ref. 12) were fitted to the usual equational form:

$$Cp^{x'} = a + bT + cT^2, \quad (24)$$

where

Cp^x = heat capacity of vapor O_2 , $\frac{\text{Btu}}{\text{lb} \cdot \text{mole} \cdot ^\circ\text{K}}$,

a = 12.62430003423920,

$$b = -1.525069140168638 \times 10^{-3},$$

$$c = 5.261760941027045 \times 10^{-6},$$

$$T = ^\circ\text{K}.$$

By knowing the value of $H_{O_2}^T$, and combining Eqs. (16) and (24), Eq. (15) can be evaluated at any temperature, T , for the value of $\bar{H}_{O_2}^\infty(T)$ that is assumed to be valid for the enthalpy of the O_2 dissolved in the liquid phase in the dilute-solution region of general KALC processing.

5.2 Calculation of CO_2 Enthalpies

Calculation of the CO_2 enthalpies is rather straightforward compared with the calculation of the O_2 enthalpies. Data (see Appendix A) for saturated gas and liquid enthalpies (reference, -40°C) were fitted to an equation of the following form:

$$H^* = a + b(T - 233.2) + c(T - 233.2)^2 + e(T - 233.2)^3, \quad (25)$$

where

H^* = enthalpy of saturated vapor or liquid, Btu/lb,

T = temperature, $^\circ\text{K}$;

and for the vapor:

$$a = 137.8,$$

$$b = 9.055289032368385 \times 10^{-2},$$

$$c = -1.668983901599419 \times 10^{-3},$$

$$e = -1.690458108705162 \times 10^{-5},$$

and for the liquid:

$$a = 0,$$

$$b = 8.195887646005974 \times 10^{-1},$$

$$c = -2.442941221527661 \times 10^{-4},$$

$$e = 6.424585633646451 \times 10^{-5}.$$

5.3 Estimation of the Gas- and Liquid-Phase Enthalpies

Equations for the following enthalpies have been presented:

- (1) enthalpy for saturated CO_2 vapor [Eq. (25)],
- (2) enthalpy for saturated CO_2 liquid [Eq. (25)],
- (3) ideal vapor enthalpy for O_2 [Eq. (16)],
- (4) infinite-dilution liquid enthalpy for O_2 [Eq. (15)].

To obtain the total gas and vapor enthalpies for a given P and T in a simple, but realistic, manner, the four quantities noted above are combined with the associated x and y values at P and T for CO_2 and O_2 , namely:

$$\text{gas-phase enthalpy} = y h_{\text{O}_2}^g + (1 - y) h_{\text{CO}_2}^g, \quad (26)$$

where

$h_{\text{O}_2}^g$ is obtained from item (3) above,

$h_{\text{CO}_2}^g$ is obtained from item (1) above (on a molar basis),

and

$$\text{liquid-phase enthalpy} = x \bar{H}_{C_2}^{\infty} + (1 - x) \bar{H}_{CO_2}^L, \quad (17)$$

where

$\bar{H}_{C_2}^{\infty}$ is obtained from item (4) above,

$\bar{H}_{CO_2}^L$ is obtained from item (2) above (on a molar basis).

The use of $\bar{H}_{C_2}^{\infty}$ as the actual liquid-phase C_2 enthalpy is predicated on the solution being dilute and is, therefore, reasonable. On the other hand, the use of saturated vapor and liquid enthalpies according to Eqs. (26) and (17) is probably more expedient than accurate, especially when the vapor phase contains large (> 10%) amounts of C_2 .

6. SUMMARY AND CONCLUSIONS

The present report deals in an empirical manner with areas of particular concern in the KALC process. The vapor-liquid equilibrium model, although empirical, basically follows accepted theory for dilute solutions but also includes certain deviations to enhance the model's applicability to a wider range of operating conditions. The resulting model represents the available data quite satisfactorily and has no apparent mathematical instabilities over the reported range of conditions.

No absolute test to establish the accuracy of enthalpies is known; consequently, the phase enthalpies are naturally more "theoretical" than the equilibrium model. However, the phase enthalpies are based on the equilibrium model, and their development is consistent with dilute-solution theory.

Overall, the report fulfills the major needs at the present time for an interpretive model of the KALC process, as well as being the most concise compilation of the KALC process variables to date. With noted exceptions, all data presented represent realistic values which may be used with confidence.

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APPENDIX A: DATA AND ASSOCIATED REFERENCES

Table A-1. Equilibrium Values for $\text{CO}_2\text{-O}_2$ System

Point	Reference ^a	Temp ($^{\circ}\text{C}$)	Pressure (atm)	x_{O_2}	y_{O_2}
1	(a)	0.0	40.0	0.0100	0.0990
2	(a)	0.0	50.0	0.0420	0.2140
3	(a)	0.0	60.0	0.0620	0.2980
4	(b)	0.0	60.0	0.0630	0.3020
5	(b)	0.0	59.4	0.0603	0.2980
6	(b)	0.0	52.5	0.0432	0.2540
7	(a)	-10.0	30.0	0.0090	0.0960
8	(a)	-10.0	40.0	0.0350	0.2630
9	(a)	-10.0	50.0	0.0560	0.3460
10	(a)	-10.0	60.0	0.0790	0.4170
11	(a)	-20.0	30.0	0.0300	0.3020
12	(c)	-20.0	36.5	0.0360	0.3330
13	(a)	-20.0	40.0	0.0420	0.4000
14	(a)	-20.0	50.0	0.0620	0.5000
15	(c)	-20.0	52.0	0.0720	0.5160
16	(a)	-20.0	60.0	0.0920	0.5400
17	(a)	-30.0	20.0	0.0100	0.2750
18	(a)	-30.0	30.0	0.0310	0.4630
19	(a)	-30.0	40.0	0.0520	0.5510
20	(a)	-30.0	50.0	0.0800	0.6090
21	(a)	-30.0	60.0	0.1040	0.6440
22	(a)	-40.0	20.0	0.0210	0.4190
23	(a)	-40.0	30.0	0.0410	0.5890
24	(a)	-40.0	40.0	0.0640	0.6510
25	(a)	-40.0	50.0	0.0870	0.6950
26	(c)	-40.0	52.0	0.0920	0.7220
27	(a)	-40.0	60.0	0.1200	0.7230
28	(b)	-40.3	58.4	0.1130	0.7740
29	(a)	-50.0	10.0	0.0080	0.3120
30	(a)	-50.0	20.0	0.0250	0.6170
31	(a)	-50.0	30.0	0.0490	0.7120
32	(a)	-50.0	40.0	0.0710	0.7610
33	(a)	-50.0	50.0	0.0960	0.7890
34	(a)	-50.0	60.0	0.1170	0.8090
35	(b)	-55.0	21.6	0.0330	0.7040
36	(b)	-55.0	38.9	0.0720	0.8120
37	(b)	-55.0	58.3	0.1190	0.8470

^a(a) A. Fredenslund and G. Sather, "Gas-Liquid Equilibrium of the Oxygen-Carbon Dioxide System," J. Chem. Eng. Data 15(1), 17-22 (1970).

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(c) G. Kaminishi and T. Toiumi, "Vapor-Liquid Equilibria Between Liquid Carbon Dioxide and Hydrogen, Nitrogen, and Oxygen," Kogyo Kagaku Zasshi 69(2), 175-78 (1966).

Equations Associated with Data Given in Table A-1

$$\log_{10} P_{CO_2}^s = a + b/T + c \log_{10} T + eT, \quad (\text{see ref. 3}), \quad (A-1)$$

where

$P_{CO_2}^s$ = saturated CO_2 vapor pressure, atm,

$$a = 14.61930,$$

$$b = -1353.701,$$

$$c = -3.144537,$$

$$e = 0.006859156,$$

$$T = ^\circ K.$$

$$P_{CO_2}^\pi = P_{CO_2}^s \exp \left[a(\pi - P_{CO_2}^s) (1.0 + b\pi)/T \right], \quad (A-2)$$

where

$P_{CO_2}^\pi$ = effective CO_2 vapor pressure at π and T , atm,

π = total system pressure, atm,

$$a = -3.753900546621806 \times 10^{-1},$$

$$b = 7.059022969361788 \times 10^{-5},$$

$$T = ^\circ K.$$

$$\pi = (a + b\pi)x + (1 + c\pi) P_{CO_2}^\pi, \quad (A-3)$$

where

$$a = 5.136303370623966 \times 10^2,$$

$$b = -3.631411222175902 \times 10^2,$$

$$c = -1.791124477315243;$$

or, rearranging in terms of x ,

$$x = \frac{-(a + c p_{\text{CO}_2}^\pi) + \sqrt{(a + c p_{\text{CO}_2}^\pi)^2 + 4b (\pi - p_{\text{CO}_2}^\pi)}}{2b}, \quad (\text{A-4})$$

where a, b, and c are as given for Eq. (A-3).

$$\log_{10} Q = a + \frac{b}{T} + c \log_{10} T + eT, \quad (\text{A-5})$$

where

Q = modified Henry's law constant, atm,

$$a = 2.397388844292291 \times 10^1,$$

$$b = -5.573868642887729 \times 10^2,$$

$$c = -1.080349820337748 \times 10^1,$$

$$e = 6.997919533272977 \times 10^{-3},$$

$$T = ^\circ\text{K}.$$

$$y = \frac{xQ}{\pi} \exp \left[\frac{\pi}{T} (a + b\pi) \right], \quad (\text{A-6})$$

where

$$a = 5.894059811222597 \times 10^{-2},$$

$$b = -5.776542100509821 \times 10^{-3},$$

$$T = ^\circ\text{K}.$$

Table A-2. Krypton (y/x) Ratios at Infinite Dilution
in Liquid Carbon Dioxide^a

Point	Temp. (°C)	(y/x) _{Kr}
1	-21.2	10.35
2	-33.2	15.72
3	-50.8	26.92
4	-50.8	27.10
5	-42.6	20.09
6	-42.6	19.86
7	-33.0	14.54
8	-33.0	14.49
9	-33.0	14.49
10	-33.0	14.53
11	-33.0	14.38
12	-33.0	14.42
13	-33.0	14.43
14	-33.0	14.38
15	-4.6	6.57
16	-4.6	5.91
17	-43.0	20.15
18	-43.0	20.16
19	-26.9	11.83
20	-26.9	11.88
21	-26.9	11.81
22	-26.9	11.85
23	-48.6	24.84
24	-48.6	24.82
25	5.3	4.40
26	5.3	4.39
27	-13.55	7.94
28	-13.55	7.98
29	-52.8	29.34
30	-52.8	29.53
31	0.0	5.19
32	0.0	5.12
33	-19.03	9.29
34	-19.03	9.38

^aValues obtained from ref. 8.

Equation Associated with Table A-2 and Fig. 4

$$\ln \left(\frac{y P_{\text{CO}_2}^*}{x} \right)_{\text{Kr}} = a + b \ln T + c/T, \quad (\text{A-7})$$

where

$P_{\text{CO}_2}^*$ = saturated vapor pressure of CO_2 , atm,

$a = 6.643677404376719 \times 10^1$,

$b = -9.389310262469535$,

$c = -2.340344748279833 \times 10^3$,

$T = ^\circ\text{K}$.

Table A-3. Xenon (y/x) Ratios at Infinite Dilution
in Liquid Carbon Dioxide^a

Point	Temp. (°C)	(y/x) _{Xe}
1	-54.8	7.55
2	-54.4	7.33
3	-52.6	7.15
4	-50.4	6.94
5	-46.2	5.92
6	-46.1	6.01
7	-36.3	4.80
8	-36.3	4.79
9	-26.9	3.74
10	-20.6	3.30
11	-18.0	3.22
12	-13.0	3.09
13	-17.9	3.19
14	- 9.20	2.79
15	- 9.30	2.78
16	- 0.20	2.33
17	- 0.20	2.34
18	- 0.20	2.35
19	10.3	1.94
20	10.4	1.94
21	10.4	1.87

^aValues obtained from ref. 8.

Equation Associated with Table A-3 and Fig. 4

$$\ln \left(\frac{y}{x} \frac{P_{\text{CO}_2}^*}{P} \right)_{\text{Xe}} = a + b \ln T + c/T, \quad (\text{A-8})$$

where

$$a = 9.680429875375295,$$

$$b = -4.242850336971706 \times 10^{-1},$$

$$c = -7.997966693737438 \times 10^2,$$

$$T = ^\circ\text{K}.$$

Table A-4. Ideal C_p for O_2 ^a

Points	Temp. (°K)	C_p (cal/g-mole)
1	100	6.958
2	200	6.961
3	298	7.020
4	300	7.023

^aData obtained from ref. 12.Equation Associated with Table A-4 and Fig. 6

$$C_p = a + bT + cT^2 = \text{Btu/lb}\cdot\text{mole}, \quad (\text{A-9})$$

where

$$a = 12.62430003423920,$$

$$b = -1.525069140168638 \times 10^{-3},$$

$$c = 5.261760941027045 \times 10^{-6},$$

$$T = ^\circ\text{K}.$$

 O_2 Liquid-Phase Enthalpy^{10,11}

$$\bar{H}_{O_2}^\infty = R \frac{d \ln H_{O_2}}{d(1/T)} + \bar{V}_{O_2}^\infty T \frac{d P_{CO_2}^\infty}{dT} + h_{O_2}^g, \text{ Btu/lb}\cdot\text{mole} \quad (\text{A-10})$$

Partial Molar Volume of Dissolved O_2 at Infinite Dilution

From the empirical model, we obtain:

$$\bar{V}_{O_2}^\infty = R a \left(1 + \frac{b}{a} P_{CO_2}^\infty \right) \text{ft}^3/\text{lb}\cdot\text{mole}, \quad (\text{A-11})$$

where

$$R = \text{gas constant} = 1.314 \text{ atm}\cdot\text{ft}^3/\text{lb}\cdot\text{mole}\cdot^\circ\text{K}$$

$$a = 5.394059811322597 \times 10^{-2},$$

$$b = -5.776542100599821 \times 10^{-3}.$$

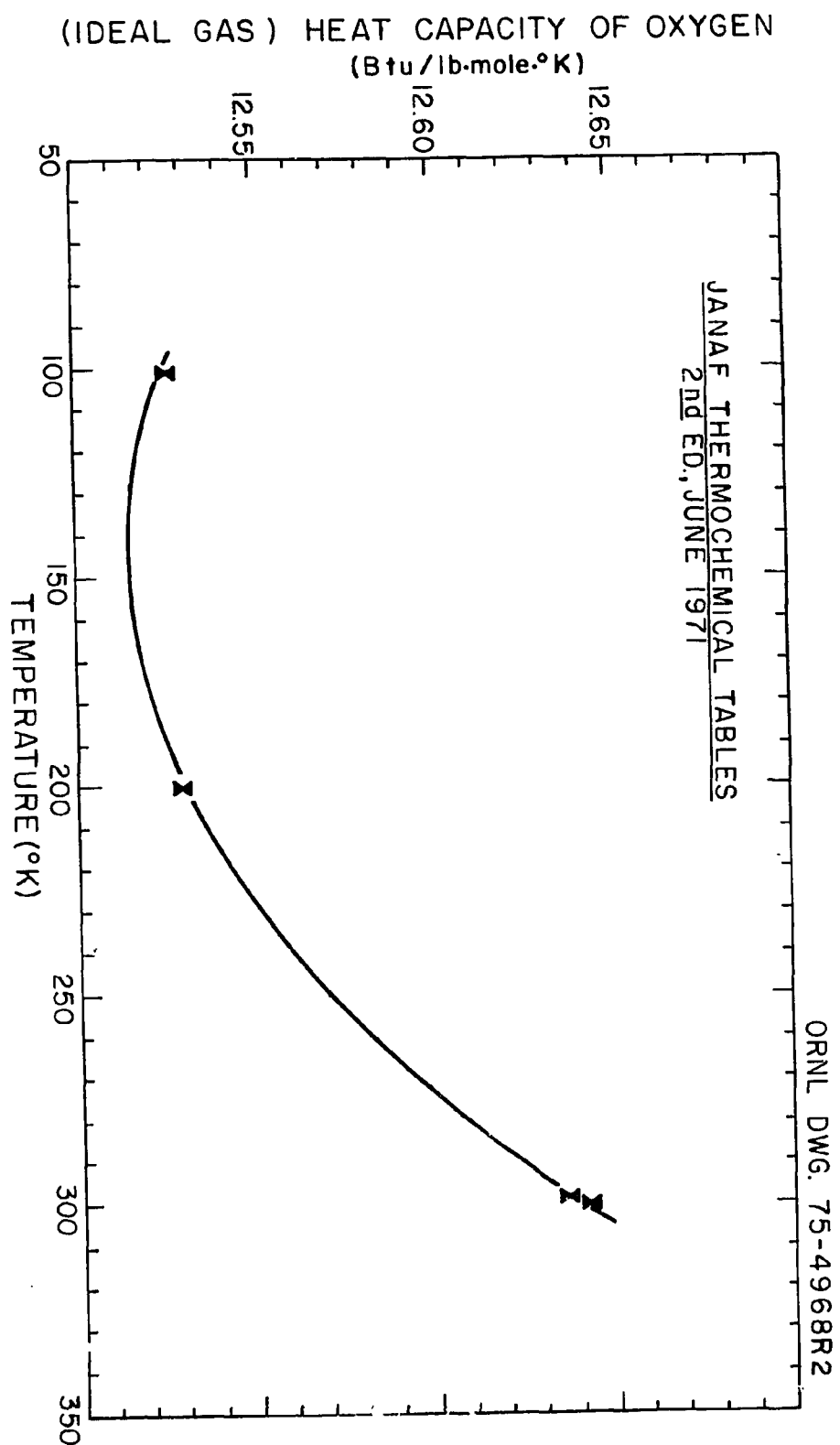


Fig. 6. Ideal heat capacity for gaseous O_2 .

O₂ Gas-Phase Enthalpy

$$h_{O_2}^g = h_{O_2}^{T_o} = 233.2 + \int_{233.2}^T Cp^* dT \text{ Btu/lb}\cdot\text{mole}, \quad (\text{A-12})$$

where

T_o = base temperature = 233.2°K,

Cp^* = heat capacity (as noted under "Ideal Cp^* for O₂," this Appendix), Btu/lb·mole·°K,

T = °K,

$h_{O_2} = 1302.95452$ Btu/lb·mole (by calculation using "O₂ Liquid-Phase Enthalpy" Eq. (A-10) at $\bar{H}_{O_2}^\infty = 0$ at 233.2°K).

Table A-5. Saturated Liquid and Vapor CO₂ Enthalpies^a

Points	Temp. (°F)	Liquid Enthalpy (Btu/lb)	Vapor Enthalpy (Btu/lb)
1	-60	- 9.2	136.6
2	-50	- 4.7	137.2
3	-40	0.0	137.8
4	-30	4.5	138.2
5	-20	9.1	138.5
6	-10	13.9	138.7
7	0	18.8	138.9
8	10	24.0	138.7
9	20	29.4	138.3

^aData taken from R. H. Perry and C. H. Chilton (eds.), Chemical Engineers Handbook, 5th ed., p. 3-162, McGraw-Hill, New York, 1973.

Equation Associated with Table A-5

$$H = a + b(T - 233.2) + c(T - 233.2)^2 + d(T - 233.2)^3, \quad (A-13)$$

where

H = phase enthalpy, Btu/lb,

T = °K,

and the constants are as given below:

<u>Constant</u>	<u>For vapor</u>	<u>For liquid</u>
a	137.8	0.0
b	$9.055289032368385 \times 10^{-2}$	$8.195887646005974 \times 10^{-1}$
c	$-1.668983901599419 \times 10^{-3}$	$-2.442941221527661 \times 10^{-4}$
d	$-1.690458108705162 \times 10^{-5}$	$6.424585633646451 \times 10^{-5}$

APPENDIX B: TESTS AND QUALIFICATIONS FOR THE EQUILIBRIUM MODEL

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Two "tests" were conducted for the (P,T,x,y) model described in this text. In the first test, we obtained model x,y values generated from actual (P, T) data and then reoptimized the empirical model constants. If the reoptimized constants differed significantly from the original ones, the internal consistency of the model was considered questionable. These constants are compared below.

The (P,T,x) portion of the model was used to regenerate both empirical constants and values of x for the "best fit" condition. Results of the (P,T,x) empirical reoptimization are given below:

<u>Constants</u>	<u>Empirical values from raw data</u>	<u>Empirical values from model "data"</u>	<u>Percent consistency^a</u>
A	$5.136303370623966 \times 10^2$	$5.136549421210135 \times 10^2$	99.995
B	-1.791124477315243	-1.788241536221097	100.161
C	$-3.631411222175902 \times 10^2$	$-3.633005324924081 \times 10^2$	99.956
D	$7.059022969361788 \times 10^{-5}$	$7.134657137893335 \times 10^{-5}$	98.940
K	$-3.753900546621806 \times 10^{-1}$	$-3.777500267348530 \times 10^{-1}$	99.375

^aPercent consistency = $100 \times \frac{\text{values from raw data}}{\text{values from model data}}$.

In the second phase of the model's internal consistency test, we employed the original optimized (P,T,x) constants but used y values generated by the model instead of raw "y" values. Results of the (P,T,y) empirical reoptimization are given in the following table:

<u>Constants</u>	<u>Empirical values from raw data</u>	<u>Empirical values from model "data"</u>	<u>Percent consistency^a</u>
A	$2.897388844292291 \times 10^1$	$2.897662176629936 \times 10^1$	99.991
B	$-5.578868642887729 \times 10^2$	$-5.579038598809840 \times 10^2$	99.997
C	$-1.080849820337748 \times 10^1$	$-1.080984531324381 \times 10^1$	99.988
D	$6.997919533272977 \times 10^{-3}$	$7.000097441602844 \times 10^{-3}$	99.969
K1	$5.894059811222597 \times 10^{-2}$	$5.948571648382958 \times 10^{-2}$	99.084
K2	$-5.776542100509821 \times 10^{-3}$	$-5.782803556901111 \times 10^{-3}$	99.892

$$^a\text{Percent consistency} = \frac{\text{values from raw data}}{\text{values from model data}} .$$

The second "test" applied to the equilibrium model was a "visual" consistency test or, more specifically, a residual test. For each point in both the (P,T,x) and the (P,T,y) portions of the model, both absolute error (i.e., $x_{\text{exp}} - x_{\text{calc}}$) and relative error [i.e., $(x_{\text{exp}} - x_{\text{calc}})/x_{\text{calc}}$] were plotted vs point numbers. (This was also done for the corresponding y values.) The visual "test" results are shown in Figs. 7-10.

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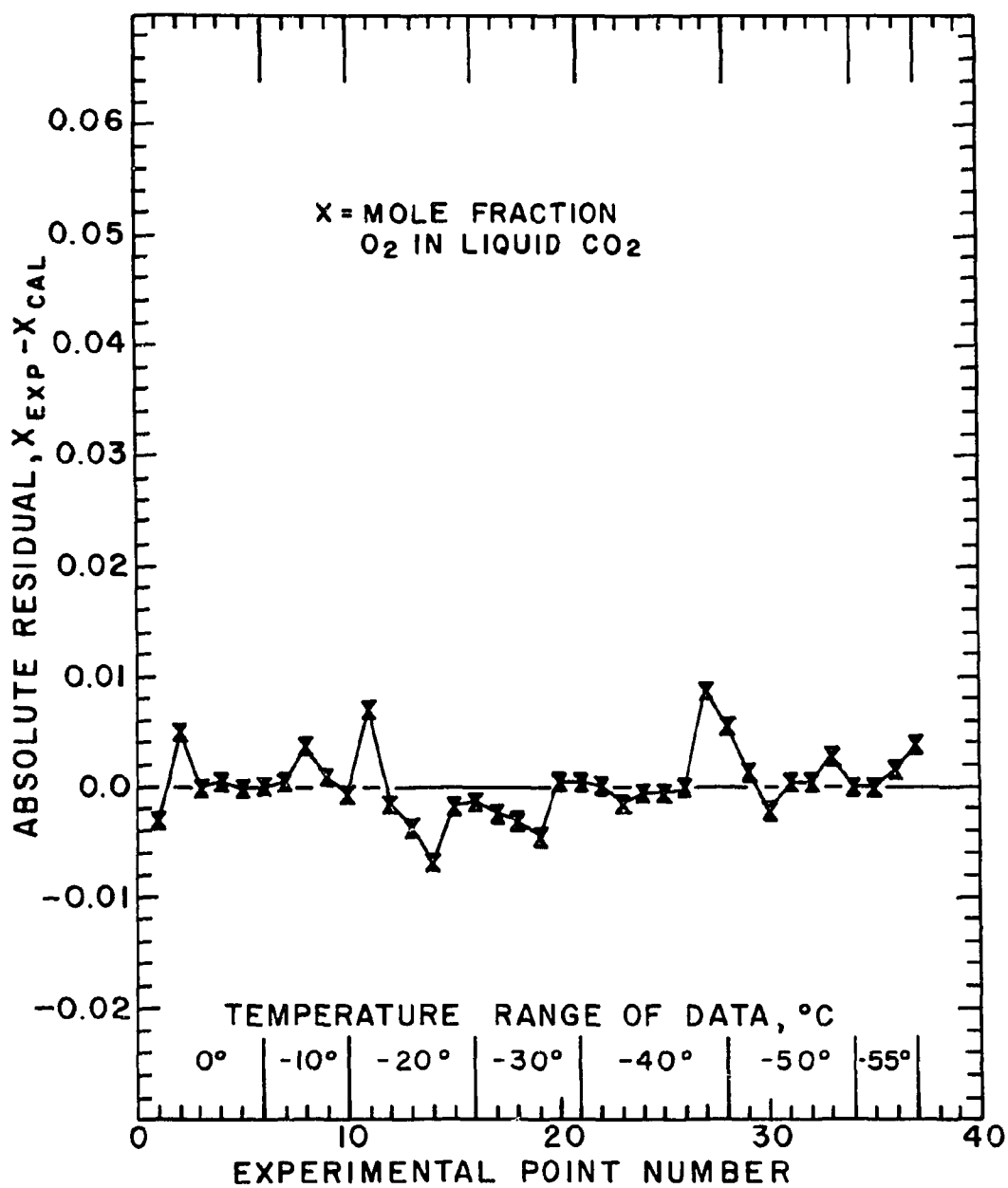


Fig. 7. Plot of absolute residual vs experimental point number for liquid mole fraction of O_2 .

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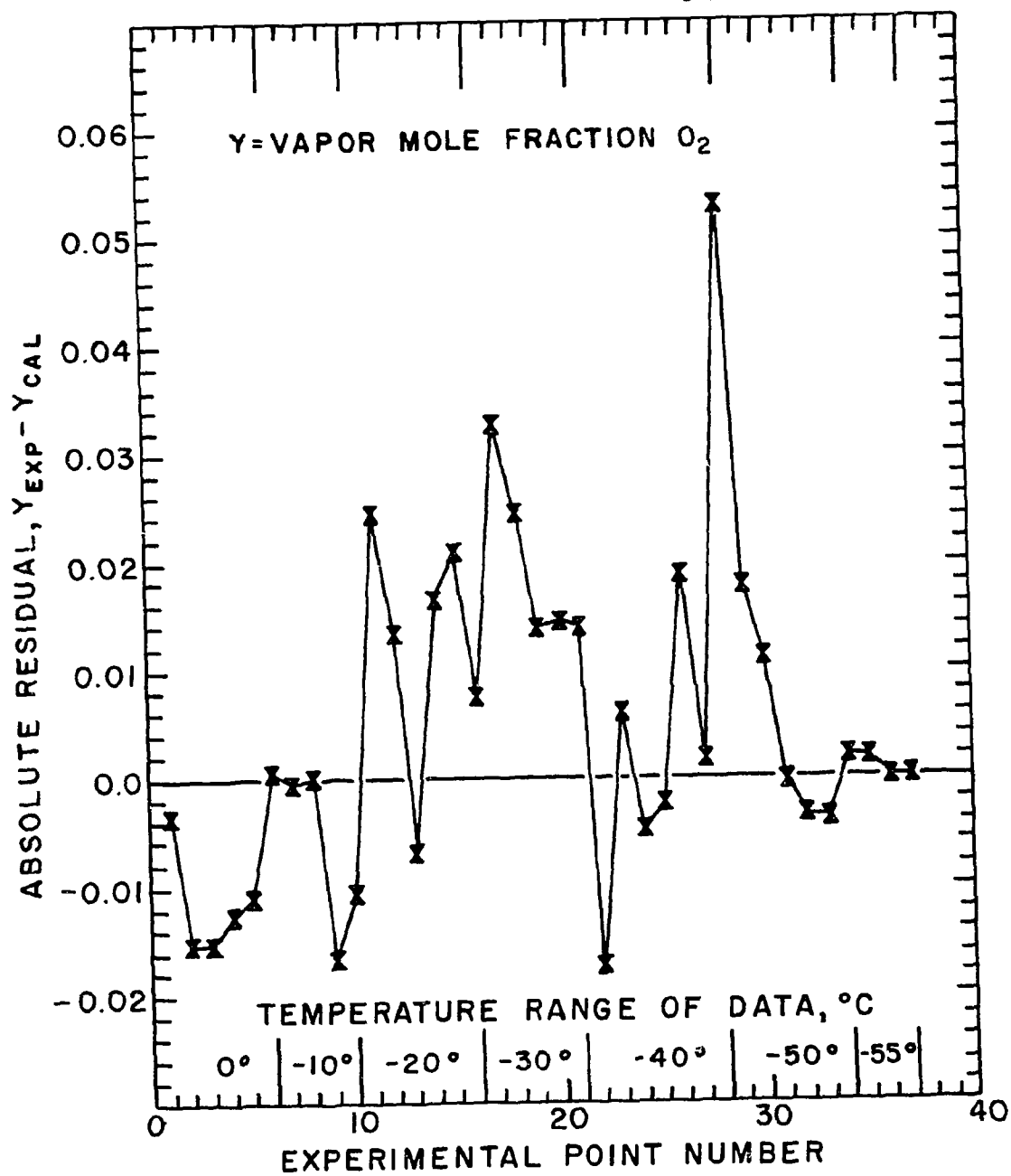


Fig. 8. Plot of absolute residual vs experimental point number for vapor mole fraction of O_2 .

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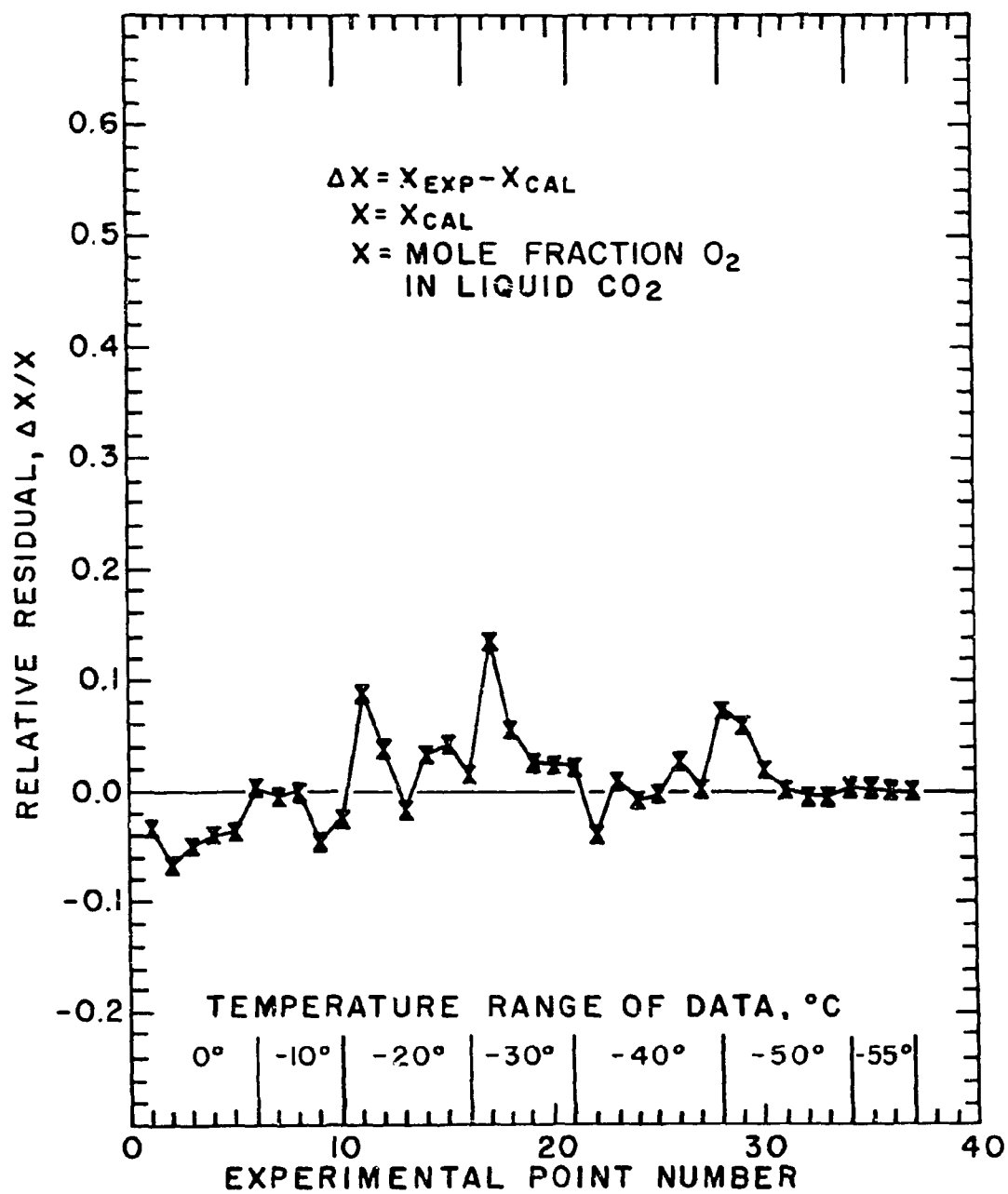


Fig. 9. Plot of relative residual vs experimental point number for liquid mole fraction of O_2 .

ORNL DWG 75-1072

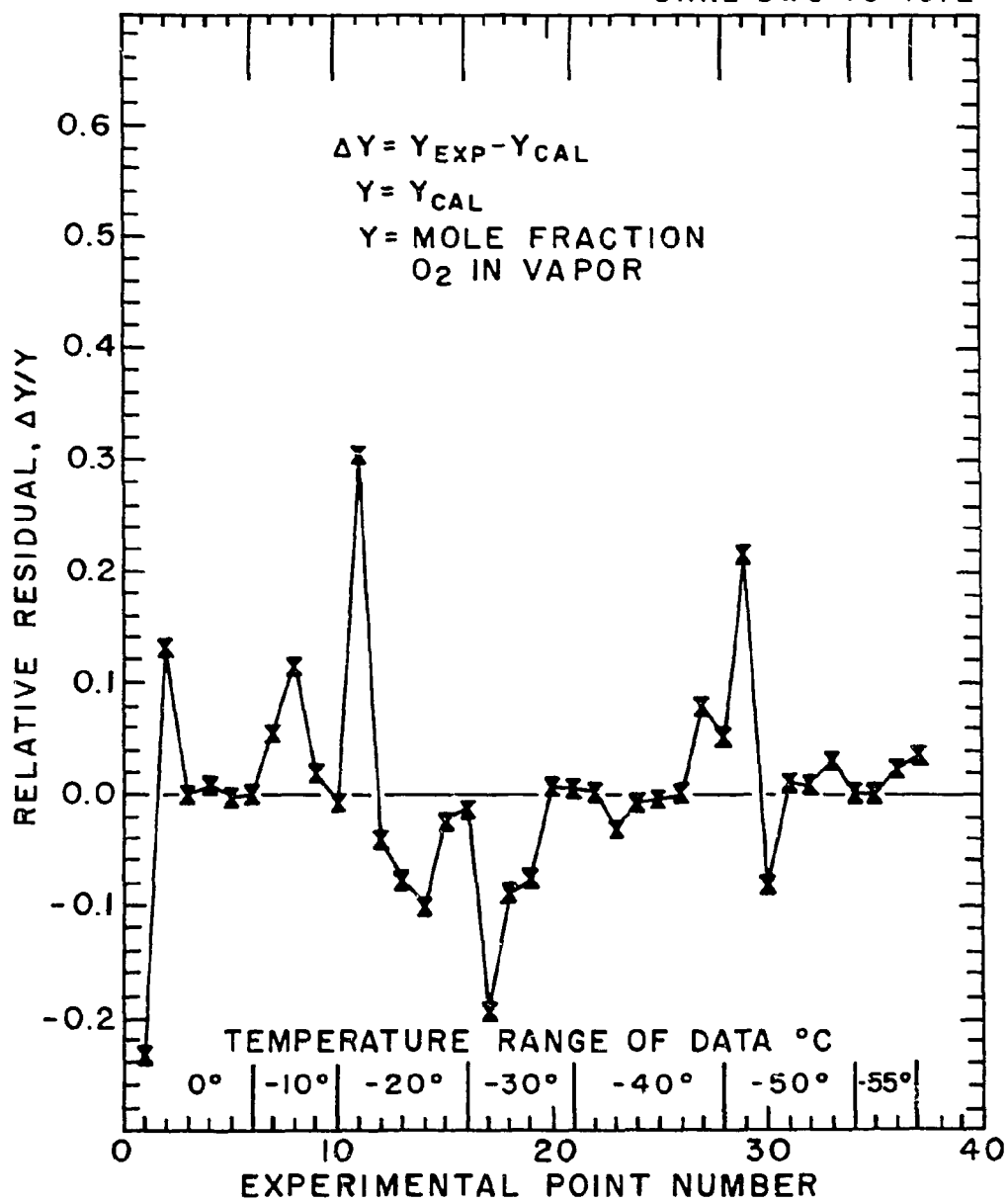


Fig. 10. Plot of relative residual vs experimental point number for vapor mole fraction of O_2 .

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APPENDIX C: CALCULATED RESULTS FOR THE CO₂-O₂-Kr-Xe SYSTEM

The tables in this appendix summarize many of the important variables over the range of interest in the KALC process. Each table contains data for a given total system pressure throughout the temperature (TEMP) range -40 to 0°C.

PSCO2 is the saturated vapor pressure (in atmospheres) of liquid CO₂ at the specified temperature. X(O2) and Y(O2) are the liquid and vapor mole fractions of O₂ in the CO₂-O₂ system for the given T and P. HN-O2 is the "working" Henry's law constant (in atmospheres) for O₂ and is to be used as follows:

$$\underline{HN-O2} = \frac{y\pi}{x}, \quad (C-1)$$

where

y = the gaseous mole fraction of O₂,

x = the liquid mole fraction of O₂,

π = the noted total system pressure, atm.

Thus, no $\left(\lim_{x \rightarrow 0}\right)$ position is implied for this Henry's law constant; it is simply a term for use at actual conditions.

Y/X-KR is the value of the equilibrium ratio for krypton in the O₂-CO₂ system and is a "working" value since it is derived from an infinite-dilution value of $(y/x)_{KR}$ by use of the following expression:

$$\left(y/x\right)_{KR} \Big|_{P_{CO_2}^*}^{\infty} = H_{KR}^{\infty} = H_{KR} = \left(y/x\right)_{KR} \Big|_{\pi}^{\pi}. \quad (C-2)$$

The definitions for Y/X-XE and HN-XE follow similarly the Y/X-KR and HN-O2 notations for krypton and oxygen, respectively.

EN-LIQ refers to the liquid enthalpy for the two-component (O_2 - CO_2) liquid mixture, and the values shown are given in Btu/lb·mole.

EN-VAP refers to the vapor enthalpy for the respective gas mixture, and the values shown are also given in Btu/lb·mole.

Enthalpies are referenced to saturated liquid CO_2 at $-40^\circ C$.

"****" spaces indicate regions beyond the two-phase regime.

The entire program used in generating the tables is included following the series of tables.

CALCULATED EQUILIBRIUM VALUES FOR THE CC2-O2-KR-XE SYSTEM¹

10.00
ATMOSPHERES

TEMP	PSCO2	X (C2)	Y (O2)	Y/X-O2	HN-C2	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.0001	.0062	41.871	418.712	18.336	183.356	5.1296	51.2959	-0.135	6019.027
-39.0	10.30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-38.0	10.68	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-37.0	11.07	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-36.0	11.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-35.0	11.88	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-34.0	12.31	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-33.0	12.74	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-32.0	13.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-31.0	13.64	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-30.0	14.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-29.0	14.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-28.0	15.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-27.0	15.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-26.0	16.10	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-25.0	16.63	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-24.0	17.18	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-23.0	17.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-22.0	18.30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-21.0	18.88	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-20.0	19.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-19.0	20.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-18.0	20.70	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

¹FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-Kr-XE SYSTEM*

11.00
ATMOSPHERES

TEMP	PSCO ₂	X (C ₂)	Y (O ₂)	Y/X-O ₂	HN-C ₂	Y/X-Kr	HN-Kr	Y/X-Xe	HN-Xe	EN-IIC	EN-VAE
-40.0	9.93	.0022	.0837	38.055	418.600	16.669	183.358	4.6633	51.2959	-1.982	5447.761
-39.0	10.30	.0014	.0545	37.804	415.840	16.714	183.849	4.7235	51.9582	34.733	5667.336
-38.0	10.68	.0007	.0248	37.554	413.097	16.755	184.305	4.7839	52.6229	71.497	5889.808
-37.0	11.07	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-36.0	11.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-35.0	11.88	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-34.0	12.31	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-33.0	12.74	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-32.0	13.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-31.0	13.64	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-30.0	14.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-29.0	14.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-28.0	15.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-27.0	15.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-26.0	16.10	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-25.0	16.63	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-24.0	17.18	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-23.0	17.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-22.0	18.30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-21.0	18.88	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-20.0	19.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-19.0	20.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-18.0	20.70	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO2-O2-KR-XE SYSTEM*

12.00
ATMOSPHERES

TEMP	PSCO2	X (C2)	Y (O2)	Y/X-O2	HN-C2	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.C043	.1485	34.872	41E.467	15.280	183.358	4.2747	51.2959	-3.836	4970.521
-39.0	10.30	.C035	.1213	34.642	415.709	15.321	183.849	4.3299	51.9582	32.838	5175.746
-38.0	10.68	.C027	.0937	34.414	412.967	15.359	184.3C5	4.3852	52.6229	69.558	5383.592
-37.0	11.07	.C019	.0656	34.187	41C.243	15.394	184.728	4.4408	53.2900	106.344	5594.068
-36.0	11.47	.C011	.0371	33.961	407.536	15.426	185.117	4.4966	53.9594	143.216	5807.185
-35.0	11.88	.C0C2	.0081	33.737	404.847	15.456	185.473	4.5526	54.6310	180.192	6022.956
-34.0	12.31	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-33.0	12.74	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-32.0	13.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-31.0	13.64	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-30.0	14.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-29.0	14.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-28.0	15.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-27.0	15.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-26.0	16.10	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-25.0	16.63	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-24.0	17.18	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-23.0	17.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-22.0	18.30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-21.0	18.88	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-20.0	19.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-19.0	20.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-18.0	20.70	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CC2-O2-KR-XE SYSTEM*

13.00
ATMOSPHERES

TEMP	PSCO2	X (C2)	Y (O2)	Y/X-O2	HN-C2	Y/X-KR	HN-KF	Y/X-XE	HN-XE	EN-1 IQ	EN-VAP
-40.0	9.93	.0063	.2034	32.178	418.314	14.104	183.358	3.9458	51.2959	-5.694	4565.669
-39.0	10.30	.0056	.1780	31.966	415.557	14.142	183.849	3.9968	51.9582	30.936	4758.750
-38.0	10.68	.0048	.1521	31.755	412.817	14.177	184.305	4.0479	52.6229	67.614	4954.217
-37.0	11.07	.0040	.1258	31.546	410.095	14.210	184.728	4.0992	53.2900	104.357	5152.078
-36.0	11.47	.0032	.0991	31.338	407.390	14.240	185.117	4.1507	53.9594	141.185	5352.344
-35.0	11.88	.0023	.0720	31.131	404.702	14.267	185.473	4.2024	54.6310	178.117	5555.024
-34.0	12.31	.0014	.0445	30.926	402.032	14.292	185.796	4.2542	55.3049	215.172	5760.128
-33.0	12.74	.0005	.0166	30.722	399.381	14.314	186.087	4.3062	55.9809	252.370	5967.665
-32.0	13.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-31.0	13.64	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-30.0	14.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-29.0	14.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-28.0	15.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-27.0	15.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-26.0	16.10	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-25.0	16.63	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-24.0	17.18	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-23.0	17.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-22.0	18.30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-21.0	18.88	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-20.0	19.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-19.0	20.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-18.0	20.70	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.4	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS < 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CC2-O2-KR-XE SYSTEM*

14.00
ATMOSPHERES

TEMP	PSC02	X {C2}	Y {O2}	Y/X-O2	HN-C2	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.CC64	.2507	29.867	416.140	13.097	183.358	3.6640	51.2959	-7.558	4217.751
-39.0	10.30	.CC76	.2267	29.670	415.585	13.132	183.849	3.7113	51.9562	29.029	4400.420
-38.0	10.68	.CC69	.2023	29.475	412.647	13.165	184.305	3.7588	52.6229	65.664	4585.273
-37.0	11.07	.CC61	.1776	29.280	409.526	13.195	184.728	3.8064	53.2900	102.363	4772.318
-36.0	11.47	.CC52	.1524	29.087	407.223	13.223	185.117	3.8542	53.9554	139.148	4961.565
-35.0	11.88	.CC44	.1269	28.896	404.537	13.248	185.473	3.9022	54.6310	176.036	5153.021
-34.0	12.31	.CC35	.1010	28.705	401.869	13.271	185.756	3.9503	55.3049	213.047	5346.696
-33.0	12.74	.CC26	.0748	28.516	399.220	13.292	186.087	3.9986	55.9809	250.200	5542.599
-32.0	13.19	.CC17	.0481	28.328	396.588	13.310	186.345	4.0471	56.6591	287.515	5740.736
-31.0	13.64	.CC07	.0210	28.141	393.575	13.327	186.571	4.0957	57.3394	325.012	5941.117
-30.0	14.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-29.0	14.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-28.0	15.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-27.0	15.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-26.0	16.10	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-25.0	16.63	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-24.0	17.18	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-23.0	17.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-22.0	18.30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-21.0	18.88	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-20.0	19.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-19.0	20.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-18.0	20.70	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CC2-O2-KR-XE SYSTEM*

15.00
ATMOSPHERES

TEMP	PSCO2	X (C2)	Y (O2)	Y/X-O2	HN-C2	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-IIC	EN-VAE
-40.0	9.93	.C1C5	.2917	27.863	417.545	12.224	183.358	3.4197	51.2959	-9.428	3915.433
-39.0	10.30	.C097	.2690	27.679	415.192	12.257	183.849	3.4639	51.9582	27.117	4089.074
-38.0	10.68	.C0E9	.2459	27.497	412.457	12.287	184.305	3.5082	52.6229	63.708	4264.725
-37.0	11.07	.C081	.2225	27.316	409.738	12.315	184.728	3.5527	53.2900	100.364	4442.393
-36.0	11.47	.C073	.1987	27.136	407.037	12.341	185.117	3.5973	53.9594	137.105	4622.086
-35.0	11.88	.C065	.1746	26.957	404.353	12.365	185.473	3.6421	54.6310	173.949	4803.812
-34.0	12.31	.C056	.1502	26.779	401.687	12.386	185.796	3.6870	55.3049	210.915	4987.579
-33.0	12.74	.C047	.1253	26.603	399.039	12.406	186.087	3.7321	55.9809	248.024	5173.393
-32.0	13.19	.C038	.1001	26.427	396.410	12.423	186.345	3.7773	56.6591	285.293	5361.263
-31.0	13.64	.C028	.0745	26.253	393.798	12.438	186.571	3.8226	57.3394	322.744	5551.196
-30.0	14.11	.C019	.0486	26.080	391.206	12.451	186.766	3.8681	58.0218	360.395	5743.199
-29.0	14.59	.C009	.0222	25.909	388.632	12.462	186.931	3.9137	58.7062	398.267	5937.280
-28.0	15.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-27.0	15.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-26.0	16.10	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-25.0	16.63	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-24.0	17.18	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-23.0	17.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-22.0	18.30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-21.0	18.88	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-20.0	19.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-19.0	20.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-18.0	20.70	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO2-O2-KR-XE SYSTEM¹

16.CO
ATMOSPHERES

TEMP	PSCO2	X (C2)	Y (O2)	Y/X-O2	HN-C2	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.C126	.3277	26.108	417.730	11.460	183.356	3.2060	51.2959	-11.303	3650.214
-39.0	10.30	.C118	.3061	25.936	414.579	11.491	183.849	3.2474	51.9582	25.199	3815.952
-38.0	10.68	.C110	.2842	25.765	412.546	11.519	184.365	3.2889	52.6229	61.746	3983.547
-37.0	11.07	.C102	.2619	25.596	409.530	11.546	184.728	3.3306	53.2900	98.359	4153.006
-36.0	11.47	.C094	.2394	25.427	406.630	11.570	185.117	3.3725	53.9594	135.056	4324.337
-35.0	11.88	.C086	.2165	25.259	404.149	11.592	185.473	3.4144	54.6310	171.856	4497.544
-34.0	12.31	.C077	.1932	25.093	401.485	11.612	185.796	3.4566	55.3049	208.777	4672.637
-33.0	12.74	.C068	.1696	24.927	398.640	11.630	186.067	3.4988	55.9869	245.841	4849.621
-32.0	13.19	.C059	.1457	24.763	396.212	11.647	186.345	3.5412	56.6591	283.065	5028.503
-31.0	13.64	.C049	.1215	24.600	393.603	11.661	186.571	3.5837	57.3394	320.469	5209.289
-30.0	14.11	.C040	.0968	24.438	391.012	11.673	186.766	3.6264	58.0218	358.074	5391.988
-29.0	14.59	.C030	.0719	24.276	388.440	11.683	186.931	3.6691	58.7062	395.898	5576.604
-28.0	15.08	.C019	.0465	24.118	385.687	11.692	187.064	3.7120	59.3925	433.963	5763.146
-27.0	15.59	.0009	.0208	23.960	383.353	11.698	187.168	3.7550	60.0808	472.289	5951.618
-26.0	16.10	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-25.0	16.63	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-24.0	17.18	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-23.0	17.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-22.0	18.30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-21.0	18.88	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-20.0	19.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-19.0	20.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-18.0	20.70	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

¹FOR KRYPTON AND XENON MOL FRACTIONS < 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO2-O2-KR-XE SYSTEM*

17. CO
ATMOSPHERES

TEMP	PSCO2	X (C2)	Y (O2)	Y/X-O2	HN-C2	Y/X-KR	HN-KF	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.C146	.3595	24.55E	417.494	10.786	183.35E	3.0174	51.2959	-13.183	3415.595
-39.0	10.30	.C139	.3389	24.397	414.74E	10.815	183.849	3.0564	51.9582	23.275	3574.356
-38.0	10.68	.C131	.3180	24.236	412.015	10.841	184.305	3.0955	52.6229	59.779	3734.839
-37.0	11.07	.0123	.2968	24.077	40E.301	10.866	184.728	3.1347	53.2900	96.348	3897.051
-36.0	11.47	.0115	.2753	23.91E	40E.605	10.889	185.117	3.1741	53.9594	133.001	4060.997
-35.0	11.88	.C107	.2534	23.760	403.526	10.910	185.473	3.2136	54.6310	169.756	4226.685
-34.0	12.31	.C098	.2313	23.604	401.264	10.929	185.796	3.2532	55.3049	206.633	4394.119
-33.0	12.74	.CC89	.2088	23.44E	39E.621	10.946	186.087	3.2930	55.9809	243.651	4563.307
-32.0	13.19	.C0E0	.1861	23.294	39E.996	10.961	186.345	3.3329	56.6591	280.830	4734.254
-31.0	13.64	.C070	.1630	23.141	393.389	10.975	186.571	3.3729	57.3394	318.188	4906.967
-30.0	14.11	.CC61	.1395	22.98E	390.801	10.986	186.76E	3.4130	58.0218	355.746	5081.450
-29.0	14.59	.C051	.1158	22.837	38E.231	10.996	186.931	3.4533	58.7062	393.523	5257.712
-28.0	15.08	.0040	.0917	22.687	38E.680	11.004	187.064	3.4937	59.3925	431.540	5435.756
-27.0	15.59	.C030	.0672	22.538	383.14E	11.010	187.168	3.5342	60.0808	469.817	5615.590
-26.0	16.10	.C019	.0424	22.390	380.634	11.014	187.242	3.5748	60.7709	508.373	5797.219
-25.0	16.63	.C008	.0173	22.244	378.140	11.017	187.286	3.6155	61.4629	547.231	5980.648
-24.0	17.18	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-23.0	17.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-22.0	18.30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-21.0	18.88	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-20.0	19.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-19.0	20.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-18.0	20.70	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KEYTON AND XENON MOL FRACTIONS < 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CC2-O2-KR-XE SYSTEM'

18.00
ATMOSPHERES

TEMP	PSCO2	X (O2)	Y (O2)	Y/X-O2	HN-C2	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAF
-40.0	9.93	.C167	.3879	23.180	417.238	10.187	183.358	2.8498	51.2959	-15.070	3206.520
-39.0	10.30	.C160	.3682	23.027	414.493	10.214	183.849	2.8866	51.9582	21.345	3359.074
-38.0	10.68	.C152	.3482	22.876	411.764	10.239	184.305	2.9235	52.6229	57.806	3513.231
-37.0	11.07	.C144	.3279	22.725	409.053	10.263	184.728	2.9606	53.2900	94.331	3668.996
-36.0	11.47	.C136	.3073	22.576	406.359	10.284	185.117	2.9977	53.9594	130.940	3826.375
-35.0	11.88	.C128	.2864	22.427	403.683	10.304	185.473	3.0351	54.6310	167.650	3985.373
-34.0	12.31	.C119	.2652	22.279	401.024	10.322	185.756	3.0725	55.3049	204.483	4145.997
-33.0	12.74	.C110	.2438	22.132	398.383	10.338	186.087	3.1101	55.9809	241.455	4308.250
-32.0	13.19	.C101	.2220	21.987	395.761	10.352	186.345	3.1477	56.6591	278.588	4472.139
-31.0	13.64	.C092	.1999	21.842	393.157	10.365	186.571	3.1855	57.3394	315.900	4637.670
-30.0	14.11	.C082	.1776	21.698	390.571	10.376	186.766	3.2234	58.0218	353.411	4804.847
-29.0	14.59	.C072	.1549	21.556	388.003	10.385	186.931	3.2615	58.7062	391.141	4973.677
-28.0	15.08	.C062	.1319	21.414	385.455	10.392	187.064	3.2996	59.3925	429.110	5144.164
-27.0	15.59	.C051	.1085	21.274	382.925	10.398	187.168	3.3378	60.0808	467.337	5316.314
-26.0	16.10	.C040	.0849	21.134	380.414	10.402	187.242	3.3762	60.7709	505.844	5490.133
-25.0	16.63	.C029	.0609	20.996	377.922	10.405	187.286	3.4146	61.4629	544.652	5665.625
-24.0	17.18	.C018	.0366	20.858	375.449	10.406	187.302	3.4532	62.1567	583.780	5842.797
-23.0	17.73	.C006	.0119	20.722	372.995	10.405	187.290	3.4918	62.8523	623.249	6021.652
-22.0	18.30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-21.0	18.88	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-20.0	19.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-19.0	20.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-18.0	20.70	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

'FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

19.00
ATMOSPHERES

TEMP	PSCO ₂	X (O ₂)	Y (O ₂)	Y/X-O ₂	HN-C ₂	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.C188	.4134	21.945	416.561	9.650	183.358	2.6998	51.2959	-16.962	3018.999
-39.0	10.30	.C181	.3944	21.801	414.219	9.676	183.849	2.7346	51.9582	19.410	3165.955
-38.0	10.68	.C173	.3752	21.658	411.493	9.700	184.305	2.7696	52.6229	55.827	3314.486
-37.0	11.07	.C165	.3557	21.515	408.785	9.723	184.728	2.8047	53.2900	92.308	3464.479
-36.0	11.47	.C157	.3360	21.373	406.094	9.743	185.117	2.8400	53.9594	128.872	3615.976
-35.0	11.88	.C149	.3159	21.233	403.421	9.762	185.473	2.8753	54.6310	165.538	3768.985
-34.0	12.31	.C140	.2956	21.093	400.765	9.779	185.796	2.9108	55.3049	202.326	3923.509
-33.0	12.74	.C131	.2751	20.954	398.127	9.794	186.067	2.9464	55.9809	239.253	4079.553
-32.0	13.19	.C122	.2542	20.816	395.507	9.808	186.345	2.9821	56.6591	276.339	4237.123
-31.0	13.64	.C113	.2331	20.679	392.905	9.820	186.571	3.0179	57.3394	313.605	4396.223
-30.0	14.11	.C103	.2117	20.543	390.322	9.830	186.766	3.0538	58.0218	351.069	4556.858
-29.0	14.59	.C093	.1899	20.406	387.757	9.838	186.931	3.0898	58.7062	388.751	4719.034
-28.0	15.08	.C083	.1679	20.274	385.211	9.845	187.064	3.1259	59.3925	426.672	4882.754
-27.0	15.59	.C072	.1456	20.141	382.684	9.851	187.168	3.1621	60.0808	464.851	5048.025
-26.0	16.10	.C061	.1230	20.005	380.176	9.855	187.242	3.1985	60.7709	503.308	5214.851
-25.0	16.63	.C050	.1000	19.878	377.686	9.857	187.286	3.2349	61.4629	542.065	5383.236
-24.0	17.18	.C039	.0768	19.748	375.216	9.858	187.302	3.2714	62.1567	581.141	5553.186
-23.0	17.73	.C027	.0532	19.619	372.765	9.857	187.290	3.3080	62.8523	620.559	5724.706
-22.0	18.30	.C015	.0293	19.491	370.333	9.855	187.249	3.3447	63.5496	660.338	5897.800
-21.0	18.88	.C003	.0050	19.364	367.920	9.852	187.181	3.3815	64.2486	700.502	6072.473
-20.0	19.47	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-19.0	20.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-18.0	20.70	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

20.00
ATMOSPHERES

TEMP	PSCO ₂	X (C ₂)	Y (O ₂)	Y/X-O ₂	HN-C ₂	Y/X-KR	HN-K _E	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.0209	.4363	20.833	416.664	9.168	183.358	2.5648	51.2959	-18.859	2849.837
-39.0	10.30	.0202	.4181	20.696	413.525	9.192	183.849	2.5979	51.9582	17.468	2991.826
-38.0	10.68	.0194	.3996	20.560	411.403	9.215	184.365	2.6311	52.6229	53.841	3135.214
-37.0	11.07	.0186	.3808	20.425	408.497	9.236	184.728	2.6645	53.2900	90.279	3280.006
-36.0	11.47	.0178	.3618	20.290	405.609	9.256	185.117	2.6980	53.9594	126.798	3426.206
-35.0	11.88	.0170	.3426	20.157	403.139	9.274	185.473	2.7316	54.6310	163.420	3573.818
-34.0	12.31	.0161	.3231	20.024	400.486	9.290	185.796	2.7652	55.3049	200.162	3722.848
-33.0	12.74	.0152	.3033	19.893	397.851	9.304	186.087	2.7990	55.9809	237.044	3873.299
-32.0	13.19	.0143	.2833	19.762	395.234	9.317	186.345	2.8330	56.6591	274.084	4025.176
-31.0	13.64	.0134	.2630	19.632	392.636	9.329	186.571	2.8670	57.3394	311.303	4178.483
-30.0	14.11	.0124	.2424	19.503	390.055	9.338	186.766	2.9011	58.0218	348.720	4333.226
-29.0	14.59	.0114	.2215	19.375	387.493	9.347	186.931	2.9353	58.7062	386.355	4489.108
-28.0	15.08	.0104	.2004	19.248	384.950	9.353	187.064	2.9696	59.3925	424.227	4647.034
-27.0	15.59	.0094	.1790	19.121	382.426	9.358	187.168	3.0040	60.0808	462.356	4806.108
-26.0	16.10	.0083	.1573	18.996	379.920	9.362	187.242	3.0385	60.7709	500.764	4966.635
-25.0	16.63	.0072	.1353	18.872	377.433	9.364	187.286	3.0731	61.4629	539.470	5128.620
-24.0	17.18	.0060	.1130	18.748	374.966	9.365	187.302	3.1078	62.1567	578.495	5292.066
-23.0	17.73	.0049	.0904	18.626	372.517	9.364	187.290	3.1426	62.8523	617.860	5456.978
-22.0	18.30	.0036	.0675	18.504	370.087	9.362	187.249	3.1775	63.5496	657.586	5623.361
-21.0	18.88	.0024	.0443	18.384	367.677	9.359	187.181	3.2124	64.2486	697.695	5791.220
-20.0	19.47	.0011	.0207	18.264	365.286	9.354	187.087	3.2475	64.9492	738.209	5960.557
-19.0	20.08	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-18.0	20.70	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

21.00
ATMOSPHERES

TEMP	PSCO ₂	X (O ₂)	Y (O ₂)	Y/X-O ₂	HN-C ₂	Y/X-KR	HN-KF	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.0231	.4572	19.826	416.346	8.731	183.358	2.4427	51.2959	-20.763	2696.451
-39.0	10.30	.0223	.4395	19.696	413.610	8.755	183.849	2.4742	51.9582	15.521	2833.904
-38.0	10.68	.0216	.4217	19.566	410.892	8.776	184.305	2.5059	52.6229	51.850	2972.670
-37.0	11.07	.0208	.4036	19.436	408.190	8.797	184.728	2.5376	53.2900	88.243	3112.751
-36.0	11.47	.0200	.3853	19.310	405.505	8.815	185.117	2.5695	53.9594	124.718	3254.152
-35.0	11.88	.0191	.3668	19.183	402.838	8.832	185.473	2.6015	54.6310	161.295	3396.878
-34.0	12.31	.0183	.3480	19.057	400.188	8.847	185.796	2.6336	55.3049	197.992	3540.931
-33.0	12.74	.0174	.3289	18.931	397.557	8.861	186.087	2.6658	55.9809	234.828	3686.317
-32.0	13.19	.0165	.3096	18.807	394.943	8.874	186.345	2.6981	56.6591	271.822	3833.038
-31.0	13.64	.0155	.2901	18.683	392.347	8.884	186.571	2.7304	57.3394	308.994	3981.100
-30.0	14.11	.0146	.2703	18.560	389.770	8.894	186.766	2.7629	58.0218	346.364	4130.505
-29.0	14.59	.0136	.2502	18.439	387.211	8.901	186.931	2.7955	58.7062	383.951	4281.259
-28.0	15.08	.0125	.2299	18.318	384.671	8.908	187.064	2.8282	59.3925	421.774	4433.366
-27.0	15.59	.0115	.2093	18.198	382.149	8.913	187.168	2.8610	60.0808	459.855	4586.828
-26.0	16.10	.0104	.1884	18.078	379.647	8.916	187.242	2.8939	60.7709	498.212	4741.652
-25.0	16.63	.0093	.1672	17.960	377.163	8.918	187.286	2.9268	61.4629	536.867	4897.840
-24.0	17.18	.0082	.1458	17.843	374.698	8.919	187.302	2.9598	62.1567	575.841	5055.396
-23.0	17.73	.0070	.1241	17.726	372.252	8.919	187.290	2.9930	62.8523	615.153	5214.326
-22.0	18.30	.0058	.1021	17.611	369.825	8.917	187.249	3.0262	63.5456	654.826	5374.632
-21.0	18.88	.0046	.0798	17.496	367.418	8.913	187.181	3.0595	64.2469	694.881	5536.319
-20.0	19.47	.0033	.0572	17.382	365.029	8.909	187.087	3.0928	64.9492	735.338	5699.391
-19.0	20.08	.0020	.0343	17.270	362.660	8.903	186.965	3.1263	65.6514	776.221	5863.852
-18.0	20.70	.0006	.0111	17.158	360.310	8.896	186.818	3.1598	66.3552	817.551	6029.706
-17.0	21.34	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.0	21.99	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS < 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-Kr-XE SYSTEM¹

22.00
ATMOSPHERES

TEMP	PSCO ₂	X (O ₂)	Y (O ₂)	Y/X-O ₂	HN-C ₂	Y/X-Kr	HN-Kr	Y/X-Xe	HN-Xe	EN-LIQ	EN-VAP
-40.0	9.93	.C252	.4761	1E.909	416.008	8.334	183.358	2.3316	51.2959	-22.672	2556.726
-39.0	10.30	.C244	.4591	1E.785	413.276	8.357	183.849	2.3617	51.9582	13.568	2690.050
-38.0	10.68	.C237	.4419	1E.662	410.561	8.378	184.305	2.3920	52.6229	49.853	2824.608
-37.0	11.07	.C229	.4244	1E.535	407.863	8.397	184.728	2.4223	53.2900	86.201	2960.402
-36.0	11.47	.C221	.4067	1E.417	405.181	8.414	185.117	2.4527	53.9594	122.632	3097.435
-35.0	11.88	.C212	.3888	1E.296	402.51E	8.431	185.473	2.4832	54.6310	159.163	3235.713
-34.0	12.31	.C204	.3706	1E.176	399.872	8.445	185.796	2.5139	55.3049	195.815	3375.237
-33.0	12.74	.C195	.3522	1E.057	397.243	8.458	186.0E7	2.5446	55.9809	232.605	3516.012
-32.0	13.19	.C186	.3336	17.938	394.633	8.470	186.345	2.5754	56.6551	269.553	3658.041
-31.0	13.64	.C177	.3148	17.820	392.041	8.481	186.571	2.6063	57.3394	306.679	3801.328
-30.0	14.11	.C167	.2956	17.703	389.467	8.489	186.766	2.6374	58.0218	344.001	3945.877
-29.0	14.59	.0157	.2763	17.587	386.911	8.497	186.931	2.6685	58.7062	381.539	4091.691
-28.0	15.08	.C147	.2567	17.472	384.374	8.503	187.064	2.6997	59.3925	419.314	4238.775
-27.0	15.59	.C136	.2368	17.357	381.856	8.508	187.168	2.7309	60.0808	457.345	4387.131
-26.0	16.10	.C126	.2167	17.243	379.356	8.511	187.242	2.7623	60.7709	495.653	4536.764
-25.0	16.63	.C115	.1964	17.131	376.875	8.513	187.266	2.7938	61.4629	534.257	4687.677
-24.0	17.18	.C103	.1757	17.019	374.413	8.514	187.302	2.8253	62.1567	573.179	4839.874
-23.0	17.73	.C092	.1548	16.90E	371.970	8.513	187.290	2.8569	62.8523	612.438	4993.359
-22.0	18.30	.C080	.1336	16.798	369.547	8.511	187.249	2.8886	63.5496	652.058	5148.136
-21.0	18.88	.C067	.1122	16.68E	367.142	8.508	187.181	2.9204	64.2486	692.058	5304.208
-20.0	19.47	.C055	.0904	16.580	364.756	8.504	187.087	2.9522	64.9492	732.460	5461.579
-19.0	20.08	.C042	.0684	16.472	362.390	8.498	186.965	2.9842	65.6514	773.286	5620.253
-18.0	20.70	.C028	.0460	16.366	360.043	8.492	186.818	3.0161	66.3552	814.558	5780.233
-17.0	21.34	.C014	.0234	16.260	357.715	8.484	186.645	3.0482	67.0605	856.299	5941.523
-16.0	21.99	.0000	.0005	1E.15E	355.406	8.475	186.44E	3.0803	67.7673	898.531	6104.127
-15.0	22.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

¹FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CC2-O2-KR-XE SYSTEM¹

23.00
ATMOSPHERES

TEMP	PSC02	X (C2)	Y (O2)	Y/X-O2	HN-C2	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAF
-40.0	9.93	.C273	.4935	18.072	415.649	7.972	183.356	2.2303	51.2959	-24.587	2428.914
-39.0	10.30	.C266	.4770	17.953	412.521	7.993	183.849	2.2591	51.9582	11.609	2558.464
-38.0	10.68	.C258	.4603	17.835	410.210	8.013	184.305	2.2880	52.6229	47.849	2689.173
-37.0	11.07	.C250	.4434	17.718	407.516	8.032	184.728	2.3170	53.2900	84.153	2821.047
-36.0	11.47	.C242	.4262	17.602	404.838	8.049	185.117	2.3461	53.9594	120.539	2954.087
-35.0	11.88	.C234	.4089	17.486	402.178	8.064	185.473	2.3753	54.6310	157.025	3088.298
-34.0	12.31	.C225	.3913	17.371	399.536	8.078	185.756	2.4046	55.3049	193.631	3223.681
-33.0	12.74	.C216	.3736	17.257	396.911	8.091	186.067	2.4340	55.9809	230.375	3360.241
-32.0	13.19	.C207	.3556	17.144	394.304	8.102	186.345	2.4634	56.6591	267.277	3497.981
-31.0	13.64	.C198	.3373	17.031	391.715	8.112	186.571	2.4930	57.3394	304.355	3636.903
-30.0	14.11	.C188	.3189	16.919	389.145	8.120	186.766	2.5227	58.0218	341.630	3777.012
-29.0	14.59	.C179	.3002	16.808	386.593	8.127	186.931	2.5524	58.7062	379.121	3918.311
-28.0	15.08	.C168	.2812	16.698	384.059	8.133	187.064	2.5823	59.3925	416.847	4060.803
-27.0	15.59	.C158	.2621	16.589	381.544	8.138	187.168	2.6122	60.0808	454.828	4204.491
-26.0	16.10	.C147	.2426	16.480	379.048	8.141	187.242	2.6422	60.7709	493.085	4349.379
-25.0	16.63	.C136	.2230	16.373	376.570	8.143	187.286	2.6723	61.4629	531.638	4495.471
-24.0	17.18	.C125	.2031	16.266	374.111	8.144	187.302	2.7025	62.1567	570.508	4642.769
-23.0	17.73	.C113	.1829	16.160	371.672	8.143	187.290	2.7327	62.8523	609.715	4791.278
-22.0	18.30	.C101	.1624	16.054	369.251	8.141	187.249	2.7630	63.5496	649.281	4941.001
-21.0	18.88	.C089	.1417	15.950	366.849	8.138	187.181	2.7934	64.2486	689.226	5091.940
-20.0	19.47	.C076	.1208	15.846	364.467	8.134	187.087	2.8239	64.9492	729.572	5244.101
-19.0	20.08	.C063	.0995	15.744	362.104	8.129	186.965	2.8544	65.6514	770.341	5397.485
-18.0	20.70	.C050	.0780	15.642	359.759	8.123	186.818	2.8850	66.3552	811.555	5552.097
-17.0	21.34	.C036	.0562	15.541	357.434	8.115	186.645	2.9157	67.0605	853.237	5707.940
-16.0	21.99	.C022	.0341	15.440	355.129	8.106	186.448	2.9464	67.7673	895.408	5865.017
-15.0	22.65	.C008	.0117	15.341	352.842	8.097	186.225	2.9772	68.4756	938.093	6023.332
-14.0	23.33	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

¹FOR KRYPTON AND XENON MOL FRACTIONS < 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

24.00
ATMOSPHERES

TEMP	PSCO ₂	X (C ₂)	Y (O ₂)	Y/X-O ₂	HN-C ₂	Y/X-KR	HN-KF	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.C254	.5094	17.303	415.271	7.640	183.356	2.1373	51.2959	-26.508	2311.561
-39.0	10.30	.C287	.4934	17.189	412.547	7.660	183.849	2.1649	51.9582	9.643	2437.644
-38.0	10.68	.C279	.4772	17.077	409.840	7.679	184.305	2.1926	52.6229	45.840	2564.821
-37.0	11.07	.C272	.4608	16.965	407.149	7.697	184.728	2.2204	53.2900	82.099	2693.095
-36.0	11.47	.C264	.4442	16.853	404.476	7.713	185.117	2.2483	53.9594	118.440	2822.469
-35.0	11.88	.C255	.4274	16.742	401.819	7.728	185.473	2.2763	54.6310	154.881	2952.946
-34.0	12.31	.C247	.4104	16.633	399.181	7.742	185.796	2.3044	55.3049	191.441	3084.528
-33.0	12.74	.C238	.3931	16.523	396.560	7.754	186.087	2.3325	55.9809	228.139	3217.219
-32.0	13.19	.C229	.3757	16.415	393.957	7.764	186.345	2.3608	56.6591	264.994	3351.021
-31.0	13.64	.C220	.3581	16.307	391.372	7.774	186.571	2.3891	57.3394	302.025	3485.937
-30.0	14.11	.C210	.3402	16.200	388.805	7.782	186.766	2.4176	58.0218	339.252	3621.970
-29.0	14.59	.C200	.3221	16.094	386.256	7.789	186.931	2.4461	58.7062	376.694	3759.124
-28.0	15.08	.C190	.3038	15.989	383.726	7.794	187.064	2.4747	59.3925	414.371	3897.401
-27.0	15.59	.C180	.2852	15.884	381.215	7.799	187.168	2.5034	60.0808	452.303	4036.805
-26.0	16.10	.C169	.2664	15.780	378.722	7.802	187.242	2.5321	60.7709	490.510	4177.339
-25.0	16.63	.C158	.2474	15.677	376.248	7.804	187.286	2.5610	61.4629	529.012	4319.005
-24.0	17.18	.C146	.2282	15.575	373.792	7.804	187.302	2.5899	62.1567	567.829	4461.608
-23.0	17.73	.C135	.2087	15.473	371.356	7.804	187.290	2.6188	62.8523	606.983	4605.749
-22.0	18.30	.C123	.1889	15.372	368.939	7.802	187.249	2.6479	63.5496	646.495	4750.834
-21.0	18.88	.C111	.1689	15.273	366.540	7.799	187.181	2.6770	64.2486	686.385	4897.063
-20.0	19.47	.C098	.1487	15.173	364.161	7.795	187.087	2.7062	64.9492	726.675	5044.442
-19.0	20.08	.C085	.1281	15.075	361.801	7.790	186.965	2.7355	65.6514	767.387	5192.973
-18.0	20.70	.C072	.1074	14.977	359.460	7.784	186.818	2.7648	66.3552	808.543	5342.659
-17.0	21.34	.C058	.0863	14.881	357.138	7.777	186.645	2.7942	67.0605	850.165	5493.503
-16.0	21.99	.C044	.0650	14.785	354.835	7.769	186.448	2.8236	67.7673	892.276	5645.509
-15.0	22.65	.C030	.0434	14.690	352.551	7.759	186.225	2.8531	68.4756	934.899	5798.679
-14.0	23.33	.C015	.0215	14.595	350.287	7.749	185.979	2.8827	69.1852	978.056	5953.016
-13.0	24.02	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-12.0	24.73	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CC2-C2-KR-XE SYSTEM*

25.00
ATMOSPHERES

TEMP	PSC02	X (C2)	Y (O2)	Y/X-O2	HN-C2	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIC	EN-VAE
-40.0	9.93	.C316	.5241	16.595	414.872	7.334	183.358	2.0518	51.2959	-28.436	2203.442
-39.0	10.30	.0308	.5085	16.486	412.152	7.354	183.849	2.0783	51.9582	7.672	2326.330
-38.0	10.68	.0301	.4928	16.378	409.449	7.372	184.305	2.1049	52.6229	43.824	2450.252
-37.0	11.07	.0293	.4769	16.271	406.763	7.389	184.728	2.1316	53.2900	80.038	2575.209
-36.0	11.47	.C285	.4607	16.164	404.094	7.405	185.117	2.1584	53.9594	116.334	2701.204
-35.0	11.88	.0277	.4444	16.056	401.442	7.419	185.473	2.1852	54.6310	152.729	2828.240
-34.0	12.31	.C268	.4279	15.952	398.807	7.432	185.756	2.2122	55.3049	189.244	2956.319
-33.0	12.74	.C259	.4112	15.848	396.190	7.443	186.087	2.2392	55.9809	225.895	3085.444
-32.0	13.19	.C250	.3943	15.744	393.591	7.454	186.345	2.2664	56.6591	262.704	3215.618
-31.0	13.64	.C241	.3771	15.640	391.010	7.463	186.571	2.2936	57.3394	299.688	3346.842
-30.0	14.11	.C232	.3598	15.536	388.447	7.471	186.766	2.3209	58.0218	336.867	3479.120
-29.0	14.59	.C222	.3423	15.436	385.902	7.477	186.931	2.3482	58.7062	374.260	3612.455
-28.0	15.08	.0212	.3245	15.335	383.376	7.483	187.064	2.3757	59.3925	411.888	3746.850
-27.0	15.59	.C201	.3065	15.235	380.868	7.487	187.168	2.4032	60.0808	449.770	3882.306
-26.0	16.10	.C191	.2884	15.135	378.379	7.490	187.242	2.4308	60.7709	487.926	4018.828
-25.0	16.63	.C180	.2699	15.036	375.908	7.491	187.286	2.4585	61.4629	526.377	4156.418
-24.0	17.18	.C168	.2513	14.938	373.456	7.492	187.302	2.4863	62.1567	565.142	4295.078
-23.0	17.73	.C157	.2324	14.841	371.024	7.492	187.250	2.5141	62.8523	604.243	4434.813
-22.0	18.30	.C145	.2133	14.744	368.610	7.490	187.249	2.5420	63.5496	643.701	4575.624
-21.0	18.88	.C132	.1939	14.649	366.215	7.487	187.181	2.5699	64.2486	683.536	4717.516
-20.0	19.47	.C120	.1744	14.554	363.839	7.483	187.087	2.5980	64.9492	723.770	4860.490
-19.0	20.08	.C107	.1545	14.459	361.482	7.479	186.965	2.6261	65.6514	764.424	5004.549
-18.0	20.70	.CC94	.1344	14.366	359.144	7.473	186.818	2.6542	66.3552	805.522	5149.698
-17.0	21.34	.CC80	.1141	14.273	356.826	7.466	186.645	2.6824	67.0605	847.084	5295.938
-16.0	21.99	.CC66	.0935	14.181	354.526	7.458	186.448	2.7107	67.7673	889.134	5443.272
-15.0	22.65	.C052	.0726	14.090	352.246	7.449	186.225	2.7390	68.4756	931.695	5591.704
-14.0	23.33	.C037	.0514	13.995	349.984	7.439	185.979	2.7674	69.1852	974.789	5741.236
-13.0	24.02	.CC22	.0300	13.910	347.742	7.428	185.708	2.7959	69.8963	1018.440	5891.871
-12.0	24.73	.C006	.0083	13.821	345.519	7.417	185.415	2.8243	70.6087	1062.673	6043.612
-11.0	25.45	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS < 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-Kr-Xe SYSTEM¹

26. CO
ATMOSPHERES

TEMP	PSCO ₂	X (CO ₂)	Y (O ₂)	Y/X-O ₂	HN-CO ₂	Y/X-Kr	HN-Kr	Y/X-Xe	HN-Xe	EN-LIQ	EN-VAP
-40.0	9.93	.C337	.5376	15.940	414.453	7.052	183.358	1.9729	51.2959	-30.369	2103.524
-39.0	10.30	.C330	.5225	15.836	411.738	7.071	183.849	1.9984	51.9582	5.694	2223.457
-38.0	10.68	.C322	.5072	15.732	409.039	7.089	184.305	2.0240	52.6229	41.801	2344.367
-37.0	11.07	.C315	.4917	15.629	406.357	7.105	184.728	2.0496	53.2900	77.971	2466.256
-36.0	11.47	.C307	.4760	15.527	403.692	7.120	185.117	2.0754	53.9594	114.221	2589.126
-35.0	11.88	.C298	.4602	15.425	401.045	7.134	185.473	2.1012	54.6310	150.571	2712.981
-34.0	12.31	.C290	.4441	15.324	398.414	7.146	185.796	2.1271	55.3049	187.040	2837.820
-33.0	12.74	.C281	.4279	15.223	395.802	7.157	186.087	2.1531	55.9809	223.645	2963.648
-32.0	13.19	.C272	.4114	15.123	393.207	7.167	186.345	2.1792	56.6591	260.406	3090.466
-31.0	13.64	.C263	.3948	15.024	390.629	7.176	186.571	2.2054	57.3394	297.343	3218.277
-30.0	14.11	.C253	.3780	14.926	388.070	7.183	186.766	2.2316	58.0218	334.474	3347.084
-29.0	14.59	.C243	.3609	14.828	385.530	7.190	186.931	2.2579	58.7062	371.819	3476.888
-28.0	15.08	.C233	.3437	14.731	383.007	7.195	187.064	2.2843	59.3925	409.398	3607.692
-27.0	15.59	.C223	.3263	14.635	380.503	7.199	187.168	2.3108	60.0808	447.230	3739.499
-26.0	16.10	.C212	.3086	14.539	378.018	7.202	187.242	2.3373	60.7709	485.335	3872.312
-25.0	16.63	.C201	.2908	14.444	375.551	7.203	187.286	2.3640	61.4629	523.734	4006.133
-24.0	17.18	.C190	.2727	14.350	373.103	7.204	187.302	2.3906	62.1567	562.447	4140.965
-23.0	17.73	.C178	.2544	14.257	370.674	7.203	187.290	2.4174	62.8523	601.494	4276.810
-22.0	18.30	.C167	.2358	14.164	368.264	7.202	187.249	2.4442	63.5496	640.897	4413.672
-21.0	18.88	.C154	.2171	14.072	365.873	7.199	187.181	2.4711	64.2486	680.677	4551.553
-20.0	19.47	.C142	.1981	13.981	363.500	7.196	187.087	2.4980	64.9492	720.855	4690.455
-19.0	20.08	.C129	.1789	13.890	361.147	7.191	186.965	2.5251	65.6514	761.452	4830.382
-18.0	20.70	.C116	.1594	13.800	358.813	7.185	186.818	2.5521	66.3552	802.491	4971.337
-17.0	21.34	.C102	.1397	13.711	356.498	7.179	186.645	2.5793	67.0605	843.994	5113.321
-16.0	21.99	.C088	.1197	13.623	354.201	7.171	186.448	2.6064	67.7673	885.983	5256.338
-15.0	22.65	.C074	.0995	13.536	351.924	7.163	186.225	2.6337	68.4756	928.481	5400.391
-14.0	23.33	.C059	.0791	13.449	349.666	7.153	185.979	2.6610	69.1852	971.511	5545.482
-13.0	24.02	.C044	.0583	13.363	347.427	7.143	185.708	2.6883	69.8963	1015.097	5691.613
-12.0	24.73	.C028	.0374	13.277	345.207	7.131	185.415	2.7157	70.6087	1059.263	5838.788
-11.0	25.45	.C012	.0161	13.193	343.006	7.119	185.099	2.7432	71.3224	1104.033	5987.009
-10.0	26.19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-9.0	26.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

¹FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CC2-O2-KR-XE SYSTEM*

27.00
ATMOSPHERES

TEMP	FSCO2	X (C2)	Y (O2)	Y/X-O2	HN-C2	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAF
-40.0	9.93	.C359	.5502	15.334	414.014	6.791	183.358	1.8998	51.2959	-32.308	2010.924
-39.0	10.30	.C352	.5355	15.233	411.303	6.809	183.849	1.9244	51.9582	3.710	2128.114
-38.0	10.68	.C344	.5205	15.134	408.609	6.826	184.305	1.9490	52.6229	39.772	2246.230
-37.0	11.07	.C336	.5055	15.035	405.932	6.842	184.728	1.9737	53.2900	75.897	2365.272
-36.0	11.47	.C328	.4902	14.936	403.272	6.856	185.117	1.9985	53.9594	112.102	2485.244
-35.0	11.88	.C320	.4747	14.836	400.629	6.869	185.473	2.0234	54.6310	148.406	2606.146
-34.0	12.31	.C311	.4591	14.741	398.003	6.881	185.796	2.0483	55.3049	184.828	2727.980
-33.0	12.74	.C303	.4433	14.644	395.394	6.892	186.087	2.0734	55.9809	221.387	2850.749
-32.0	13.19	.C294	.4273	14.548	392.804	6.902	186.345	2.0985	56.6591	258.102	2974.455
-31.0	13.64	.C284	.4112	14.453	390.231	6.910	186.571	2.1237	57.3394	294.991	3099.099
-30.0	14.11	.C275	.3948	14.358	387.676	6.917	186.766	2.1490	58.0218	332.074	3224.685
-29.0	14.59	.C265	.3782	14.264	385.140	6.923	186.931	2.1743	58.7062	369.370	3351.214
-28.0	15.08	.C255	.3615	14.171	382.621	6.928	187.064	2.1997	59.3925	406.899	3478.688
-27.0	15.59	.C245	.3445	14.079	380.122	6.932	187.168	2.2252	60.0808	444.681	3607.111
-26.0	16.10	.C234	.3274	13.987	377.640	6.935	187.242	2.2508	60.7709	482.735	3736.483
-25.0	16.63	.C223	.3100	13.895	375.177	6.937	187.286	2.2764	61.4629	521.082	3866.809
-24.0	17.18	.C212	.2925	13.805	372.733	6.937	187.302	2.3021	62.1567	559.743	3998.090
-23.0	17.73	.C200	.2747	13.715	370.308	6.937	187.290	2.3279	62.8523	598.737	4130.329
-22.0	18.30	.C188	.2567	13.626	367.902	6.935	187.249	2.3537	63.5496	638.086	4263.528
-21.0	18.88	.C176	.2385	13.538	365.514	6.933	187.161	2.3796	64.2486	677.810	4397.689
-20.0	19.47	.C164	.2201	13.450	363.146	6.929	187.087	2.4055	64.9492	717.931	4532.816
-19.0	20.08	.C151	.2015	13.363	360.796	6.925	186.965	2.4315	65.6514	758.471	4668.911
-18.0	20.70	.C138	.1826	13.276	358.465	6.919	186.818	2.4576	66.3552	799.451	4805.977
-17.0	21.34	.C124	.1635	13.191	356.154	6.913	186.645	2.4837	67.0605	840.894	4944.015
-16.0	21.99	.C110	.1441	13.106	353.861	6.905	186.448	2.5099	67.7673	882.821	5083.029
-15.0	22.65	.C096	.1245	13.022	351.587	6.897	186.225	2.5361	68.4756	925.257	5223.022
-14.0	23.33	.C081	.1047	12.938	349.333	6.888	185.979	2.5624	69.1852	968.223	5363.994
-13.0	24.02	.C066	.0846	12.855	347.097	6.878	185.708	2.5888	69.8963	1011.744	5505.950
-12.0	24.73	.C050	.0643	12.773	344.880	6.867	185.415	2.6151	70.6087	1055.843	5648.892
-11.0	25.45	.C034	.0437	12.692	342.683	6.856	185.099	2.6416	71.3224	1100.545	5792.821
-10.0	26.19	.C018	.0228	12.611	340.504	6.843	184.761	2.6680	72.0373	1145.873	5937.741
-9.0	26.94	.C001	.0017	12.531	338.344	6.830	184.401	2.6946	72.7535	1191.854	6083.653
-8.0	27.71	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM¹

28.00
ATMOSPHERES

TEMP	PSCO ₂	X (CO ₂)	Y (O ₂)	Y/X-CO ₂	HN-CO ₂	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIC	EN-VAE
-40.0	9.93	.C380	.5619	14.770	413.554	6.548	183.358	1.8320	51.2959	-34.254	1924.888
-39.0	10.30	.C373	.5475	14.673	410.849	6.566	183.849	1.8557	51.9582	1.720	2039.525
-38.0	10.68	.C366	.5329	14.577	408.160	6.582	184.305	1.8794	52.6229	37.737	2155.039
-37.0	11.07	.C358	.5182	14.482	405.488	6.597	184.728	1.9032	53.2900	73.816	2271.432
-36.0	11.47	.C350	.5034	14.387	402.832	6.611	185.117	1.9271	53.9594	109.976	2388.705
-35.0	11.88	.C342	.4883	14.293	400.194	6.624	185.473	1.9511	54.6310	146.234	2506.860
-34.0	12.31	.C333	.4731	14.195	397.572	6.636	185.796	1.9752	55.3049	182.610	2625.897
-33.0	12.74	.C324	.4577	14.106	394.965	6.646	186.087	1.9993	55.9809	219.122	2745.820
-32.0	13.19	.C315	.4421	14.014	392.383	6.655	186.345	2.0235	56.6591	255.790	2866.629
-31.0	13.64	.C306	.4264	13.922	389.814	6.663	186.571	2.0478	57.3394	292.631	2988.327
-30.0	14.11	.C297	.4104	13.831	387.264	6.670	186.766	2.0722	58.0218	329.665	3110.916
-29.0	14.59	.C287	.3943	13.740	384.732	6.676	186.931	2.0966	58.7062	366.913	3234.398
-28.0	15.08	.C277	.3780	13.651	382.218	6.681	187.064	2.1212	59.3925	404.392	3358.775
-27.0	15.59	.C267	.3615	13.562	379.722	6.685	187.168	2.1457	60.0808	442.124	3484.048
-26.0	16.10	.C256	.3449	13.473	377.245	6.687	187.242	2.1704	60.7709	480.127	3610.221
-25.0	16.63	.C245	.3280	13.385	374.787	6.689	187.286	2.1951	61.4629	518.423	3737.295
-24.0	17.18	.C234	.3109	13.298	372.347	6.689	187.302	2.2199	62.1567	557.030	3865.273
-23.0	17.73	.C222	.2936	13.212	369.925	6.689	187.290	2.2447	62.8523	595.971	3994.157
-22.0	18.30	.C210	.2762	13.126	367.523	6.687	187.249	2.2696	63.5496	635.265	4123.949
-21.0	18.88	.C198	.2585	13.041	365.139	6.685	187.181	2.2946	64.2486	674.933	4254.652
-20.0	19.47	.C186	.2406	12.956	362.775	6.682	187.087	2.3196	64.9492	714.998	4386.267
-19.0	20.08	.C173	.2225	12.872	360.429	6.677	186.965	2.3447	65.6514	755.480	4518.798
-18.0	20.70	.C160	.2041	12.789	358.102	6.672	186.818	2.3698	66.3552	796.401	4652.247
-17.0	21.34	.C146	.1856	12.707	355.794	6.666	186.645	2.3950	67.0605	837.783	4786.616
-16.0	21.99	.C132	.1668	12.625	353.505	6.659	186.448	2.4203	67.7673	879.650	4921.907
-15.0	22.65	.C118	.1478	12.544	351.235	6.651	186.225	2.4456	68.4756	922.022	5058.123
-14.0	23.33	.C103	.1285	12.464	348.984	6.642	185.979	2.4709	69.1852	964.925	5195.267
-13.0	24.02	.C088	.1090	12.384	346.752	6.632	185.708	2.4963	69.8963	1008.380	5333.340
-12.0	24.73	.C073	.0893	12.305	344.539	6.622	185.415	2.5217	70.6087	1052.412	5472.345
-11.0	25.45	.C057	.0693	12.227	342.345	6.611	185.099	2.5472	71.3224	1097.045	5612.284
-10.0	26.19	.C040	.0491	12.149	340.169	6.599	184.761	2.5728	72.0373	1142.304	5753.159
-9.0	26.94	.C024	.0286	12.072	338.013	6.586	184.401	2.5983	72.7535	1188.213	5894.973
-8.0	27.71	.C007	.0078	11.996	335.875	6.572	184.020	2.6240	73.4709	1234.798	6037.727
-7.0	28.49	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

¹FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM¹

29. CO
ATMOSPHERES

TEMP	PSCO ₂	X (CO ₂)	Y (O ₂)	Y/X-O ₂	HN-CO ₂	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.0402	.5728	14.244	413.075	6.323	183.358	1.7688	51.2959	-36.206	1844.762
-39.0	10.30	.0395	.5587	14.151	410.375	6.340	183.849	1.7917	51.9582	-0.277	1957.017
-38.0	10.68	.0387	.5445	14.058	407.691	6.355	184.305	1.8146	52.6229	35.695	2070.103
-37.0	11.07	.0380	.5301	13.966	405.024	6.370	184.728	1.8376	53.2900	71.729	2184.023
-36.0	11.47	.0372	.5156	13.875	402.373	6.383	185.117	1.8607	53.9594	107.843	2298.777
-35.0	11.88	.0363	.5009	13.784	399.740	6.396	185.473	1.8838	54.6310	144.056	2414.367
-34.0	12.31	.0355	.4861	13.694	397.123	6.407	185.796	1.9071	55.3049	180.385	2530.795
-33.0	12.74	.0346	.4711	13.604	394.524	6.417	186.087	1.9304	55.9809	216.850	2648.061
-32.0	13.19	.0337	.4559	13.515	391.943	6.426	186.345	1.9538	56.6591	253.470	2766.168
-31.0	13.64	.0328	.4405	13.427	389.379	6.433	186.571	1.9772	57.3394	290.264	2885.117
-30.0	14.11	.0319	.4250	13.339	386.834	6.440	186.766	2.0008	58.0218	327.250	3004.910
-29.0	14.59	.0309	.4093	13.252	384.306	6.446	186.931	2.0244	58.7062	364.448	3125.549
-28.0	15.08	.0299	.3934	13.165	381.797	6.450	187.064	2.0480	59.3925	401.878	3247.036
-27.0	15.59	.0289	.3774	13.079	379.305	6.454	187.168	2.0718	60.0808	439.559	3369.371
-26.0	16.10	.0278	.3611	12.994	376.833	6.457	187.242	2.0955	60.7709	477.511	3492.559
-25.0	16.63	.0267	.3447	12.910	374.379	6.458	187.286	2.1194	61.4629	515.754	3616.600
-24.0	17.18	.0256	.3281	12.826	371.943	6.459	187.302	2.1433	62.1567	554.309	3741.497
-23.0	17.73	.0244	.3113	12.742	369.526	6.458	187.290	2.1673	62.8523	593.196	3867.251
-22.0	18.30	.0232	.2943	12.660	367.128	6.457	187.249	2.1914	63.5496	632.435	3993.865
-21.0	18.88	.0220	.2771	12.578	364.748	6.455	187.181	2.2155	64.2486	672.048	4121.342
-20.0	19.47	.0208	.2597	12.496	362.386	6.451	187.087	2.2396	64.9492	712.055	4249.682
-19.0	20.08	.0195	.2420	12.415	360.046	6.447	186.965	2.2638	65.6514	752.479	4378.889
-18.0	20.70	.0182	.2242	12.335	357.723	6.442	186.818	2.2881	66.3552	793.341	4508.965
-17.0	21.34	.0168	.2062	12.256	355.419	6.436	186.645	2.3124	67.0605	834.664	4639.912
-16.0	21.99	.0154	.1879	12.177	353.134	6.429	186.448	2.3368	67.7673	876.468	4771.732
-15.0	22.65	.0140	.1694	12.095	350.868	6.422	186.225	2.3612	68.4756	918.778	4904.427
-14.0	23.33	.0125	.1507	12.021	348.620	6.413	185.979	2.3857	69.1852	961.616	5037.999
-13.0	24.02	.0110	.1318	11.945	346.392	6.404	185.708	2.4102	69.8963	1005.005	5172.452
-12.0	24.73	.0095	.1126	11.868	344.183	6.394	185.415	2.4348	70.6087	1048.970	5307.786
-11.0	25.45	.0079	.0932	11.793	341.992	6.383	185.099	2.4594	71.3224	1093.534	5444.005
-10.0	26.19	.0063	.0736	11.718	339.820	6.371	184.761	2.4840	72.0373	1138.722	5581.109
-9.0	26.94	.0046	.0537	11.644	337.667	6.359	184.401	2.5087	72.7535	1184.559	5719.102
-8.0	27.71	.0029	.0335	11.570	335.533	6.346	184.020	2.5335	73.4709	1231.071	5857.984
-7.0	28.49	.0011	.0131	11.497	333.417	6.332	183.618	2.5583	74.1894	1278.282	5997.759
-6.0	29.29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

¹FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

30.00
ATMOSPHERES

TEMP	PSCO ₂	X (CO ₂)	Y (O ₂)	Y/X-CO ₂	NN-CO ₂	Y/X-KR	NN-KR	Y/X-XE	NN-XE	NN-LIQ	NN-VAP
-40.0	9.93	.C424	.5829	13.753	412.576	6.112	183.358	1.7099	51.2959	-38.164	1769.984
-39.0	10.30	.C417	.5692	13.663	409.882	6.128	183.849	1.7319	51.9582	-2.280	1880.008
-38.0	10.68	.C409	.5553	13.573	407.203	6.144	184.305	1.7541	52.6229	33.647	1990.822
-37.0	11.07	.C401	.5413	13.485	404.541	6.158	184.728	1.7763	53.2900	69.635	2102.427
-36.0	11.47	.C393	.5271	13.397	401.895	6.171	185.117	1.7986	53.9594	105.703	2214.824
-35.0	11.88	.C385	.5127	13.309	399.267	6.182	185.473	1.8210	54.6310	141.870	2328.015
-34.0	12.31	.C377	.4982	13.222	396.656	6.193	185.796	1.8435	55.3049	178.153	2442.000
-33.0	12.74	.C368	.4836	13.135	394.062	6.203	186.087	1.8660	55.9809	214.571	2556.781
-32.0	13.19	.C359	.4688	13.050	391.485	6.211	186.345	1.8886	56.6591	251.143	2672.359
-31.0	13.64	.C350	.4538	12.964	388.926	6.219	186.571	1.9113	57.3394	287.889	2788.736
-30.0	14.11	.C341	.4386	12.880	386.386	6.226	186.766	1.9341	58.0218	324.826	2905.914
-29.0	14.59	.C331	.4233	12.795	383.863	6.231	186.931	1.9569	58.7062	361.975	3023.893
-28.0	15.08	.C321	.4078	12.712	381.358	6.235	187.064	1.9798	59.3925	399.355	3142.676
-27.0	15.59	.C311	.3922	12.629	378.871	6.239	187.168	2.0027	60.0808	436.985	3262.264
-26.0	16.10	.C300	.3763	12.547	376.403	6.241	187.242	2.0257	60.7709	474.886	3382.659
-25.0	16.63	.C289	.3603	12.465	373.954	6.243	187.286	2.0488	61.4629	513.077	3503.864
-24.0	17.18	.C278	.3441	12.384	371.522	6.243	187.302	2.0719	62.1567	551.579	3625.879
-23.0	17.73	.C266	.3277	12.304	369.110	6.243	187.290	2.0951	62.8523	590.412	3748.706
-22.0	18.30	.C255	.3112	12.224	366.716	6.242	187.249	2.1183	63.5496	629.596	3872.349
-21.0	18.88	.C242	.2944	12.145	364.341	6.239	187.181	2.1416	64.2486	669.153	3996.808
-20.0	19.47	.C230	.2775	12.066	361.984	6.236	187.087	2.1650	64.9492	709.103	4122.087
-19.0	20.08	.C217	.2603	11.988	359.647	6.232	186.965	2.1884	65.6514	749.469	4248.185
-18.0	20.70	.C204	.2430	11.911	357.328	6.227	186.818	2.2118	66.3552	790.272	4375.107
-17.0	21.34	.C190	.2254	11.834	355.028	6.222	186.645	2.2354	67.0605	831.534	4502.854
-16.0	21.99	.C177	.2077	11.758	352.747	6.215	186.448	2.2589	67.7673	873.276	4631.428
-15.0	22.65	.C162	.1897	11.683	350.485	6.208	186.225	2.2825	68.4756	915.523	4760.831
-14.0	23.33	.C148	.1715	11.608	348.242	6.199	185.979	2.3062	69.1852	958.296	4891.065
-13.0	24.02	.C133	.1531	11.534	346.017	6.190	185.708	2.3299	69.8963	1001.620	5022.133
-12.0	24.73	.C117	.1344	11.460	343.811	6.181	185.415	2.3536	70.6087	1045.517	5154.036
-11.0	25.45	.C101	.1156	11.387	341.624	6.170	185.099	2.3774	71.3224	1090.012	5286.776
-10.0	26.19	.C085	.0965	11.315	339.456	6.159	184.761	2.4012	72.0373	1135.130	5420.356
-9.0	26.94	.C069	.0771	11.244	337.307	6.147	184.401	2.4251	72.7535	1180.895	5554.777
-8.0	27.71	.C052	.0576	11.173	335.176	6.134	184.020	2.4490	73.4709	1227.332	5690.041
-7.0	28.49	.C034	.0377	11.102	333.064	6.121	183.618	2.4730	74.1894	1274.468	5826.149
-6.0	29.29	.C016	.0176	11.032	330.971	6.107	183.195	2.4970	74.9090	1322.328	5963.105
-5.0	30.11	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-4.0	30.94	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS < 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

31.00
ATMOSPHERES

TEMP	PSCO ₂	X (O ₂)	Y (O ₂)	Y/X-O ₂	HN-C ₂	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.0446	.5924	13.292	412.057	5.915	183.358	1.6547	51.2959	-40.128	1700.061
-39.0	10.30	.0438	.5790	13.205	409.366	5.931	183.849	1.6761	51.9582	-4.290	1807.992
-38.0	10.68	.0431	.5654	13.119	406.695	5.945	184.305	1.6975	52.6229	31.592	1916.673
-37.0	11.07	.0423	.5517	13.034	404.039	5.959	184.728	1.7190	53.2900	67.535	2026.106
-36.0	11.47	.0415	.5378	12.948	401.399	5.972	185.117	1.7406	53.9594	103.557	2136.292
-35.0	11.88	.0407	.5238	12.864	398.775	5.983	185.473	1.7623	54.6310	139.677	2247.232
-34.0	12.31	.0399	.5096	12.780	396.169	5.993	185.796	1.7840	55.3049	175.913	2358.926
-33.0	12.74	.0390	.4953	12.696	393.581	6.003	186.087	1.8058	55.9809	212.284	2471.375
-32.0	13.19	.0381	.4808	12.613	391.009	6.011	186.345	1.8277	56.6591	248.809	2584.582
-31.0	13.64	.0372	.4662	12.531	388.456	6.018	186.571	1.8497	57.3394	285.506	2698.547
-30.0	14.11	.0363	.4514	12.449	385.920	6.025	186.766	1.8717	58.0218	322.395	2813.271
-29.0	14.59	.0353	.4364	12.368	383.402	6.030	186.931	1.8937	58.7062	359.494	2928.756
-28.0	15.08	.0343	.4213	12.287	380.902	6.034	187.064	1.9159	59.3925	396.824	3045.004
-27.0	15.59	.0333	.4060	12.207	378.420	6.038	187.168	1.9381	60.0808	434.404	3162.016
-26.0	16.10	.0322	.3906	12.128	375.957	6.040	187.242	1.9604	60.7709	472.253	3279.793
-25.0	16.63	.0311	.3749	12.049	373.512	6.041	187.286	1.9827	61.4629	510.392	3398.337
-24.0	17.18	.0300	.3591	11.970	371.085	6.042	187.302	2.0051	62.1567	548.840	3517.651
-23.0	17.73	.0289	.3432	11.893	368.677	6.042	187.290	2.0275	62.8523	587.619	3637.735
-22.0	18.30	.0277	.3270	11.816	366.288	6.040	187.249	2.0500	63.5496	626.748	3758.591
-21.0	18.88	.0265	.3107	11.739	363.917	6.038	187.181	2.0725	64.2486	666.249	3880.223
-20.0	19.47	.0252	.2942	11.663	361.565	6.035	187.087	2.0951	64.9492	706.142	4002.630
-19.0	20.08	.0239	.2774	11.588	359.232	6.031	186.965	2.1178	65.6514	746.449	4125.816
-18.0	20.70	.0226	.2605	11.513	356.916	6.026	186.818	2.1405	66.3552	787.193	4249.781
-17.0	21.34	.0213	.2434	11.439	354.622	6.021	186.645	2.1632	67.0605	828.394	4374.529
-16.0	21.99	.0199	.2261	11.366	352.345	6.014	186.448	2.1860	67.7673	870.074	4500.061
-15.0	22.65	.0185	.2086	11.293	350.087	6.007	186.225	2.2089	68.4756	912.258	4626.379
-14.0	23.33	.0170	.1909	11.221	347.848	5.999	185.979	2.2318	69.1852	954.966	4753.484
-13.0	24.02	.0155	.1730	11.149	345.627	5.991	185.708	2.2547	69.8963	998.224	4881.380
-12.0	24.73	.0140	.1548	11.078	343.425	5.981	185.415	2.2777	70.6087	1042.053	5010.067
-11.0	25.45	.0124	.1365	11.008	341.242	5.971	185.099	2.3007	71.3224	1086.479	5139.548
-10.0	26.19	.0108	.1179	10.938	339.078	5.960	184.761	2.3238	72.0373	1131.526	5269.824
-9.0	26.94	.0091	.0991	10.869	336.932	5.948	184.401	2.3469	72.7535	1177.218	5400.898
-8.0	27.71	.0074	.0800	10.800	334.806	5.936	184.020	2.3700	73.4709	1223.581	5532.771
-7.0	28.49	.0057	.0608	10.732	332.697	5.923	183.618	2.3932	74.1894	1270.641	5665.445
-6.0	29.29	.0039	.0412	10.665	330.607	5.910	183.195	2.4164	74.9090	1318.423	5798.921
-5.0	30.11	.0020	.0215	10.598	328.536	5.895	182.753	2.4397	75.6298	1366.955	5933.201
-4.0	30.94	.0001	.0014	10.532	326.483	5.880	182.292	2.4630	76.3515	1416.264	6068.287
-3.0	31.79	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

32.00
ATMOSPHERES

TEMP	PSCO ₂	X (C ₂)	Y (O ₂)	Y/X-O ₂	NN-C ₂	Y/X-KR	NN-K ₅	Y/X-XE	NN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.C468	.6013	12.860	411.519	5.730	183.358	1.6030	51.2959	-42.099	1634.563
-39.0	10.30	.C460	.5881	12.776	408.636	5.745	183.849	1.6237	51.9582	-6.306	1740.524
-38.0	10.68	.C453	.5748	12.693	406.168	5.760	184.305	1.6445	52.6229	29.530	1847.200
-37.0	11.07	.C445	.5614	12.610	403.517	5.773	184.728	1.6653	53.2900	65.427	1954.590
-36.0	11.47	.C437	.5478	12.528	400.883	5.785	185.117	1.6862	53.9594	101.403	2062.697
-35.0	11.88	.C429	.5341	12.446	398.265	5.796	185.473	1.7072	54.6310	137.476	2171.519
-34.0	12.31	.C421	.5202	12.365	395.665	5.806	185.796	1.7283	55.3049	173.666	2281.059
-33.0	12.74	.C412	.5062	12.284	393.081	5.815	186.067	1.7494	55.9809	209.990	2391.317
-32.0	13.19	.C403	.4921	12.204	390.515	5.823	186.345	1.7706	56.6591	246.466	2502.294
-31.0	13.64	.C394	.4778	12.124	387.967	5.830	186.571	1.7919	57.3394	283.115	2613.991
-30.0	14.11	.C385	.4633	12.045	385.436	5.836	186.766	1.8132	58.0218	319.955	2726.409
-29.0	14.59	.C375	.4487	11.966	382.923	5.842	186.931	1.8346	58.7062	357.005	2839.550
-28.0	15.08	.C365	.4339	11.888	380.428	5.846	187.064	1.8560	59.3925	394.285	2953.414
-27.0	15.59	.C355	.4190	11.811	377.952	5.849	187.168	1.8775	60.0808	431.814	3068.004
-26.0	16.10	.C344	.4039	11.734	375.493	5.851	187.242	1.8991	60.7709	469.611	3183.321
-25.0	16.63	.C333	.3886	11.656	373.053	5.853	187.286	1.9207	61.4629	507.697	3299.366
-24.0	17.18	.C322	.3732	11.582	370.631	5.853	187.362	1.9424	62.1567	546.092	3416.140
-23.0	17.73	.C311	.3576	11.507	368.228	5.853	187.290	1.9641	62.8523	584.817	3533.646
-22.0	18.30	.C299	.3419	11.433	365.843	5.852	187.249	1.9859	63.5496	623.890	3651.885
-21.0	18.88	.C287	.3259	11.359	363.477	5.849	187.181	2.0078	64.2486	663.335	3770.859
-20.0	19.47	.C275	.3098	11.285	361.130	5.846	187.067	2.0297	64.9492	703.171	3890.569
-19.0	20.08	.C262	.2935	11.213	358.801	5.843	186.965	2.0516	65.6514	743.420	4011.018
-18.0	20.70	.C249	.2770	11.140	356.491	5.838	186.818	2.0736	66.3552	784.103	4132.206
-17.0	21.34	.C235	.2603	11.069	354.200	5.833	186.645	2.0956	67.0605	825.243	4254.137
-16.0	21.99	.C221	.2435	10.996	351.927	5.826	186.448	2.1177	67.7673	866.862	4376.811
-15.0	22.65	.C207	.2264	10.927	349.674	5.820	186.225	2.1399	68.4756	908.982	4500.230
-14.0	23.33	.C193	.2091	10.857	347.439	5.812	185.979	2.1620	69.1852	951.625	4624.397
-13.0	24.02	.C178	.1917	10.786	345.222	5.803	185.708	2.1843	69.8963	994.816	4749.313
-12.0	24.73	.C162	.1740	10.720	343.025	5.794	185.415	2.2065	70.6087	1038.578	4874.980
-11.0	25.45	.C147	.1561	10.651	340.846	5.784	185.099	2.2288	71.3224	1082.934	5001.400
-10.0	26.19	.C130	.1380	10.584	338.685	5.774	184.761	2.2512	72.0373	1127.910	5128.574
-9.0	26.94	.C114	.1197	10.517	336.544	5.763	184.401	2.2735	72.7535	1173.529	5256.504
-8.0	27.71	.C097	.1011	10.451	334.421	5.751	184.020	2.2960	73.4709	1219.818	5385.193
-7.0	28.49	.C079	.0824	10.385	332.316	5.738	183.618	2.3184	74.1894	1266.801	5514.641
-6.0	29.29	.C061	.0634	10.320	330.230	5.725	183.195	2.3409	74.9090	1314.506	5644.850
-5.0	30.11	.C043	.0441	10.255	328.163	5.711	182.753	2.3634	75.6298	1362.958	5775.822
-4.0	30.94	.C024	.0246	10.191	326.113	5.697	182.292	2.3860	76.3516	1412.184	5907.557
-3.0	31.79	.C005	.0049	10.128	324.083	5.682	181.811	2.4086	77.0744	1462.214	6040.058
-2.0	32.65	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS < 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

33.00
ATMOSPHERES

TEMP	PSCO ₂	X (C ₂)	Y (O ₂)	Y/X-O ₂	HN-C ₂	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.C450	.6096	12.453	410.561	5.556	183.358	1.5544	51.2959	-44.077	1573.111
-39.0	10.30	.C482	.5967	12.372	408.283	5.571	183.849	1.5745	51.9582	-8.329	1677.216
-38.0	10.68	.C475	.5837	12.292	405.622	5.585	184.305	1.5946	52.6229	27.461	1782.000
-37.0	11.07	.C467	.5705	12.211	402.577	5.598	184.728	1.6148	53.2900	63.312	1887.465
-36.0	11.47	.C459	.5572	12.132	400.348	5.610	185.117	1.6351	53.9594	99.242	1993.611
-35.0	11.88	.C451	.5438	12.053	397.736	5.620	185.473	1.6555	54.6310	135.269	2100.439
-34.0	12.31	.C443	.5302	11.974	395.141	5.630	185.796	1.6759	55.3049	171.411	2207.948
-33.0	12.74	.C434	.5165	11.896	392.564	5.639	186.087	1.6964	55.9809	207.688	2316.141
-32.0	13.19	.C425	.5027	11.818	390.003	5.647	186.345	1.7169	56.6591	244.117	2425.017
-31.0	13.64	.C416	.4887	11.741	387.460	5.654	186.571	1.7376	57.3394	280.717	2534.577
-30.0	14.11	.C407	.4745	11.665	384.935	5.660	186.766	1.7582	58.0218	317.508	2644.823
-29.0	14.59	.C397	.4602	11.589	382.427	5.665	186.931	1.7790	58.7062	354.508	2755.755
-28.0	15.08	.C387	.4458	11.513	379.938	5.669	187.064	1.7998	59.3925	391.737	2867.375
-27.0	15.59	.C377	.4312	11.438	377.466	5.672	187.168	1.8206	60.0808	429.215	2979.684
-26.0	16.10	.C366	.4164	11.364	375.013	5.674	187.242	1.8415	60.7709	466.961	3092.683
-25.0	16.63	.C356	.4015	11.290	372.578	5.675	187.286	1.8625	61.4629	504.994	3206.374
-24.0	17.18	.C345	.3865	11.217	370.161	5.676	187.302	1.8835	62.1567	543.336	3320.757
-23.0	17.73	.C333	.3712	11.144	367.763	5.675	187.290	1.9046	62.8523	582.005	3435.835
-22.0	18.30	.C321	.3558	11.072	365.383	5.674	187.249	1.9257	63.5496	621.024	3551.609
-21.0	18.88	.C309	.3403	11.001	363.022	5.672	187.181	1.9469	64.2486	660.412	3668.081
-20.0	19.47	.C297	.3245	10.930	360.679	5.669	187.087	1.9682	64.9492	700.190	3785.251
-19.0	20.08	.C284	.3086	10.859	358.355	5.666	186.965	1.9894	65.6514	740.380	3903.123
-18.0	20.70	.C271	.2925	10.789	356.045	5.661	186.818	2.0108	66.3552	781.004	4021.696
-17.0	21.34	.C259	.2762	10.720	353.763	5.656	186.645	2.0321	67.0605	822.083	4140.974
-16.0	21.99	.C244	.2598	10.651	351.495	5.650	186.448	2.0536	67.7673	863.639	4260.958
-15.0	22.65	.C230	.2431	10.583	349.245	5.643	186.225	2.0750	68.4756	905.655	4381.649
-14.0	23.33	.C215	.2263	10.516	347.014	5.636	185.979	2.0965	69.1852	948.273	4503.049
-13.0	24.02	.C200	.2092	10.449	344.802	5.628	185.768	2.1181	69.8963	991.398	4625.161
-12.0	24.73	.C185	.1920	10.382	342.609	5.619	185.415	2.1397	70.6087	1035.091	4747.985
-11.0	25.45	.C169	.1746	10.316	340.434	5.609	185.059	2.1613	71.3224	1079.378	4871.523
-10.0	26.19	.C153	.1569	10.251	338.278	5.599	184.761	2.1829	72.0373	1124.282	4995.778
-9.0	26.94	.C137	.1391	10.186	336.141	5.588	184.401	2.2047	72.7535	1169.029	5120.750
-8.0	27.71	.C120	.1210	10.122	334.022	5.576	184.020	2.2264	73.4709	1216.043	5246.441
-7.0	28.49	.C102	.1027	10.058	331.921	5.564	183.618	2.2482	74.1894	1262.949	5372.854
-6.0	29.29	.C084	.0842	9.995	329.839	5.551	183.195	2.2700	74.9090	1310.575	5499.988
-5.0	30.11	.C066	.0654	9.933	327.776	5.538	182.753	2.2918	75.6298	1358.947	5627.846
-4.0	30.94	.C047	.0464	9.871	325.730	5.524	182.292	2.3137	76.3516	1408.091	5756.429
-3.0	31.79	.C028	.0272	9.809	323.703	5.509	181.811	2.3356	77.0744	1458.036	5885.739
-2.0	32.65	.C008	.0077	9.748	321.694	5.494	181.312	2.3575	77.7982	1508.810	6015.775
-1.0	33.54	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

34.00
ATMOSPHERES

TEMP	PSCO ₂	X (C ₂)	Y (O ₂)	Y/X-O ₂	HN-C ₂	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	FN-VAP
-40.0	9.93	.0512	.6175	12.070	410.383	5.393	183.358	1.5087	51.2959	-46.061	1515.372
-39.0	10.30	.0504	.6048	11.992	407.712	5.407	183.849	1.5282	51.9582	-10.359	1617.722
-38.0	10.68	.0497	.5920	11.913	405.057	5.421	184.305	1.5477	52.6229	25.386	1720.720
-37.0	11.07	.0489	.5791	11.836	402.418	5.433	184.728	1.5674	53.2900	61.191	1824.366
-36.0	11.47	.0481	.5661	11.759	399.795	5.445	185.117	1.5870	53.9594	97.074	1928.661
-35.0	11.88	.0473	.5529	11.682	397.189	5.455	185.473	1.6068	54.6310	133.054	2033.604
-34.0	12.31	.0465	.5396	11.606	394.600	5.465	185.796	1.6266	55.3049	169.149	2139.196
-33.0	12.74	.0456	.5262	11.530	392.028	5.473	186.087	1.6465	55.9809	205.378	2245.438
-32.0	13.19	.0448	.5126	11.455	389.473	5.481	186.345	1.6664	56.6591	241.759	2352.330
-31.0	13.64	.0438	.4989	11.380	386.936	5.487	186.571	1.6865	57.3394	278.311	2459.873
-30.0	14.11	.0429	.4851	11.306	384.416	5.493	186.766	1.7065	58.0218	315.052	2568.068
-29.0	14.59	.0419	.4711	11.233	381.914	5.498	186.931	1.7267	58.7062	352.003	2676.915
-28.0	15.08	.0409	.4569	11.160	379.430	5.502	187.064	1.7468	59.3925	389.181	2786.416
-27.0	15.59	.0399	.4427	11.087	376.963	5.505	187.168	1.7671	60.0808	426.608	2896.572
-26.0	16.10	.0389	.4282	11.015	374.515	5.507	187.242	1.7874	60.7709	464.301	3007.383
-25.0	16.63	.0378	.4136	10.944	372.085	5.508	187.286	1.8077	61.4629	502.282	3118.852
-24.0	17.18	.0367	.3989	10.873	369.674	5.509	187.302	1.8281	62.1567	540.570	3230.979
-23.0	17.73	.0355	.3840	10.802	367.281	5.509	187.290	1.8486	62.8523	579.185	3343.766
-22.0	18.30	.0344	.3690	10.733	364.906	5.507	187.249	1.8691	63.5496	618.147	3457.214
-21.0	18.88	.0332	.3527	10.663	362.550	5.505	187.181	1.8897	64.2486	657.479	3571.325
-20.0	19.47	.0319	.3384	10.594	360.212	5.503	187.087	1.9103	64.9492	697.199	3686.099
-19.0	20.08	.0307	.3228	10.526	357.893	5.499	186.965	1.9309	65.6514	737.331	3801.539
-18.0	20.70	.0294	.3071	10.455	355.592	5.495	186.818	1.9516	66.3552	777.894	3917.646
-17.0	21.34	.0280	.2912	10.391	353.310	5.490	186.645	1.9724	67.0605	818.912	4034.422
-16.0	21.99	.0266	.2751	10.325	351.046	5.484	186.448	1.9932	67.7673	860.405	4151.867
-15.0	22.65	.0252	.2589	10.259	348.802	5.477	186.225	2.0140	68.4756	902.397	4269.985
-14.0	23.33	.0238	.2424	10.193	346.576	5.470	185.979	2.0349	69.1852	944.910	4388.776
-13.0	24.02	.0223	.2258	10.128	344.368	5.462	185.708	2.0558	69.8963	987.968	4508.242
-12.0	24.73	.0208	.2090	10.064	342.179	5.453	185.415	2.0767	70.6087	1031.593	4628.385
-11.0	25.45	.0192	.1919	10.000	340.009	5.444	185.099	2.0977	71.3224	1075.810	4749.206
-10.0	26.19	.0176	.1747	9.937	337.857	5.434	184.761	2.1187	72.0373	1120.643	4870.706
-9.0	26.94	.0159	.1573	9.874	335.724	5.424	184.401	2.1398	72.7535	1166.116	4992.889
-8.0	27.71	.0142	.1397	9.812	333.609	5.412	184.020	2.1609	73.4709	1212.255	5115.754
-7.0	28.49	.0125	.1218	9.750	331.512	5.401	183.618	2.1820	74.1894	1259.085	5239.303
-6.0	29.29	.0107	.1038	9.689	329.435	5.388	183.195	2.2032	74.9090	1306.632	5363.538
-5.0	30.11	.0089	.0855	9.625	327.375	5.375	182.753	2.2244	75.6298	1354.923	5488.461
-4.0	30.94	.0070	.0670	9.569	325.334	5.362	182.292	2.2456	76.3516	1403.985	5614.072
-3.0	31.79	.0051	.0482	9.509	323.310	5.347	181.811	2.2669	77.0744	1453.846	5740.372
-2.0	32.65	.0031	.0293	9.450	321.305	5.333	181.312	2.2882	77.7982	1504.533	5867.363
-1.0	33.54	.0011	.0100	9.392	319.319	5.318	180.796	2.3095	78.5230	1556.075	5995.045
0.0	34.44	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

35.00
ATMOSPHERES

TEMP	PSCO ₂	X (CO ₂)	Y (O ₂)	Y/X-O ₂	HN-CO ₂	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.0534	.6248	11.708	405.786	5.239	183.358	1.4656	51.2959	-48.052	1461.049
-39.0	10.30	.0526	.6124	11.632	407.121	5.253	183.849	1.4845	51.9582	-12.396	1561.738
-38.0	10.68	.0519	.5999	11.556	404.472	5.266	184.305	1.5035	52.6229	23.303	1663.045
-37.0	11.07	.0511	.5872	11.481	401.839	5.278	184.728	1.5226	53.2900	59.062	1764.970
-36.0	11.47	.0504	.5744	11.406	399.223	5.289	185.117	1.5417	53.9594	94.899	1867.512
-35.0	11.88	.0496	.5615	11.332	396.623	5.299	185.473	1.5609	54.6310	130.832	1970.672
-34.0	12.31	.0487	.5485	11.258	394.040	5.308	185.796	1.5801	55.3049	166.880	2074.450
-33.0	12.74	.0479	.5353	11.185	391.474	5.317	186.087	1.5995	55.9809	203.061	2178.846
-32.0	13.19	.0470	.5220	11.112	388.925	5.324	186.345	1.6188	56.6591	239.393	2283.861
-31.0	13.64	.0461	.5086	11.040	386.393	5.331	186.571	1.6383	57.3394	275.896	2389.495
-30.0	14.11	.0451	.4950	10.968	383.879	5.336	186.766	1.6578	58.0218	312.588	2495.750
-29.0	14.59	.0442	.4813	10.897	381.383	5.341	186.931	1.6773	58.7062	349.489	2602.625
-28.0	15.08	.0432	.4675	10.826	378.904	5.345	187.064	1.6969	59.3925	386.617	2710.122
-27.0	15.59	.0422	.4535	10.756	376.444	5.348	187.168	1.7166	60.0808	423.992	2818.241
-26.0	16.10	.0411	.4393	10.686	374.001	5.350	187.242	1.7363	60.7709	461.633	2926.984
-25.0	16.63	.0400	.4251	10.616	371.577	5.351	187.286	1.7561	61.4629	499.561	3036.352
-24.0	17.18	.0389	.4106	10.546	369.170	5.351	187.302	1.7759	62.1567	537.794	3146.346
-23.0	17.73	.0378	.3961	10.475	366.782	5.351	187.290	1.7958	62.8523	576.355	3256.966
-22.0	18.30	.0366	.3813	10.412	364.413	5.350	187.249	1.8157	63.5496	615.261	3368.215
-21.0	18.88	.0354	.3665	10.345	362.062	5.348	187.181	1.8357	64.2486	654.536	3480.093
-20.0	19.47	.0342	.3514	10.278	359.729	5.345	187.087	1.8557	64.9492	694.199	3592.602
-19.0	20.08	.0329	.3362	10.212	357.415	5.342	186.965	1.8758	65.6514	734.271	3705.744
-18.0	20.70	.0316	.3208	10.146	355.119	5.338	186.818	1.8959	66.3552	774.774	3819.519
-17.0	21.34	.0303	.3053	10.081	352.842	5.333	186.645	1.9160	67.0605	815.730	3933.929
-16.0	21.99	.0289	.2896	10.017	350.583	5.327	186.448	1.9362	67.7673	857.161	4048.976
-15.0	22.65	.0275	.2737	9.953	348.343	5.321	186.225	1.9564	68.4756	899.089	4164.662
-14.0	23.33	.0261	.2576	9.889	346.122	5.314	185.979	1.9767	69.1852	941.536	4280.987
-13.0	24.02	.0246	.2414	9.826	343.919	5.306	185.708	1.9970	69.8963	984.527	4397.953
-12.0	24.73	.0230	.2250	9.764	341.734	5.298	185.415	2.0174	70.6087	1028.083	4515.562
-11.0	25.45	.0215	.2083	9.702	339.569	5.289	185.099	2.0378	71.3224	1072.230	4633.815
-10.0	26.19	.0199	.1915	9.641	337.421	5.279	184.761	2.0582	72.0373	1116.991	4752.713
-9.0	26.94	.0182	.1745	9.580	335.292	5.269	184.401	2.0787	72.7535	1162.391	4872.260
-8.0	27.71	.0165	.1573	9.519	333.182	5.258	184.020	2.0992	73.4709	1208.455	4992.454
-7.0	28.49	.0148	.1399	9.460	331.090	5.246	183.618	2.1197	74.1894	1255.208	5113.299
-6.0	29.29	.0130	.1223	9.400	329.016	5.234	183.195	2.1403	74.9050	1302.676	5234.795
-5.0	30.11	.0112	.1044	9.342	326.961	5.222	182.753	2.1609	75.6298	1350.886	5356.944
-4.0	30.94	.0093	.0864	9.284	324.923	5.208	182.292	2.1815	76.3516	1399.865	5479.747
-3.0	31.79	.0074	.0681	9.226	322.904	5.195	181.811	2.2021	77.0744	1449.641	5603.205
-2.0	32.65	.0054	.0496	9.169	320.903	5.180	181.312	2.2228	77.7982	1500.241	5727.318
-1.0	33.54	.0034	.0308	9.112	318.920	5.166	180.796	2.2435	78.5230	1551.694	5852.089
0.0	34.44	.0013	.0119	9.056	316.955	5.150	180.261	2.2642	79.2486	1604.030	5977.517

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

36.00
ATMOSPHERES

TEMP	PSCO ₂	X (C ₂)	Y (O ₂)	Y/X-O ₂	HN-C ₂	Y/X-KR	HN-KF	Y/X-XE	HN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.0556	.6318	11.366	409.169	5.093	183.358	1.4249	51.2959	-50.050	1409.879
-39.0	10.30	.0549	.6196	11.292	406.511	5.107	183.849	1.4433	51.9582	-14.439	1508.993
-38.0	10.68	.0541	.6073	11.219	403.869	5.120	184.305	1.4617	52.6229	21.213	1608.696
-37.0	11.07	.0534	.5948	11.146	401.242	5.131	184.728	1.4803	53.2900	56.926	1708.988
-36.0	11.47	.0526	.5823	11.073	398.632	5.142	185.117	1.4989	53.9594	92.716	1809.869
-35.0	11.88	.0518	.5696	11.001	396.039	5.152	185.473	1.5175	54.6310	128.602	1911.337
-34.0	12.31	.0509	.5568	10.929	393.462	5.161	185.796	1.5362	55.3049	164.602	2013.395
-33.0	12.74	.0501	.5439	10.858	390.902	5.169	186.087	1.5550	55.9809	200.735	2116.042
-32.0	13.19	.0492	.5309	10.788	388.359	5.176	186.345	1.5739	56.6591	237.020	2219.277
-31.0	13.64	.0483	.5177	10.718	385.833	5.183	186.571	1.5928	57.3394	273.474	2323.103
-30.0	14.11	.0474	.5044	10.648	383.325	5.188	186.766	1.6117	58.0218	310.116	2427.518
-29.0	14.59	.0464	.4910	10.579	380.835	5.193	186.931	1.6307	58.7062	346.967	2532.524
-28.0	15.08	.0454	.4774	10.510	378.362	5.196	187.064	1.6498	59.3925	384.044	2638.122
-27.0	15.59	.0444	.4637	10.442	375.907	5.199	187.168	1.6689	60.0808	421.367	2744.312
-26.0	16.10	.0434	.4498	10.374	373.470	5.201	187.242	1.6881	60.7709	458.956	2851.095
-25.0	16.63	.0423	.4359	10.307	371.051	5.202	187.286	1.7073	61.4629	496.830	2958.472
-24.0	17.18	.0412	.4217	10.240	368.651	5.203	187.302	1.7266	62.1567	535.010	3066.445
-23.0	17.73	.0400	.4075	10.174	366.268	5.202	187.290	1.7459	62.8523	573.515	3175.013
-22.0	18.30	.0389	.3930	10.108	363.904	5.201	187.249	1.7653	63.5496	612.366	3284.179
-21.0	18.88	.0377	.3785	10.043	361.558	5.199	187.181	1.7847	64.2486	651.583	3393.943
-20.0	19.47	.0365	.3637	9.979	359.230	5.197	187.087	1.8041	64.9492	691.188	3504.307
-19.0	20.08	.0352	.3489	9.914	356.921	5.193	186.965	1.8237	65.6514	731.201	3615.271
-18.0	20.70	.0339	.3338	9.851	354.631	5.189	186.818	1.8432	66.3552	771.644	3726.839
-17.0	21.34	.0326	.3186	9.788	352.358	5.185	186.645	1.8628	67.0605	812.538	3839.009
-16.0	21.99	.0312	.3033	9.725	350.105	5.179	186.448	1.8824	67.7673	853.905	3951.785
-15.0	22.65	.0298	.2877	9.663	347.870	5.173	186.225	1.9021	68.4756	895.769	4065.167
-14.0	23.33	.0283	.2720	9.601	345.653	5.166	185.979	1.9218	69.1852	938.151	4179.157
-13.0	24.02	.0268	.2561	9.540	343.455	5.159	185.708	1.9416	69.8963	981.074	4293.757
-12.0	24.73	.0253	.2401	9.480	341.275	5.150	185.415	1.9614	70.6087	1024.562	4408.967
-11.0	25.45	.0238	.2238	9.420	339.114	5.142	185.099	1.9812	71.3224	1068.638	4524.789
-10.0	26.19	.0222	.2074	9.360	336.971	5.132	184.761	2.0010	72.0373	1113.327	4641.225
-9.0	26.94	.0205	.1908	9.301	334.847	5.122	184.401	2.0209	72.7535	1158.654	4758.275
-8.0	27.71	.0188	.1740	9.243	332.741	5.112	184.020	2.0409	73.4709	1204.642	4875.943
-7.0	28.49	.0171	.1570	9.185	330.653	5.100	183.618	2.0608	74.1894	1251.318	4994.227
-6.0	29.29	.0153	.1397	9.127	328.584	5.089	183.195	2.0808	74.9090	1298.707	5113.131
-5.0	30.11	.0135	.1223	9.070	326.533	5.076	182.753	2.1008	75.6298	1346.836	5232.655
-4.0	30.94	.0116	.1047	9.014	324.500	5.064	182.292	2.1209	76.3516	1395.732	5352.800
-3.0	31.79	.0097	.0868	8.958	322.485	5.050	181.811	2.1410	77.0744	1445.422	5473.568
-2.0	32.65	.0077	.0688	8.902	320.488	5.036	181.312	2.1611	77.7982	1495.935	5594.959
-1.0	33.54	.0057	.0505	8.847	318.509	5.022	180.796	2.1812	78.5230	1547.299	5716.974
0.0	34.44	.0036	.0320	8.793	316.548	5.007	180.261	2.2014	79.2486	1599.543	5839.614

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM¹

37.00
ATMOSPHERES

TEMP	PSCO2	X (C2)	Y (O2)	Y/X-O2	HN-C2	Y/X-KR	HN-KR	Y/X-XE	HN-XE	EN-LIQ	EN-VAF
-40.0	9.93	.C578	.6383	11.041	408.533	4.956	183.356	1.3864	51.2959	-52.054	1361.629
-39.0	10.30	.C571	.6264	1C.97C	405.682	4.969	183.849	1.4043	51.9582	-16.489	1459.246
-38.0	10.68	.C564	.6143	10.899	403.246	4.981	184.3C5	1.4222	52.6229	19.117	1557.424
-37.0	11.07	.C556	.6020	1C.82E	400.627	4.993	184.728	1.4403	53.2900	54.783	1656.165
-36.0	11.47	.C548	.5897	1C.757	396.C23	5.003	185.117	1.4584	53.9594	90.526	1755.466
-35.0	11.88	.C540	.5773	10.687	395.436	5.013	185.473	1.4765	54.6310	126.365	1855.329
-34.0	12.31	.C532	.5647	1C.61E	392.666	5.022	185.796	1.4947	55.3049	162.317	1955.753
-33.0	12.74	.C523	.5520	10.549	390.312	5.029	186.0E7	1.5130	55.9809	198.402	2056.738
-32.0	13.19	.C515	.5392	1C.48C	387.775	5.036	186.345	1.5313	56.6591	234.638	2158.284
-31.0	13.64	.C505	.5263	10.412	385.256	5.042	186.571	1.5497	57.3394	271.043	2260.391
-30.0	14.11	.C496	.5133	10.345	382.754	5.048	186.766	1.5682	58.0218	307.636	2363.061
-29.0	14.59	.C487	.5001	1C.27E	38C.27C	5.052	186.931	1.5867	58.7062	344.436	2466.293
-28.0	15.08	.C477	.4868	10.211	377.803	5.056	187.064	1.6052	59.3925	381.462	2570.087
-27.0	15.59	.C467	.4733	10.145	375.354	5.059	187.168	1.6238	60.0808	418.733	2674.446
-26.0	16.10	.C456	.4598	1C.079	372.523	5.061	187.242	1.6425	60.7709	456.270	2779.369
-25.0	16.63	.C445	.4461	10.014	370.509	5.062	187.2E6	1.6612	61.4629	494.091	2884.857
-24.0	17.18	.C434	.4322	9.949	368.114	5.062	187.3C2	1.6799	62.1567	532.216	2990.911
-23.0	17.73	.C423	.4182	9.88E	365.737	5.062	187.290	1.6987	62.8523	570.666	3097.532
-22.0	18.30	.C411	.4041	9.821	363.379	5.061	187.249	1.7176	63.5496	609.460	3204.721
-21.0	18.88	.C400	.3898	9.75E	361.C3E	5.059	187.181	1.7364	64.2486	648.621	3312.479
-20.0	19.47	.C387	.3754	9.695	358.716	5.056	187.087	1.7554	64.9492	688.167	3420.807
-19.0	20.08	.C375	.3608	9.633	356.412	5.053	186.965	1.7744	65.6514	728.120	3529.707
-18.0	20.70	.C362	.3461	9.571	354.127	5.049	186.818	1.7934	66.3552	768.502	3639.179
-17.0	21.34	.C348	.3312	9.510	351.660	5.044	186.645	1.8124	67.0605	809.335	3749.226
-16.0	21.99	.C335	.3162	9.449	349.611	5.039	186.448	1.8315	67.7673	850.639	3859.847
-15.0	22.65	.C321	.3010	9.389	347.381	5.033	186.225	1.8507	68.4756	892.438	3971.045
-14.0	23.33	.C306	.2856	9.329	345.17C	5.026	185.979	1.8699	69.1852	934.754	4082.820
-13.0	24.02	.C291	.2701	9.27C	342.576	5.019	185.7C8	1.8891	69.8963	977.610	4195.175
-12.0	24.73	.C276	.2544	9.211	34C.802	5.011	185.415	1.9083	70.6087	1021.029	4308.110
-11.0	25.45	.C261	.2385	9.153	338.645	5.003	185.059	1.9276	71.3224	1065.035	4421.627
-10.0	26.19	.C245	.2224	9.095	336.507	4.994	184.761	1.9470	72.0373	1109.651	4535.728
-9.0	26.94	.C228	.2062	9.037	334.387	4.984	184.4C1	1.9663	72.7535	1154.904	4650.412
-8.0	27.71	.C211	.1897	8.981	332.286	4.974	184.020	1.9857	73.4709	1200.816	4765.683
-7.0	28.49	.C194	.1731	8.924	33C.203	4.963	183.618	2.0051	74.1894	1247.414	4881.540
-6.0	29.29	.C176	.1563	8.869	32E.138	4.951	183.195	2.0246	74.9090	1294.724	4997.986
-5.0	30.11	.C158	.1393	8.813	326.C91	4.939	182.753	2.0440	75.6298	1342.772	5115.022
-4.0	30.94	.C139	.1220	8.758	324.063	4.927	182.292	2.0636	76.3516	1391.585	5232.648
-3.0	31.79	.C120	.1046	8.704	322.052	4.914	181.811	2.0831	77.0744	1441.189	5350.865
-2.0	32.65	.C1C1	.0869	8.65C	32C.C6C	4.900	181.312	2.1027	77.7982	1491.615	5469.675
-1.0	33.54	.C080	.0691	8.597	318.085	4.886	180.756	2.1222	78.5230	1542.889	5589.079
0.0	34.44	.C060	.0510	8.544	316.128	4.872	180.261	2.1419	79.2486	1595.041	5709.076

¹FOR KRYPTON AND XENON MOI FRACTIONS << 1 MOI PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-KR-XE SYSTEM*

38.00
ATMOSPHERES

TEMP	PSCO ₂	X (CO ₂)	Y (O ₂)	Y/X-O ₂	NN-CO ₂	Y/X-KR	NN-KR	Y/X-XE	NN-XE	EN-LIQ	EN-VAP
-40.0	9.93	.C600	.6445	10.734	407.878	4.825	183.358	1.3499	51.2959	-54.065	1316.087
-39.0	10.30	.C593	.6327	10.664	405.234	4.838	183.849	1.3673	51.9582	-18.547	1412.279
-38.0	10.68	.C586	.6208	10.595	402.605	4.850	184.305	1.3848	52.6229	17.013	1509.006
-37.0	11.07	.C578	.6088	10.526	399.992	4.861	184.728	1.4024	53.2900	52.632	1606.270
-36.0	11.47	.C571	.5967	10.458	397.395	4.872	185.117	1.4200	53.9594	88.328	1704.069
-35.0	11.88	.C563	.5845	10.390	394.815	4.881	185.473	1.4377	54.6310	124.120	1802.403
-34.0	12.31	.C554	.5722	10.322	392.251	4.889	185.756	1.4554	55.3049	160.025	1901.272
-33.0	12.74	.C546	.5597	10.255	389.704	4.897	186.067	1.4732	55.9809	196.061	2000.676
-32.0	13.19	.C537	.5471	10.185	387.174	4.904	186.345	1.4910	56.6591	232.248	2100.615
-31.0	13.64	.C528	.5344	10.123	384.661	4.910	186.571	1.5089	57.3394	268.604	2201.089
-30.0	14.11	.C519	.5216	10.057	382.165	4.915	186.766	1.5269	58.0218	305.147	2302.097
-29.0	14.59	.C509	.5087	9.992	379.687	4.919	186.931	1.5449	58.7062	341.896	2403.642
-28.0	15.08	.C499	.4956	9.927	377.226	4.923	187.064	1.5630	59.3925	378.871	2505.722
-27.0	15.59	.C489	.4825	9.863	374.783	4.925	187.168	1.5811	60.0808	416.091	2608.339
-26.0	16.10	.C479	.4692	9.799	372.358	4.927	187.242	1.5992	60.7709	453.574	2711.493
-25.0	16.63	.C468	.4557	9.736	369.951	4.929	187.286	1.6174	61.4629	491.342	2815.185
-24.0	17.18	.C457	.4421	9.673	367.562	4.929	187.302	1.6357	62.1567	529.413	2919.416
-23.0	17.73	.C446	.4284	9.610	365.191	4.929	187.250	1.6540	62.8523	567.807	3024.186
-22.0	18.30	.C434	.4146	9.546	362.838	4.928	187.249	1.6724	63.5496	606.545	3129.496
-21.0	18.88	.C422	.4006	9.487	360.503	4.926	187.181	1.6908	64.2486	645.648	3235.348
-20.0	19.47	.C410	.3864	9.426	358.186	4.923	187.087	1.7092	64.9492	685.136	3341.742
-19.0	20.08	.C397	.3722	9.365	355.888	4.920	186.965	1.7277	65.6514	725.029	3448.679
-18.0	20.70	.C384	.3577	9.305	353.608	4.916	186.818	1.7462	66.3552	765.351	3556.161
-17.0	21.34	.C371	.3432	9.246	351.346	4.912	186.645	1.7648	67.0605	806.121	3664.189
-16.0	21.99	.C358	.3284	9.187	349.103	4.907	186.448	1.7834	67.7673	847.362	3772.763
-15.0	22.65	.C343	.3136	9.128	346.878	4.901	186.225	1.8020	68.4756	889.096	3881.886
-14.0	23.33	.C329	.2985	9.070	344.672	4.894	185.979	1.8207	69.1852	931.346	3991.557
-13.0	24.02	.C314	.2833	9.013	342.483	4.887	185.708	1.8394	69.8963	974.134	4101.780
-12.0	24.73	.C299	.2679	8.956	340.314	4.879	185.415	1.8581	70.6087	1017.483	4212.554
-11.0	25.45	.C284	.2524	8.899	338.162	4.871	185.099	1.8769	71.3224	1061.419	4323.882
-10.0	26.19	.C268	.2366	8.843	336.029	4.862	184.761	1.8957	72.0373	1105.963	4435.764
-9.0	26.94	.C251	.2208	8.787	333.914	4.853	184.401	1.9146	72.7535	1151.141	4548.201
-8.0	27.71	.C234	.2047	8.732	331.817	4.843	184.020	1.9334	73.4709	1196.977	4661.196
-7.0	28.49	.C217	.1884	8.677	329.739	4.832	183.618	1.9524	74.1894	1243.498	4774.748
-6.0	29.29	.C199	.1720	8.623	327.679	4.821	183.195	1.9713	74.9090	1290.728	4888.860
-5.0	30.11	.C181	.1553	8.569	325.637	4.809	182.753	1.9903	75.6298	1338.694	5003.533
-4.0	30.94	.C163	.1385	8.516	323.612	4.797	182.252	2.0093	76.3516	1387.423	5118.766
-3.0	31.79	.C143	.1214	8.463	321.606	4.785	181.811	2.0283	77.0744	1436.942	5234.563
-2.0	32.65	.C124	.1042	8.411	319.618	4.771	181.312	2.0473	77.7982	1487.280	5350.922
-1.0	33.54	.C104	.0867	8.359	317.648	4.758	180.796	2.0664	78.5230	1538.464	5467.846
0.0	34.44	.C083	.0690	8.308	315.695	4.744	180.261	2.0855	79.2486	1590.524	5585.334

*FOR KRYPTON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-O₂-Kr-Xe SYSTEM*

39.00
ATMOSPHERES

TEMP	PSCO ₂	X CO ₂	Y CO ₂	Y/X-CO ₂	HN-CO ₂	Y/X-Kr	HN-Kr	Y/X-Xe	HN-Xe	EN-LIQ	EN-VAP
-40.0	9.93	.0623	.6304	10.441	407.204	4.701	183.358	1.3153	51.2959	-56.083	1273.066
-39.0	10.30	.0616	.6398	10.374	404.567	4.714	183.849	1.3323	51.9582	-20.611	1367.898
-38.0	10.68	.0608	.6271	10.306	401.545	4.726	184.305	1.3493	52.6229	14.902	1463.242
-37.0	11.07	.0601	.6153	10.239	399.339	4.737	184.728	1.3664	53.2900	50.474	1559.098
-36.0	11.47	.0593	.6034	10.173	396.750	4.747	185.117	1.3836	53.9594	86.123	1655.465
-35.0	11.88	.0585	.5913	10.107	394.176	4.756	185.473	1.4008	54.6310	121.867	1752.342
-34.0	12.31	.0577	.5792	10.042	391.619	4.764	185.796	1.4181	55.3049	157.724	1849.729
-33.0	12.74	.0568	.5670	9.976	389.079	4.771	186.087	1.4354	55.9809	193.712	1947.626
-32.0	13.19	.0560	.5546	9.912	386.555	4.778	186.345	1.4528	56.6591	229.850	2046.033
-31.0	13.64	.0551	.5422	9.847	384.049	4.784	186.571	1.4702	57.3394	266.156	2144.950
-30.0	14.11	.0541	.5296	9.784	381.560	4.789	186.766	1.4877	58.0218	302.649	2244.377
-29.0	14.59	.0532	.5169	9.720	379.088	4.793	186.931	1.5053	58.7062	339.348	2344.314
-28.0	15.08	.0522	.5041	9.657	376.633	4.797	187.064	1.5229	59.3925	376.272	2444.762
-27.0	15.59	.0512	.4911	9.595	374.197	4.799	187.168	1.5405	60.0808	413.439	2545.720
-26.0	16.10	.0501	.4780	9.533	371.778	4.801	187.242	1.5582	60.7709	450.870	2647.190
-25.0	16.63	.0491	.4649	9.471	369.376	4.802	187.286	1.5760	61.4629	488.583	2749.172
-24.0	17.18	.0480	.4515	9.410	366.993	4.803	187.302	1.5938	62.1567	526.599	2851.666
-23.0	17.73	.0469	.4381	9.349	364.628	4.802	187.290	1.6116	62.8523	564.938	2954.674
-22.0	18.30	.0457	.4245	9.289	362.281	4.801	187.249	1.6295	63.5496	603.620	3058.195
-21.0	18.88	.0445	.4108	9.230	359.952	4.800	187.181	1.6474	64.2486	642.665	3162.232
-20.0	19.47	.0433	.3969	9.170	357.641	4.797	187.087	1.6654	64.9492	682.094	3266.785
-19.0	20.08	.0420	.3829	9.111	355.348	4.794	186.965	1.6834	65.6514	721.928	3371.854
-18.0	20.70	.0407	.3688	9.053	353.074	4.790	186.818	1.7014	66.3552	762.188	3477.442
-17.0	21.34	.0394	.3545	8.995	350.817	4.786	186.645	1.7195	67.0605	802.896	3583.548
-16.0	21.99	.0380	.3401	8.938	348.580	4.781	186.448	1.7376	67.7673	844.073	3690.175
-15.0	22.65	.0366	.3255	8.881	346.360	4.775	186.225	1.7558	68.4756	885.742	3797.323
-14.0	23.33	.0352	.3107	8.825	344.159	4.769	185.979	1.7740	69.1852	927.926	3904.993
-13.0	24.02	.0337	.2958	8.769	341.976	4.762	185.708	1.7922	69.8963	970.646	4013.187
-12.0	24.73	.0322	.2808	8.713	339.811	4.754	185.415	1.8105	70.6087	1013.926	4121.905
-11.0	25.45	.0307	.2655	8.658	337.665	4.746	185.099	1.8288	71.3224	1057.790	4231.150
-10.0	26.19	.0291	.2502	8.604	335.537	4.737	184.761	1.8471	72.0373	1102.262	4340.921
-9.0	26.94	.0274	.2346	8.549	333.427	4.728	184.401	1.8655	72.7535	1147.365	4451.221
-8.0	27.71	.0258	.2189	8.496	331.335	4.718	184.020	1.8839	73.4709	1193.126	4562.051
-7.0	28.49	.0240	.2029	8.443	329.261	4.708	183.618	1.9023	74.1894	1239.568	4673.411
-6.0	29.29	.0223	.1868	8.390	327.206	4.697	183.195	1.9207	74.9090	1286.718	4785.303
-5.0	30.11	.0205	.1705	8.338	325.168	4.686	182.753	1.9392	75.6298	1334.603	4897.728
-4.0	30.94	.0186	.1541	8.286	323.149	4.674	182.292	1.9577	76.3516	1383.248	5010.687
-3.0	31.79	.0167	.1374	8.235	321.147	4.662	181.811	1.9763	77.0744	1432.681	5124.181
-2.0	32.65	.0147	.1205	8.184	319.164	4.649	181.312	1.9948	77.7982	1482.930	5238.210
-1.0	33.54	.0127	.1034	8.133	317.198	4.636	180.796	2.0134	78.5230	1534.024	5352.776
0.0	34.44	.0107	.0862	8.083	315.250	4.622	180.261	2.0320	79.2486	1585.991	5467.879

*FOR NEON AND XENON MOL FRACTIONS << 1 MOL PERCENT

CALCULATED EQUILIBRIUM VALUES FOR THE CO₂-C₂H₆-Kr-Xe SYSTEM*

40.00
ATMOSPHERES

TEMP	PSCO ₂	X (O ₂)	Y (O ₂)	Y/X-C ₂	HN-C ₂	Y/X-Kr	HN-Kr	Y/X-Xe	HN-Xe	EN-IIC	EN-VAE
-40.0	9.93	.0645	.6559	10.163	406.510	4.584	183.358	1.2824	51.2959	-58.108	1232.395
-39.0	10.30	.0638	.6445	10.097	403.881	4.596	183.849	1.2990	51.9582	-22.683	1325.928
-38.0	10.68	.0631	.6330	10.032	401.266	4.608	184.305	1.3156	52.6229	12.783	1419.951
-37.0	11.07	.0623	.6213	9.967	398.668	4.618	184.728	1.3322	53.2900	48.309	1514.462
-36.0	11.47	.0616	.6096	9.902	396.085	4.628	185.117	1.3490	53.9594	83.910	1609.461
-35.0	11.88	.0608	.5978	9.838	393.519	4.637	185.473	1.3658	54.6310	119.607	1704.948
-34.0	12.31	.0599	.5859	9.774	390.969	4.645	185.796	1.3826	55.3049	155.415	1800.921
-33.0	12.74	.0591	.5739	9.711	388.435	4.652	186.087	1.3995	55.9809	191.355	1897.380
-32.0	13.19	.0582	.5617	9.648	385.919	4.659	186.345	1.4165	56.6591	227.444	1994.325
-31.0	13.64	.0573	.5495	9.585	383.419	4.664	186.571	1.4335	57.3394	263.700	2091.757
-30.0	14.11	.0564	.5371	9.523	380.937	4.669	186.766	1.4505	58.0218	300.143	2189.674
-29.0	14.59	.0554	.5246	9.462	378.471	4.673	186.931	1.4677	58.7062	336.791	2288.077
-28.0	15.08	.0545	.5120	9.401	376.023	4.677	187.064	1.4848	59.3925	373.663	2386.967
-27.0	15.59	.0535	.4993	9.340	373.593	4.679	187.168	1.5020	60.0808	410.778	2486.343
-26.0	16.10	.0524	.4865	9.280	371.180	4.681	187.242	1.5193	60.7709	448.156	2586.207
-25.0	16.63	.0514	.4735	9.220	368.785	4.682	187.286	1.5366	61.4629	485.815	2686.557
-24.0	17.18	.0503	.4604	9.160	366.408	4.683	187.302	1.5539	62.1567	523.777	2787.396
-23.0	17.73	.0491	.4472	9.101	364.049	4.682	187.290	1.5713	62.8523	562.060	2888.723
-22.0	18.30	.0480	.4339	9.043	361.708	4.681	187.249	1.5887	63.5496	600.685	2990.540
-21.0	18.88	.0468	.4204	8.985	359.385	4.680	187.181	1.6062	64.2486	639.672	3092.846
-20.0	19.47	.0456	.4069	8.927	357.080	4.677	187.087	1.6237	64.9492	679.042	3195.643
-19.0	20.08	.0443	.3931	8.870	354.793	4.674	186.965	1.6413	65.6514	718.816	3298.933
-18.0	20.70	.0430	.3793	8.813	352.524	4.670	186.818	1.6589	66.3552	759.015	3402.714
-17.0	21.34	.0417	.3652	8.757	350.274	4.666	186.645	1.6765	67.0605	799.660	3506.990
-16.0	21.99	.0404	.3511	8.701	348.041	4.661	186.448	1.6942	67.7673	840.774	3611.760
-15.0	22.65	.0390	.3368	8.646	345.827	4.656	186.225	1.7119	68.4756	882.377	3717.026
-14.0	23.33	.0375	.3223	8.591	343.632	4.649	185.979	1.7296	69.1852	924.494	3822.789
-13.0	24.02	.0360	.3077	8.536	341.454	4.643	185.708	1.7474	69.8963	967.146	3929.050
-12.0	24.73	.0345	.2930	8.482	339.295	4.635	185.415	1.7652	70.6087	1010.357	4035.809
-11.0	25.45	.0330	.2781	8.429	337.153	4.627	185.099	1.7831	71.3224	1054.149	4143.069
-10.0	26.19	.0314	.2630	8.376	335.030	4.619	184.761	1.8009	72.0373	1098.548	4250.830
-9.0	26.94	.0298	.2477	8.323	332.926	4.610	184.401	1.8188	72.7535	1143.577	4359.094
-8.0	27.71	.0281	.2323	8.271	330.839	4.600	184.020	1.8368	73.4709	1189.261	4467.861
-7.0	28.49	.0264	.2167	8.219	328.770	4.590	183.618	1.8547	74.1894	1235.625	4577.133
-6.0	29.29	.0246	.2010	8.168	326.720	4.580	183.195	1.8727	74.9090	1282.617	4686.911
-5.0	30.11	.0228	.1850	8.117	324.687	4.569	182.753	1.8907	75.6298	1330.497	4797.195
-4.0	30.94	.0209	.1685	8.067	322.672	4.557	182.292	1.9088	76.3516	1379.058	4907.987
-3.0	31.79	.0190	.1526	8.017	320.675	4.545	181.811	1.9269	77.0744	1428.405	5019.288
-2.0	32.65	.0171	.1361	7.967	318.696	4.533	181.312	1.9450	77.7982	1478.566	5131.098
-1.0	33.54	.0151	.1194	7.918	316.735	4.520	180.796	1.9631	78.5230	1529.569	5243.419
0.0	34.44	.0130	.1024	7.870	314.792	4.507	180.261	1.9812	79.2486	1581.443	5356.250

*FOR KRYPTON AND XENON MOL FRACTIONS < 1 MOL PERCENT

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C
C PROGRAM CALCULATES EQUILIBRIUM INFORMATION OVER A TEMPERATURE
C RANGE (-40.C - 0.C DEGREES CENTIGRADE) FOR A GIVEN PRESSURE RANGE
C J1 - J2 ATMOSPHERES IN STEPS OF DELTA ATMOSPHERES
C *** J1, J2, AND DELTA ARE READ IN ON THREE SEPARATE CARDS ***
C VARIABLE FORMAT
C J1 I2
C J2 I2
C DELTA F10.0
C
0001 REAL*8 X
0002 READ(5,200) J1,J2
0003 200 FORMAT(I2)
0004 READ(5,210) DELTA
0005 210 FORMAT(F10.0)
0006 X1=1.0/DELTA
0007 J1=J1*IFIX(X1)
0008 J2=J2*IFIX(X1)
0009 X=X1
0010 CALL EQC2(J1,J2,X)
0011 CALL EXIT
0012 END
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0001      SUBROUTINE EQC2(J1,J2,CD)
0002      IMPLICIT REAL*8 (A-H), REAL*8 (O-Z)
0003      REAL*8 I50
0004      A=513.630337C623966
0005      B=-1.791124477315243
0006      C=-363.1411222175502
0007      D=7.059C22969361788E-05
0008      RK=-0.37539C0546621806
0009      AA=28.97388E44292291
0010      EB=-557.886E642887729
0011      CC=-10.E0849820337748
0012      DD=0.00E997519533272977
0013      EE=0.05E94059811222597
0014      FF=-0.0C577E542100509821
0015      A1=9.68C429875375295
0016      A2=-0.47428E0336971706
0017      A3=-799.7966653737438
0018      E1=66.43677404376719
0019      B2=-9.3E931C262469535
0020      E3=-2340.344748275833
0021      DO 50 I=J1,J2,1
0022      ET=FLOAT(I)/CC
0023      WRITE(6,5)
0024      5    FORMAT(1H1,/,39X,3X,'CALCULATED EQUILIBRIUM VALUES FOR THE CO2-O2-
0025      *KR-XE SYSTEM')
0026      9    FORMAT(40X,2X,'-----')
0027      WRITE(6,6) ET
0028      6    FORMAT(/,40X,26X,F5.2)
0029      WRITE(6,7)
0030      7    FORMAT(40X,23X,'ATMOSPHERES',/)
0031      WRITE(6,3)
0032      3    FORMAT(16X,'-----')
0033      WRITE(6,1)
0034      1    FORMAT(16X,1X,'TEMP',3X,'ESCO2',3X,'X(O2)',3X,'Y(O2)',3X,'Y/X-O2',
0035      *4X,'HN-C2',4X,'Y/X-KR',
0036      *4X,'HN-KR',4X,'Y/X-XE',5X,'HN-XE',
0037      *4X,'EN-LIQ',3X,'EN-VAP')
0038      WRITE(6,3)
0039      WRITE(6,27)
0040      27    FORMAT(1H )
0041      4    FORMAT(16X,F5.1,3X,F5.2,3X,F5.4,3X,F5.4,3X,F6.3,3X,F7.3,3X,F6.3,
0042      *3X,F7.3,2X,F7.4,2X,F9.4,3X,F8.3,3X,F8.3)
0043      8    FORMAT(16X,F5.1,3X,F5.2,3X, '*****',3X, '*****',3X, '*****',3X,
0044      *3X, '*****',3X, '*****',4X, '*****',
0045      * 3X,8(' '),3X,8(' '))
0046      DO 49 K=1,4,1
0047      T=-41.0+FLOAT(K)+273.2
0048      PS1=24.6193C
0049      PS2=1353.202/T
0050      PS3=8.142537*ELOG10(T)
0051      PS4=0.0C6255156*T
0052      PS=PS1-PS2-PS3+PS4
0053      PS=10.0**PS
0054      DP=PT-PS

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0049      PC=PS*DEXP({(KK*DE)*(1.0+E*IT))/T)
0050      ER=(A+B*PC)**2-4.0*C*(PC-FT)
0051      IF (ER) 3E,40,4E
0052      3E  WRITE(6,100)
0053      100  FORMAT('**NEGATIVE SQUARE FOOT**')
0054      GO TO 5C
0055      40  X2=- (A+E*EC)/(2.0*C)
0056      GO TO 47
0057      45  X2=(- (A+B*PC)+DSQRT(ER))/(2.0*C)
0058      IF (X2 .LT. C.0) GC TO 60
0059      47  H2= AA * EB/T + CC*DLOG10(T) + DE*T
0060      H2=10.0 ** E2
0061      Y2=X2*H2*DEXP({(PT/T)*(EE+FF*PT)))/PT
0062      RK2=Y2/X2
0063      RXE =A1+A2*DLOG(T)+A3/T
0064      RKE=DEXP(RXE)/PT
0065      HXE=RXE*FT
0066      RKR=E1+E2*DLOG(T)+B3/T
0067      RKR=DEXP(RKR)/PT
0068      HKR=RKR*FT
0069      H2=Y2/X2*PT
0070      P40=0.0144122393-E.142537/T
0071      P40=PS*(P40+3115.86275/T**2)
0072      H41=137.8+0.0905528903*(T-233.2)
      * -0.0016685839*(T-233.2)**2
      * -1.69045611E-05*(T-233.2)**3
0073      H41=H41*44.C1
0074      H42=0.819588765*(T-233.2)
      * -2.44294122E-04*(T-233.2)**2
      * + 6.42458563E-05*(T-233.2)**3
0075      H42=H42*44.C1
0076      G41=-1302.95452 + 12.6243C00342392C*(T-233.2)
      * -1.525069140168638E-03*(T**2-233.2**2)/2.0
      * +5.261760941027C45E-06*(T**3-233.2**3)/3.0
0077      V40=0.0774479459
0078      V40=V40*(1.C-9.8006167E-02*FS)
0079      H90=-10.8084962/T
      * +2.30258505*6.99791953E-C3
      * +2.302585C9557.886864/T**2
      * -2.0*E.7765421E-03*FS*F40/T
      * +5.89405981E-02*P40/T
      * -(PS/T**2)*(5.89405981E-02)
      * +5.7765421E-03*(PS/T)**2
0080      G42=G41+1.986*V40*T*P40/0.7302
      *-1.986*T**2*H50/1.8
0081      G50=(1.0-Y2)*H41 + Y2*G41
0082      L50=(1.0-X2)*H42 + X2*G42
0083      T=T-273.2
0084      WRITE(6,4) T,FS,X2,Y2,RK2,H2,RKE,HKR,FXE,EXE,L50,G50
0085      GO TO 49
0086      60  T=T-273.2
0087      WRITE(6,8) T,PS
0088      45  CONTINUE
0089      WRITE(6,27)
0090      WRITE(6,3)
0091      WRITE(6,333)
0092      333  FORMAT('16X,***FOR KRYPTON AND XENON MCI FRACTIONS << 1 MOL PERCENT
      *')

```

FORTRAN IV G LEVEL 21

EQ02

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PAGE 0003

0093 50 CONTINUE
0094 RETURN
0095 END

APPENDIX D: CALCULATED VALUES OF SELECTED QUANTITIES FOR SATURATED CO₂

Properties of saturated CO_2 are presented in this section. The properties selected for presentation are as follows (each as a function of temperature):

- (a) Vapor pressure of saturated CO_2
- (b) Densities of saturated liquid and vapor
- (c) y/x values for O_2 at infinite dilution
- (d) y/x values for Kr at infinite dilution
- (e) y/x values for Xe at infinite dilution
- (f) scfm/gpm equivalency factor
- (g) scfm/kW equivalency factor
- (h) scfm/acfm equivalency factor
- (i) Viscosity of saturated liquid
- (j) Enthalpy of saturated liquid
- (k) Enthalpy of saturated vapor
- (l) Saturated heat of vaporization

Tables for these properties are presented first; then each property is discussed separately and data are presented.

(a) Vapor pressure of saturated CO_2 . This quantity is as indicated by the equation given by Michel et al.:³

$$\log_{10} P_{\text{CO}_2}^* = a + \frac{b}{T} + c \log_{10} T + eT, \quad (\text{D-1})$$

GENERAL INFORMATION ON SATURATED CARBON DIOXIDE

(STP = 70 F, 1 ATM)

TEMP C	P (CO2) ATMA	LIQ DENSITY #/FT3	VAPOR DENSITY #/FT3	Y/X-O2 (AT INFINITE DILUTION)	Y/X-KR	Y/X-XE	SCPM/GPM	SCFM/KW	SCPM/ACFM	LIQ VISCOSITY CPS	LIQUID ENTHALPY BTU/LB	VAPOUR ENTHALPY BTU/LB
-40.	9.928	69.5885	1.636	42.176	18.469	5.1669	81.251	3.606	14.289	0.19635	-0.000	137.80
-39.	10.298	69.3462	1.695	40.388	17.852	5.0453	80.968	3.625	14.807	0.19369	0.819	137.89
-38.	10.679	69.1026	1.756	38.687	17.259	4.9278	80.684	3.645	15.341	0.19106	1.639	137.97
-37.	11.070	68.8567	1.819	37.071	16.688	4.8141	80.397	3.665	15.890	0.18846	2.458	138.06
-36.	11.471	68.6078	1.884	35.533	16.138	4.7039	80.106	3.685	16.455	0.18588	3.279	138.13
-35.	11.883	68.3554	1.950	34.069	15.608	4.5972	79.811	3.705	17.036	0.18333	4.100	138.21
-34.	12.306	68.0995	2.019	32.678	15.098	4.4940	79.513	3.725	17.634	0.18080	4.923	138.28
-33.	12.741	67.8405	2.089	31.350	14.606	4.3939	79.210	3.746	18.248	0.17829	5.747	138.35
-32.	13.187	67.5788	2.161	30.085	14.131	4.2967	78.905	3.768	18.879	0.17579	6.574	138.41
-31.	13.643	67.3152	2.236	28.882	13.675	4.2027	78.597	3.791	19.528	0.17332	7.403	138.47
-30.	14.112	67.0507	2.312	27.734	13.235	4.1117	78.288	3.814	20.194	0.17085	8.236	138.52
-29.	14.591	66.7856	2.390	26.639	12.811	4.0234	77.978	3.837	20.879	0.16841	9.071	138.57
-28.	15.084	66.5204	2.471	25.594	12.402	3.9375	77.669	3.862	21.584	0.16598	9.911	138.62
-27.	15.588	66.2550	2.554	24.598	12.007	3.8542	77.359	3.886	22.310	0.16356	10.754	138.66
-26.	16.105	65.9892	2.640	23.646	11.626	3.7734	77.049	3.912	23.056	0.16115	11.603	138.69
-25.	16.634	65.7226	2.728	22.737	11.259	3.6950	76.737	3.937	23.825	0.15876	12.456	138.73
-24.	17.176	65.4542	2.818	21.870	10.905	3.6188	76.424	3.963	24.616	0.15638	13.314	138.75
-23.	17.730	65.1833	2.911	21.041	10.563	3.5449	76.108	3.989	25.430	0.15401	14.178	138.77
-22.	18.298	64.9088	3.007	20.249	10.234	3.4731	75.787	4.016	26.267	0.15166	15.048	138.79
-21.	18.878	64.6299	3.106	19.491	9.915	3.4033	75.461	4.044	27.129	0.14932	15.925	138.80
-20.	19.472	64.3459	3.207	18.766	9.608	3.3354	75.130	4.072	28.016	0.14700	16.808	138.81
-19.	20.081	64.0562	3.312	18.072	9.311	3.2694	74.792	4.101	28.928	0.14469	17.699	138.81
-18.	20.702	63.7608	3.419	17.409	9.024	3.2053	74.447	4.131	29.866	0.14240	18.597	138.80
-17.	21.336	63.4597	3.530	16.774	8.748	3.1430	74.095	4.163	30.831	0.14013	19.503	138.79
-16.	21.986	63.1532	3.643	16.165	8.480	3.0822	73.737	4.195	31.824	0.13788	20.417	138.78
-15.	22.649	62.8419	3.760	15.583	8.222	3.0233	73.374	4.229	32.845	0.13566	21.341	138.76
-14.	23.328	62.5264	3.881	15.024	7.972	2.9657	73.005	4.264	33.896	0.13346	22.273	138.73
-13.	24.021	62.2073	4.004	14.489	7.731	2.9098	72.633	4.301	34.978	0.13128	23.215	138.70
-12.	24.727	61.8855	4.132	13.977	7.498	2.8555	72.257	4.339	36.091	0.12913	24.167	138.66
-11.	25.449	61.5614	4.263	13.485	7.273	2.8025	71.879	4.378	37.238	0.12702	25.129	138.61
-10.	26.188	61.2354	4.398	13.012	7.055	2.7508	71.498	4.419	38.419	0.12494	26.102	138.56
-9.	26.941	60.9073	4.538	12.559	6.845	2.7005	71.115	4.461	39.637	0.12290	27.086	138.50
-8.	27.708	60.5770	4.682	12.125	6.641	2.6516	70.729	4.504	40.893	0.12090	28.082	138.43
-7.	28.493	60.2439	4.830	11.708	6.444	2.6037	70.340	4.549	42.188	0.11894	29.089	138.36
-6.	29.293	59.9070	4.983	11.308	6.254	2.5573	69.947	4.595	43.525	0.11703	30.109	138.29
-5.	30.109	59.5655	5.141	10.923	6.070	2.5119	69.548	4.643	44.905	0.11518	31.141	138.20
-4.	30.941	59.2181	5.304	10.553	5.892	2.4676	69.143	4.693	46.330	0.11338	32.186	138.11
-3.	31.790	58.8638	5.473	10.197	5.719	2.4245	68.729	4.745	47.803	0.11164	33.245	138.01
-2.	32.655	58.5017	5.647	9.855	5.552	2.3824	68.306	4.800	49.326	0.10996	34.317	137.90
-1.	33.537	58.1309	5.827	9.527	5.391	2.3414	67.873	4.858	50.901	0.10836	35.403	137.79
0.	34.436	57.7511	6.014	9.211	5.235	2.3013	67.430	4.918	52.530	0.10682	36.504	137.67

GENERAL INFORMATION ON SATURATED CARBON DIOXIDE

{STP = 0 C, 1 ATM}

TEMP C	P(CO2) ATMA	LIQ DENSITY #/FT3	VAPOR DENSITY #/FT3	Y/X-O2 (AT INFINITE DILUTION)	Y/X-KR	Y/X-XE	SCFM/GPM	SCFM/KW	SCFM/ACFM	LIQ VISCOSITY CPS	LIQUID ENTHALPY BTU/LB	VAPOUR ENTHALPY BTU/LB
-40.	9.928	69.5885	1.636	42.176	18.469	5.1669	75.320	3.342	13.246	0.19635	-0.000	137.80
-39.	10.298	69.3462	1.695	40.388	17.852	5.0453	75.058	3.361	13.726	0.19369	0.819	137.89
-38.	10.679	69.1026	1.756	38.687	17.259	4.9278	74.794	3.379	14.221	0.19106	1.639	137.97
-37.	11.070	68.8567	1.819	37.071	16.688	4.8141	74.528	3.397	14.730	0.18846	2.458	138.06
-36.	11.471	68.6078	1.884	35.533	16.138	4.7039	74.259	3.416	15.254	0.18588	3.279	138.13
-35.	11.883	68.3554	1.950	34.069	15.608	4.5972	73.985	3.434	15.793	0.18333	4.100	138.21
-34.	12.306	68.0995	2.019	32.678	15.098	4.4940	73.739	3.453	16.347	0.18080	4.923	138.28
-33.	12.741	67.8405	2.089	31.350	14.606	4.3939	73.428	3.473	16.916	0.17829	5.747	138.35
-32.	13.187	67.5788	2.161	30.085	14.131	4.2967	73.145	3.493	17.501	0.17579	6.574	138.41
-31.	13.643	67.3152	2.236	28.882	13.675	4.2027	72.860	3.514	18.102	0.17332	7.403	138.47
-30.	14.112	67.0507	2.312	27.734	13.235	4.1117	72.573	3.535	18.720	0.17085	8.236	138.52
-29.	14.591	66.7856	2.390	26.639	12.811	4.0234	72.286	3.557	19.355	0.16841	9.071	138.57
-28.	15.084	66.5204	2.471	25.594	12.402	3.9375	71.999	3.580	20.009	0.16598	9.911	138.62
-27.	15.588	66.2550	2.554	24.598	12.007	3.8542	71.712	3.603	20.681	0.16356	10.754	138.66
-26.	16.105	65.9892	2.640	23.646	11.626	3.7734	71.424	3.626	21.373	0.16115	11.603	138.69
-25.	16.634	65.7226	2.728	22.737	11.259	3.6950	71.136	3.650	22.086	0.15876	12.456	138.73
-24.	17.176	65.4542	2.818	21.870	10.905	3.6188	70.845	3.674	22.819	0.15638	13.314	138.75
-23.	17.730	65.1833	2.911	21.041	10.563	3.5449	70.552	3.698	23.573	0.15401	14.178	138.77
-22.	18.298	64.9088	3.007	20.249	10.234	3.4731	70.255	3.723	24.350	0.15166	15.048	138.79
-21.	18.878	64.6299	3.106	19.491	9.915	3.4033	69.953	3.749	25.149	0.14932	15.925	138.80
-20.	19.472	64.3459	3.207	18.766	9.608	3.3354	69.646	3.775	25.971	0.14700	16.808	138.81
-19.	20.081	64.0562	3.312	18.072	9.311	3.2694	69.332	3.802	26.816	0.14469	17.699	138.81
-18.	20.702	63.7608	3.419	17.409	9.024	3.2053	69.012	3.830	27.686	0.14240	18.597	138.80
-17.	21.336	63.4597	3.530	16.774	8.748	3.1430	68.687	3.859	28.581	0.14013	19.503	138.79
-16.	21.986	63.1532	3.643	16.165	8.480	3.0822	68.355	3.889	29.501	0.13788	20.417	138.78
-15.	22.649	62.8419	3.760	15.583	8.222	3.0233	68.018	3.920	30.448	0.13566	21.341	138.76
-14.	23.328	62.5264	3.881	15.024	7.972	2.9657	67.676	3.953	31.422	0.13346	22.273	138.73
-13.	24.021	62.2073	4.004	14.489	7.731	2.9098	67.331	3.987	32.424	0.13128	23.215	138.70
-12.	24.727	61.8855	4.132	13.977	7.498	2.8555	66.983	4.022	33.457	0.12913	24.167	138.66
-11.	25.449	61.5614	4.263	13.485	7.273	2.8025	66.632	4.059	34.520	0.12702	25.129	138.61
-10.	26.188	61.2354	4.398	13.012	7.055	2.7508	66.279	4.096	35.615	0.12494	26.102	138.56
-9.	26.941	60.9073	4.538	12.559	6.845	2.7005	65.924	4.135	36.744	0.12290	27.086	138.50
-8.	27.708	60.5770	4.682	12.125	6.641	2.6516	65.566	4.175	37.908	0.12090	28.082	138.43
-7.	28.493	60.2439	4.830	11.708	6.444	2.6037	65.206	4.217	39.109	0.11894	29.089	138.36
-6.	29.293	59.9070	4.983	11.308	6.254	2.5573	64.841	4.260	40.348	0.11703	30.109	138.29
-5.	30.109	59.5655	5.141	10.923	6.070	2.5119	64.472	4.304	41.627	0.11518	31.141	138.20
-4.	30.941	59.2181	5.304	10.553	5.892	2.4676	64.096	4.350	42.948	0.11338	32.186	138.11
-3.	31.790	58.8638	5.473	10.197	5.719	2.4245	63.712	4.399	44.314	0.11164	33.245	138.01
-2.	32.655	58.5017	5.647	9.855	5.552	2.3824	63.320	4.450	45.726	0.10996	34.317	137.90
-1.	33.537	58.1309	5.827	9.527	5.391	2.3414	62.919	4.503	47.186	0.10836	35.403	137.79
0.	34.436	57.7511	6.014	9.211	5.235	2.3013	62.508	4.559	48.696	0.10682	36.504	137.67

where

$P_{CO_2}^*$ = saturated vapor pressure of CO_2 , atm,

$a = 24.61930$,

$b = -1353.202$,

$c = -8.142537$,

$e = 0.006259156$,

$T = ^\circ K$.

Figure 11 shows the Michels et al.³ equation with data from the Matheson Gas Data Book¹³ superimposed.

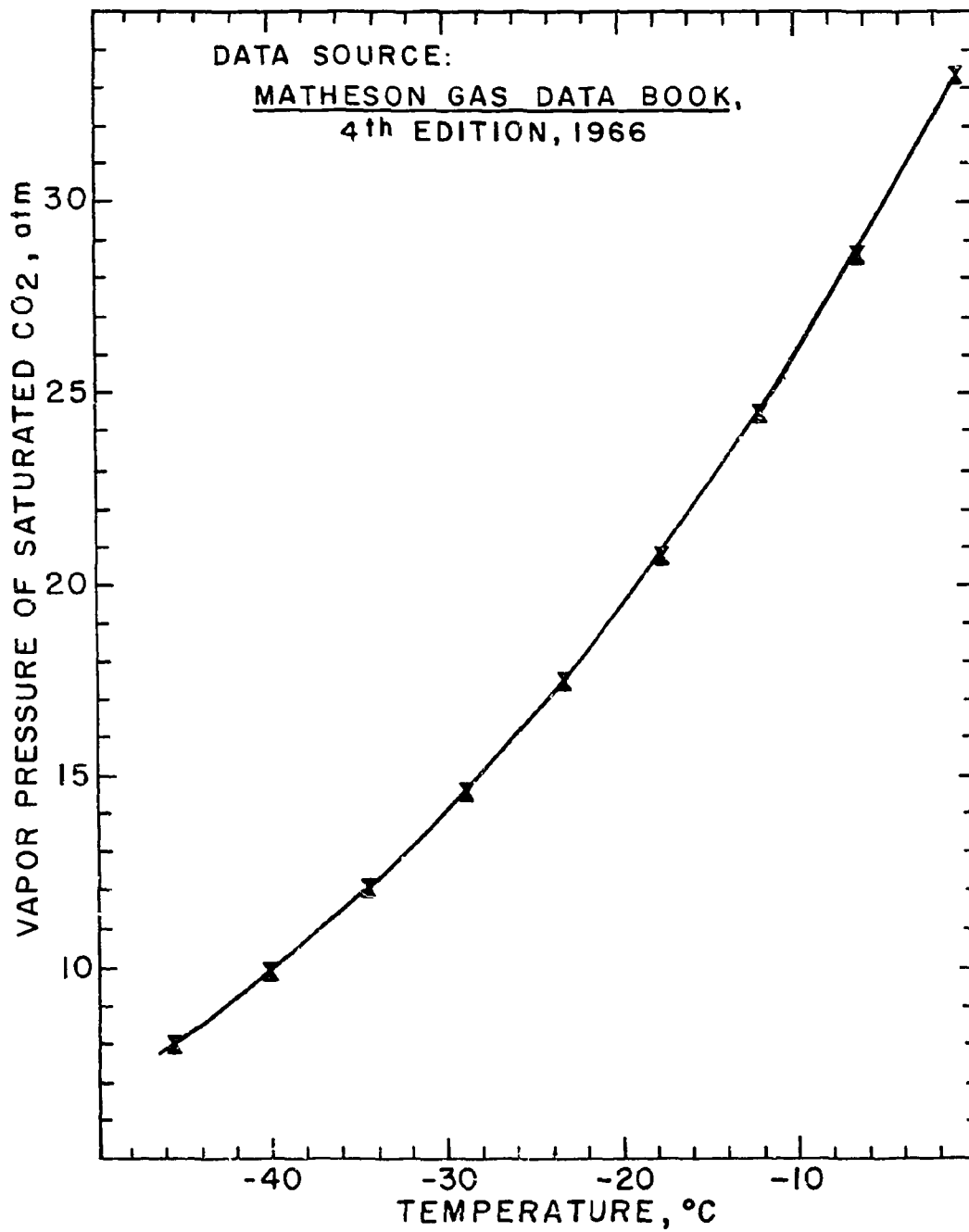
(b) Densities of saturated liquid and vapor. These values were taken from the Matheson Gas Data Book¹³ and fitted to a polynomial equation for general use. The general equation for both liquid (Fig. 12) and gas (Fig. 13) densities is as follows:

$$\rho = \sum_{i=0}^n a_i T^i = \text{lb/ft}^3 \quad (T = ^\circ C), \quad (D-2)$$

where for:

<u>i</u>	<u>a_i for liquid</u>	<u>a_i for gas</u>
0	5.77510570×10^1	6.01394902
1	$-3.84432272 \times 10^{-1}$	$1.89746449 \times 10^{-1}$
2	$-4.57510457 \times 10^{-3}$	$3.25872957 \times 10^{-3}$
3	$1.83812626 \times 10^{-5}$	$4.79946523 \times 10^{-5}$
4	$1.49400710 \times 10^{-5}$	$5.04650092 \times 10^{-7}$
5	$-2.22067930 \times 10^{-7}$	$3.34686382 \times 10^{-8}$
6	$-7.12541564 \times 10^{-8}$	$4.02306651 \times 10^{-9}$
7	$-5.80351736 \times 10^{-10}$	$1.78662970 \times 10^{-10}$
8	$1.33561163 \times 10^{-10}$	$-1.36449077 \times 10^{-12}$
9	$2.99616855 \times 10^{-12}$	$-4.27330448 \times 10^{-13}$
10	$-9.20260648 \times 10^{-14}$	$-1.30046818 \times 10^{-14}$
11	$-3.75691860 \times 10^{-15}$	$9.92111143 \times 10^{-17}$
12	$-1.07926418 \times 10^{-17}$	$1.44514663 \times 10^{-17}$
13	$1.17320995 \times 10^{-18}$	$3.51537047 \times 10^{-19}$
14	$1.88060734 \times 10^{-20}$	$3.76720706 \times 10^{-21}$
15	$8.97437992 \times 10^{-23}$	$1.56213201 \times 10^{-23}$

ORNL DWG 75-14964

Fig. 11. Saturated vapor pressure of CO₂.

ORNL DWG 75-4973RI

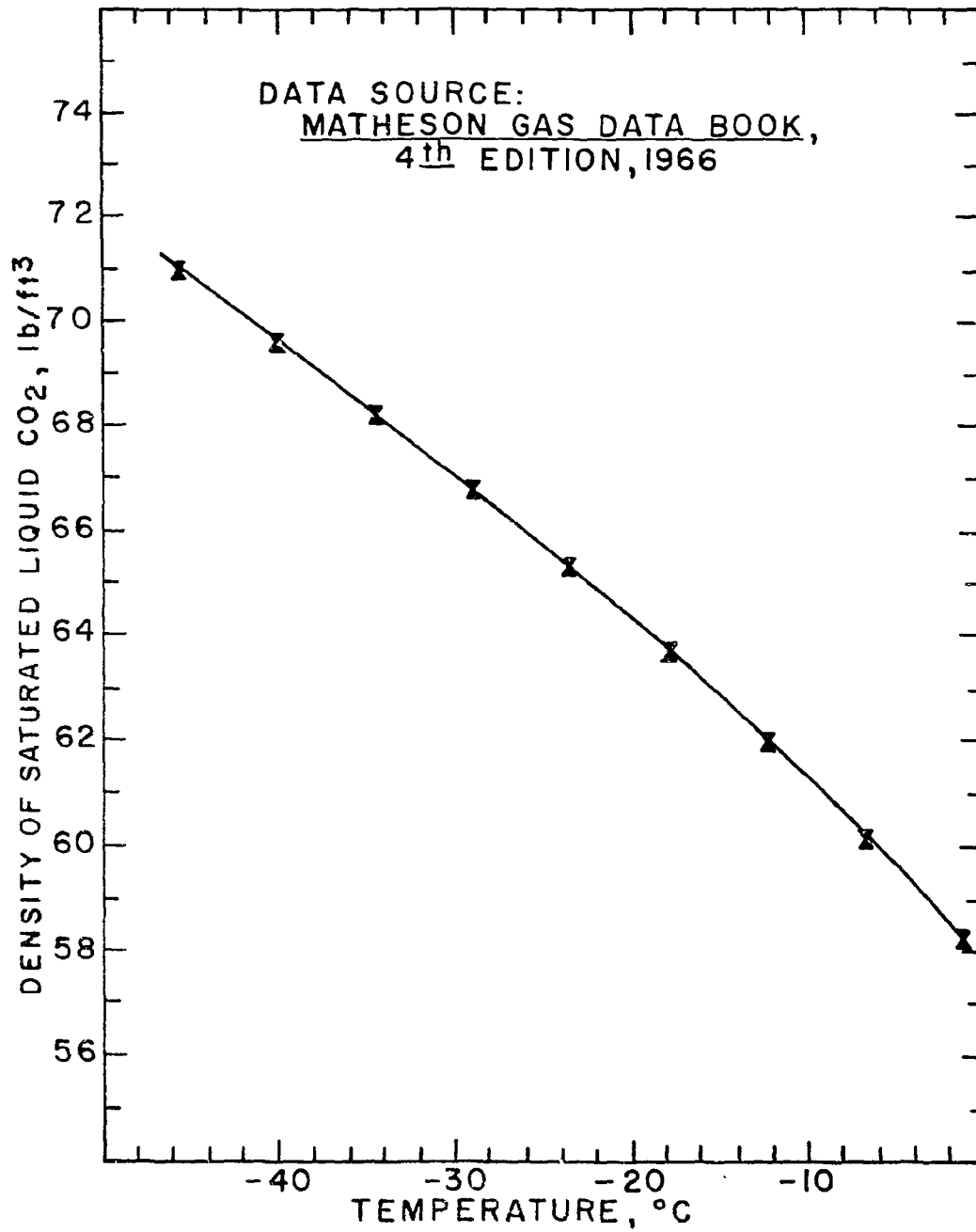


Fig. 12. Density of saturated liquid CO₂ vs temperature.

ORNL DWG 75-4976R1

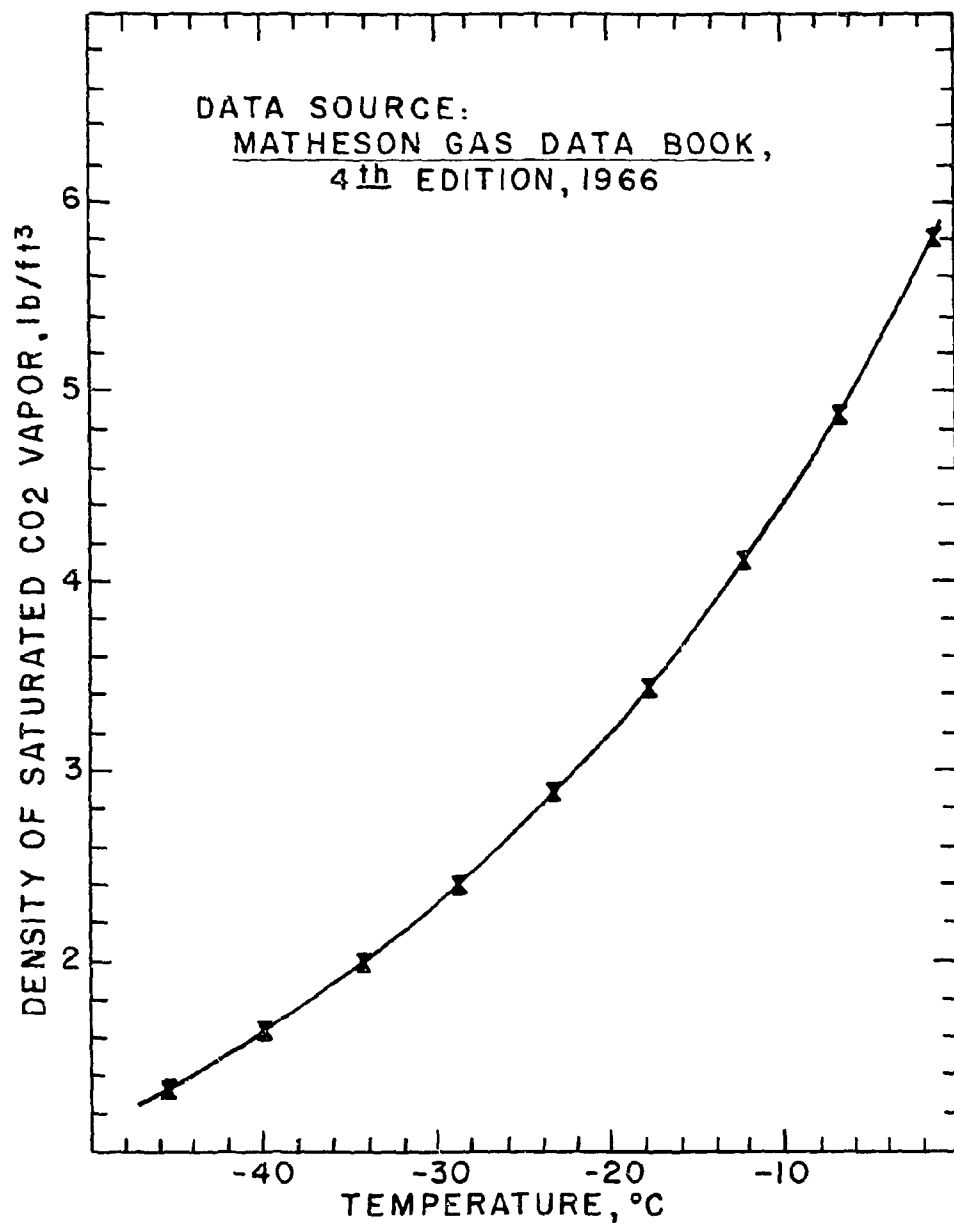


Fig. 13. Density of saturated CO₂ vapor vs temperature.

(c) $(y/x)_{O_2}$ at infinite dilution. These values are calculated directly from the equilibrium model by evaluating Eq. (11) at T and $P_{CO_2}^*(T)$. Then $(y/x)_{O_2}^\infty = \left(\frac{Q}{P_{CO_2}^*} \right) \left(\frac{y P_{CO_2}^*}{xQ} \right)$.

(d) $(y/x)_{Kr}$ at infinite dilution. These values are obtained directly from Eq. (13) evaluated at T and $P_{CO_2}^*(T)$.

(e) $(y/x)_{Xe}$ at infinite dilution. These values are obtained directly from Eq. (13) evaluated at T and $P_{CO_2}^*(T)$.

(f) scfm/gpm equivalency factor (Figs. 14 and 15). These values are calculated according to the following relationship:

$$\frac{\text{scfm}}{\text{gpm}} = \frac{\rho_L^* \frac{\text{lb}}{\text{ft}^3}}{\left(7.481 \frac{\text{gal}}{\text{ft}^3} (\rho_g^s) \right)}, \quad (D-3)$$

where

ρ_L^* = density of saturated liquid at temperature T; see (b) above

ρ_g^s = gas density at standard conditions

(Note: for CO_2 gas:

at 70°F, 1 atm: $\rho_g^s = 0.114485 \text{ lb/ft}^3$;

at 0°C, 1 atm: $\rho_g^s = 0.1235 \text{ lb/ft}^3$).

(g) scfm/kW (Figs. 16 and 17). The values were calculated using the following relation:

$$\frac{\text{scfm}}{\text{kW}} = \frac{3413 \frac{\text{Btu}}{\text{hr-kW}}}{60 \frac{\text{min}}{\text{hr}} \left(\lambda \frac{\text{Btu}}{\text{lb}} \right) \rho_g^s} - \frac{56.8833}{\lambda \rho_g^s}, \quad (D-4)$$

ORNL DWG 75-4971R1

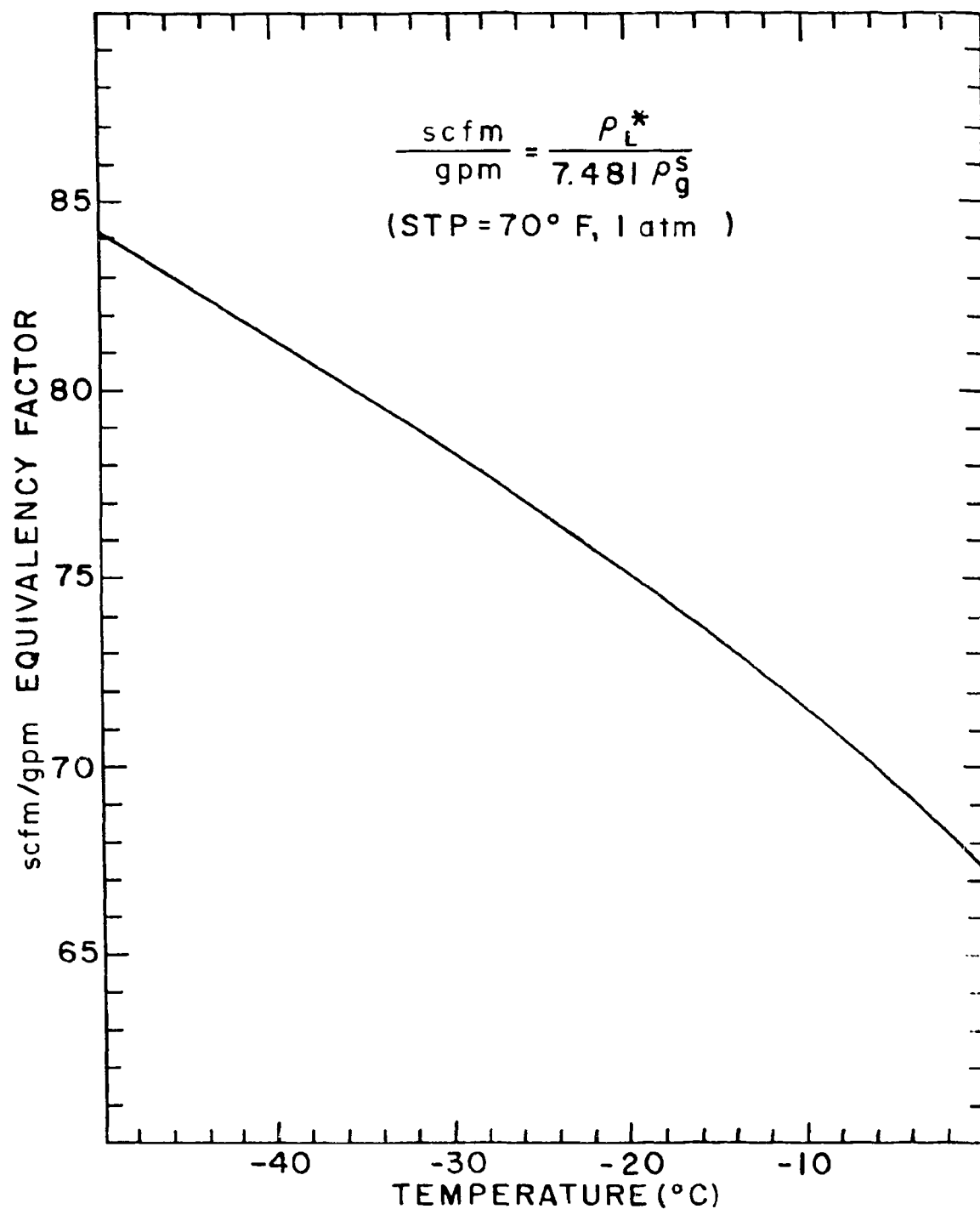


Fig. 14. Plot of scfm/gpm (70°F, 1 atm) equivalency factor for CO₂ vs temperature.

ORNL DWG 75-5013R1

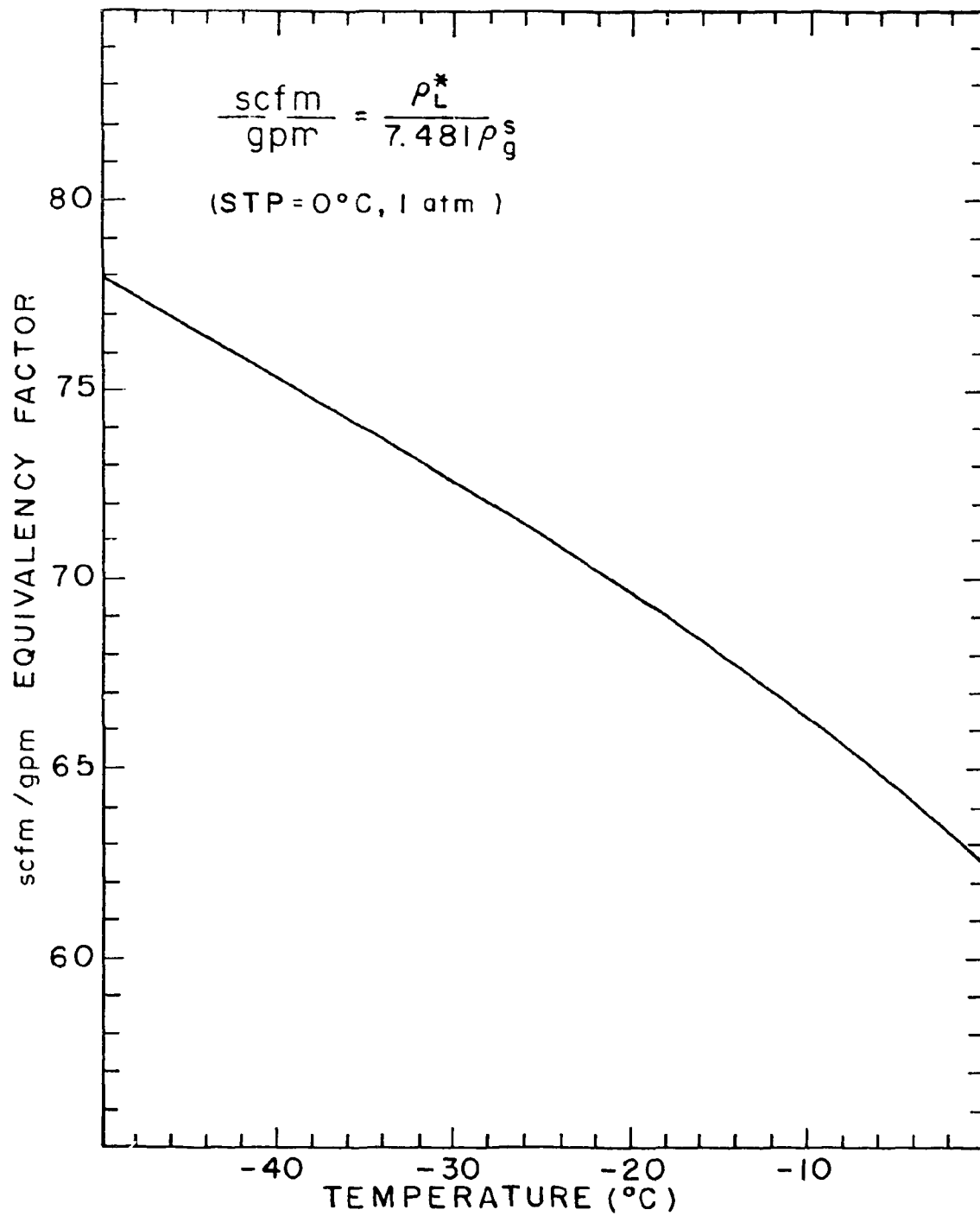


Fig. 15. Plot of scfm/gpm (0°C, 1 atm) equivalency factor for CO₂ vs temperature.

ORNL DWG 75-4972R1

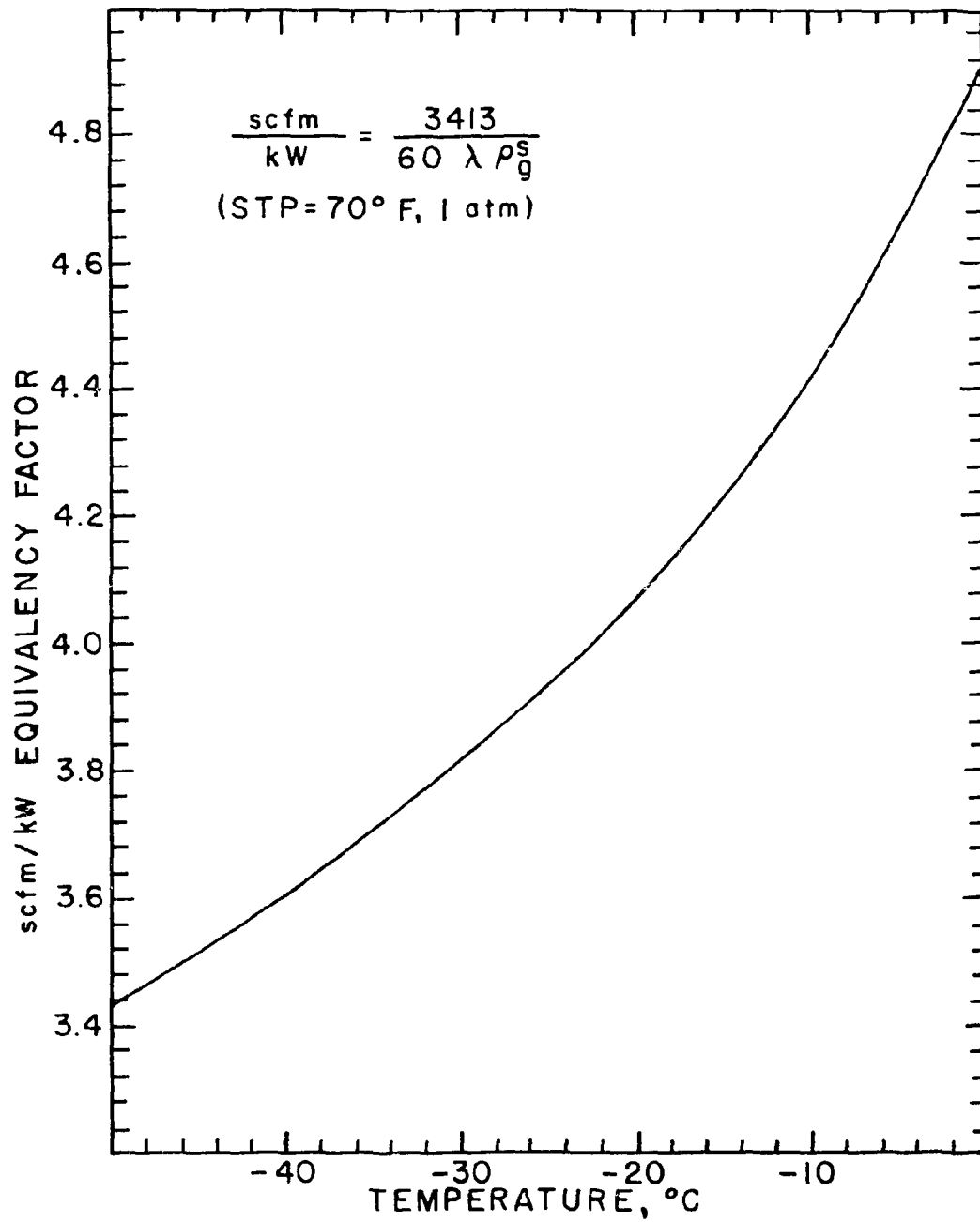


Fig. 16. Plot of scfm/kW (70°F, 1 atm) equivalency factor for CO₂ vs temperature.

ORNL DWG 75-5015R1

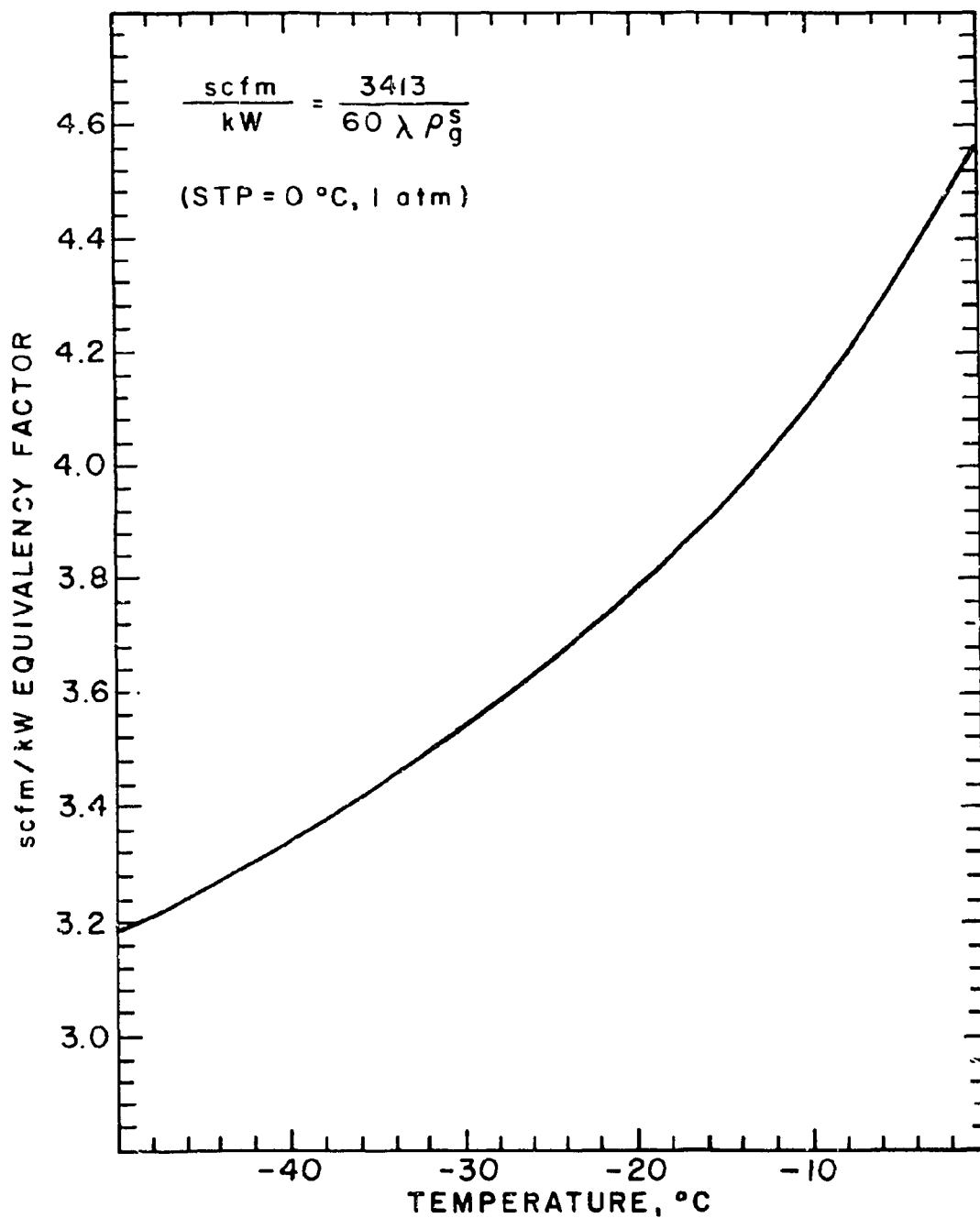


Fig. 17. Plot of scfm/kW (0°C, 1 atm) equivalency factor for CO₂ vs temperature.

where

λ = heat of vaporization at temperature T , calculated as the difference of saturated vapor and saturated liquid enthalpies [Eq. (25)],

ρ_g^S = gas density at standard conditions.

(Note: for CO_2 gas:

at 70°F , 1 atm, $\rho_g^S = 0.114485 \text{ lb/ft}^3$,

at 0°C , 1 atm, $\rho_g^S = 0.1235 \text{ lb/ft}^3$.

(h) scfm/acfm (Figs. 13 and 19). These values were calculated using the following relation:

$$\frac{\text{scfm}}{\text{acfm}} = \frac{\rho_g^S \text{ lb/ft}^3}{\rho_g^T \text{ lb/ft}^3}, \quad (\text{D-5})$$

where

acfm = actual cubic feet per minute,

ρ_g^T = density of saturated gas at temperature T [see (b) above],

ρ_g^S = density of gas at standard conditions.

(Note: for CO_2 :

at 70°F , 1 atm, $\rho_g^S = 0.114485$,

at 0°C , 1 atm, $\rho_g^S = 0.1235$.

(i) Viscosity of saturated liquid (Fig. 20). These values are calculated by a polynomial equation of the form

$$\mu = \sum_{i=0}^n a_i T^i, \text{ cP} \quad (T = ^\circ\text{C}), \quad (\text{D-6})$$

where data for the curve were taken from Herreman et al.¹⁴ The following data were accepted:

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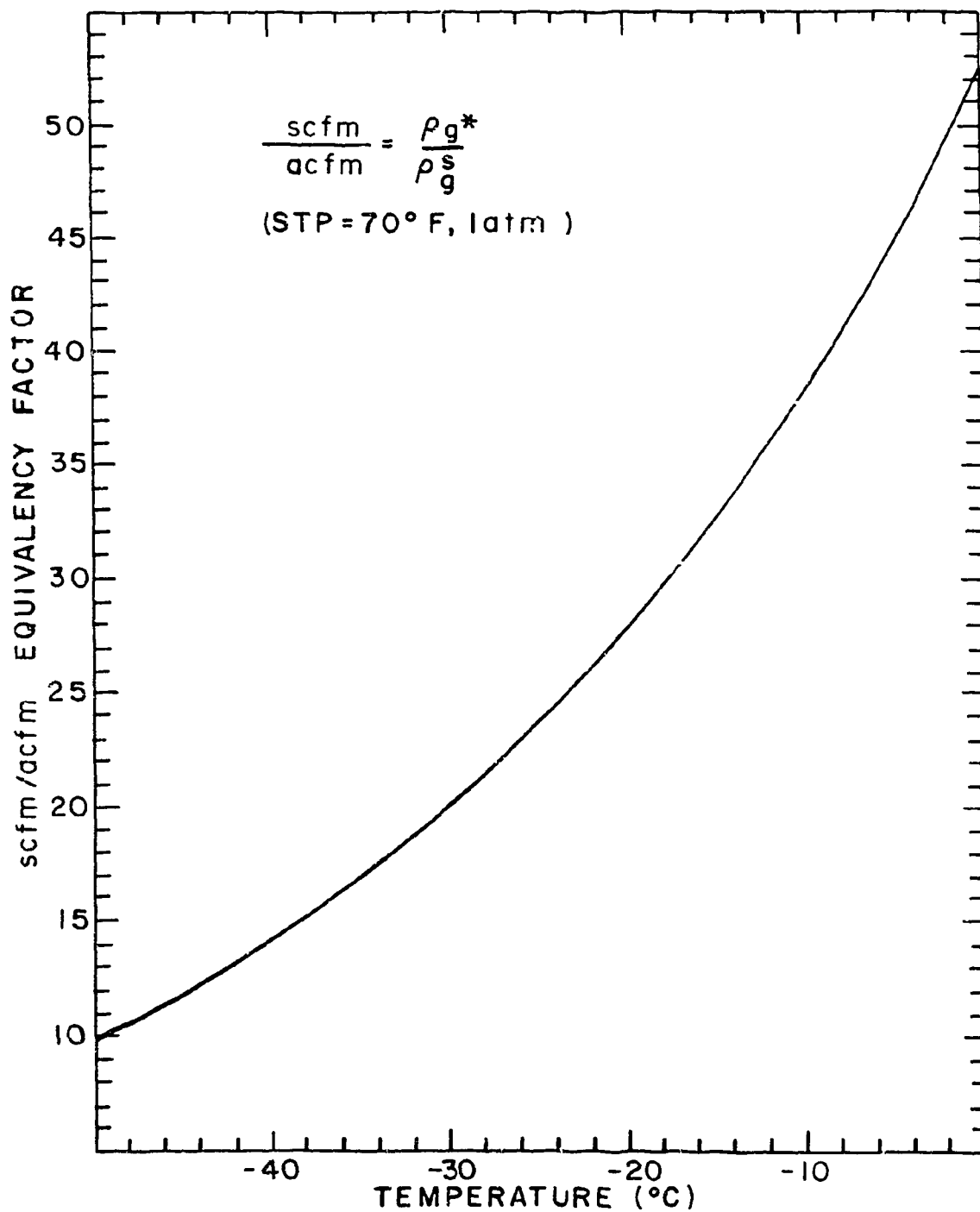


Fig. 18. Plot of scfm/acfm (70°F, 1 atm) equivalency factor for CO₂ vs temperature.

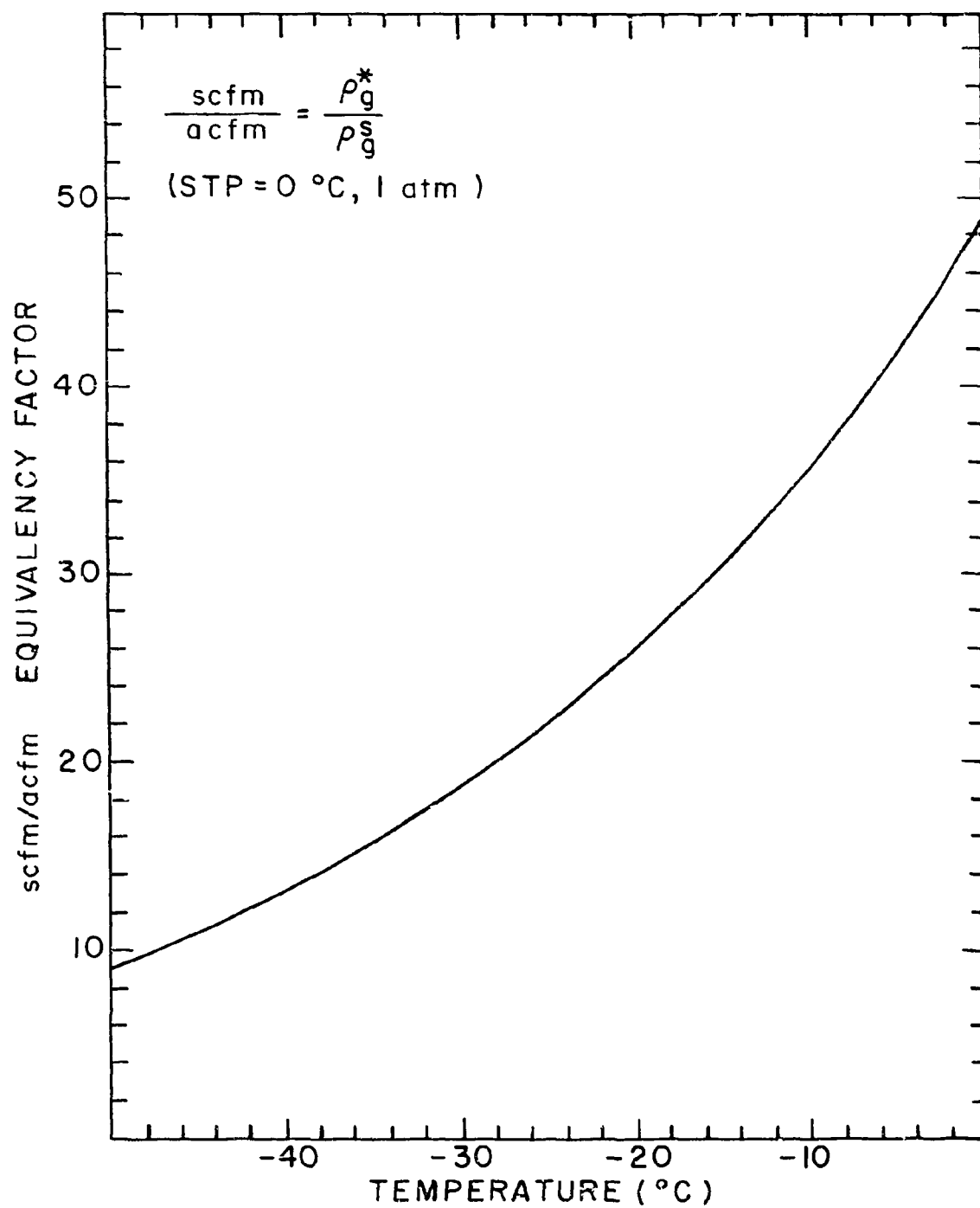


Fig. 19. Plot of scfm/acfm (0°C, 1 atm) equivalency factor for CO₂ vs temperature.

ORNL DWG 75-4978R1

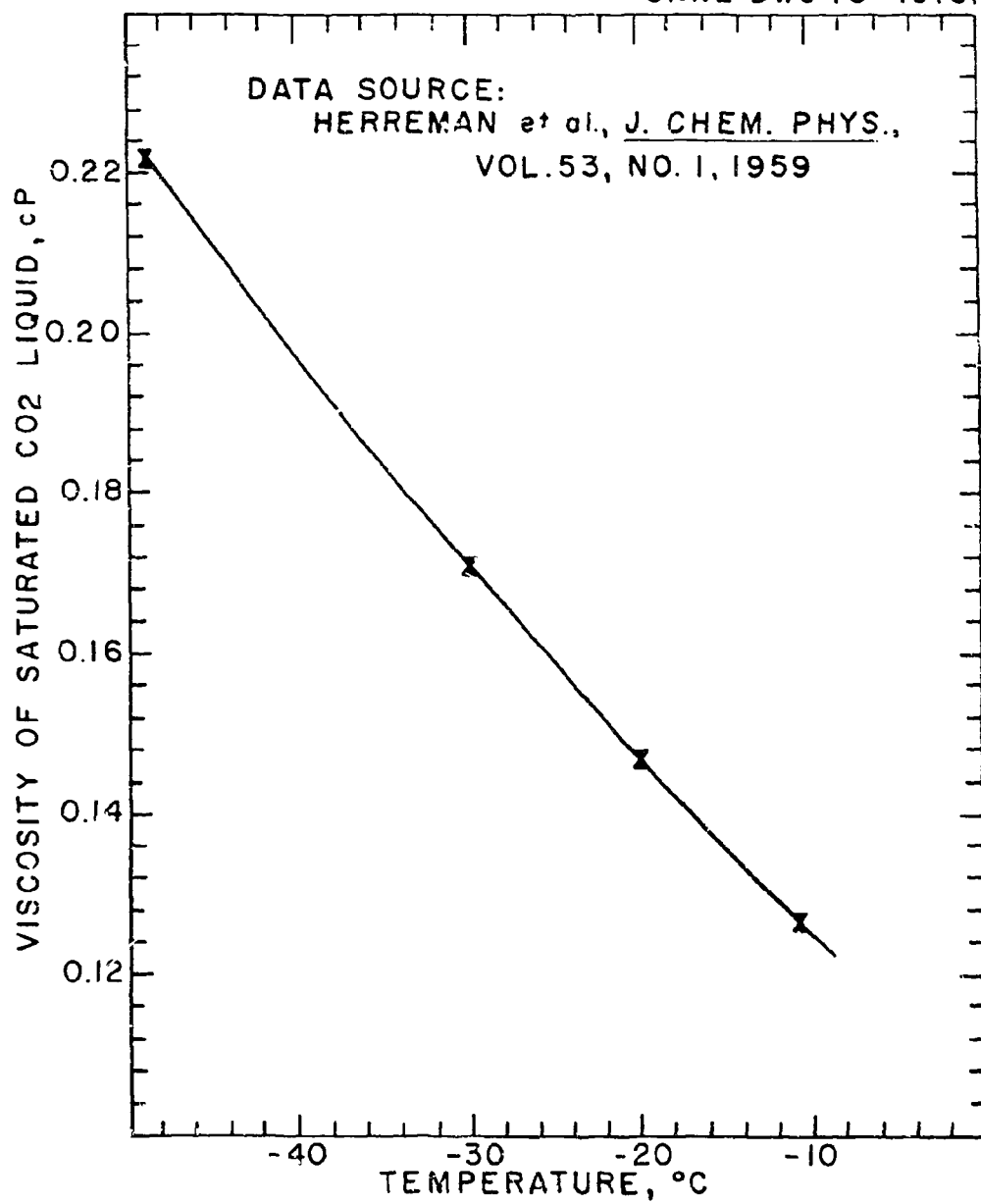


Fig. 20. Viscosity of saturated liquid CO_2 vs temperature.

<u>Temp. (°C)</u>	<u>μ (cP)</u>
-53.9	0.2384
-48.9	0.2219
-30.1	0.1711
-20.0	0.1470
-10.8	0.1266
+ 0.7	0.1058

with the following equation parameters:

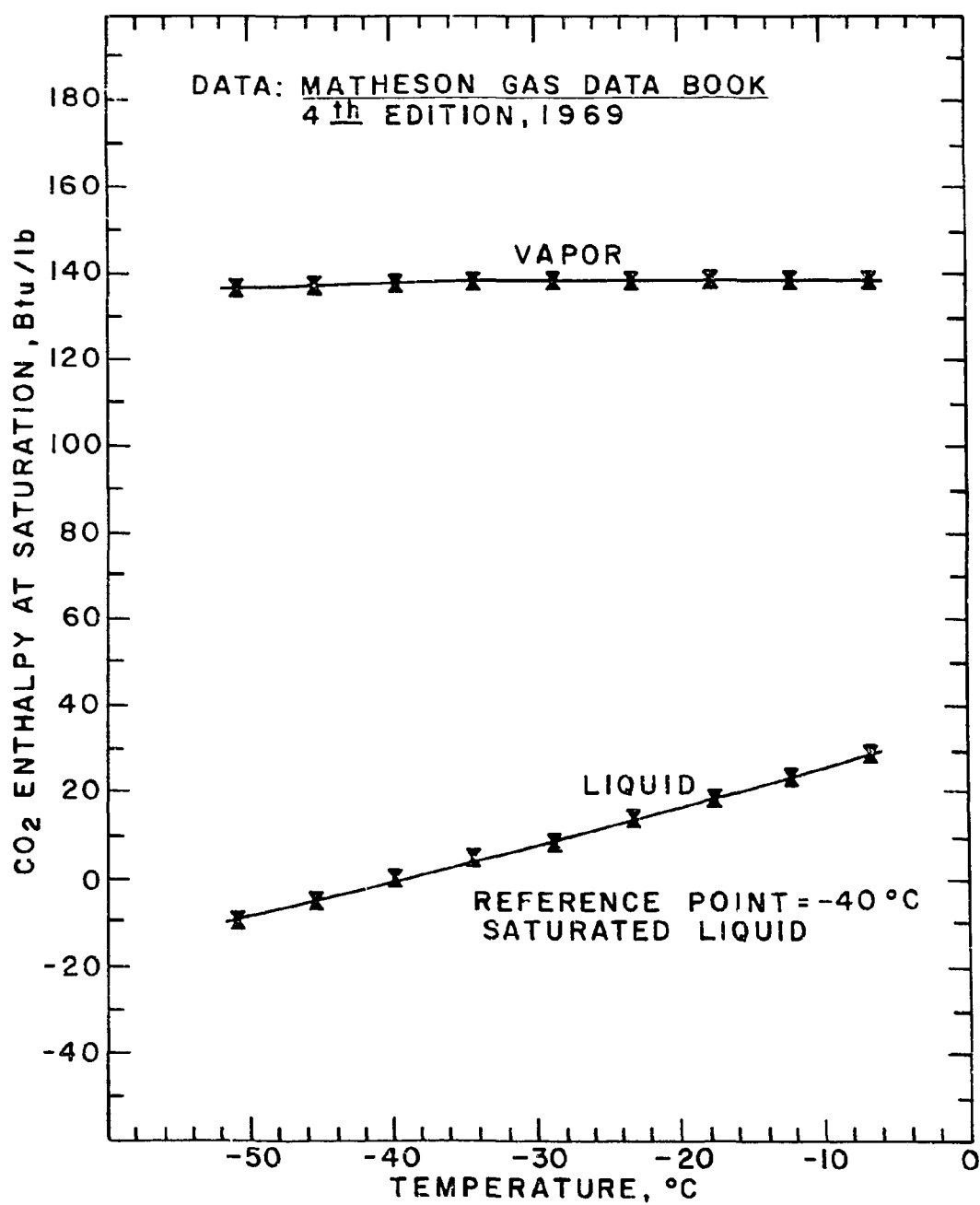
<u>i</u>	<u>$\frac{a_i}{i}$</u>
0	$1.06824689 \times 10^{-1}$
1	$-1.49202875 \times 10^{-3}$
2	$3.97141789 \times 10^{-5}$
3	$8.61206427 \times 10^{-7}$
4	$8.36870199 \times 10^{-9}$

(j) Saturated liquid enthalpy (Fig. 21). These values were obtained by using Eq. (25).

(k) Saturated vapor enthalpy (Fig. 21). These values were obtained by using Eq. (25).

(l) Saturated heat of vaporization (Fig. 22). These values may be obtained by use of Eq. (25).

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Fig. 21. Vapor and liquid enthalpies for saturated CO₂.

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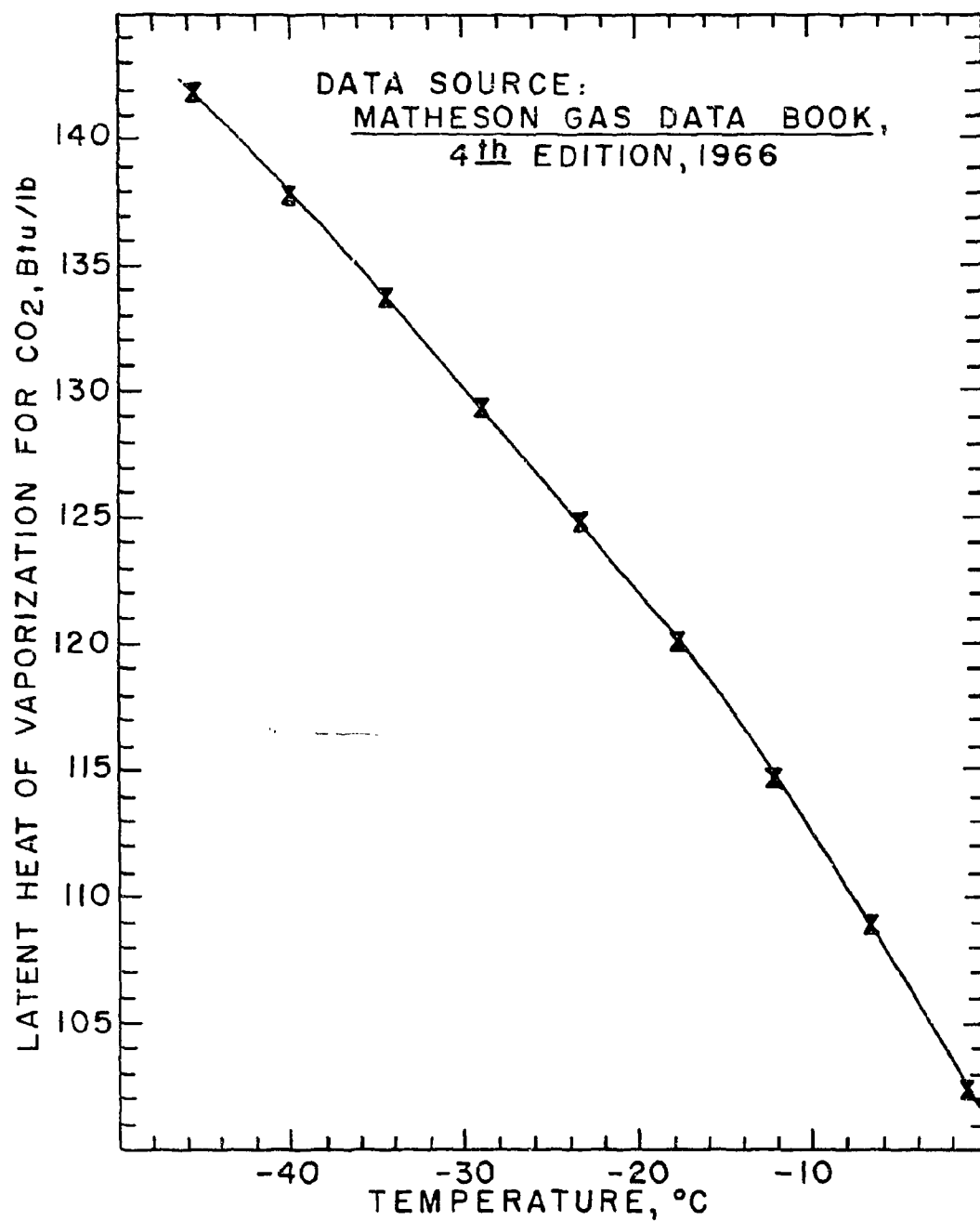


Fig. 22. Latent heat of vaporization for CO₂.

APPENDIX E: SELECTED DENSITY VALUES FOR CO₂, O₂, N₂, and AIR,
CALCULATED USING THE BEATTIE-BRIDGMAN EQUATION OF STATE

The tables of densities and compressibility factors included in this appendix cover the present range of interest in the KALC work. The computer programs used to obtain the values in the various tables follow each table respectively.

All densities and compressibility factors were calculated using the Beattie-Bridgman equation of state for the selected components. Beattie-Bridgman constants were taken from ref. 15.

DENSITY OF CO₂
(LB/FT³)

TEMPERATURE (C)	5.00 (PSIG)	6.00 (PSIG)	7.00 (PSIG)	8.00 (PSIG)	9.00 (PSIG)	10.00 (PSIG)	11.00 (PSIG)	12.00 (PSIG)	13.00 (PSIG)	14.00 (PSIG)
20.00	0.15415	0.16203	0.16992	0.17782	0.18572	0.19363	0.20155	0.20947	0.21740	0.22533
20.20	0.15404	0.16192	0.16980	0.17770	0.18559	0.19350	0.20141	0.20932	0.21724	0.22517
20.40	0.15393	0.16181	0.16969	0.17757	0.18546	0.19336	0.20126	0.20917	0.21709	0.22501
20.60	0.15383	0.16169	0.16957	0.17745	0.18533	0.19323	0.20112	0.20903	0.21694	0.22485
20.80	0.15372	0.16158	0.16945	0.17732	0.18520	0.19309	0.20098	0.20888	0.21678	0.22469
21.00	0.15361	0.16147	0.16933	0.17720	0.18507	0.19295	0.20084	0.20873	0.21663	0.22454
21.20	0.15350	0.16136	0.16921	0.17708	0.18495	0.19282	0.20070	0.20859	0.21648	0.22438
21.40	0.15340	0.16124	0.16910	0.17695	0.18482	0.19269	0.20056	0.20844	0.21633	0.22422
21.60	0.15329	0.16113	0.16898	0.17683	0.18469	0.19255	0.20042	0.20830	0.21618	0.22406
21.80	0.15318	0.16102	0.16886	0.17671	0.18456	0.19242	0.20028	0.20815	0.21602	0.22391
22.00	0.15308	0.16091	0.16874	0.17658	0.18443	0.19228	0.20014	0.20800	0.21587	0.22375
22.20	0.15297	0.16080	0.16863	0.17646	0.18430	0.19215	0.20000	0.20786	0.21572	0.22359
22.40	0.15287	0.16068	0.16851	0.17634	0.18417	0.19201	0.19986	0.20771	0.21557	0.22344
22.60	0.15276	0.16057	0.16839	0.17622	0.18405	0.19188	0.19972	0.20757	0.21542	0.22329
22.80	0.15266	0.16046	0.16828	0.17609	0.18392	0.19175	0.19958	0.20742	0.21527	0.22312
23.00	0.15255	0.16035	0.16816	0.17597	0.18379	0.19161	0.19944	0.20728	0.21512	0.22297
23.20	0.15244	0.16024	0.16804	0.17585	0.18366	0.19148	0.19931	0.20714	0.21497	0.22281
23.40	0.15234	0.16013	0.16793	0.17573	0.18354	0.19135	0.19917	0.20699	0.21482	0.22266
23.60	0.15223	0.16002	0.16781	0.17561	0.18341	0.19122	0.19903	0.20685	0.21467	0.22250
23.80	0.15213	0.15991	0.16769	0.17548	0.18328	0.19108	0.19889	0.20670	0.21452	0.22235
24.00	0.15202	0.15980	0.16758	0.17536	0.18315	0.19095	0.19875	0.20656	0.21437	0.22219
24.20	0.15192	0.15969	0.16746	0.17524	0.18303	0.19082	0.19862	0.20642	0.21422	0.22204
24.40	0.15182	0.15958	0.16735	0.17512	0.18290	0.19069	0.19848	0.20627	0.21408	0.22188
24.60	0.15171	0.15947	0.16723	0.17500	0.18278	0.19056	0.19834	0.20613	0.21393	0.22173
24.80	0.15161	0.15936	0.16712	0.17488	0.18265	0.19042	0.19820	0.20599	0.21378	0.22158
25.00	0.15150	0.15925	0.16700	0.17476	0.18252	0.19029	0.19807	0.20585	0.21363	0.22142
25.20	0.15140	0.15914	0.16689	0.17464	0.18240	0.19016	0.19793	0.20570	0.21348	0.22127
25.40	0.15130	0.15903	0.16677	0.17452	0.18227	0.19003	0.19779	0.20556	0.21334	0.22112
25.60	0.15119	0.15892	0.16666	0.17440	0.18215	0.18990	0.19766	0.20542	0.21319	0.22096
25.80	0.15109	0.15881	0.16654	0.17428	0.18202	0.18977	0.19752	0.20528	0.21304	0.22081
26.00	0.15099	0.15871	0.16643	0.17416	0.18190	0.18964	0.19739	0.20514	0.21290	0.22066
26.20	0.15088	0.15860	0.16632	0.17404	0.18177	0.18951	0.19725	0.20500	0.21275	0.22051
26.40	0.15078	0.15849	0.16620	0.17392	0.18165	0.18938	0.19711	0.20486	0.21260	0.22035
26.60	0.15068	0.15838	0.16609	0.17380	0.18152	0.18925	0.19698	0.20471	0.21246	0.22020
26.80	0.15057	0.15827	0.16598	0.17368	0.18140	0.18912	0.19684	0.20457	0.21231	0.22005
27.00	0.15047	0.15816	0.16586	0.17357	0.18127	0.18899	0.19671	0.20443	0.21216	0.21990
27.20	0.15037	0.15806	0.16575	0.17345	0.18115	0.18886	0.19657	0.20429	0.21202	0.21975
27.40	0.15027	0.15795	0.16564	0.17333	0.18103	0.18873	0.19644	0.20415	0.21187	0.21960
27.60	0.15017	0.15784	0.16552	0.17321	0.18090	0.18860	0.19630	0.20401	0.21173	0.21945
27.80	0.15006	0.15773	0.16541	0.17309	0.18078	0.18847	0.19617	0.20387	0.21158	0.21930
28.00	0.14996	0.15763	0.16530	0.17298	0.18066	0.18834	0.19604	0.20373	0.21144	0.21915
28.20	0.14986	0.15752	0.16519	0.17286	0.18053	0.18822	0.19590	0.20359	0.21129	0.21900
28.40	0.14976	0.15741	0.16507	0.17274	0.18041	0.18809	0.19577	0.20346	0.21115	0.21885
28.60	0.14966	0.15731	0.16496	0.17262	0.18029	0.18796	0.19564	0.20332	0.21100	0.21870
28.80	0.14956	0.15720	0.16485	0.17251	0.18017	0.18783	0.19550	0.20318	0.21086	0.21855
29.00	0.14945	0.15709	0.16474	0.17239	0.18004	0.18770	0.19537	0.20304	0.21072	0.21840
29.20	0.14935	0.15699	0.16463	0.17227	0.17992	0.18758	0.19524	0.20290	0.21057	0.21825
29.40	0.14925	0.15688	0.16452	0.17215	0.17980	0.18745	0.19510	0.20276	0.21043	0.21810
29.60	0.14915	0.15678	0.16440	0.17204	0.17968	0.18732	0.19497	0.20263	0.21029	0.21795
29.80	0.14905	0.15667	0.16429	0.17192	0.17956	0.18719	0.19484	0.20249	0.21014	0.21780
30.00	0.14895	0.15656	0.16418	0.17181	0.17943	0.18707	0.19471	0.20235	0.21000	0.21765

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF CO₂
(LB/FT³)

TEMPERATURE (°C)	15.00 (PSIG)	16.00 (PSIG)	17.00 (PSIG)	18.00 (PSIG)	19.00 (PSIG)	20.00 (PSIG)	21.00 (PSIG)	22.00 (PSIG)	23.00 (PSIG)	24.00 (PSIG)
20.00	0.23327	0.24121	0.24916	0.25712	0.26508	0.27305	0.28103	0.28901	0.29700	0.30499
20.20	0.23310	0.24104	0.24899	0.25694	0.26490	0.27286	0.28083	0.28880	0.29678	0.30477
20.40	0.23294	0.24087	0.24881	0.25676	0.26471	0.27266	0.28063	0.28860	0.29657	0.30455
20.60	0.23277	0.24070	0.24863	0.25657	0.26452	0.27247	0.28043	0.28839	0.29636	0.30434
20.80	0.23261	0.24053	0.24846	0.25639	0.26433	0.27228	0.28023	0.28819	0.29615	0.30412
21.00	0.23245	0.24036	0.24828	0.25621	0.26415	0.27208	0.28003	0.28798	0.29594	0.30390
21.20	0.23228	0.24019	0.24811	0.25603	0.26396	0.27189	0.27983	0.28778	0.29573	0.30369
21.40	0.23212	0.24002	0.24793	0.25585	0.26377	0.27170	0.27963	0.28757	0.29552	0.30347
21.60	0.23196	0.23985	0.24776	0.25567	0.26359	0.27151	0.27944	0.28737	0.29531	0.30326
21.80	0.23179	0.23969	0.24758	0.25549	0.26340	0.27132	0.27924	0.28717	0.29510	0.30304
22.00	0.23163	0.23952	0.24741	0.25531	0.26321	0.27112	0.27904	0.28696	0.29489	0.30283
22.20	0.23147	0.23935	0.24724	0.25513	0.26303	0.27093	0.27884	0.28676	0.29468	0.30261
22.40	0.23131	0.23918	0.24706	0.25495	0.26284	0.27074	0.27865	0.28656	0.29448	0.30240
22.60	0.23114	0.23901	0.24689	0.25477	0.26266	0.27055	0.27845	0.28636	0.29427	0.30218
22.80	0.23098	0.23885	0.24672	0.25459	0.26247	0.27036	0.27826	0.28615	0.29406	0.30197
23.00	0.23082	0.23868	0.24654	0.25441	0.26229	0.27017	0.27806	0.28595	0.29385	0.30176
23.20	0.23066	0.23851	0.24637	0.25424	0.26211	0.26998	0.27786	0.28575	0.29365	0.30154
23.40	0.23050	0.23835	0.24620	0.25406	0.26192	0.26979	0.27767	0.28555	0.29344	0.30133
23.60	0.23034	0.23818	0.24603	0.25388	0.26174	0.26960	0.27747	0.28535	0.29323	0.30112
23.80	0.23018	0.23801	0.24586	0.25370	0.26156	0.26941	0.27728	0.28515	0.29303	0.30091
24.00	0.23002	0.23785	0.24568	0.25353	0.26137	0.26923	0.27708	0.28495	0.29282	0.30070
24.20	0.22986	0.23768	0.24551	0.25335	0.26119	0.26904	0.27689	0.28475	0.29261	0.30048
24.40	0.22970	0.23752	0.24534	0.25317	0.26101	0.26885	0.27670	0.28455	0.29241	0.30027
24.60	0.22954	0.23735	0.24517	0.25300	0.26083	0.26866	0.27650	0.28435	0.29220	0.30006
24.80	0.22938	0.23719	0.24500	0.25282	0.26064	0.26847	0.27631	0.28415	0.29200	0.29985
25.00	0.22922	0.23702	0.24483	0.25264	0.26046	0.26829	0.27612	0.28395	0.29179	0.29964
25.20	0.22906	0.23686	0.24466	0.25247	0.26028	0.26810	0.27592	0.28375	0.29159	0.29943
25.40	0.22890	0.23669	0.24449	0.25229	0.26010	0.26791	0.27573	0.28356	0.29139	0.29922
25.60	0.22874	0.23653	0.24432	0.25212	0.25992	0.26773	0.27554	0.28336	0.29118	0.29901
25.80	0.22859	0.23637	0.24415	0.25194	0.25974	0.26754	0.27535	0.28316	0.29098	0.29880
26.00	0.22843	0.23620	0.24398	0.25177	0.25956	0.26735	0.27516	0.28296	0.29078	0.29860
26.20	0.22827	0.23604	0.24381	0.25159	0.25938	0.26717	0.27496	0.28277	0.29057	0.29839
26.40	0.22811	0.23588	0.24364	0.25142	0.25920	0.26698	0.27477	0.28257	0.29037	0.29818
26.60	0.22795	0.23571	0.24348	0.25124	0.25902	0.26680	0.27458	0.28237	0.29017	0.29797
26.80	0.22780	0.23555	0.24331	0.25107	0.25884	0.26661	0.27439	0.28218	0.28997	0.29776
27.00	0.22764	0.23539	0.24314	0.25090	0.25866	0.26643	0.27420	0.28198	0.28977	0.29756
27.20	0.22748	0.23523	0.24297	0.25072	0.25848	0.26624	0.27401	0.28179	0.28956	0.29735
27.40	0.22733	0.23506	0.24280	0.25055	0.25830	0.26606	0.27382	0.28159	0.28936	0.29714
27.60	0.22717	0.23490	0.24264	0.25038	0.25812	0.26588	0.27363	0.28140	0.28916	0.29694
27.80	0.22702	0.23474	0.24247	0.25021	0.25795	0.26569	0.27344	0.28120	0.28896	0.29673
28.00	0.22686	0.23458	0.24230	0.25003	0.25777	0.26551	0.27325	0.28101	0.28876	0.29653
28.20	0.22670	0.23442	0.24214	0.24986	0.25759	0.26533	0.27307	0.28081	0.28856	0.29632
28.40	0.22655	0.23426	0.24197	0.24969	0.25741	0.26514	0.27288	0.28062	0.28836	0.29611
28.60	0.22639	0.23410	0.24180	0.24952	0.25724	0.26496	0.27269	0.28042	0.28816	0.29591
28.80	0.22624	0.23394	0.24164	0.24935	0.25706	0.26478	0.27250	0.28023	0.28797	0.29571
29.00	0.22608	0.23378	0.24147	0.24918	0.25688	0.26460	0.27231	0.28004	0.28777	0.29550
29.20	0.22593	0.23362	0.24131	0.24900	0.25671	0.26441	0.27213	0.27985	0.28757	0.29530
29.40	0.22578	0.23346	0.24114	0.24883	0.25653	0.26423	0.27194	0.27965	0.28737	0.29509
29.60	0.22562	0.23330	0.24098	0.24866	0.25635	0.26405	0.27175	0.27946	0.28717	0.29489
29.80	0.22547	0.23314	0.24081	0.24849	0.25618	0.26387	0.27157	0.27927	0.28698	0.29469
30.00	0.22531	0.23298	0.24065	0.24832	0.25600	0.26369	0.27138	0.27908	0.28678	0.29448

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF CO₂^{*}
(LB/FT³)

TEMPERATURE (C)	25.00 (PSIG)	26.00 (PSIG)	27.00 (PSIG)	28.00 (PSIG)	29.00 (PSIG)	30.00 (PSIG)	31.00 (PSIG)	32.00 (PSIG)	33.00 (PSIG)	34.00 (PSIG)
20.00	0.31299	0.32100	0.32901	0.33703	0.34505	0.35308	0.36112	0.36916	0.37721	0.38527
20.20	0.31277	0.32077	0.32877	0.33678	0.34480	0.35283	0.36086	0.36889	0.37694	0.38499
20.40	0.31254	0.32054	0.32854	0.33654	0.34455	0.35257	0.36060	0.36863	0.37667	0.38471
20.60	0.31232	0.32031	0.32830	0.33630	0.34431	0.35232	0.36034	0.36836	0.37639	0.38443
20.80	0.31210	0.32008	0.32807	0.33606	0.34406	0.35207	0.36008	0.36810	0.37612	0.38415
21.00	0.31187	0.31985	0.32783	0.33582	0.34381	0.35181	0.35982	0.36783	0.37585	0.38388
21.20	0.31165	0.31962	0.32760	0.33558	0.34357	0.35156	0.35956	0.36757	0.37558	0.38360
21.40	0.31143	0.31939	0.32736	0.33534	0.34332	0.35131	0.35931	0.36731	0.37531	0.38332
21.60	0.31121	0.31917	0.32713	0.33510	0.34308	0.35106	0.35905	0.36704	0.37504	0.38305
21.80	0.31099	0.31894	0.32690	0.33486	0.34283	0.35081	0.35879	0.36678	0.37477	0.38277
22.00	0.31077	0.31871	0.32667	0.33462	0.34259	0.35056	0.35853	0.36652	0.37451	0.38250
22.20	0.31055	0.31849	0.32643	0.33439	0.34234	0.35031	0.35828	0.36625	0.37424	0.38223
22.40	0.31033	0.31826	0.32620	0.33415	0.34210	0.35006	0.35802	0.36599	0.37397	0.38195
22.60	0.31011	0.31804	0.32597	0.33391	0.34186	0.34981	0.35777	0.36573	0.37370	0.38168
22.80	0.30989	0.31781	0.32574	0.33367	0.34161	0.34956	0.35751	0.36547	0.37344	0.38141
23.00	0.30967	0.31759	0.32551	0.33344	0.34137	0.34931	0.35726	0.36521	0.37317	0.38113
23.20	0.30945	0.31736	0.32528	0.33320	0.34113	0.34906	0.35700	0.36495	0.37290	0.38086
23.40	0.30923	0.31714	0.32505	0.33296	0.34089	0.34882	0.35675	0.36469	0.37264	0.38059
23.60	0.30901	0.31691	0.32482	0.33273	0.34065	0.34857	0.35650	0.36443	0.37237	0.38032
23.80	0.30880	0.31669	0.32459	0.33249	0.34040	0.34832	0.35624	0.36417	0.37211	0.38005
24.00	0.30858	0.31647	0.32436	0.33226	0.34016	0.34807	0.35599	0.36391	0.37184	0.37978
24.20	0.30836	0.31624	0.32413	0.33202	0.33992	0.34783	0.35574	0.36365	0.37158	0.37951
24.40	0.30814	0.31602	0.32390	0.33179	0.33968	0.34758	0.35549	0.36340	0.37131	0.37924
24.60	0.30793	0.31580	0.32367	0.33155	0.33944	0.34734	0.35523	0.36314	0.37105	0.37897
24.80	0.30771	0.31558	0.32345	0.33132	0.33920	0.34709	0.35498	0.36288	0.37079	0.37870
25.00	0.30749	0.31535	0.32322	0.33109	0.33896	0.34685	0.35473	0.36263	0.37052	0.37843
25.20	0.30728	0.31513	0.32299	0.33086	0.33872	0.34660	0.35448	0.36237	0.37026	0.37816
25.40	0.30706	0.31491	0.32276	0.33062	0.33849	0.34636	0.35423	0.36211	0.37000	0.37789
25.60	0.30685	0.31469	0.32254	0.33039	0.33825	0.34611	0.35398	0.36186	0.36974	0.37763
25.80	0.30663	0.31447	0.32231	0.33016	0.33801	0.34587	0.35373	0.36160	0.36948	0.37736
26.00	0.30642	0.31425	0.32209	0.32993	0.33777	0.34563	0.35348	0.36135	0.36922	0.37709
26.20	0.30621	0.31403	0.32186	0.32970	0.33754	0.34538	0.35323	0.36109	0.36896	0.37683
26.40	0.30599	0.31381	0.32163	0.32946	0.33730	0.34514	0.35299	0.36084	0.36870	0.37656
26.60	0.30578	0.31359	0.32141	0.32923	0.33706	0.34490	0.35274	0.36059	0.36844	0.37630
26.80	0.30557	0.31337	0.32119	0.32900	0.33683	0.34466	0.35249	0.36033	0.36818	0.37603
27.00	0.30535	0.31315	0.32096	0.32877	0.33659	0.34441	0.35224	0.36008	0.36792	0.37577
27.20	0.30514	0.31294	0.32074	0.32854	0.33636	0.34417	0.35200	0.35983	0.36766	0.37550
27.40	0.30493	0.31272	0.32051	0.32831	0.33612	0.34393	0.35175	0.35957	0.36740	0.37524
27.60	0.30472	0.31250	0.32029	0.32809	0.33589	0.34369	0.35150	0.35932	0.36715	0.37497
27.80	0.30450	0.31228	0.32007	0.32786	0.33565	0.34345	0.35126	0.35907	0.36689	0.37471
28.00	0.30429	0.31207	0.31984	0.32763	0.33542	0.34321	0.35101	0.35882	0.36663	0.37445
28.20	0.30408	0.31185	0.31962	0.32740	0.33518	0.34297	0.35077	0.35857	0.36637	0.37419
28.40	0.30387	0.31163	0.31940	0.32717	0.33495	0.34273	0.35052	0.35832	0.36612	0.37392
28.60	0.30366	0.31142	0.31918	0.32695	0.33472	0.34250	0.35028	0.35807	0.36586	0.37366
28.80	0.30345	0.31120	0.31896	0.32672	0.33449	0.34226	0.35004	0.35782	0.36561	0.37340
29.00	0.30324	0.31099	0.31874	0.32649	0.33425	0.34202	0.34979	0.35757	0.36535	0.37314
29.20	0.30303	0.31077	0.31852	0.32627	0.33402	0.34178	0.34955	0.35732	0.36510	0.37289
29.40	0.30282	0.31056	0.31830	0.32604	0.33379	0.34155	0.34931	0.35707	0.36484	0.37262
29.60	0.30261	0.31034	0.31808	0.32581	0.33356	0.34131	0.34906	0.35682	0.36459	0.37236
29.80	0.30240	0.31013	0.31786	0.32559	0.33333	0.34107	0.34882	0.35658	0.36434	0.37210
30.00	0.30220	0.30991	0.31754	0.32536	0.33310	0.34084	0.34858	0.35633	0.36408	0.37184

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF CO₂
(LB/FT³)

TEMPERATURE (°C)	35.00 (PSIG)	36.00 (PSIG)	37.00 (PSIG)	38.00 (PSIG)	39.00 (PSIG)	40.00 (PSIG)	41.00 (PSIG)	42.00 (PSIG)	43. (PSIG)	44.00 (PSIG)
20.00	0.39333	0.40139	0.40947	0.41755	0.42564	0.43373	0.44183	0.44994	0.45805	0.46617
20.20	0.39304	0.40110	0.40917	0.41725	0.42533	0.43341	0.44151	0.44961	0.45771	0.46583
20.40	0.39276	0.40081	0.40888	0.41694	0.42502	0.43310	0.44119	0.44928	0.45738	0.46549
20.60	0.39247	0.40052	0.40858	0.41664	0.42471	0.43278	0.44086	0.44895	0.45705	0.46514
20.80	0.39219	0.40023	0.40828	0.41634	0.42440	0.43247	0.44054	0.44863	0.45671	0.46481
21.00	0.39191	0.39995	0.40799	0.41604	0.42409	0.43216	0.44022	0.44830	0.45638	0.46447
21.20	0.39163	0.39966	0.40769	0.41574	0.42379	0.43184	0.43990	0.44797	0.45605	0.46413
21.40	0.39134	0.39937	0.40740	0.41544	0.42348	0.43153	0.43959	0.44765	0.45572	0.46379
21.60	0.39106	0.39908	0.40711	0.41514	0.42317	0.43122	0.43927	0.44732	0.45538	0.46345
21.80	0.39078	0.39879	0.40681	0.41484	0.42287	0.43091	0.43895	0.44700	0.45505	0.46312
22.00	0.39050	0.39851	0.40652	0.41454	0.42256	0.43059	0.43863	0.44667	0.45472	0.46278
22.20	0.39022	0.39822	0.40623	0.41424	0.42226	0.43028	0.43831	0.44635	0.45439	0.46244
22.40	0.38994	0.39793	0.40593	0.41394	0.42195	0.42997	0.43800	0.44603	0.45407	0.46211
22.60	0.38966	0.39765	0.40564	0.41364	0.42165	0.42966	0.43768	0.44571	0.45374	0.46177
22.80	0.38938	0.39736	0.40535	0.41335	0.42135	0.42935	0.43737	0.44538	0.45341	0.46144
23.00	0.38910	0.39708	0.40506	0.41305	0.42104	0.42904	0.43705	0.44506	0.45308	0.46111
23.20	0.38882	0.39680	0.40477	0.41275	0.42074	0.42874	0.43674	0.44474	0.45275	0.46077
23.40	0.38855	0.39651	0.40448	0.41246	0.42044	0.42844	0.43644	0.44442	0.45243	0.46044
23.60	0.38827	0.39623	0.40419	0.41216	0.42014	0.42812	0.43611	0.44410	0.45210	0.46011
23.80	0.38799	0.39594	0.40390	0.41187	0.41984	0.42781	0.43579	0.44378	0.45178	0.45978
24.00	0.38772	0.39566	0.40361	0.41157	0.41954	0.42751	0.43548	0.44346	0.45145	0.45944
24.20	0.38744	0.39538	0.40333	0.41128	0.41924	0.42720	0.43517	0.44314	0.45113	0.45911
24.40	0.38716	0.39510	0.40304	0.41098	0.41894	0.42689	0.43486	0.44283	0.45080	0.45878
24.60	0.38689	0.39482	0.40275	0.41069	0.41864	0.42659	0.43455	0.44251	0.45048	0.45845
24.80	0.38661	0.39454	0.40246	0.41040	0.41834	0.42628	0.43423	0.44219	0.45016	0.45812
25.00	0.38634	0.39426	0.40218	0.41011	0.41804	0.42598	0.43392	0.44188	0.44983	0.45780
25.20	0.38607	0.39399	0.40189	0.40981	0.41774	0.42567	0.43361	0.44156	0.44951	0.45747
25.40	0.38579	0.39370	0.40161	0.40952	0.41744	0.42537	0.43330	0.44124	0.44919	0.45714
25.60	0.38552	0.39342	0.40132	0.40923	0.41715	0.42507	0.43300	0.44093	0.44887	0.45681
25.80	0.38525	0.39314	0.40104	0.40894	0.41685	0.42477	0.43269	0.44061	0.44855	0.45649
26.00	0.38497	0.39286	0.40075	0.40865	0.41655	0.42446	0.43238	0.44030	0.44823	0.45616
26.20	0.38470	0.39258	0.40047	0.40836	0.41626	0.42416	0.43207	0.43999	0.44791	0.45583
26.40	0.38443	0.39230	0.40018	0.40807	0.41596	0.42386	0.43176	0.43967	0.44759	0.45551
26.60	0.38416	0.39203	0.39990	0.40778	0.41567	0.42356	0.43146	0.43936	0.44727	0.45518
26.80	0.38389	0.39175	0.39962	0.40749	0.41537	0.42326	0.43115	0.43905	0.44695	0.45486
27.00	0.38362	0.39147	0.39934	0.40721	0.41508	0.42296	0.43084	0.43874	0.44663	0.45454
27.20	0.38335	0.39120	0.39906	0.40692	0.41479	0.42266	0.43054	0.43842	0.44632	0.45421
27.40	0.38308	0.39092	0.39877	0.40663	0.41449	0.42236	0.43023	0.43811	0.44600	0.45389
27.60	0.38281	0.39065	0.39849	0.40634	0.41420	0.42206	0.42993	0.43780	0.44568	0.45357
27.80	0.38254	0.39037	0.39821	0.40606	0.41391	0.42176	0.42963	0.43749	0.44537	0.45325
28.00	0.38227	0.39010	0.39793	0.40577	0.41362	0.42147	0.42932	0.43718	0.44505	0.45292
28.20	0.38200	0.38982	0.39765	0.40549	0.41332	0.42117	0.42902	0.43688	0.44474	0.45260
28.40	0.38174	0.38955	0.39737	0.40520	0.41303	0.42087	0.42872	0.43657	0.44442	0.45228
28.60	0.38147	0.38928	0.39709	0.40492	0.41274	0.42058	0.42841	0.43626	0.44411	0.45196
28.80	0.38120	0.38901	0.39682	0.40463	0.41245	0.42028	0.42811	0.43595	0.44379	0.45164
29.00	0.38093	0.38873	0.39654	0.40435	0.41216	0.41998	0.42781	0.43564	0.44348	0.45132
29.20	0.38067	0.38846	0.39626	0.40407	0.41187	0.41969	0.42751	0.43534	0.44317	0.45101
29.40	0.38040	0.38819	0.39598	0.40378	0.41159	0.41940	0.42721	0.43503	0.44286	0.45069
29.60	0.38014	0.38792	0.39571	0.40350	0.41130	0.41910	0.42691	0.43472	0.44254	0.45037
29.80	0.37987	0.38765	0.39543	0.40322	0.41101	0.41881	0.42661	0.43442	0.44223	0.45005
30.00	0.37961	0.38738	0.39515	0.40294	0.41072	0.41851	0.42631	0.43411	0.44192	0.44974

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF CO₂
(LB/FT³)

TEMPERATURE (C)	100.00 (PSIG)	110.00 (PSIG)	120.00 (PSIG)	130.00 (PSIG)	140.00 (PSIG)	150.00 (PSIG)	160.00 (PSIG)	170.00 (PSIG)	180.00 (PSIG)	190.00 (PSIG)
20.00	0.93140	1.01678	1.10288	1.18974	1.27737	1.36578	1.45500	1.54504	1.63593	1.72768
20.20	0.93067	1.01597	1.10200	1.18877	1.27631	1.36464	1.45376	1.54371	1.63450	1.72614
20.40	0.92994	1.01516	1.10111	1.18780	1.27526	1.36349	1.45253	1.54238	1.63307	1.72461
20.60	0.92921	1.01435	1.10022	1.18683	1.27420	1.36235	1.45130	1.54105	1.63164	1.72309
20.80	0.92849	1.01355	1.09934	1.18587	1.27315	1.36121	1.45006	1.53973	1.63022	1.72156
21.00	0.92776	1.01274	1.09846	1.18490	1.27210	1.36007	1.44884	1.53840	1.62880	1.72004
21.20	0.92704	1.01194	1.09757	1.18394	1.27106	1.35894	1.44761	1.53709	1.62739	1.71852
21.40	0.92631	1.01114	1.09669	1.18298	1.27001	1.35781	1.44639	1.53577	1.62597	1.71701
21.60	0.92559	1.01034	1.09582	1.18202	1.26895	1.35668	1.44516	1.53445	1.62456	1.71550
21.80	0.92487	1.00955	1.09494	1.18106	1.26792	1.35555	1.44395	1.53314	1.62315	1.71399
22.00	0.92415	1.00875	1.09406	1.18010	1.26688	1.35442	1.44273	1.53183	1.62175	1.71248
22.20	0.92343	1.00796	1.09319	1.17915	1.26585	1.35329	1.44151	1.53053	1.62034	1.71098
22.40	0.92271	1.00716	1.09232	1.17820	1.26481	1.35217	1.44030	1.52922	1.61894	1.70949
22.60	0.92199	1.00637	1.09145	1.17725	1.26378	1.35105	1.43909	1.52792	1.61755	1.70799
22.80	0.92128	1.00558	1.09058	1.17630	1.26274	1.34994	1.43789	1.52662	1.61615	1.70650
23.00	0.92056	1.00479	1.08972	1.17535	1.26171	1.34882	1.43668	1.52533	1.61476	1.70501
23.20	0.91985	1.00400	1.08885	1.17441	1.26069	1.34770	1.43548	1.52403	1.61337	1.70352
23.40	0.91914	1.00322	1.08799	1.17346	1.25966	1.34659	1.43428	1.52274	1.61199	1.70204
23.60	0.91843	1.00243	1.08712	1.17252	1.25864	1.34549	1.43309	1.52146	1.61061	1.70056
23.80	0.91772	1.00165	1.08626	1.17158	1.25761	1.34438	1.43189	1.52017	1.60923	1.69909
24.00	0.91701	1.00087	1.08540	1.17064	1.25659	1.34327	1.43070	1.51889	1.60785	1.69761
24.20	0.91631	1.00008	1.08455	1.16971	1.25557	1.34217	1.42951	1.51760	1.60648	1.69614
24.40	0.91560	0.99931	1.08369	1.16877	1.25456	1.34107	1.42832	1.51633	1.60511	1.69468
24.60	0.91490	0.99853	1.08284	1.16784	1.25354	1.33997	1.42713	1.51505	1.60374	1.69321
24.80	0.91419	0.99775	1.08198	1.16690	1.25253	1.33887	1.42595	1.51378	1.60238	1.69175
25.00	0.91349	0.99698	1.08113	1.16598	1.25152	1.33778	1.42477	1.51251	1.60101	1.69029
25.20	0.91279	0.99620	1.08028	1.16505	1.25051	1.33669	1.42359	1.51124	1.59965	1.68884
25.40	0.91209	0.99543	1.07943	1.16412	1.24950	1.33559	1.42241	1.50997	1.59829	1.68739
25.60	0.91139	0.99466	1.07859	1.16319	1.24850	1.33451	1.42124	1.50871	1.59694	1.68594
25.80	0.91070	0.99389	1.07774	1.16227	1.24749	1.33342	1.42007	1.50745	1.59559	1.68449
26.00	0.91000	0.99312	1.07690	1.16135	1.24649	1.33234	1.41890	1.50620	1.59424	1.68305
26.20	0.90931	0.99235	1.07605	1.16043	1.24549	1.33125	1.41773	1.50494	1.59289	1.68161
26.40	0.90861	0.99159	1.07521	1.15951	1.24449	1.33017	1.41657	1.50369	1.59155	1.68017
26.60	0.90792	0.99082	1.07437	1.15860	1.24350	1.32910	1.41540	1.50244	1.59021	1.67874
26.80	0.90723	0.99006	1.07354	1.15768	1.24251	1.32802	1.41424	1.50119	1.58887	1.67731
27.00	0.90654	0.98930	1.07270	1.15677	1.24151	1.32694	1.41308	1.49994	1.58753	1.67588
27.20	0.90585	0.98853	1.07187	1.15586	1.24052	1.32587	1.41193	1.49870	1.58620	1.67445
27.40	0.90516	0.98778	1.07103	1.15495	1.23953	1.32480	1.41077	1.49746	1.58487	1.67303
27.60	0.90448	0.98702	1.07020	1.15404	1.23855	1.32374	1.40962	1.49622	1.58355	1.67161
27.80	0.90379	0.98626	1.06937	1.15313	1.23756	1.32267	1.40847	1.49499	1.58222	1.67020
28.00	0.90311	0.98550	1.06854	1.15223	1.23658	1.32160	1.40733	1.49375	1.58090	1.66878
28.20	0.90243	0.98475	1.06771	1.15132	1.23560	1.32054	1.40618	1.49252	1.57958	1.66737
28.40	0.90174	0.98400	1.06689	1.15042	1.23462	1.31948	1.40504	1.49129	1.57826	1.66596
28.60	0.90106	0.98325	1.06606	1.14952	1.23364	1.31843	1.40390	1.49007	1.57695	1.66456
28.80	0.90038	0.98250	1.06524	1.14862	1.23266	1.31737	1.40276	1.48884	1.57564	1.66316
29.00	0.89970	0.98175	1.06441	1.14773	1.23169	1.31631	1.40162	1.48762	1.57433	1.66176
29.20	0.89903	0.98100	1.06359	1.14683	1.23071	1.31526	1.40049	1.48640	1.57302	1.66036
29.40	0.89835	0.98025	1.06278	1.14594	1.22974	1.31421	1.39936	1.48519	1.57172	1.65897
29.60	0.89768	0.97951	1.06196	1.14504	1.22877	1.31316	1.39822	1.48397	1.57042	1.65758
29.80	0.89700	0.97876	1.06114	1.14415	1.22781	1.31212	1.39710	1.48276	1.56912	1.65619
30.00	0.89633	0.97802	1.06033	1.14326	1.22684	1.31107	1.39597	1.48155	1.56782	1.65480

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF CO₂
(LB/FT³)

TEMPERATURE (C)	200.00 (PSIG)	210.00 (PSIG)	220.00 (PSIG)	230.00 (PSIG)	240.00 (PSIG)	250.00 (PSIG)	260.00 (PSIG)	270.00 (PSIG)	280.00 (PSIG)	290.00 (PSIG)
20.00	1.82031	1.91385	2.00832	2.10374	2.20015	2.29755	2.39600	2.49550	2.59609	2.69780
20.20	1.81867	1.91210	2.00646	2.10176	2.19804	2.29533	2.39363	2.49300	2.59345	2.69502
20.40	1.81703	1.91036	2.00460	2.09979	2.19595	2.29310	2.39128	2.49051	2.59082	2.69224
20.60	1.81540	1.90862	2.00275	2.09782	2.19385	2.29088	2.38893	2.48802	2.58819	2.68946
20.80	1.81377	1.90688	2.00090	2.09585	2.19177	2.28867	2.38659	2.48555	2.58558	2.68670
21.00	1.81215	1.90515	1.99905	2.09389	2.18968	2.28646	2.38425	2.48308	2.58296	2.68394
21.20	1.81053	1.90341	1.99721	2.09193	2.18761	2.28426	2.38192	2.48061	2.58036	2.68120
21.40	1.80891	1.90169	1.99537	2.08998	2.18554	2.28207	2.37959	2.47815	2.57776	2.67845
21.60	1.80729	1.89997	1.99354	2.08803	2.18347	2.27988	2.37728	2.47570	2.57517	2.67572
21.80	1.80568	1.89825	1.99171	2.08609	2.18141	2.27769	2.37496	2.47326	2.57259	2.67299
22.00	1.80407	1.89653	1.98989	2.08415	2.17935	2.27551	2.37265	2.47081	2.57001	2.67027
22.20	1.80247	1.89482	1.98807	2.08222	2.17730	2.27333	2.37035	2.46838	2.56744	2.66756
22.40	1.80087	1.89312	1.98625	2.08029	2.17525	2.27117	2.36806	2.46595	2.56487	2.66485
22.60	1.79928	1.89142	1.98444	2.07836	2.17321	2.26900	2.36577	2.46353	2.56232	2.66216
22.80	1.79768	1.88972	1.98263	2.07644	2.17117	2.26684	2.36348	2.46112	2.55977	2.65946
23.00	1.79609	1.88802	1.98083	2.07452	2.16914	2.26469	2.36120	2.45870	2.55722	2.65678
23.20	1.79450	1.88633	1.97903	2.07261	2.16711	2.26254	2.35893	2.45630	2.55468	2.65410
23.40	1.79292	1.88465	1.97723	2.07071	2.16509	2.26040	2.35666	2.45391	2.55215	2.65143
23.60	1.79134	1.88296	1.97544	2.06880	2.16307	2.25826	2.35440	2.45152	2.54963	2.64877
23.80	1.78977	1.88129	1.97366	2.06691	2.16106	2.25613	2.35215	2.44913	2.54711	2.64612
24.00	1.78819	1.87960	1.97187	2.06501	2.15904	2.25399	2.34989	2.44675	2.54460	2.64346
24.20	1.78662	1.87793	1.97009	2.06312	2.15704	2.25168	2.34764	2.44438	2.54210	2.64082
24.40	1.78506	1.87626	1.96832	2.06123	2.15504	2.24976	2.34541	2.44201	2.53960	2.63819
24.60	1.78349	1.87460	1.96654	2.05935	2.15304	2.24764	2.34317	2.43965	2.53711	2.63556
24.80	1.78193	1.87294	1.96478	2.05747	2.15106	2.24554	2.34094	2.43730	2.53462	2.63294
25.00	1.78037	1.87128	1.96301	2.05560	2.14907	2.24343	2.33872	2.43495	2.53214	2.63032
25.20	1.77882	1.86962	1.96125	2.05373	2.14709	2.24133	2.33650	2.43260	2.52967	2.62772
25.40	1.77727	1.86797	1.95950	2.05187	2.14511	2.23924	2.33428	2.43027	2.52720	2.62512
25.60	1.77573	1.86632	1.95774	2.05001	2.14314	2.23715	2.33208	2.42793	2.52474	2.62252
25.80	1.77418	1.86468	1.95600	2.04815	2.14117	2.23507	2.32988	2.42561	2.52229	2.61994
26.00	1.77264	1.86304	1.95425	2.04630	2.13921	2.23299	2.32768	2.42328	2.51984	2.61736
26.20	1.77111	1.86140	1.95251	2.04445	2.13725	2.23092	2.32548	2.42097	2.51739	2.61478
26.40	1.76957	1.85977	1.95077	2.04261	2.13529	2.22885	2.32330	2.41866	2.51496	2.61221
26.60	1.76804	1.85814	1.94904	2.04077	2.13334	2.22679	2.32112	2.41636	2.51253	2.60965
26.80	1.76652	1.85651	1.94731	2.03893	2.13140	2.22473	2.31894	2.41406	2.51011	2.60710
27.00	1.76499	1.85489	1.94558	2.03710	2.12945	2.22267	2.31677	2.41177	2.50768	2.60455
27.20	1.76347	1.85327	1.94386	2.03527	2.12752	2.22062	2.31460	2.40948	2.50527	2.60201
27.40	1.76195	1.85165	1.94215	2.03345	2.12559	2.21858	2.31244	2.40720	2.50287	2.59947
27.60	1.76044	1.85004	1.94043	2.03163	2.12366	2.21654	2.31029	2.40492	2.50047	2.59694
27.80	1.75893	1.84843	1.93872	2.02982	2.12174	2.21451	2.30814	2.40266	2.49808	2.59442
28.00	1.75742	1.84682	1.93701	2.02800	2.11982	2.21248	2.30599	2.40039	2.49568	2.59190
28.20	1.75591	1.84522	1.93531	2.02620	2.11791	2.21045	2.30385	2.39813	2.49330	2.58940
28.40	1.75441	1.84362	1.93361	2.02440	2.11599	2.20843	2.30172	2.39587	2.49093	2.58690
28.60	1.75291	1.84203	1.93192	2.02260	2.11409	2.20641	2.29958	2.39363	2.48856	2.58440
28.80	1.75142	1.84043	1.93022	2.02080	2.11219	2.20440	2.29746	2.39136	2.48619	2.58191
29.00	1.74992	1.83884	1.92854	2.01901	2.11029	2.20239	2.29534	2.38914	2.48383	2.57942
29.20	1.74844	1.83726	1.92685	2.01722	2.10840	2.20039	2.29322	2.38691	2.48148	2.57694
29.40	1.74695	1.83568	1.92517	2.01544	2.10651	2.19839	2.29111	2.38469	2.47913	2.57447
29.60	1.74546	1.83410	1.92349	2.01366	2.10462	2.19640	2.28901	2.38246	2.47679	2.57201
29.80	1.74398	1.83252	1.92182	2.01188	2.10274	2.19441	2.28690	2.38025	2.47445	2.56954
30.00	1.74251	1.83095	1.92015	2.01011	2.10087	2.19243	2.28481	2.37804	2.47212	2.56709

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF CO₂'
(LB/FT³)

TEMPERATURE (C)	300.00 (PSIG)	310.00 (PSIG)	320.00 (PSIG)	330.00 (PSIG)	340.00 (PSIG)	350.00 (PSIG)	360.00 (PSIG)	370.00 (PSIG)	380.00 (PSIG)	390.00 (PSIG)
20.00	2.80067	2.90472	3.01000	3.11654	3.22444	3.33362	3.44419	3.55619	3.66966	3.78467
20.20	2.79773	2.90162	3.00673	3.11310	3.22081	3.32981	3.44019	3.55198	3.66523	3.78001
20.40	2.79480	2.89854	3.00348	3.10967	3.21714	3.32601	3.43620	3.54778	3.66083	3.77538
20.60	2.79187	2.89545	3.00023	3.10625	3.21354	3.32223	3.43221	3.54359	3.65643	3.77076
20.80	2.78896	2.89238	2.99699	3.10284	3.20996	3.31845	3.42824	3.53942	3.65204	3.76616
21.00	2.78605	2.88931	2.99376	3.09944	3.20638	3.31469	3.42428	3.53526	3.64767	3.76157
21.20	2.78315	2.88625	2.99054	3.09605	3.20282	3.31094	3.42034	3.53112	3.64332	3.75700
21.40	2.78025	2.88320	2.98733	3.09267	3.19925	3.30720	3.41641	3.52699	3.63898	3.75244
21.60	2.77737	2.88017	2.98413	3.08930	3.19571	3.30341	3.41249	3.52288	3.63466	3.74790
21.80	2.77450	2.87713	2.98094	3.08594	3.19218	3.29969	3.40859	3.51877	3.63036	3.74338
22.00	2.77162	2.87411	2.97775	3.08259	3.18865	3.29599	3.40469	3.51468	3.62605	3.73887
22.20	2.76877	2.87110	2.97458	3.07925	3.18514	3.29229	3.40082	3.51060	3.62178	3.73437
22.40	2.76591	2.86809	2.97142	3.07593	3.18164	3.28862	3.39695	3.50654	3.61751	3.72990
22.60	2.76307	2.86510	2.96826	3.07261	3.17816	3.28495	3.39309	3.50249	3.61326	3.72544
22.80	2.76024	2.86211	2.96512	3.06970	3.17467	3.28129	3.38918	3.49846	3.60903	3.72100
23.00	2.75740	2.85912	2.96198	3.06599	3.17120	3.27764	3.38534	3.49443	3.60480	3.71655
23.20	2.75458	2.85615	2.95985	3.06270	3.16774	3.27400	3.38153	3.49042	3.60059	3.71214
23.40	2.75177	2.85319	2.95573	3.05942	3.16429	3.27038	3.37772	3.48643	3.59640	3.70774
23.60	2.74897	2.85024	2.95262	3.05615	3.16086	3.26677	3.37393	3.48244	3.59222	3.70335
23.80	2.74617	2.84729	2.94952	3.05289	3.15743	3.26317	3.37015	3.47847	3.58805	3.69898
24.00	2.74337	2.84435	2.94642	3.04963	3.15401	3.25957	3.36637	3.47444	3.58389	3.69462
24.20	2.74059	2.84142	2.94334	3.04639	3.15060	3.25599	3.36261	3.47049	3.57975	3.69028
24.40	2.73782	2.83850	2.94027	3.04316	3.14720	3.25243	3.35887	3.46656	3.57563	3.68596
24.60	2.73504	2.83558	2.93720	3.03994	3.14381	3.24886	3.35513	3.46264	3.57151	3.68164
24.80	2.73229	2.83267	2.93414	3.03672	3.14043	3.24532	3.35141	3.45873	3.56733	3.67734
25.00	2.72953	2.82977	2.93109	3.03351	3.13706	3.24178	3.34769	3.45484	3.56325	3.67305
25.20	2.72678	2.82688	2.92805	3.03032	3.13370	3.23825	3.34399	3.45095	3.55917	3.66878
25.40	2.72404	2.82400	2.92501	3.02713	3.13035	3.23474	3.34030	3.44708	3.55511	3.66453
25.60	2.72131	2.82112	2.92199	3.02395	3.12701	3.23123	3.33662	3.44322	3.55107	3.66028
25.80	2.71859	2.81825	2.91898	3.02078	3.12369	3.22774	3.33295	3.43937	3.54704	3.65606
26.00	2.71587	2.81539	2.91596	3.01762	3.12037	3.22425	3.32930	3.43554	3.54301	3.65176
26.20	2.71315	2.81254	2.91297	3.01446	3.11705	3.22077	3.32565	3.43171	3.53900	3.64755
26.40	2.71045	2.80970	2.90998	3.01132	3.11375	3.21731	3.32201	3.42790	3.53501	3.64337
26.60	2.70776	2.80686	2.90699	3.00819	3.11046	3.21385	3.31839	3.42411	3.53103	3.63920
26.80	2.70507	2.80403	2.90402	3.00506	3.10718	3.21041	3.31476	3.42032	3.52706	3.63504
27.00	2.70238	2.80120	2.90105	3.00194	3.10390	3.20697	3.31117	3.41653	3.52309	3.63089
27.20	2.69971	2.79839	2.89809	2.99884	3.10064	3.20355	3.30758	3.41277	3.51915	3.62675
27.40	2.69704	2.79558	2.89514	2.99574	3.09739	3.20014	3.30400	3.40902	3.51522	3.62264
27.60	2.69438	2.79278	2.89220	2.99264	3.09415	3.19673	3.30043	3.40528	3.51130	3.61853
27.80	2.69172	2.79000	2.88927	2.98956	3.09091	3.19334	3.29688	3.40155	3.50739	3.61444
28.00	2.68907	2.78721	2.88631	2.98649	3.08768	3.18995	3.29332	3.39783	3.50349	3.61035
28.20	2.68643	2.78443	2.88342	2.98342	3.08446	3.18657	3.28978	3.39411	3.49961	3.60629
28.40	2.68380	2.78166	2.88051	2.98036	3.08125	3.18321	3.28625	3.39042	3.49573	3.60223
28.60	2.68117	2.77890	2.87760	2.97732	3.07806	3.17986	3.28274	3.38673	3.49188	3.59819
28.80	2.67855	2.77614	2.87471	2.97427	3.07487	3.17651	3.27923	3.38306	3.48802	3.59416
29.00	2.67593	2.77339	2.87182	2.97124	3.07168	3.17317	3.27573	3.37939	3.48412	3.59014
29.20	2.67332	2.77065	2.86894	2.96822	3.06851	3.16984	3.27224	3.37574	3.48036	3.58614
29.40	2.67073	2.76791	2.86607	2.96520	3.06535	3.16653	3.26877	3.37210	3.47655	3.58215
29.60	2.66813	2.76518	2.86320	2.96219	3.06219	3.16321	3.26530	3.36847	3.47274	3.57817
29.80	2.66554	2.76247	2.86034	2.95920	3.05904	3.15992	3.26185	3.36485	3.46895	3.57420
30.00	2.66296	2.75975	2.85749	2.95620	3.05591	3.15662	3.25839	3.36123	3.46517	3.57024

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF CO₂
(LB/FT³)

TEMPERATURE (C)	400.00 (PSIG)	410.00 (PSIG)	420.00 (PSIG)	430.00 (PSIG)	440.00 (PSIG)	450.00 (PSIG)	460.00 (PSIG)	470.00 (PSIG)	480.00 (PSIG)	490.00 (PSIG)
20.00	3.90125	4.01946	4.13937	4.26103	4.38452	4.50990	4.63725	4.76664	4.89816	5.03189
20.20	3.89636	4.01433	4.13398	4.25538	4.37858	4.50366	4.63070	4.75976	4.89092	5.02430
20.40	3.89149	4.00922	4.12861	4.24974	4.37266	4.49744	4.62417	4.75290	4.88373	5.01674
20.60	3.88664	4.00412	4.12326	4.24412	4.36676	4.49125	4.61767	4.74608	4.87656	5.00921
20.80	3.88180	3.99905	4.11793	4.23853	4.36089	4.48509	4.61120	4.73928	4.86943	5.00172
21.00	3.87698	3.99398	4.11262	4.23295	4.35503	4.47895	4.60475	4.73252	4.86233	4.99426
21.20	3.87219	3.98895	4.10733	4.22740	4.34921	4.47284	4.59933	4.72578	4.85526	4.98684
21.40	3.86740	3.98392	4.10206	4.22187	4.34341	4.46674	4.59194	4.71907	4.84822	4.97945
21.60	3.86264	3.97893	4.09681	4.21636	4.33763	4.46068	4.58558	4.71240	4.84122	4.97211
21.80	3.85789	3.97394	4.09158	4.21088	4.33188	4.45464	4.57925	4.70576	4.83424	4.96479
22.00	3.85315	3.96897	4.08637	4.20540	4.32614	4.44852	4.57294	4.69913	4.82729	4.95749
22.20	3.84844	3.96402	4.08118	4.19996	4.32043	4.44264	4.56665	4.69254	4.82038	4.95025
22.40	3.84374	3.95910	4.07601	4.19454	4.31474	4.43667	4.56040	4.68599	4.81351	4.94303
22.60	3.83906	3.95419	4.07086	4.18914	4.30908	4.43074	4.55418	4.67945	4.80665	4.93585
22.80	3.83440	3.94929	4.06573	4.18376	4.30343	4.42482	4.54797	4.67295	4.79984	4.92870
23.00	3.82975	3.94441	4.06061	4.17840	4.29781	4.41892	4.54178	4.66647	4.79304	4.92157
23.20	3.82511	3.93956	4.05552	4.17305	4.29221	4.41305	4.53563	4.66002	4.78628	4.91448
23.40	3.82050	3.93472	4.05044	4.16773	4.28664	4.40721	4.52951	4.65360	4.77955	4.90743
23.60	3.81590	3.92989	4.04538	4.16243	4.28108	4.40139	4.52341	4.64721	4.77285	4.90041
23.80	3.81132	3.92509	4.04035	4.15715	4.27555	4.39558	4.51733	4.64084	4.76618	4.89341
24.00	3.80674	3.92029	4.03532	4.15188	4.27003	4.38980	4.51127	4.63449	4.75952	4.88644
24.20	3.80219	3.91552	4.03032	4.14664	4.26453	4.38405	4.50525	4.62817	4.75291	4.87951
24.40	3.79765	3.91071	4.02534	4.14143	4.25906	4.37831	4.49924	4.62189	4.74632	4.87261
24.60	3.79313	3.90602	4.02037	4.13622	4.25361	4.37260	4.49326	4.61562	4.73976	4.86574
24.80	3.78862	3.90130	4.01542	4.13104	4.24818	4.36692	4.48730	4.60938	4.73323	4.85890
25.00	3.78413	3.89659	4.01049	4.12587	4.24277	4.36125	4.48136	4.60316	4.72672	4.85208
25.20	3.77965	3.89190	4.00558	4.12072	4.23738	4.35560	4.47545	4.59698	4.72024	4.84530
25.40	3.77519	3.88723	4.00068	4.11559	4.23201	4.34998	4.46957	4.59082	4.71379	4.83854
25.60	3.77075	3.88258	3.99580	4.11048	4.22666	4.34439	4.46371	4.58468	4.70736	4.83182
25.80	3.76632	3.87793	3.99094	4.10540	4.22133	4.33881	4.45787	4.57859	4.70097	4.82513
26.00	3.76190	3.87330	3.98610	4.10032	4.21602	4.33325	4.45205	4.57248	4.69460	4.81846
26.20	3.75750	3.86869	3.98126	4.09527	4.21073	4.32771	4.44625	4.56641	4.68825	4.81181
26.40	3.75311	3.86410	3.97645	4.09023	4.20546	4.32219	4.44049	4.56038	4.68193	4.80521
26.60	3.74874	3.85952	3.97167	4.08521	4.20021	4.31670	4.43474	4.55437	4.67564	4.79863
26.80	3.74438	3.85496	3.96689	4.08021	4.19498	4.31123	4.42901	4.54938	4.66938	4.79206
27.00	3.74003	3.85041	3.96212	4.07523	4.18976	4.30577	4.42330	4.54240	4.66313	4.78553
27.20	3.73561	3.84588	3.95738	4.07027	4.18457	4.30034	4.41762	4.53646	4.65691	4.77903
27.40	3.73130	3.84136	3.95265	4.06532	4.17940	4.29493	4.41196	4.53054	4.65072	4.77256
27.60	3.72700	3.83686	3.94795	4.06039	4.17424	4.28954	4.40632	4.52464	4.64456	4.76611
27.80	3.72272	3.83237	3.94325	4.05548	4.16910	4.28416	4.40070	4.51877	4.63841	4.75369
28.00	3.71844	3.82780	3.93857	4.05058	4.16398	4.27880	4.39509	4.51291	4.63229	4.75229
28.20	3.71419	3.82334	3.93390	4.04571	4.15888	4.27347	4.38953	4.50708	4.62619	4.74692
28.40	3.70994	3.81890	3.92926	4.04084	4.15380	4.26816	4.38397	4.50127	4.62013	4.74058
28.60	3.70572	3.81448	3.92463	4.03600	4.14873	4.26287	4.37844	4.49549	4.61408	4.73426
28.80	3.70149	3.81007	3.92001	4.03118	4.14369	4.25759	4.37292	4.48973	4.60806	4.72797
29.00	3.69729	3.80567	3.91530	4.02636	4.13865	4.25233	4.36742	4.48398	4.60206	4.72169
29.20	3.69310	3.80128	3.91072	4.02157	4.13364	4.24709	4.36195	4.47827	4.59609	4.71545
29.40	3.68892	3.79692	3.90616	4.01679	4.12865	4.24187	4.35650	4.47258	4.59013	4.70924
29.60	3.68476	3.79256	3.90160	4.01203	4.12367	4.23667	4.35106	4.46689	4.58420	4.70304
29.80	3.68061	3.78822	3.89706	4.00718	4.11872	4.23149	4.34565	4.46124	4.57830	4.69687
30.00	3.67647	3.78389	3.89253	4.00245	4.11378	4.22633	4.34026	4.45560	4.57241	4.69073

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF O2'
(LB/FT3)

TEMPERATURE (C)	5.00 (PSIG)	6.00 (PSIG)	7.00 (PSIG)	8.00 (PSIG)	9.00 (PSIG)	10.00 (PSIG)	11.00 (PSIG)	12.00 (PSIG)	13.00 (PSIG)	14.00 (PSIG)
20.00	0.11138	0.11704	0.12270	0.12836	0.13402	0.13968	0.14534	0.15101	0.15667	0.16233
20.20	0.11130	0.11696	0.12261	0.12827	0.13393	0.13958	0.14524	0.15090	0.15656	0.16222
20.40	0.11123	0.11688	0.12253	0.12818	0.13384	0.13949	0.14514	0.15080	0.15645	0.16211
20.60	0.11115	0.11680	0.12245	0.12809	0.13374	0.13939	0.14504	0.15070	0.15635	0.16200
20.80	0.11107	0.11672	0.12236	0.12801	0.13365	0.13930	0.14495	0.15059	0.15624	0.16189
21.00	0.11100	0.11664	0.12228	0.12792	0.13356	0.13920	0.14485	0.15049	0.15613	0.16178
21.20	0.11092	0.11656	0.12219	0.12783	0.13347	0.13911	0.14475	0.15039	0.15603	0.16167
21.40	0.11085	0.11648	0.12211	0.12774	0.13338	0.13901	0.14465	0.15028	0.15592	0.16156
21.60	0.11077	0.11640	0.12203	0.12766	0.13329	0.13892	0.14455	0.15018	0.15581	0.16145
21.80	0.11070	0.11632	0.12194	0.12757	0.13320	0.13882	0.14445	0.15008	0.15571	0.16134
22.00	0.11062	0.11624	0.12186	0.12748	0.13311	0.13873	0.14435	0.14998	0.15560	0.16123
22.20	0.11054	0.11616	0.12178	0.12740	0.13302	0.13863	0.14425	0.14987	0.15549	0.16112
22.40	0.11047	0.11608	0.12170	0.12731	0.13292	0.13854	0.14416	0.14977	0.15539	0.16101
22.60	0.11039	0.11600	0.12161	0.12722	0.13283	0.13845	0.14406	0.14967	0.15528	0.16090
22.80	0.11032	0.11592	0.12153	0.12714	0.13274	0.13835	0.14396	0.14957	0.15518	0.16079
23.00	0.11024	0.11585	0.12145	0.12705	0.13265	0.13826	0.14386	0.14947	0.15507	0.16068
23.20	0.11017	0.11577	0.12137	0.12696	0.13256	0.13816	0.14376	0.14937	0.15497	0.16057
23.40	0.11010	0.11569	0.12128	0.12688	0.13247	0.13807	0.14367	0.14926	0.15486	0.16046
23.60	0.11002	0.11561	0.12120	0.12679	0.13238	0.13798	0.14357	0.14916	0.15476	0.16035
23.80	0.10995	0.11553	0.12112	0.12671	0.13229	0.13788	0.14347	0.14906	0.15465	0.16024
24.00	0.10987	0.11545	0.12104	0.12662	0.13221	0.13779	0.14338	0.14896	0.15455	0.16013
24.20	0.10980	0.11538	0.12096	0.12654	0.13212	0.13770	0.14328	0.14886	0.15444	0.16003
24.40	0.10972	0.11530	0.12087	0.12645	0.13203	0.13760	0.14318	0.14876	0.15434	0.15992
24.60	0.10965	0.11522	0.12079	0.12636	0.13194	0.13751	0.14308	0.14866	0.15423	0.15981
24.80	0.10958	0.11514	0.12071	0.12628	0.13185	0.13742	0.14299	0.14856	0.15413	0.15970
25.00	0.10950	0.11507	0.12063	0.12619	0.13176	0.13733	0.14289	0.14846	0.15403	0.15959
25.20	0.10943	0.11499	0.12055	0.12611	0.13167	0.13723	0.14280	0.14836	0.15392	0.15949
25.40	0.10935	0.11491	0.12047	0.12602	0.13158	0.13714	0.14270	0.14826	0.15382	0.15938
25.60	0.10928	0.11483	0.12039	0.12594	0.13149	0.13705	0.14260	0.14816	0.15371	0.15927
25.80	0.10921	0.11476	0.12031	0.12585	0.13141	0.13696	0.14251	0.14806	0.15361	0.15916
26.00	0.10913	0.11468	0.12022	0.12577	0.13132	0.13686	0.14241	0.14796	0.15351	0.15906
26.20	0.10906	0.11460	0.12014	0.12569	0.13123	0.13677	0.14232	0.14786	0.15340	0.15895
26.40	0.10899	0.11453	0.12006	0.12560	0.13114	0.13668	0.14222	0.14776	0.15330	0.15884
26.60	0.10891	0.11445	0.11998	0.12552	0.13105	0.13659	0.14212	0.14766	0.15320	0.15874
26.80	0.10884	0.11437	0.11990	0.12543	0.13096	0.13650	0.14203	0.14756	0.15310	0.15863
27.00	0.10877	0.11430	0.11982	0.12535	0.13088	0.13640	0.14193	0.14746	0.15299	0.15852
27.20	0.10870	0.11422	0.11974	0.12527	0.13079	0.13631	0.14184	0.14736	0.15289	0.15842
27.40	0.10862	0.11414	0.11966	0.12518	0.13070	0.13622	0.14174	0.14727	0.15279	0.15831
27.60	0.10855	0.11407	0.11958	0.12510	0.13061	0.13613	0.14165	0.14717	0.15269	0.15820
27.80	0.10848	0.11399	0.11950	0.12501	0.13053	0.13604	0.14155	0.14707	0.15258	0.15810
28.00	0.10841	0.11391	0.11942	0.12493	0.13044	0.13595	0.14146	0.14697	0.15248	0.15799
28.20	0.10833	0.11384	0.11934	0.12485	0.13035	0.13586	0.14137	0.14687	0.15238	0.15789
28.40	0.10826	0.11376	0.11926	0.12476	0.13027	0.13577	0.14127	0.14677	0.15228	0.15778
28.60	0.10819	0.11369	0.11918	0.12468	0.13018	0.13568	0.14118	0.14668	0.15218	0.15768
28.80	0.10812	0.11361	0.11910	0.12460	0.13009	0.13559	0.14108	0.14658	0.15208	0.15757
29.00	0.10805	0.11354	0.11902	0.12452	0.13001	0.13550	0.14099	0.14648	0.15197	0.15747
29.20	0.10797	0.11346	0.11895	0.12443	0.12992	0.13541	0.14090	0.14638	0.15187	0.15736
29.40	0.10790	0.11338	0.11887	0.12435	0.12983	0.13532	0.14080	0.14629	0.15177	0.15726
29.60	0.10783	0.11331	0.11879	0.12427	0.12975	0.13523	0.14071	0.14619	0.15167	0.15715
29.80	0.10776	0.11323	0.11871	0.12419	0.12966	0.13514	0.14061	0.14609	0.15157	0.15705
30.00	0.10769	0.11316	0.11863	0.12410	0.12958	0.13505	0.14052	0.14600	0.15147	0.15694

*CALCULATED FROM THE BEATTIE-BRIGEMAN EQUATION

DENSITY OF O₂
(LB/FT³)

TEMPERATURE (C)	15.00 (PSIG)	16.00 (PSIG)	17.00 (PSIG)	18.00 (PSIG)	19.00 (PSIG)	20.00 (PSIG)	21.00 (PSIG)	22.00 (PSIG)	23.00 (PSIG)	24.00 (PSIG)
20.00	0.16800	0.17366	0.17933	0.18499	0.19066	0.19633	0.20200	0.20767	0.21333	0.21900
20.20	0.16788	0.17354	0.17921	0.18487	0.19053	0.19619	0.20186	0.20752	0.21319	0.21885
20.40	0.16777	0.17342	0.17908	0.18474	0.19040	0.19606	0.20172	0.20738	0.21304	0.21870
20.60	0.16765	0.17331	0.17896	0.18461	0.19027	0.19592	0.20158	0.20724	0.21289	0.21855
20.80	0.16754	0.17319	0.17884	0.18449	0.19014	0.19579	0.20144	0.20710	0.21275	0.21840
21.00	0.16742	0.17307	0.17871	0.18436	0.19001	0.19566	0.20130	0.20695	0.21260	0.21825
21.20	0.16731	0.17295	0.17859	0.18423	0.18988	0.19552	0.20117	0.20681	0.21246	0.21810
21.40	0.16719	0.17283	0.17847	0.18411	0.18975	0.19539	0.20103	0.20667	0.21231	0.21795
21.60	0.16708	0.17271	0.17835	0.18398	0.18962	0.19525	0.20089	0.20653	0.21217	0.21780
21.80	0.16697	0.17260	0.17823	0.18386	0.18949	0.19512	0.20075	0.20639	0.21202	0.21766
22.00	0.16685	0.17248	0.17810	0.18373	0.18936	0.19499	0.20062	0.20625	0.21188	0.21751
22.20	0.16674	0.17236	0.17798	0.18361	0.18923	0.19485	0.20048	0.20611	0.21173	0.21736
22.40	0.16662	0.17224	0.17786	0.18348	0.18910	0.19472	0.20034	0.20596	0.21159	0.21721
22.60	0.16651	0.17213	0.17774	0.18336	0.18897	0.19459	0.20021	0.20582	0.21144	0.21706
22.80	0.16640	0.17201	0.17762	0.18323	0.18884	0.19446	0.20007	0.20568	0.21130	0.21691
23.00	0.16628	0.17189	0.17750	0.18311	0.18872	0.19432	0.19993	0.20554	0.21115	0.21677
23.20	0.16617	0.17177	0.17738	0.18298	0.18859	0.19419	0.19980	0.20540	0.21101	0.21662
23.40	0.16606	0.17166	0.17726	0.18286	0.18846	0.19406	0.19966	0.20526	0.21087	0.21647
23.60	0.16595	0.17154	0.17714	0.18273	0.18833	0.19393	0.19953	0.20512	0.21072	0.21632
23.80	0.16583	0.17143	0.17702	0.18261	0.18820	0.19380	0.19939	0.20499	0.21058	0.21618
24.00	0.16572	0.17131	0.17690	0.18249	0.18808	0.19366	0.19926	0.20485	0.21044	0.21603
24.20	0.16561	0.17119	0.17678	0.18236	0.18795	0.19353	0.19912	0.20471	0.21029	0.21588
24.40	0.16550	0.17108	0.17666	0.18224	0.18782	0.19340	0.19899	0.20457	0.21015	0.21574
24.60	0.16538	0.17096	0.17654	0.18212	0.18769	0.19327	0.19885	0.20443	0.21001	0.21559
24.80	0.16527	0.17085	0.17642	0.18199	0.18757	0.19314	0.19872	0.20429	0.20987	0.21544
25.00	0.16516	0.17073	0.17630	0.18187	0.18744	0.19301	0.19858	0.20415	0.20973	0.21530
25.20	0.16505	0.17062	0.17618	0.18175	0.18731	0.19288	0.19845	0.20402	0.20958	0.21515
25.40	0.16494	0.17050	0.17606	0.18162	0.18719	0.19275	0.19831	0.20388	0.20944	0.21501
25.60	0.16483	0.17039	0.17594	0.18150	0.18706	0.19262	0.19818	0.20374	0.20930	0.21486
25.80	0.16472	0.17027	0.17582	0.18138	0.18693	0.19249	0.19805	0.20360	0.20916	0.21472
26.00	0.16461	0.17016	0.17571	0.18126	0.18681	0.19236	0.19791	0.20347	0.20902	0.21457
26.20	0.16449	0.17004	0.17559	0.18113	0.18668	0.19223	0.19778	0.20333	0.20888	0.21443
26.40	0.16438	0.16993	0.17547	0.18101	0.18656	0.19210	0.19765	0.20319	0.20874	0.21428
26.60	0.16427	0.16981	0.17535	0.18089	0.18643	0.19197	0.19751	0.20305	0.20860	0.21414
26.80	0.16416	0.16970	0.17523	0.18077	0.18631	0.19184	0.19738	0.20292	0.20846	0.21400
27.00	0.16405	0.16958	0.17512	0.18065	0.18618	0.19171	0.19725	0.20278	0.20832	0.21385
27.20	0.16394	0.16947	0.17500	0.18053	0.18606	0.19159	0.19712	0.20265	0.20818	0.21371
27.40	0.16383	0.16936	0.17488	0.18041	0.18593	0.19146	0.19698	0.20251	0.20804	0.21356
27.60	0.16372	0.16924	0.17476	0.18029	0.18581	0.19133	0.19685	0.20237	0.20790	0.21342
27.80	0.16361	0.16913	0.17465	0.18017	0.18568	0.19120	0.19672	0.20224	0.20776	0.21328
28.00	0.16351	0.16902	0.17453	0.18004	0.18556	0.19107	0.19659	0.20210	0.20762	0.21314
28.20	0.16340	0.16890	0.17441	0.17992	0.18543	0.19095	0.19646	0.20197	0.20748	0.21299
28.40	0.16329	0.16879	0.17430	0.17980	0.18531	0.19082	0.19633	0.20183	0.20734	0.21285
28.60	0.16318	0.16868	0.17418	0.17968	0.18519	0.19069	0.19619	0.20170	0.20720	0.21271
28.80	0.16307	0.16857	0.17407	0.17956	0.18506	0.19056	0.19606	0.20156	0.20706	0.21257
29.00	0.16296	0.16845	0.17395	0.17944	0.18494	0.19044	0.19593	0.20143	0.20693	0.21242
29.20	0.16285	0.16834	0.17383	0.17932	0.18482	0.19031	0.19580	0.20129	0.20679	0.21228
29.40	0.16274	0.16823	0.17372	0.17921	0.18469	0.19018	0.19567	0.20116	0.20665	0.21214
29.60	0.16264	0.16812	0.17360	0.17909	0.18457	0.19006	0.19554	0.20103	0.20651	0.21200
29.80	0.16253	0.16801	0.17349	0.17897	0.18445	0.18993	0.19541	0.20089	0.20638	0.21186
30.00	0.16242	0.16790	0.17337	0.17885	0.18433	0.18980	0.19528	0.20076	0.20624	0.21172

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF O2'
(LB/FT3)

TEMPERATURE (C)	25.00 (PSIG)	26.00 (PSIG)	27.00 (PSIG)	28.00 (PSIG)	29.00 (PSIG)	30.00 (PSIG)	31.00 (PSIG)	32.00 (PSIG)	33.00 (PSIG)	34.00 (PSIG)
20.00	0.22467	0.23034	0.23602	0.24169	0.24736	0.25303	0.25871	0.26438	0.27005	0.27573
20.20	0.22452	0.23019	0.23585	0.24152	0.24719	0.25286	0.25853	0.26420	0.26987	0.27554
20.40	0.22437	0.23003	0.23569	0.24136	0.24702	0.25268	0.25835	0.26402	0.26968	0.27535
20.60	0.22421	0.22987	0.23553	0.24119	0.24685	0.25251	0.25817	0.26383	0.26950	0.27516
20.80	0.22406	0.22971	0.23537	0.24102	0.24668	0.25234	0.25799	0.26365	0.26931	0.27497
21.00	0.22390	0.22955	0.23521	0.24086	0.24651	0.25216	0.25782	0.26347	0.26913	0.27478
21.20	0.22375	0.22940	0.23504	0.24069	0.24634	0.25199	0.25764	0.26329	0.26894	0.27459
21.40	0.22360	0.22924	0.23488	0.24053	0.24617	0.25182	0.25746	0.26311	0.26876	0.27440
21.60	0.22344	0.22908	0.23472	0.24036	0.24600	0.25164	0.25729	0.26293	0.26857	0.27422
21.80	0.22329	0.22893	0.23456	0.24020	0.24583	0.25147	0.25711	0.26275	0.26839	0.27403
22.00	0.22314	0.22877	0.23440	0.24003	0.24567	0.25130	0.25693	0.26257	0.26820	0.27384
22.20	0.22298	0.22861	0.23424	0.23987	0.24550	0.25113	0.25676	0.26239	0.26802	0.27365
22.40	0.22283	0.22846	0.23408	0.23971	0.24533	0.25096	0.25658	0.26221	0.26784	0.27347
22.60	0.22268	0.22830	0.23392	0.23954	0.24516	0.25079	0.25641	0.26203	0.26765	0.27328
22.80	0.22253	0.22814	0.23376	0.23938	0.24500	0.25061	0.25623	0.26185	0.26747	0.27309
23.00	0.22238	0.22799	0.23360	0.23921	0.24483	0.25044	0.25606	0.26167	0.26729	0.27290
23.20	0.22223	0.22783	0.23344	0.23905	0.24466	0.25027	0.25588	0.26149	0.26711	0.27272
23.40	0.22207	0.22768	0.23328	0.23889	0.24450	0.25010	0.25571	0.26132	0.26692	0.27253
23.60	0.22192	0.22752	0.23312	0.23873	0.24433	0.24993	0.25553	0.26114	0.26674	0.27235
23.80	0.22177	0.22737	0.23297	0.23856	0.24416	0.24976	0.25536	0.26096	0.26656	0.27216
24.00	0.22162	0.22721	0.23281	0.23840	0.24400	0.24959	0.25519	0.26078	0.26638	0.27198
24.20	0.22147	0.22706	0.23265	0.23824	0.24383	0.24942	0.25501	0.26061	0.26620	0.27179
24.40	0.22132	0.22691	0.23249	0.23808	0.24367	0.24925	0.25484	0.26043	0.26602	0.27161
24.60	0.22117	0.22675	0.23233	0.23792	0.24350	0.24908	0.25467	0.26025	0.26584	0.27142
24.80	0.22102	0.22660	0.23218	0.23776	0.24333	0.24891	0.25449	0.26008	0.26566	0.27124
25.00	0.22087	0.22645	0.23202	0.23759	0.24317	0.24875	0.25432	0.25990	0.26548	0.27105
25.20	0.22072	0.22629	0.23186	0.23743	0.24301	0.24858	0.25415	0.25972	0.26530	0.27087
25.40	0.22057	0.22614	0.23171	0.23727	0.24284	0.24841	0.25398	0.25955	0.26512	0.27069
25.60	0.22042	0.22599	0.23155	0.23711	0.24268	0.24824	0.25381	0.25937	0.26494	0.27050
25.80	0.22028	0.22583	0.23139	0.23695	0.24251	0.24807	0.25363	0.25920	0.26476	0.27032
26.00	0.22013	0.22568	0.23124	0.23679	0.24235	0.24791	0.25346	0.25902	0.26458	0.27014
26.20	0.21998	0.22553	0.23108	0.23663	0.24219	0.24774	0.25329	0.25885	0.26440	0.26996
26.40	0.21983	0.22538	0.23093	0.23647	0.24202	0.24757	0.25312	0.25867	0.26422	0.26977
26.60	0.21968	0.22523	0.23077	0.23631	0.24186	0.24740	0.25295	0.25850	0.26404	0.26959
26.80	0.21953	0.22507	0.23061	0.23616	0.24170	0.24724	0.25278	0.25832	0.26387	0.26941
27.00	0.21939	0.22492	0.23046	0.23600	0.24153	0.24707	0.25261	0.25815	0.26369	0.26923
27.20	0.21924	0.22477	0.23030	0.23584	0.24137	0.24691	0.25244	0.25798	0.26351	0.26905
27.40	0.21909	0.22462	0.23015	0.23568	0.24121	0.24674	0.25227	0.25780	0.26333	0.26887
27.60	0.21895	0.22447	0.23000	0.23552	0.24105	0.24657	0.25210	0.25763	0.26316	0.26869
27.80	0.21880	0.22432	0.22984	0.23536	0.24089	0.24641	0.25193	0.25746	0.26298	0.26850
28.00	0.21865	0.22417	0.22969	0.23521	0.24072	0.24624	0.25176	0.25728	0.26280	0.26832
28.20	0.21851	0.22402	0.22953	0.23505	0.24056	0.24608	0.25159	0.25711	0.26263	0.26814
28.40	0.21836	0.22387	0.22938	0.23489	0.24040	0.24591	0.25143	0.25694	0.26245	0.26796
28.60	0.21821	0.22372	0.22923	0.23473	0.24024	0.24575	0.25126	0.25677	0.26228	0.26779
28.80	0.21807	0.22357	0.22907	0.23458	0.24008	0.24558	0.25109	0.25659	0.26210	0.26761
29.00	0.21792	0.22342	0.22892	0.23442	0.23992	0.24542	0.25092	0.25642	0.26192	0.26743
29.20	0.21778	0.22327	0.22877	0.23426	0.23976	0.24526	0.25075	0.25625	0.26175	0.26725
29.40	0.21763	0.22312	0.22861	0.23411	0.23960	0.24509	0.25059	0.25608	0.26157	0.26707
29.60	0.21749	0.22297	0.22846	0.23395	0.23944	0.24493	0.25042	0.25591	0.26140	0.26689
29.80	0.21734	0.22283	0.22831	0.23379	0.23928	0.24477	0.25025	0.25574	0.26123	0.26671
30.00	0.21720	0.22268	0.22816	0.23364	0.23912	0.24460	0.25009	0.25557	0.26105	0.26654

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF O2'
(LB/FT3)

TEMPERATURE (C)	35.00 (PSIG)	36.00 (PSIG)	37.00 (PSIG)	38.00 (PSIG)	39.00 (PSIG)	40.00 (PSIG)	41.00 (PSIG)	42.00 (PSIG)	43.00 (PSIG)	44.00 (PSIG)
20.00	0.28141	0.28708	0.29276	0.29844	0.30411	0.30979	0.31547	0.32115	0.32683	0.33251
20.20	0.28121	0.28688	0.29256	0.29823	0.30390	0.30958	0.31525	0.32093	0.32660	0.33228
20.40	0.28102	0.28669	0.29235	0.29802	0.30369	0.30936	0.31504	0.32071	0.32638	0.33205
20.60	0.28082	0.28649	0.29215	0.29782	0.30348	0.30915	0.31482	0.32049	0.32615	0.33182
20.80	0.28063	0.28629	0.29195	0.29761	0.30328	0.30894	0.31460	0.32027	0.32593	0.33159
21.00	0.28044	0.28609	0.29175	0.29741	0.30307	0.30873	0.31438	0.32004	0.32570	0.33137
21.20	0.28025	0.28590	0.29155	0.29720	0.30286	0.30851	0.31417	0.31982	0.32548	0.33114
21.40	0.28005	0.28570	0.29135	0.29700	0.30265	0.30830	0.31395	0.31960	0.32526	0.33091
21.60	0.27986	0.28550	0.29115	0.29680	0.30244	0.30809	0.31374	0.31938	0.32503	0.33068
21.80	0.27967	0.28531	0.29095	0.29659	0.30223	0.30788	0.31352	0.31916	0.32481	0.33045
22.00	0.27948	0.28511	0.29075	0.29639	0.30203	0.30767	0.31331	0.31895	0.32459	0.33023
22.20	0.27929	0.28492	0.29055	0.29619	0.30182	0.30745	0.31309	0.31873	0.32436	0.33000
22.40	0.27909	0.28472	0.29035	0.29598	0.30161	0.30724	0.31288	0.31851	0.32414	0.32977
22.60	0.27890	0.28453	0.29015	0.29578	0.30141	0.30703	0.31266	0.31829	0.32392	0.32955
22.80	0.27871	0.28433	0.28996	0.29558	0.30120	0.30682	0.31245	0.31807	0.32370	0.32932
23.00	0.27852	0.28414	0.28976	0.29538	0.30099	0.30661	0.31223	0.31785	0.32348	0.32910
23.20	0.27833	0.28395	0.28956	0.29517	0.30079	0.30640	0.31202	0.31764	0.32325	0.32887
23.40	0.27814	0.28375	0.28936	0.29497	0.30058	0.30620	0.31181	0.31742	0.32303	0.32865
23.60	0.27795	0.28356	0.28916	0.29477	0.30038	0.30599	0.31159	0.31720	0.32281	0.32842
23.80	0.27776	0.28336	0.28897	0.29457	0.30017	0.30578	0.31138	0.31699	0.32259	0.32820
24.00	0.27757	0.28317	0.28877	0.29437	0.29997	0.30557	0.31117	0.31677	0.32237	0.32797
24.20	0.27739	0.28298	0.28857	0.29417	0.29976	0.30536	0.31096	0.31655	0.32215	0.32775
24.40	0.27720	0.28279	0.28838	0.29397	0.29956	0.30515	0.31075	0.31634	0.32193	0.32753
24.60	0.27701	0.28259	0.28818	0.29377	0.29936	0.30495	0.31053	0.31612	0.32171	0.32730
24.80	0.27682	0.28240	0.28799	0.29357	0.29915	0.30474	0.31032	0.31591	0.32150	0.32708
25.00	0.27663	0.28221	0.28779	0.29337	0.29895	0.30453	0.31011	0.31569	0.32128	0.32686
25.20	0.27644	0.28202	0.28760	0.29317	0.29875	0.30432	0.30990	0.31548	0.32106	0.32664
25.40	0.27626	0.28183	0.28740	0.29297	0.29855	0.30412	0.30969	0.31527	0.32084	0.32642
25.60	0.27607	0.28164	0.28721	0.29277	0.29834	0.30391	0.30948	0.31505	0.32062	0.32619
25.80	0.27588	0.28145	0.28701	0.29258	0.29814	0.30371	0.30927	0.31484	0.32041	0.32597
26.00	0.27570	0.28126	0.28682	0.29238	0.29794	0.30350	0.30906	0.31463	0.32019	0.32575
26.20	0.27551	0.28107	0.28662	0.29218	0.29774	0.30330	0.30885	0.31441	0.31997	0.32553
26.40	0.27532	0.28088	0.28643	0.29198	0.29754	0.30309	0.30864	0.31420	0.31976	0.32531
26.60	0.27514	0.28069	0.28624	0.29179	0.29734	0.30289	0.30844	0.31399	0.31954	0.32509
26.80	0.27495	0.28050	0.28604	0.29159	0.29714	0.30268	0.30823	0.31378	0.31932	0.32487
27.00	0.27477	0.28031	0.28585	0.29139	0.29693	0.30248	0.30802	0.31356	0.31911	0.32465
27.20	0.27458	0.28012	0.28566	0.29120	0.29673	0.30227	0.30781	0.31335	0.31889	0.32443
27.40	0.27440	0.27993	0.28547	0.29100	0.29653	0.30207	0.30761	0.31314	0.31868	0.32422
27.60	0.27421	0.27974	0.28527	0.29080	0.29634	0.30187	0.30740	0.31293	0.31846	0.32400
27.80	0.27403	0.27956	0.28508	0.29061	0.29614	0.30166	0.30719	0.31272	0.31825	0.32378
28.00	0.27385	0.27937	0.28489	0.29041	0.29594	0.30146	0.30698	0.31251	0.31803	0.32356
28.20	0.27366	0.27918	0.28470	0.29022	0.29574	0.30126	0.30678	0.31230	0.31782	0.32334
28.40	0.27348	0.27899	0.28451	0.29002	0.29554	0.30106	0.30657	0.31209	0.31761	0.32313
28.60	0.27330	0.27881	0.28432	0.28983	0.29534	0.30085	0.30637	0.31188	0.31740	0.32291
28.80	0.27311	0.27862	0.28413	0.28964	0.29514	0.30065	0.30616	0.31167	0.31718	0.32269
29.00	0.27293	0.27843	0.28394	0.28944	0.29495	0.30045	0.30596	0.31146	0.31697	0.32248
29.20	0.27275	0.27825	0.28375	0.28925	0.29475	0.30025	0.30575	0.31125	0.31676	0.32226
29.40	0.27257	0.27806	0.28356	0.28905	0.29455	0.30005	0.30555	0.31105	0.31654	0.32204
29.60	0.27238	0.27788	0.28337	0.28886	0.29435	0.29985	0.30534	0.31084	0.31633	0.32183
29.80	0.27220	0.27769	0.28318	0.28867	0.29416	0.29965	0.30514	0.31063	0.31612	0.32161
30.00	0.27202	0.27750	0.28299	0.28848	0.29396	0.29945	0.30494	0.31042	0.31591	0.32140

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF O₂¹
(LB/FT³)

TEMPERATURE (C)	100.00 (PSIG)	110.00 (PSIG)	120.00 (PSIG)	130.00 (PSIG)	140.00 (PSIG)	150.00 (PSIG)	160.00 (PSIG)	170.00 (PSIG)	180.00 (PSIG)	190.00 (PSIG)
20.00	0.65150	0.70865	0.76584	0.82309	0.88039	0.93775	0.99516	1.05262	1.11014	1.16770
20.20	0.65105	0.70815	0.76530	0.82251	0.87977	0.93709	0.99445	1.05187	1.10934	1.16687
20.40	0.65059	0.70765	0.76476	0.82193	0.87915	0.93642	0.99375	1.05112	1.10855	1.16603
20.60	0.65014	0.70715	0.76423	0.82135	0.87853	0.93576	0.99304	1.05038	1.10776	1.16520
20.80	0.64968	0.70666	0.76369	0.82077	0.87791	0.93510	0.99234	1.04963	1.10697	1.16437
21.00	0.64923	0.70616	0.76315	0.82020	0.87729	0.93444	0.99164	1.04889	1.10619	1.16354
21.20	0.64877	0.70567	0.76262	0.81962	0.87667	0.93378	0.99093	1.04814	1.10540	1.16271
21.40	0.64832	0.70518	0.76209	0.81904	0.87606	0.93312	0.99023	1.04740	1.10461	1.16188
21.60	0.64787	0.70468	0.76155	0.81847	0.87544	0.93246	0.98953	1.04666	1.10383	1.16105
21.80	0.64742	0.70419	0.76102	0.81790	0.87482	0.93180	0.98884	1.04592	1.10305	1.16023
22.00	0.64697	0.70370	0.76049	0.81732	0.87421	0.93115	0.98814	1.04518	1.10227	1.15940
22.20	0.64652	0.70321	0.75995	0.81675	0.87360	0.93049	0.98744	1.04444	1.10149	1.15858
22.40	0.64607	0.70272	0.75942	0.81618	0.87298	0.92984	0.98674	1.04370	1.10071	1.15776
22.60	0.64562	0.70223	0.75889	0.81561	0.87237	0.92919	0.98605	1.04296	1.09993	1.15694
22.80	0.64517	0.70174	0.75837	0.81504	0.87176	0.92853	0.98536	1.04223	1.09915	1.15612
23.00	0.64472	0.70126	0.75784	0.81447	0.87115	0.92788	0.98466	1.04149	1.09837	1.15530
23.20	0.64428	0.70077	0.75731	0.81390	0.87054	0.92723	0.98397	1.04076	1.09760	1.15448
23.40	0.64383	0.70028	0.75678	0.81333	0.86993	0.92658	0.98328	1.04003	1.09683	1.15367
23.60	0.64339	0.69980	0.75626	0.81277	0.86933	0.92593	0.98259	1.03930	1.09605	1.15286
23.80	0.64294	0.69931	0.75573	0.81220	0.86872	0.92529	0.98190	1.03857	1.09528	1.15204
24.00	0.64250	0.69883	0.75521	0.81164	0.86811	0.92464	0.98122	1.03784	1.09451	1.15123
24.20	0.64205	0.69834	0.75468	0.81107	0.86751	0.92399	0.98053	1.03711	1.09374	1.15042
24.40	0.64161	0.69786	0.75416	0.81051	0.86691	0.92335	0.97984	1.03638	1.09297	1.14961
24.60	0.64117	0.69738	0.75364	0.80995	0.86630	0.92271	0.97916	1.03566	1.09221	1.14880
24.80	0.64073	0.69690	0.75312	0.80938	0.86570	0.92206	0.97848	1.03493	1.09144	1.14799
25.00	0.64029	0.69642	0.75260	0.80882	0.86510	0.92142	0.97779	1.03421	1.09067	1.14719
25.20	0.63985	0.69594	0.75208	0.80826	0.86450	0.92078	0.97711	1.03349	1.08991	1.14638
25.40	0.63941	0.69546	0.75156	0.80770	0.86390	0.92014	0.97643	1.03277	1.08915	1.14558
25.60	0.63897	0.69498	0.75104	0.80715	0.86330	0.91950	0.97575	1.03204	1.08839	1.14478
25.80	0.63853	0.69450	0.75052	0.80659	0.86270	0.91886	0.97507	1.03133	1.08763	1.14397
26.00	0.63809	0.69402	0.75000	0.80603	0.86210	0.91823	0.97439	1.03061	1.08687	1.14317
26.20	0.63765	0.69355	0.74949	0.80547	0.86151	0.91759	0.97372	1.02989	1.08611	1.14237
26.40	0.63722	0.69307	0.74897	0.80492	0.86091	0.91695	0.97304	1.02917	1.08535	1.14157
26.60	0.63678	0.69259	0.74846	0.80436	0.86032	0.91632	0.97237	1.02846	1.08459	1.14078
26.80	0.63634	0.69212	0.74794	0.80381	0.85973	0.91569	0.97169	1.02774	1.08384	1.13998
27.00	0.63591	0.69164	0.74743	0.80326	0.85913	0.91505	0.97102	1.02703	1.08309	1.13919
27.20	0.63547	0.69117	0.74692	0.80270	0.85854	0.91442	0.97035	1.02632	1.08233	1.13839
27.40	0.63504	0.69070	0.74640	0.80215	0.85795	0.91379	0.96968	1.02561	1.08158	1.13760
27.60	0.63461	0.69023	0.74589	0.80160	0.85736	0.91316	0.96901	1.02490	1.08083	1.13681
27.80	0.63418	0.68976	0.74538	0.80105	0.85677	0.91253	0.96834	1.02419	1.08008	1.13602
28.00	0.63374	0.68928	0.74487	0.80050	0.85618	0.91190	0.96767	1.02348	1.07933	1.13523
28.20	0.63331	0.68881	0.74436	0.79996	0.85559	0.91127	0.96700	1.02277	1.07859	1.13444
28.40	0.63288	0.68835	0.74385	0.79941	0.85501	0.91065	0.96634	1.02207	1.07784	1.13366
28.60	0.63245	0.68788	0.74335	0.79886	0.85442	0.91002	0.96567	1.02136	1.07710	1.13287
28.80	0.63202	0.68741	0.74284	0.79831	0.85383	0.90940	0.96501	1.02066	1.07635	1.13209
29.00	0.63159	0.68694	0.74233	0.79777	0.85325	0.90877	0.96434	1.01995	1.07561	1.13130
29.20	0.63116	0.68647	0.74183	0.79723	0.85267	0.90815	0.96368	1.01925	1.07487	1.13052
29.40	0.63074	0.68601	0.74132	0.79668	0.85208	0.90753	0.96302	1.01855	1.07413	1.12974
29.60	0.63031	0.68554	0.74082	0.79614	0.85150	0.90691	0.96236	1.01785	1.07338	1.12896
29.80	0.62988	0.68508	0.74031	0.79560	0.85092	0.90629	0.96170	1.01715	1.07265	1.12818
30.00	0.62946	0.68461	0.73981	0.79505	0.85034	0.90567	0.96104	1.01645	1.07191	1.12740

¹ CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF O₂
(LB/FT³)

TEMPERATURE (C)	200.00 (PSIG)	210.00 (PSIG)	220.00 (PSIG)	230.00 (PSIG)	240.00 (PSIG)	250.00 (PSIG)	260.00 (PSIG)	270.00 (PSIG)	280.00 (PSIG)	290.00 (PSIG)
20.00	1.22532	1.28299	1.34071	1.39849	1.45631	1.51418	1.57211	1.63009	1.68811	1.74619
20.20	1.22444	1.28207	1.33975	1.39748	1.45526	1.51309	1.57097	1.62890	1.68686	1.74491
20.40	1.22357	1.28115	1.33879	1.39647	1.45421	1.51199	1.56983	1.62771	1.68565	1.74364
20.60	1.22269	1.28023	1.33782	1.39546	1.45315	1.51090	1.56869	1.62653	1.68442	1.74236
20.80	1.22182	1.27931	1.33686	1.39446	1.45211	1.50980	1.56755	1.62535	1.68320	1.74109
21.00	1.22094	1.27840	1.33590	1.39345	1.45106	1.50871	1.56641	1.62417	1.68197	1.73982
21.20	1.22007	1.27748	1.33494	1.39245	1.45001	1.50762	1.56528	1.62299	1.68075	1.73855
21.40	1.21920	1.27657	1.33399	1.39145	1.44897	1.50653	1.56415	1.62181	1.67952	1.73728
21.60	1.21833	1.27566	1.33303	1.39045	1.44793	1.50545	1.56302	1.62064	1.67831	1.73602
21.80	1.21746	1.27474	1.33208	1.38946	1.44689	1.50436	1.56189	1.61947	1.67709	1.73476
22.00	1.21659	1.27383	1.33112	1.38846	1.44584	1.50328	1.56076	1.61829	1.67587	1.73350
22.20	1.21573	1.27293	1.33017	1.38746	1.44481	1.50220	1.55964	1.61712	1.67466	1.73224
22.40	1.21486	1.27202	1.32922	1.38647	1.44377	1.50112	1.55851	1.61596	1.67345	1.73098
22.60	1.21400	1.27111	1.32827	1.38548	1.44274	1.50004	1.55733	1.61479	1.67224	1.72973
22.80	1.21314	1.27021	1.32733	1.38449	1.44170	1.49896	1.55627	1.61363	1.67103	1.72848
23.00	1.21228	1.26931	1.32638	1.38350	1.44067	1.49789	1.55515	1.61246	1.66982	1.72723
23.20	1.21142	1.26840	1.32544	1.38251	1.43964	1.49681	1.55404	1.61130	1.66862	1.72598
23.40	1.21056	1.26750	1.32449	1.38153	1.43861	1.49574	1.55292	1.61014	1.66742	1.72473
23.60	1.20971	1.26661	1.32355	1.38055	1.43758	1.49467	1.55181	1.60899	1.66621	1.72349
23.80	1.20885	1.26571	1.32261	1.37956	1.43656	1.49360	1.55069	1.60783	1.66502	1.72224
24.00	1.20800	1.26481	1.32167	1.37858	1.43554	1.49254	1.54958	1.60668	1.66382	1.72100
24.20	1.20714	1.26392	1.32074	1.37760	1.43451	1.49147	1.54848	1.60553	1.66262	1.71976
24.40	1.20629	1.26302	1.31980	1.37662	1.43349	1.49041	1.54737	1.60438	1.66143	1.71853
24.60	1.20544	1.26213	1.31886	1.37565	1.43247	1.48935	1.54625	1.60323	1.66024	1.71729
24.80	1.20459	1.26124	1.31793	1.37467	1.43145	1.48828	1.54515	1.60208	1.65905	1.71606
25.00	1.20374	1.26035	1.31700	1.37370	1.43044	1.48722	1.54406	1.60094	1.65786	1.71482
25.20	1.20290	1.25946	1.31607	1.37272	1.42942	1.48617	1.54296	1.59979	1.65667	1.71359
25.40	1.20205	1.25857	1.31514	1.37175	1.42841	1.48511	1.54186	1.59865	1.65549	1.71237
25.60	1.20121	1.25769	1.31421	1.37078	1.42740	1.48406	1.54076	1.59751	1.65430	1.71114
25.80	1.20037	1.25680	1.31329	1.36982	1.42639	1.48301	1.53967	1.59637	1.65312	1.70992
26.00	1.19952	1.25592	1.31236	1.36885	1.42538	1.48195	1.53857	1.59524	1.65194	1.70869
26.20	1.19868	1.25504	1.31144	1.36788	1.42437	1.48090	1.53748	1.59410	1.65077	1.70747
26.40	1.19784	1.25416	1.31052	1.36692	1.42336	1.47986	1.53639	1.59297	1.64959	1.70625
26.60	1.19701	1.25328	1.30960	1.36596	1.42236	1.47881	1.53530	1.59184	1.64842	1.70504
26.80	1.19617	1.25240	1.30868	1.36500	1.42136	1.47777	1.53422	1.59071	1.64725	1.70382
27.00	1.19533	1.25152	1.30776	1.36403	1.42036	1.47672	1.53313	1.58958	1.64607	1.70261
27.20	1.19450	1.25065	1.30684	1.36308	1.41936	1.47568	1.53204	1.58846	1.64490	1.70140
27.40	1.19367	1.24977	1.30593	1.36212	1.41836	1.47464	1.53096	1.58733	1.64374	1.70019
27.60	1.19283	1.24890	1.30501	1.36117	1.41736	1.47360	1.52989	1.58621	1.64257	1.69895
27.80	1.19200	1.24803	1.30410	1.36021	1.41637	1.47256	1.52880	1.58509	1.64143	1.69776
28.00	1.19117	1.24716	1.30319	1.35926	1.41537	1.47153	1.52773	1.58397	1.64025	1.69657
28.20	1.19034	1.24629	1.30228	1.35831	1.41438	1.47049	1.52665	1.58285	1.63909	1.69537
28.40	1.18952	1.24542	1.30137	1.35736	1.41339	1.46946	1.52554	1.58173	1.63793	1.69417
28.60	1.18869	1.24456	1.30046	1.35641	1.41240	1.46843	1.52450	1.58062	1.63677	1.69297
28.80	1.18787	1.24369	1.29956	1.35546	1.41141	1.46740	1.52343	1.57950	1.63562	1.69177
29.00	1.18704	1.24283	1.29865	1.35452	1.41042	1.46637	1.52236	1.57839	1.63446	1.69056
29.20	1.18622	1.24196	1.29775	1.35357	1.40944	1.46535	1.52129	1.57728	1.63331	1.68936
29.40	1.18540	1.24110	1.29684	1.35262	1.40845	1.46432	1.52021	1.57618	1.63216	1.68819
29.60	1.18458	1.24024	1.29594	1.35169	1.40747	1.46330	1.51916	1.57507	1.63102	1.68700
29.80	1.18376	1.23938	1.29505	1.35075	1.40649	1.46227	1.51813	1.57397	1.62987	1.68582
30.00	1.18294	1.23853	1.29415	1.34981	1.40551	1.46125	1.51704	1.57286	1.62873	1.68463

*CALCULATED FROM THE BEATTIE-SPIDGEMAN EQUATION

DENSITY OF O2
(LB/FT³)

TEMPERATURE (C)	300.00 (PSIG)	310.00 (PSIG)	320.00 (PSIG)	330.00 (PSIG)	340.00 (PSIG)	350.00 (PSIG)	360.00 (PSIG)	370.00 (PSIG)	380.00 (PSIG)	390.00 (PSIG)
20.00	1.80431	1.85249	1.92071	1.97998	2.01710	2.09567	2.15009	2.21255	2.27106	2.32962
20.20	1.80299	1.85112	1.91929	1.97752	2.01579	2.09411	2.15248	2.21090	2.26936	2.32787
20.40	1.80167	1.84975	1.91788	1.97606	2.01429	2.09256	2.15093	2.20925	2.26767	2.32613
20.60	1.80035	1.84839	1.91647	1.97461	2.01279	2.09101	2.14929	2.20761	2.26596	2.32440
20.80	1.79903	1.84702	1.91506	1.97315	2.01128	2.08947	2.14770	2.20597	2.26429	2.32266
21.00	1.79772	1.84566	1.91366	1.97170	2.02979	2.08792	2.14619	2.20433	2.26261	2.32093
21.20	1.79640	1.84431	1.91225	1.97025	2.02829	2.08643	2.14452	2.20270	2.26091	2.31920
21.40	1.79509	1.84295	1.91085	1.96880	2.02680	2.08494	2.14291	2.20107	2.25925	2.31747
21.60	1.79378	1.84159	1.90945	1.96736	2.02531	2.08310	2.14135	2.19944	2.25757	2.31575
21.80	1.79248	1.84024	1.90806	1.96591	2.02382	2.08177	2.13977	2.19781	2.25590	2.31403
22.00	1.79117	1.83889	1.90666	1.96447	2.02233	2.08024	2.13819	2.19619	2.25422	2.31231
22.20	1.79987	1.84754	1.90527	1.96303	2.02085	2.07871	2.13661	2.19454	2.25256	2.31060
22.40	1.78857	1.84620	1.90388	1.96160	2.01937	2.07718	2.13504	2.19294	2.25085	2.30889
22.60	1.78727	1.84485	1.90249	1.96017	2.01789	2.07565	2.13347	2.19133	2.24921	2.30716
22.80	1.78597	1.84351	1.90110	1.95873	2.01641	2.07411	2.13193	2.18971	2.24757	2.30547
23.00	1.78468	1.84217	1.89972	1.95710	2.01493	2.07261	2.13033	2.18810	2.24591	2.30376
23.20	1.78338	1.84084	1.89831	1.95568	2.01346	2.07109	2.12877	2.18645	2.24425	2.30206
23.40	1.78209	1.83950	1.89695	1.95425	2.01199	2.06954	2.12721	2.18496	2.24250	2.30036
23.60	1.78080	1.83817	1.89558	1.95283	2.01052	2.06807	2.12565	2.18324	2.24085	2.29867
23.80	1.77952	1.83683	1.89420	1.95141	2.00906	2.06656	2.12410	2.18154	2.23910	2.29694
24.00	1.77823	1.83551	1.89282	1.95019	2.00759	2.06505	2.12254	2.17977	2.23736	2.29520
24.20	1.77695	1.83418	1.89145	1.94877	2.00613	2.06354	2.12099	2.17808	2.23562	2.29346
24.40	1.77567	1.83285	1.89008	1.94736	2.00466	2.06204	2.11944	2.17649	2.23388	2.29171
24.60	1.77439	1.83153	1.88871	1.94594	2.00322	2.06053	2.11789	2.17489	2.23214	2.28997
24.80	1.77311	1.83021	1.88735	1.94454	2.00177	2.05903	2.11635	2.17327	2.23040	2.28823
25.00	1.77184	1.82889	1.88599	1.94313	2.00031	2.05752	2.11481	2.17171	2.22867	2.28649
25.20	1.77056	1.82757	1.88463	1.94172	1.99886	2.05605	2.11327	2.17014	2.22693	2.28475
25.40	1.76929	1.82626	1.88327	1.94032	1.99741	2.05454	2.11171	2.16854	2.22519	2.28301
25.60	1.76802	1.82494	1.88191	1.93892	1.99597	2.05304	2.11020	2.16697	2.22345	2.28126
25.80	1.76675	1.82363	1.88056	1.93752	1.99453	2.05154	2.10867	2.16540	2.22171	2.27952
26.00	1.76549	1.82232	1.87920	1.93612	1.99308	2.05004	2.10714	2.16382	2.21997	2.27778
26.20	1.76422	1.82102	1.87785	1.93473	1.99165	2.04850	2.10561	2.16225	2.21823	2.27604
26.40	1.76296	1.81971	1.87650	1.93334	1.99021	2.04701	2.10404	2.16068	2.21649	2.27430
26.60	1.76170	1.81841	1.87515	1.93195	1.98878	2.04546	2.10250	2.15912	2.21475	2.27256
26.80	1.76045	1.81711	1.87381	1.93056	1.98735	2.04417	2.10103	2.15765	2.21301	2.27082
27.00	1.75919	1.81581	1.87247	1.92917	1.98591	2.04270	2.09952	2.15515	2.21127	2.26908
27.20	1.75793	1.81451	1.87113	1.92779	1.98449	2.04121	2.09801	2.15361	2.20953	2.26734
27.40	1.75668	1.81321	1.86979	1.92641	1.98306	2.03976	2.09649	2.15207	2.20779	2.26560
27.60	1.75543	1.81192	1.86845	1.92503	1.98164	2.03829	2.09499	2.15052	2.20605	2.26386
27.80	1.75418	1.81063	1.86712	1.92365	1.98022	2.03681	2.09344	2.14898	2.20431	2.26212
28.00	1.75294	1.80934	1.86579	1.92227	1.97880	2.03536	2.09197	2.14741	2.20257	2.26038
28.20	1.75169	1.80805	1.86446	1.92090	1.97738	2.03390	2.09047	2.14584	2.20083	2.25864
28.40	1.75045	1.80677	1.86313	1.91953	1.97597	2.03244	2.08897	2.14427	2.20009	2.25690
28.60	1.74921	1.80548	1.86180	1.91816	1.97456	2.03099	2.08747	2.14270	2.20000	2.25516
28.80	1.74797	1.80420	1.86048	1.91679	1.97314	2.02954	2.08597	2.14113	2.20000	2.25342
29.00	1.74673	1.80292	1.85915	1.91543	1.97174	2.02804	2.08447	2.13956	2.20000	2.25168
29.20	1.74550	1.80164	1.85783	1.91406	1.97031	2.02661	2.08294	2.13800	2.20000	2.24994
29.40	1.74426	1.80037	1.85652	1.91270	1.96893	2.02519	2.08144	2.13643	2.20000	2.24820
29.60	1.74303	1.79909	1.85520	1.91134	1.96752	2.02374	2.08000	2.13487	2.20000	2.24646
29.80	1.74180	1.79782	1.85388	1.90999	1.96612	2.02228	2.07852	2.13330	2.20000	2.24472
30.00	1.74057	1.79655	1.85257	1.90863	1.96471	2.02086	2.07701	2.13174	2.20000	2.24298

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF O₂
(LB/FT³)

TEMPERATURE (C)	400.00 (PSIG)	410.00 (PSIG)	420.00 (PSIG)	430.00 (PSIG)	440.00 (PSIG)	450.00 (PSIG)	460.00 (PSIG)	470.00 (PSIG)	480.00 (PSIG)	490.00 (PSIG)
20.00	2.38822	2.44687	2.50556	2.56431	2.62309	2.68193	2.74081	2.79972	2.85869	2.91770
20.20	2.38643	2.44503	2.50368	2.56237	2.62111	2.67990	2.73872	2.79759	2.85651	2.91547
20.40	2.38464	2.44319	2.50180	2.56044	2.61913	2.67787	2.73664	2.79547	2.85433	2.91325
20.60	2.38286	2.44136	2.49992	2.55851	2.61715	2.67584	2.73457	2.79334	2.85216	2.91102
20.80	2.38108	2.43953	2.49804	2.55659	2.61518	2.67382	2.73250	2.79123	2.84999	2.90880
21.00	2.37930	2.43771	2.49616	2.55466	2.61321	2.67180	2.73043	2.78911	2.84783	2.90659
21.20	2.37752	2.43588	2.49429	2.55274	2.61124	2.66978	2.72837	2.78699	2.84566	2.90438
21.40	2.37574	2.43406	2.49242	2.55083	2.60928	2.66777	2.72631	2.78488	2.84350	2.90217
21.60	2.37398	2.43224	2.49056	2.54891	2.60732	2.66576	2.72425	2.78278	2.84135	2.89997
21.80	2.37221	2.43043	2.48869	2.54700	2.60536	2.66375	2.72219	2.78067	2.83920	2.89777
22.00	2.37044	2.42861	2.48683	2.54510	2.60340	2.66175	2.72014	2.77857	2.83705	2.89557
22.20	2.36868	2.42681	2.48498	2.54319	2.60145	2.65975	2.71809	2.77648	2.83490	2.89337
22.40	2.36692	2.42500	2.48313	2.54129	2.59950	2.65775	2.71605	2.77438	2.83276	2.89118
22.60	2.36516	2.42320	2.48128	2.53940	2.59756	2.65576	2.71401	2.77230	2.83063	2.88900
22.80	2.36341	2.42140	2.47943	2.53750	2.59561	2.65377	2.71197	2.77021	2.82849	2.88682
23.00	2.36166	2.41960	2.47758	2.53561	2.59367	2.65178	2.70994	2.76813	2.82636	2.88463
23.20	2.35991	2.41780	2.47574	2.53372	2.59174	2.64980	2.70790	2.76605	2.82423	2.88246
23.40	2.35817	2.41601	2.47390	2.53184	2.58981	2.64782	2.70588	2.76398	2.82211	2.88029
23.60	2.35643	2.41423	2.47207	2.52995	2.58788	2.64585	2.70385	2.76190	2.81999	2.87812
23.80	2.35469	2.41244	2.47024	2.52807	2.58595	2.64387	2.70183	2.75983	2.81787	2.87596
24.00	2.35295	2.41066	2.46840	2.52619	2.58403	2.64190	2.69981	2.75777	2.81576	2.87379
24.20	2.35122	2.40888	2.46658	2.52432	2.58211	2.63993	2.69780	2.75570	2.81365	2.87164
24.40	2.34948	2.40710	2.46476	2.52245	2.58019	2.63797	2.69579	2.75365	2.81155	2.86948
24.60	2.34775	2.40532	2.46293	2.52058	2.57827	2.63601	2.69378	2.75159	2.80944	2.86733
24.80	2.34603	2.40355	2.46111	2.51872	2.57636	2.63405	2.69178	2.74954	2.80734	2.86519
25.00	2.34431	2.40178	2.45930	2.51686	2.57446	2.63209	2.68977	2.74749	2.80524	2.86304
25.20	2.34259	2.40001	2.45748	2.51500	2.57255	2.63014	2.68777	2.74545	2.80315	2.86090
25.40	2.34087	2.39825	2.45568	2.51314	2.57065	2.62819	2.68578	2.74340	2.80106	2.85876
25.60	2.33915	2.39649	2.45387	2.51129	2.56875	2.62625	2.68379	2.74136	2.79898	2.85663
25.80	2.33744	2.39473	2.45207	2.50944	2.56686	2.62431	2.68180	2.73933	2.79690	2.85451
26.00	2.33573	2.39298	2.45026	2.50760	2.56496	2.62237	2.67981	2.73730	2.79482	2.85238
26.20	2.33402	2.39123	2.44847	2.50575	2.56307	2.62043	2.67783	2.73527	2.79274	2.85025
26.40	2.33232	2.38948	2.44667	2.50391	2.56118	2.61850	2.67585	2.73324	2.79067	2.84813
26.60	2.33062	2.38773	2.44488	2.50207	2.55930	2.61657	2.67388	2.73122	2.78860	2.84602
26.80	2.32892	2.38599	2.44309	2.50024	2.55742	2.61465	2.67190	2.72920	2.78654	2.84391
27.00	2.32722	2.38424	2.44130	2.49840	2.55554	2.61272	2.66993	2.72718	2.78447	2.84179
27.20	2.32553	2.38251	2.43952	2.49658	2.55367	2.61080	2.66796	2.72517	2.78241	2.83969
27.40	2.32384	2.38077	2.43774	2.49475	2.55180	2.60888	2.66600	2.72316	2.78036	2.83759
27.60	2.32215	2.37904	2.43596	2.49292	2.54993	2.60697	2.66404	2.72116	2.77831	2.83549
27.80	2.32046	2.37731	2.43419	2.49111	2.54806	2.60505	2.66209	2.71915	2.77626	2.83340
28.00	2.31878	2.37558	2.43241	2.48928	2.54620	2.60314	2.66013	2.71715	2.77421	2.83130
28.20	2.31710	2.37385	2.43065	2.48747	2.54434	2.60124	2.65818	2.71515	2.77217	2.82921
28.40	2.31542	2.37213	2.42888	2.48566	2.54248	2.59934	2.65621	2.71316	2.77013	2.82713
28.60	2.31375	2.37041	2.42711	2.48385	2.54063	2.59744	2.65429	2.71117	2.76809	2.82505
28.80	2.31207	2.36869	2.42535	2.48205	2.53878	2.59554	2.65235	2.70919	2.76606	2.82297
29.00	2.31040	2.36698	2.42359	2.48024	2.53693	2.59365	2.65041	2.70720	2.76403	2.82089
29.20	2.30874	2.36527	2.42183	2.47844	2.53508	2.59176	2.64847	2.70522	2.76200	2.81882
29.40	2.30707	2.36356	2.42008	2.47664	2.53324	2.58987	2.64654	2.70324	2.75998	2.81675
29.60	2.30541	2.36185	2.41833	2.47485	2.53140	2.58799	2.64461	2.70127	2.75796	2.81469
29.80	2.30375	2.36015	2.41658	2.47306	2.52956	2.58611	2.64269	2.69930	2.75594	2.81262
30.00	2.30209	2.35845	2.41484	2.47126	2.52773	2.58423	2.64076	2.69733	2.75393	2.81057

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF N2'
(LB/FT3)

TEMPERATURE (C)	5.00 (PSIG)	6.00 (PSIG)	7.00 (PSIG)	8.00 (PSIG)	9.00 (PSIG)	10.00 (PSIG)	11.00 (PSIG)	12.00 (PSIG)	13.00 (PSIG)	14.00 (PSIG)
20.00	0.09747	0.10242	0.10737	0.11232	0.11727	0.12222	0.12717	0.13212	0.13707	0.14202
20.20	0.09740	0.10235	0.10729	0.11224	0.11719	0.12213	0.12708	0.13203	0.13698	0.14192
20.40	0.09733	0.10228	0.10722	0.11216	0.11711	0.12205	0.12699	0.13194	0.13688	0.14183
20.60	0.09727	0.10221	0.10715	0.11209	0.11703	0.12197	0.12691	0.13185	0.13679	0.14173
20.80	0.09720	0.10214	0.10707	0.11201	0.11695	0.12188	0.12682	0.13176	0.13669	0.14163
21.00	0.09714	0.10207	0.10700	0.11193	0.11687	0.12180	0.12673	0.13167	0.13660	0.14154
21.20	0.09707	0.10200	0.10693	0.11186	0.11679	0.12172	0.12665	0.13158	0.13651	0.14144
21.40	0.09700	0.10193	0.10685	0.11178	0.11671	0.12163	0.12656	0.13149	0.13641	0.14134
21.60	0.09694	0.10186	0.10678	0.11170	0.11663	0.12155	0.12647	0.13140	0.13632	0.14125
21.80	0.09687	0.10179	0.10671	0.11163	0.11655	0.12147	0.12639	0.13131	0.13623	0.14115
22.00	0.09680	0.10172	0.10664	0.11155	0.11647	0.12139	0.12630	0.13122	0.13614	0.14105
22.20	0.09674	0.10165	0.10656	0.11148	0.11639	0.12130	0.12622	0.13113	0.13604	0.14096
22.40	0.09667	0.10158	0.10649	0.11140	0.11631	0.12122	0.12613	0.13104	0.13595	0.14086
22.60	0.09661	0.10151	0.10642	0.11133	0.11623	0.12114	0.12604	0.13095	0.13586	0.14077
22.80	0.09654	0.10144	0.10635	0.11125	0.11615	0.12106	0.12596	0.13086	0.13577	0.14067
23.00	0.09648	0.10138	0.10627	0.11117	0.11607	0.12097	0.12587	0.13077	0.13567	0.14057
23.20	0.09641	0.10131	0.10620	0.11110	0.11600	0.12089	0.12579	0.13068	0.13558	0.14048
23.40	0.09635	0.10124	0.10613	0.11102	0.11592	0.12081	0.12570	0.13060	0.13549	0.14038
23.60	0.09628	0.10117	0.10606	0.11095	0.11584	0.12073	0.12562	0.13051	0.13540	0.14029
23.80	0.09622	0.10110	0.10599	0.11087	0.11576	0.12065	0.12553	0.13042	0.13531	0.14019
24.00	0.09615	0.10103	0.10592	0.11080	0.11568	0.12056	0.12545	0.13033	0.13522	0.14010
24.20	0.09609	0.10097	0.10584	0.11072	0.11560	0.12048	0.12536	0.13024	0.13512	0.14000
24.40	0.09602	0.10090	0.10577	0.11065	0.11553	0.12040	0.12528	0.13016	0.13503	0.13991
24.60	0.09596	0.10083	0.10570	0.11057	0.11545	0.12032	0.12519	0.13007	0.13494	0.13982
24.80	0.09589	0.10076	0.10563	0.11050	0.11537	0.12024	0.12511	0.12998	0.13485	0.13972
25.00	0.09583	0.10069	0.10556	0.11043	0.11529	0.12016	0.12503	0.12989	0.13476	0.13963
25.20	0.09576	0.10063	0.10549	0.11035	0.11521	0.12008	0.12494	0.12980	0.13467	0.13953
25.40	0.09570	0.10056	0.10542	0.11028	0.11514	0.12000	0.12486	0.12972	0.13458	0.13944
25.60	0.09563	0.10049	0.10535	0.11020	0.11506	0.11992	0.12477	0.12963	0.13449	0.13934
25.80	0.09557	0.10042	0.10528	0.11013	0.11498	0.11984	0.12469	0.12954	0.13440	0.13925
26.00	0.09551	0.10036	0.10521	0.11006	0.11491	0.11976	0.12461	0.12946	0.13431	0.13916
26.20	0.09544	0.10029	0.10513	0.10998	0.11483	0.11967	0.12452	0.12937	0.13422	0.13906
26.40	0.09538	0.10022	0.10506	0.10991	0.11475	0.11959	0.12444	0.12928	0.13413	0.13897
26.60	0.09531	0.10015	0.10499	0.10983	0.11467	0.11951	0.12436	0.12920	0.13404	0.13888
26.80	0.09525	0.10009	0.10492	0.10976	0.11460	0.11943	0.12427	0.12911	0.13395	0.13878
27.00	0.09519	0.10002	0.10485	0.10969	0.11452	0.11935	0.12419	0.12902	0.13386	0.13869
27.20	0.09512	0.09995	0.10478	0.10961	0.11444	0.11927	0.12411	0.12894	0.13377	0.13860
27.40	0.09506	0.09989	0.10471	0.10954	0.11437	0.11920	0.12402	0.12885	0.13368	0.13851
27.60	0.09500	0.09982	0.10464	0.10947	0.11429	0.11912	0.12394	0.12876	0.13359	0.13841
27.80	0.09493	0.09975	0.10457	0.10939	0.11422	0.11904	0.12386	0.12868	0.13350	0.13832
28.00	0.09487	0.09969	0.10450	0.10932	0.11414	0.11896	0.12377	0.12859	0.13341	0.13823
28.20	0.09481	0.09962	0.10443	0.10925	0.11406	0.11888	0.12369	0.12851	0.13332	0.13814
28.40	0.09474	0.09955	0.10436	0.10918	0.11399	0.11880	0.12361	0.12842	0.13323	0.13804
28.60	0.09468	0.09949	0.10430	0.10910	0.11391	0.11872	0.12353	0.12834	0.13314	0.13795
28.80	0.09462	0.09942	0.10423	0.10903	0.11384	0.11864	0.12345	0.12825	0.13306	0.13786
29.00	0.09455	0.09936	0.10416	0.10896	0.11376	0.11856	0.12336	0.12816	0.13297	0.13777
29.20	0.09449	0.09929	0.10409	0.10889	0.11368	0.11848	0.12328	0.12808	0.13288	0.13768
29.40	0.09443	0.09922	0.10402	0.10881	0.11361	0.11840	0.12320	0.12799	0.13279	0.13759
29.60	0.09437	0.09916	0.10395	0.10874	0.11353	0.11833	0.12312	0.12791	0.13270	0.13749
29.80	0.09430	0.09909	0.10388	0.10867	0.11346	0.11825	0.12304	0.12783	0.13261	0.13740
30.00	0.09424	0.09903	0.10381	0.10860	0.11338	0.11817	0.12295	0.12774	0.13253	0.13731

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF N₂
(LB/FT³)

TEMPERATURE (C)	15.00 (PSIG)	16.00 (PSIG)	17.00 (PSIG)	18.00 (PSIG)	19.00 (PSIG)	20.00 (PSIG)	21.00 (PSIG)	22.00 (PSIG)	23.00 (PSIG)	24.00 (PSIG)
20.00	0.14697	0.15192	0.15688	0.16183	0.16678	0.17173	0.17668	0.18164	0.18659	0.19154
20.20	0.14687	0.15182	0.15677	0.16172	0.16666	0.17161	0.17656	0.18151	0.18646	0.19141
20.40	0.14677	0.15172	0.15666	0.16161	0.16655	0.17150	0.17644	0.18139	0.18633	0.19128
20.60	0.14667	0.15161	0.15655	0.16149	0.16644	0.17138	0.17632	0.18126	0.18621	0.19115
20.80	0.14657	0.15151	0.15645	0.16138	0.16632	0.17126	0.17620	0.18114	0.18608	0.19102
21.00	0.14647	0.15140	0.15634	0.16127	0.16621	0.17114	0.17608	0.18101	0.18595	0.19089
21.20	0.14637	0.15130	0.15623	0.16116	0.16609	0.17103	0.17596	0.18089	0.18582	0.19076
21.40	0.14627	0.15120	0.15613	0.16105	0.16598	0.17091	0.17584	0.18077	0.18570	0.19062
21.60	0.14617	0.15109	0.15602	0.16094	0.16587	0.17079	0.17572	0.18064	0.18557	0.19049
21.80	0.14607	0.15099	0.15591	0.16083	0.16575	0.17068	0.17560	0.18052	0.18544	0.19036
22.00	0.14597	0.15089	0.15581	0.16072	0.16564	0.17056	0.17548	0.18040	0.18532	0.19023
22.20	0.14587	0.15079	0.15570	0.16061	0.16553	0.17044	0.17536	0.18027	0.18519	0.19010
22.40	0.14577	0.15068	0.15559	0.16051	0.16542	0.17033	0.17524	0.18015	0.18506	0.18998
22.60	0.14567	0.15058	0.15549	0.16040	0.16530	0.17021	0.17512	0.18003	0.18494	0.18985
22.80	0.14557	0.15048	0.15538	0.16029	0.16519	0.17010	0.17500	0.17991	0.18481	0.18972
23.00	0.14548	0.15038	0.15528	0.16018	0.16508	0.16998	0.17488	0.17978	0.18469	0.18959
23.20	0.14538	0.15027	0.15517	0.16007	0.16497	0.16987	0.17476	0.17966	0.18456	0.18946
23.40	0.14528	0.15017	0.15507	0.15996	0.16486	0.16975	0.17464	0.17954	0.18443	0.18933
23.60	0.14518	0.15007	0.15496	0.15985	0.16474	0.16963	0.17453	0.17942	0.18431	0.18920
23.80	0.14508	0.14997	0.15486	0.15974	0.16463	0.16952	0.17441	0.17930	0.18419	0.18907
24.00	0.14498	0.14987	0.15475	0.15964	0.16452	0.16940	0.17429	0.17917	0.18406	0.18895
24.20	0.14488	0.14977	0.15465	0.15953	0.16441	0.16929	0.17417	0.17905	0.18394	0.18882
24.40	0.14479	0.14966	0.15454	0.15942	0.16430	0.16918	0.17405	0.17893	0.18381	0.18869
24.60	0.14469	0.14956	0.15444	0.15931	0.16419	0.16906	0.17394	0.17881	0.18369	0.18854
24.80	0.14459	0.14946	0.15433	0.15920	0.16408	0.16895	0.17382	0.17869	0.18356	0.18843
25.00	0.14449	0.14936	0.15423	0.15910	0.16397	0.16883	0.17370	0.17857	0.18344	0.18831
25.20	0.14440	0.14926	0.15413	0.15899	0.16385	0.16872	0.17358	0.17845	0.18331	0.18816
25.40	0.14430	0.14916	0.15402	0.15888	0.16374	0.16861	0.17347	0.17833	0.18319	0.18805
25.60	0.14420	0.14906	0.15392	0.15878	0.16363	0.16849	0.17335	0.17821	0.18307	0.18793
25.80	0.14411	0.14896	0.15381	0.15867	0.16352	0.16838	0.17323	0.17809	0.18294	0.18780
26.00	0.14401	0.14886	0.15371	0.15856	0.16341	0.16827	0.17312	0.17797	0.18282	0.18767
26.20	0.14391	0.14876	0.15361	0.15846	0.16330	0.16815	0.17300	0.17785	0.18270	0.18755
26.40	0.14382	0.14866	0.15350	0.15835	0.16319	0.16804	0.17288	0.17773	0.18258	0.18742
26.60	0.14372	0.14856	0.15340	0.15824	0.16308	0.16793	0.17277	0.17761	0.18245	0.18730
26.80	0.14362	0.14846	0.15330	0.15814	0.16298	0.16781	0.17265	0.17749	0.18233	0.18717
27.00	0.14353	0.14836	0.15320	0.15803	0.16287	0.16770	0.17254	0.17737	0.18221	0.18704
27.20	0.14343	0.14826	0.15309	0.15793	0.16276	0.16759	0.17242	0.17725	0.18209	0.18692
27.40	0.14333	0.14816	0.15299	0.15782	0.16265	0.16748	0.17231	0.17713	0.18196	0.18679
27.60	0.14324	0.14806	0.15289	0.15771	0.16254	0.16736	0.17219	0.17702	0.18184	0.18667
27.80	0.14314	0.14796	0.15279	0.15761	0.16243	0.16725	0.17208	0.17690	0.18172	0.18654
28.00	0.14305	0.14787	0.15268	0.15750	0.16232	0.16714	0.17196	0.17678	0.18160	0.18642
28.20	0.14295	0.14777	0.15258	0.15740	0.16221	0.16703	0.17185	0.17666	0.18148	0.18629
28.40	0.14286	0.14767	0.15248	0.15729	0.16211	0.16692	0.17173	0.17654	0.18136	0.18617
28.60	0.14276	0.14757	0.15238	0.15719	0.16200	0.16681	0.17162	0.17643	0.18124	0.18605
28.80	0.14267	0.14747	0.15228	0.15708	0.16189	0.16670	0.17150	0.17631	0.18112	0.18592
29.00	0.14257	0.14737	0.15218	0.15698	0.16178	0.16658	0.17139	0.17619	0.18099	0.18580
29.20	0.14248	0.14728	0.15208	0.15687	0.16167	0.16647	0.17127	0.17607	0.18087	0.18567
29.40	0.14238	0.14718	0.15197	0.15677	0.16157	0.16636	0.17116	0.17596	0.18075	0.18555
29.60	0.14229	0.14708	0.15187	0.15667	0.16146	0.16625	0.17105	0.17584	0.18063	0.18543
29.80	0.14219	0.14698	0.15177	0.15656	0.16135	0.16614	0.17093	0.17572	0.18051	0.18530
30.00	0.14210	0.14689	0.15167	0.15646	0.16125	0.16603	0.17082	0.17561	0.18039	0.18518

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF N₂
(LB/FT³)

TEMPERATURE (C)	25.00 (PSIG)	26.00 (PSIG)	27.00 (PSIG)	28.00 (PSIG)	29.00 (PSIG)	30.00 (PSIG)	31.00 (PSIG)	32.00 (PSIG)	33.00 (PSIG)	34.00 (PSIG)
20.00	0.19650	0.20145	0.20640	0.21136	0.21631	0.22126	0.22622	0.23117	0.23613	0.24108
20.20	0.19636	0.20131	0.20626	0.21121	0.21616	0.22111	0.22606	0.23101	0.23596	0.24092
20.40	0.19623	0.20117	0.20612	0.21107	0.21601	0.22096	0.22591	0.23085	0.23580	0.24075
20.60	0.19609	0.20103	0.20598	0.21092	0.21586	0.22081	0.22575	0.23070	0.23564	0.24058
20.80	0.19596	0.20090	0.20584	0.21078	0.21572	0.22066	0.22560	0.23054	0.23548	0.24042
21.00	0.19582	0.20076	0.20569	0.21063	0.21557	0.22051	0.22544	0.23038	0.23532	0.24026
21.20	0.19569	0.20062	0.20555	0.21049	0.21542	0.22035	0.22529	0.23022	0.23516	0.24009
21.40	0.19555	0.20048	0.20541	0.21034	0.21527	0.22020	0.22513	0.23006	0.23499	0.23993
21.60	0.19542	0.20035	0.20527	0.21020	0.21513	0.22005	0.22498	0.22991	0.23483	0.23976
21.80	0.19529	0.20021	0.20513	0.21006	0.21498	0.21990	0.22483	0.22975	0.23467	0.23960
22.00	0.19515	0.20007	0.20499	0.20991	0.21483	0.21975	0.22467	0.22959	0.23451	0.23943
22.20	0.19502	0.19994	0.20485	0.20977	0.21469	0.21960	0.22452	0.22944	0.23435	0.23927
22.40	0.19489	0.19980	0.20471	0.20963	0.21454	0.21945	0.22437	0.22928	0.23419	0.23911
22.60	0.19476	0.19966	0.20457	0.20948	0.21439	0.21930	0.22421	0.22912	0.23403	0.23894
22.80	0.19462	0.19953	0.20443	0.20934	0.21425	0.21915	0.22406	0.22897	0.23387	0.23878
23.00	0.19449	0.19939	0.20430	0.20920	0.21410	0.21900	0.22391	0.22881	0.23371	0.23862
23.20	0.19436	0.19926	0.20416	0.20906	0.21396	0.21885	0.22375	0.22865	0.23355	0.23846
23.40	0.19423	0.19912	0.20402	0.20891	0.21381	0.21871	0.22360	0.22850	0.23340	0.23830
23.60	0.19409	0.19899	0.20388	0.20877	0.21366	0.21856	0.22345	0.22834	0.23324	0.23813
23.80	0.19396	0.19885	0.20374	0.20863	0.21352	0.21841	0.22330	0.22819	0.23308	0.23797
24.00	0.19383	0.19872	0.20360	0.20849	0.21337	0.21826	0.22315	0.22803	0.23292	0.23781
24.20	0.19370	0.19858	0.20346	0.20835	0.21323	0.21811	0.22300	0.22788	0.23276	0.23765
24.40	0.19357	0.19845	0.20333	0.20821	0.21309	0.21797	0.22284	0.22772	0.23260	0.23749
24.60	0.19344	0.19831	0.20319	0.20807	0.21294	0.21782	0.22269	0.22757	0.23245	0.23732
24.80	0.19331	0.19818	0.20305	0.20792	0.21280	0.21767	0.22254	0.22742	0.23229	0.23716
25.00	0.19318	0.19805	0.20291	0.20778	0.21265	0.21752	0.22239	0.22726	0.23213	0.23700
25.20	0.19305	0.19791	0.20278	0.20764	0.21251	0.21738	0.22224	0.22711	0.23198	0.23684
25.40	0.19292	0.19778	0.20264	0.20750	0.21237	0.21723	0.22209	0.22696	0.23182	0.23668
25.60	0.19279	0.19764	0.20250	0.20736	0.21222	0.21708	0.22194	0.22680	0.23166	0.23652
25.80	0.19266	0.19751	0.20237	0.20722	0.21208	0.21694	0.22179	0.22665	0.23151	0.23636
26.00	0.19253	0.19738	0.20223	0.20708	0.21194	0.21679	0.22164	0.22650	0.23135	0.23620
26.20	0.19240	0.19725	0.20209	0.20694	0.21179	0.21664	0.22149	0.22634	0.23119	0.23604
26.40	0.19227	0.19711	0.20196	0.20681	0.21165	0.21650	0.22134	0.22619	0.23104	0.23589
26.60	0.19214	0.19698	0.20182	0.20667	0.21151	0.21635	0.22120	0.22604	0.23088	0.23573
26.80	0.19201	0.19685	0.20169	0.20653	0.21137	0.21621	0.22105	0.22589	0.23073	0.23557
27.00	0.19188	0.19672	0.20155	0.20639	0.21123	0.21606	0.22090	0.22574	0.23057	0.23541
27.20	0.19175	0.19658	0.20142	0.20625	0.21108	0.21592	0.22075	0.22558	0.23042	0.23525
27.40	0.19162	0.19645	0.20128	0.20611	0.21094	0.21577	0.22060	0.22543	0.23026	0.23509
27.60	0.19149	0.19632	0.20115	0.20597	0.21080	0.21563	0.22045	0.22528	0.23011	0.23494
27.80	0.19137	0.19619	0.20101	0.20584	0.21066	0.21548	0.22031	0.22513	0.22995	0.23478
28.00	0.19124	0.19606	0.20088	0.20570	0.21052	0.21534	0.22016	0.22498	0.22980	0.23462
28.20	0.19111	0.19593	0.20074	0.20556	0.21038	0.21520	0.22001	0.22483	0.22965	0.23446
28.40	0.19098	0.19580	0.20061	0.20542	0.21024	0.21505	0.21987	0.22468	0.22949	0.23431
28.60	0.19086	0.19567	0.20048	0.20529	0.21010	0.21491	0.21972	0.22453	0.22934	0.23415
28.80	0.19073	0.19554	0.20034	0.20515	0.20996	0.21476	0.21957	0.22438	0.22919	0.23400
29.00	0.19060	0.19540	0.20021	0.20501	0.20982	0.21462	0.21943	0.22423	0.22903	0.23384
29.20	0.19047	0.19527	0.20008	0.20488	0.20968	0.21448	0.21928	0.22408	0.22888	0.23368
29.40	0.19035	0.19514	0.19994	0.20474	0.20954	0.21434	0.21913	0.22393	0.22873	0.23351
29.60	0.19022	0.19502	0.19981	0.20460	0.20940	0.21419	0.21899	0.22378	0.22858	0.23334
29.80	0.19009	0.19489	0.19968	0.20447	0.20926	0.21405	0.21884	0.22363	0.22842	0.23322
30.00	0.18997	0.19476	0.19954	0.20433	0.20912	0.21391	0.21870	0.22348	0.22827	0.23306

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF N₂
(LB/FT³)

TEMPERATURE (C)	35.00 (PSIG)	36.00 (PSIG)	37.00 (PSIG)	38.00 (PSIG)	39.00 (PSIG)	40.00 (PSIG)	41.00 (PSIG)	42.00 (PSIG)	43.00 (PSIG)	44.00 (PSIG)
20.00	0.24604	0.25099	0.25595	0.26090	0.26586	0.27081	0.27577	0.28073	0.28568	0.29064
20.20	0.24597	0.25082	0.25577	0.26072	0.26568	0.27063	0.27558	0.28053	0.28549	0.29044
20.40	0.24570	0.25065	0.25559	0.26054	0.26549	0.27044	0.27539	0.28034	0.28529	0.29024
20.60	0.24553	0.25047	0.25542	0.26036	0.26531	0.27026	0.27520	0.28015	0.28509	0.29004
20.80	0.24536	0.25030	0.25524	0.26019	0.26513	0.27007	0.27501	0.27995	0.28490	0.28984
21.00	0.24519	0.25013	0.25507	0.26001	0.26495	0.26988	0.27482	0.27976	0.28470	0.28964
21.20	0.24502	0.24996	0.25489	0.25983	0.26476	0.26970	0.27463	0.27957	0.28451	0.28944
21.40	0.24486	0.24979	0.25472	0.25965	0.26458	0.26951	0.27445	0.27938	0.28431	0.28924
21.60	0.24469	0.24962	0.25454	0.25947	0.26440	0.26933	0.27426	0.27919	0.28412	0.28904
21.80	0.24452	0.24945	0.25437	0.25930	0.26422	0.26914	0.27407	0.27900	0.28392	0.28885
22.00	0.24435	0.24927	0.25420	0.25912	0.26404	0.26896	0.27388	0.27880	0.28373	0.28865
22.20	0.24419	0.24910	0.25402	0.25894	0.26386	0.26878	0.27369	0.27861	0.28353	0.28845
22.40	0.24402	0.24893	0.25385	0.25876	0.26368	0.26859	0.27351	0.27842	0.28334	0.28825
22.60	0.24385	0.24876	0.25368	0.25859	0.26350	0.26841	0.27332	0.27823	0.28314	0.28806
22.80	0.24369	0.24859	0.25350	0.25841	0.26332	0.26823	0.27313	0.27804	0.28295	0.28786
23.00	0.24352	0.24843	0.25333	0.25823	0.26314	0.26804	0.27295	0.27785	0.28276	0.28766
23.20	0.24336	0.24826	0.25316	0.25806	0.26296	0.26786	0.27276	0.27766	0.28257	0.28747
23.40	0.24319	0.24809	0.25298	0.25788	0.26278	0.26768	0.27258	0.27747	0.28237	0.28727
23.60	0.24302	0.24792	0.25281	0.25771	0.26260	0.26750	0.27239	0.27729	0.28218	0.28708
23.80	0.24286	0.24775	0.25264	0.25753	0.26242	0.26731	0.27221	0.27710	0.28199	0.28688
24.00	0.24269	0.24758	0.25247	0.25736	0.26224	0.26713	0.27202	0.27691	0.28180	0.28669
24.20	0.24253	0.24741	0.25230	0.25718	0.26207	0.26695	0.27184	0.27672	0.28161	0.28649
24.40	0.24237	0.24725	0.25213	0.25701	0.26189	0.26677	0.27165	0.27653	0.28141	0.28630
24.60	0.24220	0.24708	0.25196	0.25683	0.26171	0.26659	0.27147	0.27634	0.28122	0.28610
24.80	0.24204	0.24691	0.25178	0.25666	0.26153	0.26641	0.27128	0.27616	0.28103	0.28591
25.00	0.24187	0.24674	0.25161	0.25649	0.26136	0.26623	0.27110	0.27597	0.28084	0.28571
25.20	0.24171	0.24658	0.25144	0.25631	0.26118	0.26605	0.27092	0.27578	0.28065	0.28552
25.40	0.24155	0.24641	0.25127	0.25614	0.26100	0.26587	0.27073	0.27560	0.28046	0.28533
25.60	0.24138	0.24624	0.25110	0.25597	0.26083	0.26569	0.27055	0.27541	0.28027	0.28513
25.80	0.24122	0.24608	0.25094	0.25579	0.26065	0.26551	0.27037	0.27522	0.28008	0.28494
26.00	0.24106	0.24591	0.25077	0.25562	0.26047	0.26533	0.27018	0.27504	0.27989	0.28475
26.20	0.24090	0.24575	0.25060	0.25545	0.26030	0.26515	0.27000	0.27485	0.27970	0.28456
26.40	0.24073	0.24558	0.25043	0.25528	0.26012	0.26497	0.26982	0.27467	0.27952	0.28436
26.60	0.24057	0.24542	0.25026	0.25510	0.25995	0.26479	0.26964	0.27448	0.27933	0.28417
26.80	0.24041	0.24525	0.25009	0.25493	0.25977	0.26461	0.26946	0.27430	0.27914	0.28398
27.00	0.24025	0.24509	0.24992	0.25476	0.25960	0.26444	0.26927	0.27411	0.27895	0.28379
27.20	0.24009	0.24492	0.24975	0.25459	0.25942	0.26426	0.26909	0.27393	0.27876	0.28360
27.40	0.23993	0.24476	0.24959	0.25442	0.25925	0.26408	0.26891	0.27374	0.27858	0.28341
27.60	0.23976	0.24459	0.24942	0.25425	0.25908	0.26390	0.26873	0.27356	0.27839	0.28322
27.80	0.23960	0.24443	0.24925	0.25408	0.25890	0.26373	0.26855	0.27338	0.27820	0.28303
28.00	0.23944	0.24426	0.24909	0.25391	0.25873	0.26355	0.26837	0.27319	0.27802	0.28284
28.20	0.23928	0.24410	0.24892	0.25374	0.25855	0.26337	0.26819	0.27301	0.27783	0.28265
28.40	0.23912	0.24394	0.24875	0.25357	0.25838	0.26320	0.26801	0.27283	0.27764	0.28246
28.60	0.23896	0.24377	0.24859	0.25340	0.25821	0.26302	0.26783	0.27265	0.27746	0.28227
28.80	0.23880	0.24361	0.24842	0.25323	0.25804	0.26285	0.26765	0.27246	0.27727	0.28208
29.00	0.23864	0.24345	0.24825	0.25306	0.25786	0.26267	0.26747	0.27228	0.27709	0.28189
29.20	0.23848	0.24329	0.24809	0.25289	0.25769	0.26249	0.26730	0.27210	0.27690	0.28170
29.40	0.23833	0.24312	0.24792	0.25272	0.25752	0.26232	0.26712	0.27192	0.27672	0.28152
29.60	0.23817	0.24296	0.24776	0.25255	0.25735	0.26214	0.26694	0.27174	0.27653	0.28133
29.80	0.23801	0.24280	0.24759	0.25238	0.25718	0.26197	0.26676	0.27155	0.27635	0.28114
30.00	0.23785	0.24264	0.24743	0.25222	0.25701	0.26179	0.26658	0.27137	0.27616	0.28095

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF N₂^{*}
(LB/FT³)

TEMPERATURE (C)	100.00 (PSIG)	110.00 (PSIG)	120.00 (PSIG)	130.00 (PSIG)	140.00 (PSIG)	150.00 (PSIG)	160.00 (PSIG)	170.00 (PSIG)	180.00 (PSIG)	190.00 (PSIG)
20.00	0.56847	0.61814	0.66782	0.71752	0.76723	0.81695	0.86669	0.91644	0.96620	1.01597
20.20	0.56808	0.61771	0.66736	0.71702	0.76669	0.81638	0.86608	0.91579	0.96552	1.01525
20.40	0.56768	0.61728	0.66689	0.71651	0.76615	0.81580	0.86547	0.91515	0.96484	1.01454
20.60	0.56729	0.61685	0.66642	0.71601	0.76562	0.81523	0.86486	0.91450	0.96416	1.01382
20.80	0.56690	0.61642	0.66596	0.71551	0.76508	0.81466	0.86425	0.91386	0.96348	1.01310
21.00	0.56650	0.61599	0.66549	0.71501	0.76454	0.81409	0.86365	0.91322	0.96280	1.01239
21.20	0.56611	0.61556	0.66503	0.71451	0.76401	0.81352	0.86304	0.91257	0.96212	1.01168
21.40	0.56572	0.61513	0.66457	0.71402	0.76348	0.81295	0.86244	0.91193	0.96144	1.01096
21.60	0.56532	0.61471	0.66411	0.71352	0.76294	0.81238	0.86183	0.91129	0.96077	1.01025
21.80	0.56493	0.61428	0.66365	0.71302	0.76241	0.81181	0.86123	0.91066	0.96009	1.00954
22.00	0.56454	0.61386	0.66318	0.71253	0.76188	0.81125	0.86063	0.91002	0.95942	1.00883
22.20	0.56415	0.61343	0.66272	0.71203	0.76135	0.81068	0.86003	0.90938	0.95875	1.00812
22.40	0.56376	0.61301	0.66226	0.71154	0.76082	0.81012	0.85942	0.90874	0.95807	1.00741
22.60	0.56337	0.61258	0.66181	0.71104	0.76029	0.80955	0.85883	0.90811	0.95740	1.00671
22.80	0.56298	0.61216	0.66135	0.71055	0.75976	0.80899	0.85823	0.90748	0.95673	1.00600
23.00	0.56259	0.61174	0.66089	0.71006	0.75924	0.80843	0.85763	0.90684	0.95607	1.00530
23.20	0.56221	0.61131	0.66043	0.70957	0.75871	0.80786	0.85703	0.90621	0.95540	1.00459
23.40	0.56182	0.61089	0.65998	0.70907	0.75818	0.80730	0.85643	0.90558	0.95473	1.00389
23.60	0.56143	0.61047	0.65952	0.70858	0.75766	0.80674	0.85584	0.90495	0.95407	1.00319
23.80	0.56105	0.61005	0.65907	0.70809	0.75713	0.80618	0.85525	0.90432	0.95340	1.00249
24.00	0.56066	0.60963	0.65861	0.70760	0.75661	0.80562	0.85465	0.90369	0.95274	1.00179
24.20	0.56028	0.60921	0.65816	0.70712	0.75609	0.80507	0.85406	0.90306	0.95207	1.00109
24.40	0.55989	0.60879	0.65771	0.70663	0.75556	0.80451	0.85347	0.90243	0.95141	1.00040
24.60	0.55951	0.60838	0.65725	0.70614	0.75504	0.80395	0.85288	0.90181	0.95075	0.99970
24.80	0.55913	0.60796	0.65680	0.70566	0.75452	0.80340	0.85229	0.90118	0.95009	0.99900
25.00	0.55874	0.60754	0.65635	0.70517	0.75400	0.80284	0.85170	0.90056	0.94943	0.99831
25.20	0.55836	0.60712	0.65590	0.70469	0.75348	0.80229	0.85111	0.89994	0.94877	0.99762
25.40	0.55798	0.60671	0.65545	0.70420	0.75296	0.80174	0.85052	0.89931	0.94811	0.99692
25.60	0.55760	0.60629	0.65500	0.70372	0.75245	0.80118	0.84993	0.89869	0.94746	0.99623
25.80	0.55722	0.60588	0.65455	0.70324	0.75193	0.80063	0.84935	0.89807	0.94680	0.99554
26.00	0.55684	0.60547	0.65410	0.70275	0.75141	0.80008	0.84876	0.89745	0.94615	0.99485
26.20	0.55646	0.60505	0.65366	0.70227	0.75090	0.79953	0.84818	0.89683	0.94549	0.99417
26.40	0.55608	0.60464	0.65321	0.70179	0.75038	0.79898	0.84759	0.89621	0.94484	0.99348
26.60	0.55570	0.60423	0.65276	0.70131	0.74987	0.79844	0.84701	0.89560	0.94419	0.99279
26.80	0.55532	0.60382	0.65232	0.70083	0.74936	0.79789	0.84643	0.89498	0.94354	0.99211
27.00	0.55494	0.60340	0.65187	0.70035	0.74884	0.79734	0.84585	0.89436	0.94289	0.99142
27.20	0.55457	0.60299	0.65143	0.69987	0.74833	0.79679	0.84527	0.89375	0.94224	0.99074
27.40	0.55419	0.60258	0.65099	0.69940	0.74782	0.79625	0.84469	0.89314	0.94159	0.99006
27.60	0.55382	0.60217	0.65054	0.69892	0.74731	0.79570	0.84411	0.89252	0.94095	0.98937
27.80	0.55344	0.60177	0.65010	0.69844	0.74680	0.79516	0.84353	0.89191	0.94030	0.98869
28.00	0.55307	0.60136	0.64966	0.69797	0.74629	0.79462	0.84295	0.89130	0.93965	0.98801
28.20	0.55269	0.60095	0.64922	0.69749	0.74578	0.79408	0.84238	0.89069	0.93901	0.98734
28.40	0.55232	0.60054	0.64878	0.69702	0.74527	0.79353	0.84180	0.89008	0.93837	0.98666
28.60	0.55194	0.60014	0.64834	0.69655	0.74477	0.79299	0.84123	0.88947	0.93772	0.98598
28.80	0.55157	0.59973	0.64790	0.69607	0.74426	0.79245	0.84065	0.88887	0.93708	0.98531
29.00	0.55120	0.59932	0.64746	0.69560	0.74375	0.79191	0.84008	0.88826	0.93644	0.98463
29.20	0.55083	0.59892	0.64702	0.69513	0.74325	0.79138	0.83951	0.88765	0.93580	0.98396
29.40	0.55046	0.59852	0.64658	0.69466	0.74274	0.79084	0.83894	0.88705	0.93515	0.98328
29.60	0.55009	0.59811	0.64615	0.69419	0.74224	0.79030	0.83837	0.88644	0.93452	0.98261
29.80	0.54972	0.59771	0.64571	0.69372	0.74174	0.78976	0.83780	0.88584	0.93389	0.98194
30.00	0.54935	0.59731	0.64527	0.69325	0.74124	0.78923	0.83723	0.88524	0.93325	0.98127

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF N₂
(LB/FT³)

TEMPERATURE (C)	200.00 (PSIG)	210.00 (PSIG)	220.00 (PSIG)	230.00 (PSIG)	240.00 (PSIG)	250.00 (PSIG)	260.00 (PSIG)	270.00 (PSIG)	280.00 (PSIG)	290.00 (PSIG)
20.00	1.06576	1.11556	1.16536	1.21518	1.26501	1.31485	1.36469	1.41455	1.46441	1.51428
20.20	1.06500	1.11476	1.16454	1.21432	1.26411	1.31391	1.36372	1.41353	1.46336	1.51320
20.40	1.06425	1.11397	1.16371	1.21345	1.26320	1.31297	1.36274	1.41252	1.46231	1.51211
20.60	1.06349	1.11318	1.16288	1.21259	1.26230	1.31203	1.36177	1.41151	1.46126	1.51102
20.80	1.06274	1.11240	1.16206	1.21173	1.26141	1.31110	1.36079	1.41050	1.46022	1.50994
21.00	1.06199	1.11161	1.16123	1.21086	1.26051	1.31016	1.35982	1.40949	1.45917	1.50885
21.20	1.06124	1.11082	1.16041	1.21001	1.25961	1.30923	1.35885	1.40848	1.45812	1.50777
21.40	1.06049	1.11004	1.15959	1.20915	1.25872	1.30830	1.35788	1.40748	1.45708	1.50669
21.60	1.05974	1.10925	1.15877	1.20825	1.25782	1.30736	1.35692	1.40648	1.45604	1.50561
21.80	1.05900	1.10847	1.15795	1.20743	1.25693	1.30644	1.35595	1.40547	1.45500	1.50454
22.00	1.05825	1.10769	1.15713	1.20658	1.25604	1.30551	1.35499	1.40447	1.45396	1.50346
22.20	1.05751	1.10691	1.15631	1.20573	1.25515	1.30458	1.35402	1.40347	1.45293	1.50239
22.40	1.05676	1.10613	1.15550	1.20488	1.25426	1.30366	1.35306	1.40247	1.45189	1.50132
22.60	1.05602	1.10535	1.15468	1.20403	1.25338	1.30274	1.35210	1.40148	1.45086	1.50025
22.80	1.05528	1.10457	1.15387	1.20318	1.25249	1.30182	1.35114	1.40048	1.44983	1.49918
23.00	1.05454	1.10380	1.15306	1.20233	1.25161	1.30089	1.35019	1.39949	1.44880	1.49811
23.20	1.05380	1.10302	1.15225	1.20148	1.25072	1.29997	1.34923	1.39850	1.44777	1.49704
23.40	1.05306	1.10225	1.15144	1.20063	1.24984	1.29906	1.34828	1.39751	1.44674	1.49598
23.60	1.05233	1.10147	1.15063	1.19979	1.24896	1.29814	1.34732	1.39652	1.44571	1.49492
23.80	1.05159	1.10070	1.14982	1.19895	1.24808	1.29722	1.34637	1.39553	1.44469	1.49386
24.00	1.05086	1.09993	1.14901	1.19810	1.24720	1.29631	1.34542	1.39454	1.44367	1.49280
24.20	1.05012	1.09916	1.14821	1.19726	1.24633	1.29540	1.34447	1.39356	1.44265	1.49174
24.40	1.04939	1.09840	1.14741	1.19643	1.24545	1.29449	1.34353	1.39257	1.44163	1.49069
24.60	1.04866	1.09763	1.14660	1.19559	1.24458	1.29358	1.34258	1.39159	1.44061	1.48963
24.80	1.04793	1.09686	1.14580	1.19475	1.24371	1.29267	1.34164	1.39061	1.43959	1.48858
25.00	1.04720	1.09610	1.14500	1.19391	1.24283	1.29176	1.34069	1.38963	1.43858	1.48752
25.20	1.04647	1.09533	1.14420	1.19308	1.24196	1.29085	1.33975	1.38866	1.43756	1.48648
25.40	1.04574	1.09457	1.14340	1.19225	1.24109	1.28995	1.33881	1.38768	1.43655	1.48543
25.60	1.04502	1.09381	1.14261	1.19141	1.24023	1.28905	1.33787	1.38670	1.43554	1.48438
25.80	1.04429	1.09305	1.14181	1.19058	1.23936	1.28815	1.33694	1.38573	1.43453	1.48334
26.00	1.04357	1.09229	1.14102	1.18975	1.23850	1.28724	1.33600	1.38476	1.43352	1.48229
26.20	1.04284	1.09153	1.14023	1.18892	1.23763	1.28634	1.33506	1.38379	1.43252	1.48125
26.40	1.04212	1.09077	1.13943	1.18810	1.23677	1.28545	1.33413	1.38282	1.43151	1.48021
26.60	1.04140	1.09002	1.13864	1.18727	1.23591	1.28455	1.33320	1.38185	1.43051	1.47917
26.80	1.04068	1.08926	1.13785	1.18645	1.23505	1.28366	1.33227	1.38089	1.42951	1.47813
27.00	1.03996	1.08851	1.13706	1.18562	1.23419	1.28276	1.33134	1.37992	1.42851	1.47710
27.20	1.03924	1.08776	1.13628	1.18480	1.23333	1.28187	1.33041	1.37896	1.42751	1.47606
27.40	1.03853	1.08700	1.13549	1.18398	1.23247	1.28098	1.32948	1.37800	1.42651	1.47503
27.60	1.03781	1.08625	1.13470	1.18316	1.23162	1.28009	1.32856	1.37704	1.42552	1.47400
27.80	1.03710	1.08550	1.13392	1.18234	1.23077	1.27920	1.32763	1.37608	1.42452	1.47297
28.00	1.03638	1.08476	1.13313	1.18152	1.22991	1.27831	1.32671	1.37512	1.42353	1.47194
28.20	1.03567	1.08401	1.13235	1.18070	1.22906	1.27742	1.32579	1.37416	1.42254	1.47091
28.40	1.03496	1.08326	1.13157	1.17989	1.22821	1.27654	1.32487	1.37321	1.42155	1.46989
28.60	1.03425	1.08252	1.13079	1.17908	1.22736	1.27565	1.32395	1.37225	1.42056	1.46887
28.80	1.03354	1.08177	1.13002	1.17826	1.22651	1.27477	1.32303	1.37130	1.41957	1.46784
29.00	1.03283	1.08103	1.12924	1.17745	1.22567	1.27389	1.32212	1.37035	1.41858	1.46682
29.20	1.03212	1.08029	1.12846	1.17664	1.22482	1.27301	1.32120	1.36940	1.41760	1.46580
29.40	1.03141	1.07955	1.12769	1.17583	1.22398	1.27213	1.32029	1.36845	1.41662	1.46478
29.60	1.03071	1.07880	1.12691	1.17502	1.22314	1.27126	1.31938	1.36751	1.41564	1.46377
29.80	1.03000	1.07807	1.12614	1.17421	1.22229	1.27038	1.31847	1.36656	1.41466	1.46275
30.00	1.02930	1.07733	1.12537	1.17341	1.22145	1.26950	1.31756	1.36562	1.41368	1.46174

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF N2'
(LB/FT3)

TEMPERATURE (C)	300.00 (PSIG)	310.00 (PSIG)	320.00 (PSIG)	330.00 (PSIG)	340.00 (PSIG)	350.00 (PSIG)	360.00 (PSIG)	370.00 (PSIG)	380.00 (PSIG)	390.00 (PSIG)
20.00	1.56416	1.61405	1.66394	1.71384	1.76375	1.81366	1.86357	1.91349	1.96342	2.01335
20.20	1.56304	1.61289	1.66274	1.71260	1.76247	1.81234	1.86222	1.91210	1.96198	2.01187
20.40	1.56191	1.61172	1.66154	1.71136	1.76119	1.81102	1.86086	1.91071	1.96055	2.01040
20.60	1.56079	1.61056	1.66034	1.71012	1.75992	1.80971	1.85951	1.90931	1.95912	2.00893
20.80	1.55966	1.60940	1.65914	1.70889	1.75864	1.80840	1.85816	1.90793	1.95770	2.00747
21.00	1.55855	1.60824	1.65795	1.70765	1.75737	1.80709	1.85681	1.90654	1.95627	2.00601
21.20	1.55742	1.60709	1.65675	1.70642	1.75610	1.80578	1.85547	1.90516	1.95485	2.00455
21.40	1.55631	1.60593	1.65556	1.70519	1.75483	1.80447	1.85412	1.90377	1.95343	2.00309
21.60	1.55519	1.60478	1.65437	1.70397	1.75356	1.80317	1.85278	1.90240	1.95201	2.00163
21.80	1.55408	1.60363	1.65318	1.70274	1.75230	1.80187	1.85144	1.90102	1.95059	2.00018
22.00	1.55296	1.60248	1.65199	1.70151	1.75104	1.80057	1.85010	1.89964	1.94918	1.99873
22.20	1.55186	1.60133	1.65081	1.70029	1.74978	1.79927	1.84877	1.89827	1.94777	1.99728
22.40	1.55075	1.60013	1.64962	1.69907	1.74852	1.79797	1.84743	1.89690	1.94636	1.99583
22.60	1.54964	1.59904	1.64844	1.69785	1.74727	1.79668	1.84610	1.89553	1.94495	1.99439
22.80	1.54854	1.59790	1.64726	1.69664	1.74601	1.79539	1.84477	1.89416	1.94355	1.99294
23.00	1.54743	1.59675	1.64608	1.69542	1.74476	1.79410	1.84345	1.89279	1.94215	1.99150
23.20	1.54633	1.59562	1.64491	1.69421	1.74351	1.79281	1.84212	1.89143	1.94075	1.99006
23.40	1.54523	1.59448	1.64373	1.69300	1.74226	1.79152	1.84080	1.89007	1.93935	1.98863
23.60	1.54413	1.59334	1.64256	1.69179	1.74101	1.79024	1.83948	1.88871	1.93795	1.98719
23.80	1.54303	1.59221	1.64139	1.69058	1.73977	1.78896	1.83816	1.88736	1.93656	1.98576
24.00	1.54193	1.59107	1.64022	1.68937	1.73852	1.78768	1.83684	1.88600	1.93516	1.98433
24.20	1.54084	1.58995	1.63905	1.68817	1.73728	1.78640	1.83552	1.88465	1.93377	1.98290
24.40	1.53975	1.58882	1.63789	1.68697	1.73604	1.78512	1.83421	1.88330	1.93239	1.98148
24.60	1.53866	1.58769	1.63672	1.68576	1.73481	1.78385	1.83290	1.88195	1.93100	1.98006
24.80	1.53757	1.58656	1.63556	1.68456	1.73357	1.78258	1.83159	1.88060	1.92962	1.97864
25.00	1.53648	1.58544	1.63440	1.68337	1.73234	1.78131	1.83028	1.87926	1.92824	1.97722
25.20	1.53539	1.58432	1.63324	1.68217	1.73110	1.78004	1.82898	1.87792	1.92686	1.97580
25.40	1.53431	1.58319	1.63208	1.68098	1.72987	1.77877	1.82767	1.87658	1.92548	1.97439
25.60	1.53323	1.58208	1.63093	1.67979	1.72865	1.77751	1.82637	1.87524	1.92411	1.97297
25.80	1.53215	1.58096	1.62978	1.67860	1.72742	1.77625	1.82507	1.87390	1.92273	1.97156
26.00	1.53107	1.57984	1.62862	1.67741	1.72619	1.77498	1.82377	1.87257	1.92136	1.97016
26.20	1.52999	1.57873	1.62747	1.67622	1.72497	1.77372	1.82248	1.87124	1.91999	1.96875
26.40	1.52891	1.57762	1.62632	1.67504	1.72375	1.77247	1.82119	1.86990	1.91863	1.96735
26.60	1.52784	1.57651	1.62518	1.67386	1.72253	1.77121	1.81989	1.86858	1.91726	1.96595
26.80	1.52676	1.57540	1.62403	1.67268	1.72132	1.76996	1.81860	1.86725	1.91590	1.96455
27.00	1.52569	1.57429	1.62289	1.67149	1.72010	1.76871	1.81732	1.86593	1.91454	1.96315
27.20	1.52462	1.57318	1.62175	1.67032	1.71889	1.76746	1.81603	1.86460	1.91318	1.96175
27.40	1.52355	1.57208	1.62061	1.66914	1.71768	1.76621	1.81474	1.86328	1.91182	1.96036
27.60	1.52249	1.57098	1.61947	1.66797	1.71647	1.76496	1.81346	1.86197	1.91047	1.95897
27.80	1.52142	1.56988	1.61834	1.66680	1.71526	1.76372	1.81218	1.86065	1.90911	1.95758
28.00	1.52036	1.56878	1.61720	1.66562	1.71405	1.76248	1.81090	1.85933	1.90776	1.95619
28.20	1.51930	1.56768	1.61607	1.66446	1.71285	1.76124	1.80963	1.85802	1.90641	1.95481
28.40	1.51824	1.56659	1.61494	1.66329	1.71164	1.76000	1.80836	1.85671	1.90507	1.95343
28.60	1.51718	1.56549	1.61380	1.66212	1.71044	1.75876	1.80708	1.85540	1.90373	1.95205
28.80	1.51612	1.56440	1.61268	1.66096	1.70924	1.75753	1.80581	1.85410	1.90238	1.95067
29.00	1.51506	1.56330	1.61155	1.65980	1.70805	1.75629	1.80454	1.85279	1.90104	1.94929
29.20	1.51401	1.56222	1.61043	1.65864	1.70685	1.75506	1.80328	1.85149	1.89970	1.94792
29.40	1.51296	1.56113	1.60930	1.65748	1.70566	1.75383	1.80201	1.85019	1.89837	1.94655
29.60	1.51190	1.56004	1.60818	1.65632	1.70446	1.75260	1.80075	1.84889	1.89703	1.94518
29.80	1.51086	1.55896	1.60706	1.65517	1.70327	1.75138	1.79949	1.84759	1.89570	1.94381
30.00	1.50981	1.55788	1.60594	1.65401	1.70208	1.75016	1.79823	1.84630	1.89437	1.94244

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF N₂
(LB/FT³)

TEMPERATURE (C)	400.00 (PSIG)	410.00 (PSIG)	420.00 (PSIG)	430.00 (PSIG)	440.00 (PSIG)	450.00 (PSIG)	460.00 (PSIG)	470.00 (PSIG)	480.00 (PSIG)	490.00 (PSIG)
20.00	2.05327	2.11321	2.16314	2.21308	2.26302	2.31297	2.36291	2.41285	2.46279	2.51273
20.20	2.06176	2.11166	2.16156	2.21146	2.26136	2.31126	2.36116	2.41107	2.46097	2.51087
20.40	2.06026	2.11011	2.15997	2.20983	2.25969	2.30956	2.35942	2.40928	2.45914	2.50901
20.60	2.05875	2.10957	2.15839	2.20821	2.25803	2.30785	2.35768	2.40750	2.45732	2.50715
20.80	2.05725	2.10702	2.15581	2.20559	2.25537	2.30515	2.35494	2.40473	2.45451	2.50429
21.00	2.05574	2.10549	2.15422	2.20397	2.25371	2.30346	2.35320	2.40295	2.45269	2.50244
21.20	2.05424	2.10395	2.15265	2.20235	2.25206	2.30177	2.35147	2.40118	2.45088	2.50059
21.40	2.05275	2.10241	2.15107	2.20074	2.25040	2.30008	2.34974	2.40041	2.45008	2.49974
21.60	2.05125	2.10088	2.14950	2.20013	2.24976	2.29939	2.34902	2.39864	2.44827	2.49790
21.80	2.04976	2.09935	2.14893	2.19852	2.24811	2.29770	2.34729	2.39688	2.44647	2.49606
22.00	2.04827	2.09782	2.14736	2.19692	2.24647	2.29602	2.34557	2.39512	2.44467	2.49422
22.20	2.04678	2.09629	2.14580	2.19532	2.24483	2.29434	2.34385	2.39336	2.44287	2.49238
22.40	2.04530	2.09477	2.14424	2.19372	2.24319	2.29266	2.34214	2.39161	2.44108	2.49055
22.60	2.04382	2.09325	2.14268	2.19212	2.24155	2.29099	2.34042	2.38986	2.43929	2.48872
22.80	2.04234	2.09173	2.14113	2.19052	2.23992	2.28932	2.33871	2.38811	2.43750	2.48689
23.00	2.04085	2.09021	2.13957	2.18893	2.23829	2.28764	2.33700	2.38636	2.43571	2.48507
23.20	2.03938	2.08870	2.13802	2.18734	2.23666	2.28598	2.33530	2.38462	2.43393	2.48325
23.40	2.03791	2.08719	2.13647	2.18575	2.23503	2.28431	2.33360	2.38288	2.43215	2.48143
23.60	2.03644	2.08568	2.13492	2.18417	2.23341	2.28265	2.33190	2.38114	2.43038	2.47962
23.80	2.03496	2.08417	2.13338	2.18259	2.23179	2.28099	2.33020	2.37940	2.42861	2.47780
24.00	2.03350	2.08267	2.13183	2.18100	2.23017	2.27934	2.32850	2.37767	2.42683	2.47599
24.20	2.03203	2.08116	2.13029	2.17943	2.22855	2.27768	2.32681	2.37594	2.42506	2.47419
24.40	2.03057	2.07966	2.12876	2.17785	2.22764	2.27673	2.32583	2.37491	2.42399	2.47309
24.60	2.02911	2.07816	2.12722	2.17628	2.22633	2.27538	2.32444	2.37349	2.42254	2.47215
24.80	2.02765	2.07667	2.12569	2.17471	2.22372	2.27274	2.32175	2.37077	2.41978	2.46878
25.00	2.02620	2.07517	2.12416	2.17314	2.22212	2.27109	2.32007	2.36904	2.41802	2.46699
25.20	2.02474	2.07369	2.12263	2.17157	2.22051	2.26945	2.31839	2.36733	2.41626	2.46520
25.40	2.02329	2.07220	2.12110	2.17001	2.21891	2.26781	2.31672	2.36562	2.41511	2.46414
25.60	2.02184	2.07071	2.11958	2.16845	2.21731	2.26618	2.31504	2.36390	2.41407	2.46312
25.80	2.02040	2.06923	2.11806	2.16689	2.21572	2.26455	2.31337	2.36220	2.41302	2.46214
26.00	2.01895	2.06774	2.11654	2.16533	2.21412	2.26291	2.31170	2.36049	2.41197	2.46105
26.20	2.01751	2.06626	2.11502	2.16378	2.21253	2.26129	2.31004	2.35879	2.41053	2.46057
26.40	2.01607	2.06479	2.11351	2.16223	2.21095	2.25966	2.30838	2.35709	2.40959	2.45964
26.60	2.01463	2.06331	2.11200	2.16068	2.20936	2.25804	2.30672	2.35539	2.40846	2.45853
26.80	2.01319	2.06184	2.11049	2.15913	2.20777	2.25642	2.30506	2.35369	2.40733	2.45742
27.00	2.01176	2.06037	2.10898	2.15759	2.20619	2.25480	2.30340	2.35200	2.40599	2.45619
27.20	2.01033	2.05890	2.10747	2.15604	2.20461	2.25318	2.30175	2.35031	2.39887	2.44742
27.40	2.00890	2.05743	2.10597	2.15450	2.20304	2.25157	2.30010	2.34862	2.39714	2.44566
27.60	2.00747	2.05597	2.10447	2.15297	2.20146	2.24996	2.29845	2.34694	2.39542	2.44390
27.80	2.00605	2.05451	2.10297	2.15143	2.19989	2.24835	2.29681	2.34526	2.39371	2.44215
28.00	2.00462	2.05305	2.10147	2.14990	2.19832	2.24674	2.29516	2.34357	2.39198	2.44039
28.20	2.00320	2.05159	2.09998	2.14837	2.19675	2.24514	2.29352	2.34190	2.39027	2.43864
28.40	2.00178	2.05014	2.09849	2.14684	2.19519	2.24354	2.29188	2.34022	2.38856	2.43689
28.60	2.00037	2.04869	2.09700	2.14532	2.19363	2.24194	2.29025	2.33855	2.38685	2.43515
28.80	1.99895	2.04723	2.09551	2.14379	2.19207	2.24034	2.28861	2.33688	2.38515	2.43340
29.00	1.99754	2.04578	2.09403	2.14227	2.19051	2.23875	2.28698	2.33521	2.38344	2.43166
29.20	1.99613	2.04434	2.09255	2.14075	2.18896	2.23716	2.28535	2.33355	2.38174	2.42992
29.40	1.99472	2.04289	2.09107	2.13924	2.18740	2.23557	2.28373	2.33189	2.38004	2.42819
29.60	1.99332	2.04145	2.08959	2.13772	2.18585	2.23398	2.28211	2.33023	2.37834	2.42646
29.80	1.99191	2.04001	2.08811	2.13621	2.18431	2.23240	2.28049	2.32857	2.37665	2.42473
30.00	1.99051	2.03857	2.08664	2.13470	2.18276	2.23081	2.27887	2.32692	2.37496	2.42300

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF AIR¹
(LB/FT³)

TEMPERATURE (C)	5.00 (PSIG)	6.00 (PSIG)	7.00 (PSIG)	8.00 (PSIG)	9.00 (PSIG)	10.00 (PSIG)	11.00 (PSIG)	12.00 (PSIG)	13.00 (PSIG)	14.00 (PSIG)
20.00	0.10089	0.10502	0.11114	0.11626	0.12139	0.12652	0.13164	0.13677	0.14189	0.14702
20.20	0.10082	0.10594	0.11106	0.11619	0.12131	0.12643	0.13155	0.13667	0.14180	0.14692
20.40	0.10075	0.10587	0.11099	0.11611	0.12122	0.12634	0.13146	0.13658	0.14170	0.14682
20.60	0.10068	0.10580	0.11091	0.11603	0.12114	0.12626	0.13137	0.13649	0.14160	0.14672
20.80	0.10062	0.10573	0.11084	0.11595	0.12106	0.12617	0.13128	0.13639	0.14150	0.14662
21.00	0.10055	0.10565	0.11076	0.11587	0.12098	0.12608	0.13119	0.13630	0.14141	0.14652
21.20	0.10048	0.10558	0.11069	0.11579	0.12089	0.12600	0.13110	0.13621	0.14131	0.14642
21.40	0.10041	0.10551	0.11061	0.11571	0.12081	0.12591	0.13101	0.13611	0.14121	0.14632
21.60	0.10034	0.10544	0.11053	0.11563	0.12073	0.12583	0.13092	0.13602	0.14112	0.14622
21.80	0.10027	0.10537	0.11046	0.11555	0.12065	0.12574	0.13083	0.13593	0.14102	0.14612
22.00	0.10021	0.10529	0.11038	0.11547	0.12056	0.12565	0.13074	0.13584	0.14093	0.14602
22.20	0.10014	0.10522	0.11031	0.11539	0.12048	0.12557	0.13066	0.13574	0.14083	0.14592
22.40	0.10007	0.10515	0.11023	0.11532	0.12040	0.12548	0.13057	0.13565	0.14073	0.14582
22.60	0.10000	0.10508	0.11016	0.11524	0.12032	0.12540	0.13048	0.13556	0.14064	0.14572
22.80	0.09993	0.10501	0.11008	0.11516	0.12024	0.12531	0.13039	0.13547	0.14054	0.14562
23.00	0.09987	0.10494	0.11001	0.11508	0.12015	0.12523	0.13030	0.13537	0.14045	0.14552
23.20	0.09980	0.10487	0.10994	0.11500	0.12007	0.12514	0.13021	0.13528	0.14035	0.14542
23.40	0.09973	0.10480	0.10986	0.11493	0.11999	0.12506	0.13012	0.13519	0.14026	0.14532
23.60	0.09966	0.10472	0.10979	0.11485	0.11991	0.12497	0.13004	0.13510	0.14016	0.14523
23.80	0.09960	0.10465	0.10971	0.11477	0.11983	0.12489	0.12995	0.13501	0.14007	0.14513
24.00	0.09953	0.10458	0.10964	0.11469	0.11975	0.12480	0.12986	0.13492	0.13997	0.14503
24.20	0.09946	0.10451	0.10956	0.11462	0.11967	0.12472	0.12977	0.13483	0.13988	0.14493
24.40	0.09939	0.10444	0.10949	0.11454	0.11959	0.12464	0.12968	0.13473	0.13978	0.14483
24.60	0.09933	0.10437	0.10942	0.11446	0.11951	0.12455	0.12960	0.13464	0.13969	0.14474
24.80	0.09926	0.10430	0.10934	0.11438	0.11943	0.12447	0.12951	0.13455	0.13960	0.14464
25.00	0.09919	0.10423	0.10927	0.11431	0.11935	0.12438	0.12942	0.13446	0.13950	0.14454
25.20	0.09913	0.10415	0.10920	0.11423	0.11927	0.12430	0.12934	0.13437	0.13941	0.14444
25.40	0.09906	0.10409	0.10912	0.11415	0.11918	0.12422	0.12925	0.13428	0.13931	0.14435
25.60	0.09899	0.10402	0.10905	0.11408	0.11910	0.12413	0.12916	0.13419	0.13922	0.14425
25.80	0.09893	0.10395	0.10898	0.11400	0.11902	0.12405	0.12908	0.13410	0.13913	0.14415
26.00	0.09886	0.10388	0.10890	0.11392	0.11894	0.12397	0.12899	0.13401	0.13903	0.14406
26.20	0.09879	0.10381	0.10883	0.11385	0.11886	0.12388	0.12890	0.13392	0.13894	0.14396
26.40	0.09873	0.10374	0.10876	0.11377	0.11879	0.12380	0.12882	0.13383	0.13885	0.14386
26.60	0.09866	0.10367	0.10868	0.11369	0.11871	0.12372	0.12873	0.13374	0.13875	0.14377
26.80	0.09860	0.10360	0.10861	0.11362	0.11863	0.12363	0.12864	0.13365	0.13866	0.14367
27.00	0.09853	0.10353	0.10854	0.11354	0.11855	0.12355	0.12856	0.13356	0.13857	0.14357
27.20	0.09846	0.10346	0.10847	0.11347	0.11847	0.12347	0.12847	0.13347	0.13847	0.14348
27.40	0.09840	0.10340	0.10839	0.11339	0.11839	0.12339	0.12838	0.13338	0.13838	0.14338
27.60	0.09833	0.10333	0.10832	0.11331	0.11831	0.12330	0.12830	0.13329	0.13829	0.14329
27.80	0.09827	0.10326	0.10825	0.11324	0.11823	0.12322	0.12821	0.13321	0.13820	0.14319
28.00	0.09820	0.10319	0.10818	0.11316	0.11815	0.12314	0.12813	0.13312	0.13810	0.14309
28.20	0.09814	0.10312	0.10810	0.11309	0.11807	0.12306	0.12804	0.13303	0.13801	0.14300
28.40	0.09807	0.10305	0.10803	0.11301	0.11799	0.12298	0.12796	0.13294	0.13792	0.14290
28.60	0.09801	0.10298	0.10796	0.11294	0.11792	0.12289	0.12787	0.13285	0.13783	0.14281
28.80	0.09794	0.10291	0.10789	0.11286	0.11784	0.12281	0.12779	0.13276	0.13774	0.14271
29.00	0.09788	0.10285	0.10782	0.11279	0.11776	0.12273	0.12770	0.13267	0.13765	0.14262
29.20	0.09781	0.10278	0.10775	0.11271	0.11768	0.12265	0.12762	0.13259	0.13755	0.14252
29.40	0.09775	0.10271	0.10767	0.11264	0.11760	0.12257	0.12753	0.13250	0.13746	0.14243
29.60	0.09768	0.10264	0.10760	0.11256	0.11752	0.12249	0.12745	0.13241	0.13737	0.14233
29.80	0.09762	0.10257	0.10753	0.11249	0.11745	0.12240	0.12736	0.13232	0.13728	0.14224
30.00	0.09755	0.10251	0.10746	0.11241	0.11737	0.12232	0.12728	0.13223	0.13719	0.14214

¹CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF AIR^{*}
(LB/FT³)

TEMPERATURE (C)	15.00 (PSIG)	16.00 (PSIG)	17.00 (PSIG)	18.00 (PSIG)	19.00 (PSIG)	20.00 (PSIG)	21.00 (PSIG)	22.00 (PSIG)	23.00 (PSIG)	24.00 (PSIG)
20.00	0.15215	0.15727	0.16240	0.16753	0.17266	0.17778	0.18291	0.18804	0.19317	0.19830
20.20	0.15204	0.15717	0.16229	0.16741	0.17254	0.17766	0.18279	0.18791	0.19304	0.19816
20.40	0.15194	0.15706	0.16218	0.16730	0.17242	0.17754	0.18266	0.18778	0.19290	0.19803
20.60	0.15183	0.15695	0.16207	0.16718	0.17230	0.17742	0.18254	0.18765	0.19277	0.19789
20.80	0.15173	0.15684	0.16196	0.16707	0.17218	0.17730	0.18241	0.18753	0.19264	0.19775
21.00	0.15163	0.15674	0.16184	0.16695	0.17206	0.17718	0.18229	0.18740	0.19251	0.19762
21.20	0.15152	0.15663	0.16173	0.16684	0.17195	0.17705	0.18216	0.18727	0.19238	0.19748
21.40	0.15142	0.15652	0.16162	0.16673	0.17183	0.17693	0.18204	0.18714	0.19224	0.19735
21.60	0.15132	0.15641	0.16151	0.16661	0.17171	0.17681	0.18191	0.18701	0.19211	0.19721
21.80	0.15121	0.15631	0.16140	0.16650	0.17160	0.17669	0.18179	0.18689	0.19198	0.19708
22.00	0.15111	0.15620	0.16129	0.16639	0.17148	0.17657	0.18166	0.18676	0.19185	0.19694
22.20	0.15101	0.15609	0.16118	0.16627	0.17136	0.17645	0.18154	0.18663	0.19172	0.19681
22.40	0.15090	0.15599	0.16107	0.16616	0.17124	0.17633	0.18142	0.18650	0.19159	0.19668
22.60	0.15080	0.15588	0.16096	0.16605	0.17113	0.17621	0.18129	0.18638	0.19146	0.19654
22.80	0.15070	0.15578	0.16085	0.16593	0.17101	0.17609	0.18117	0.18625	0.19133	0.19641
23.00	0.15060	0.15567	0.16075	0.16582	0.17090	0.17597	0.18105	0.18612	0.19120	0.19628
23.20	0.15049	0.15557	0.16064	0.16571	0.17078	0.17585	0.18092	0.18600	0.19107	0.19614
23.40	0.15039	0.15546	0.16053	0.16560	0.17066	0.17573	0.18080	0.18587	0.19094	0.19601
23.60	0.15029	0.15535	0.16042	0.16548	0.17055	0.17561	0.18068	0.18574	0.19081	0.19588
23.80	0.15019	0.15525	0.16031	0.16537	0.17043	0.17549	0.18056	0.18562	0.19068	0.19574
24.00	0.15009	0.15514	0.16020	0.16526	0.17032	0.17537	0.18043	0.18549	0.19055	0.19561
24.20	0.14999	0.15504	0.16009	0.16515	0.17020	0.17526	0.18031	0.18537	0.19042	0.19548
24.40	0.14988	0.15493	0.15998	0.16504	0.17009	0.17514	0.18019	0.18524	0.19029	0.19535
24.60	0.14978	0.15483	0.15988	0.16492	0.16997	0.17502	0.18007	0.18512	0.19016	0.19521
24.80	0.14968	0.15473	0.15977	0.16481	0.16986	0.17490	0.17995	0.18499	0.18904	0.19508
25.00	0.14958	0.15462	0.15966	0.16470	0.16974	0.17478	0.17982	0.18487	0.18891	0.19495
25.20	0.14948	0.15452	0.15955	0.16459	0.16963	0.17467	0.17970	0.18474	0.18878	0.19482
25.40	0.14938	0.15441	0.15945	0.16448	0.16951	0.17455	0.17958	0.18462	0.18865	0.19469
25.60	0.14928	0.15431	0.15934	0.16437	0.16940	0.17443	0.17946	0.18449	0.18852	0.19456
25.80	0.14918	0.15420	0.15923	0.16426	0.16929	0.17431	0.17934	0.18437	0.18840	0.19442
26.00	0.14908	0.15410	0.15912	0.16415	0.16917	0.17420	0.17922	0.18424	0.18827	0.19429
26.20	0.14898	0.15400	0.15902	0.16404	0.16906	0.17408	0.17910	0.18412	0.18814	0.19416
26.40	0.14888	0.15389	0.15891	0.16393	0.16894	0.17396	0.17898	0.18400	0.18901	0.19403
26.60	0.14878	0.15379	0.15880	0.16382	0.16883	0.17384	0.17886	0.18387	0.18889	0.19390
26.80	0.14868	0.15369	0.15870	0.16371	0.16872	0.17373	0.17874	0.18375	0.18876	0.19377
27.00	0.14858	0.15358	0.15859	0.16360	0.16860	0.17361	0.17862	0.18363	0.18863	0.19364
27.20	0.14848	0.15348	0.15848	0.16349	0.16849	0.17350	0.17850	0.18350	0.18851	0.19351
27.40	0.14838	0.15338	0.15838	0.16338	0.16838	0.17338	0.17838	0.18338	0.18838	0.19338
27.60	0.14828	0.15328	0.15827	0.16327	0.16827	0.17326	0.17826	0.18326	0.18825	0.19325
27.80	0.14818	0.15317	0.15817	0.16316	0.16815	0.17315	0.17814	0.18313	0.18813	0.19312
28.00	0.14808	0.15307	0.15806	0.16305	0.16804	0.17303	0.17802	0.18301	0.18800	0.19299
28.20	0.14798	0.15297	0.15796	0.16294	0.16793	0.17292	0.17790	0.18289	0.18788	0.19287
28.40	0.14789	0.15287	0.15785	0.16283	0.16782	0.17280	0.17778	0.18277	0.18775	0.19274
28.60	0.14779	0.15277	0.15775	0.16273	0.16771	0.17269	0.17767	0.18265	0.18763	0.19261
29.00	0.14769	0.15266	0.15764	0.16262	0.16759	0.17257	0.17755	0.18252	0.18750	0.19248
29.20	0.14759	0.15256	0.15754	0.16251	0.16748	0.17246	0.17743	0.18240	0.18738	0.19235
29.40	0.14749	0.15246	0.15743	0.16240	0.16737	0.17234	0.17731	0.18228	0.18725	0.19222
29.60	0.14739	0.15236	0.15733	0.16229	0.16726	0.17223	0.17719	0.18216	0.18713	0.19210
29.80	0.14730	0.15226	0.15722	0.16218	0.16715	0.17211	0.17707	0.18204	0.18700	0.19197
30.00	0.14720	0.15216	0.15712	0.16208	0.16704	0.17200	0.17696	0.18192	0.18688	0.19184
30.00	0.14710	0.15206	0.15701	0.16197	0.16693	0.17188	0.17684	0.18180	0.18675	0.19171

^{*} CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF AIR*
(LB/FT³)

TEMPERATURE (C)	25.00 (PSIG)	26.00 (PSIG)	27.00 (PSIG)	28.00 (PSIG)	29.00 (PSIG)	30.00 (PSIG)	31.00 (PSIG)	32.00 (PSIG)	33.00 (PSIG)	34.00 (PSIG)
20.00	0.20343	0.20856	0.21369	0.21882	0.22395	0.22908	0.23421	0.23934	0.24447	0.24960
20.20	0.20329	0.20841	0.21354	0.21867	0.22379	0.22892	0.23405	0.23918	0.24430	0.24943
20.40	0.20315	0.20827	0.21339	0.21852	0.22364	0.22876	0.23389	0.23901	0.24414	0.24926
20.60	0.20301	0.20813	0.21325	0.21837	0.22349	0.22861	0.23373	0.23885	0.24397	0.24909
20.80	0.20287	0.20799	0.21310	0.21822	0.22333	0.22845	0.23357	0.23868	0.24380	0.24892
21.00	0.20273	0.20784	0.21296	0.21807	0.22318	0.22829	0.23341	0.23852	0.24363	0.24875
21.20	0.20259	0.20770	0.21281	0.21792	0.22303	0.22814	0.23325	0.23836	0.24347	0.24858
21.40	0.20245	0.20756	0.21266	0.21777	0.22288	0.22798	0.23309	0.23819	0.24330	0.24841
21.60	0.20232	0.20742	0.21252	0.21762	0.22272	0.22783	0.23293	0.23803	0.24313	0.24824
21.80	0.20218	0.20728	0.21237	0.21747	0.22257	0.22767	0.23277	0.23787	0.24297	0.24807
22.00	0.20204	0.20713	0.21223	0.21732	0.22242	0.22751	0.23261	0.23771	0.24280	0.24790
22.20	0.20190	0.20699	0.21208	0.21717	0.22227	0.22736	0.23245	0.23754	0.24264	0.24773
22.40	0.20176	0.20685	0.21194	0.21703	0.22211	0.22720	0.23229	0.23738	0.24247	0.24756
22.60	0.20163	0.20671	0.21179	0.21688	0.22196	0.22705	0.23213	0.23722	0.24230	0.24739
22.80	0.20149	0.20657	0.21165	0.21673	0.22181	0.22689	0.23198	0.23706	0.24214	0.24722
23.00	0.20135	0.20643	0.21151	0.21658	0.22166	0.22674	0.23182	0.23690	0.24197	0.24705
23.20	0.20122	0.20629	0.21136	0.21644	0.22151	0.22658	0.23166	0.23673	0.24181	0.24688
23.40	0.20108	0.20615	0.21122	0.21629	0.22136	0.22643	0.23150	0.23657	0.24164	0.24672
23.60	0.20094	0.20601	0.21108	0.21614	0.22121	0.22628	0.23134	0.23641	0.24148	0.24655
23.80	0.20081	0.20587	0.21093	0.21600	0.22106	0.22612	0.23119	0.23625	0.24132	0.24638
24.00	0.20067	0.20573	0.21079	0.21585	0.22091	0.22597	0.23103	0.23609	0.24115	0.24621
24.20	0.20053	0.20559	0.21065	0.21570	0.22076	0.22582	0.23087	0.23593	0.24099	0.24605
24.40	0.20040	0.20545	0.21050	0.21556	0.22061	0.22566	0.23072	0.23577	0.24083	0.24588
24.60	0.20026	0.20531	0.21036	0.21541	0.22046	0.22551	0.23056	0.23561	0.24066	0.24571
24.80	0.20013	0.20517	0.21022	0.21526	0.22031	0.22536	0.23041	0.23545	0.24050	0.24555
25.00	0.19999	0.20503	0.21008	0.21512	0.22016	0.22521	0.23025	0.23529	0.24034	0.24538
25.20	0.19986	0.20490	0.20993	0.21497	0.22001	0.22505	0.23009	0.23513	0.24017	0.24522
25.40	0.19972	0.20476	0.20979	0.21483	0.21987	0.22490	0.22994	0.23497	0.24001	0.24505
25.60	0.19959	0.20462	0.20965	0.21468	0.21972	0.22475	0.22978	0.23482	0.23985	0.24488
25.80	0.19945	0.20448	0.20951	0.21454	0.21957	0.22460	0.22963	0.23466	0.23969	0.24472
26.00	0.19932	0.20434	0.20937	0.21439	0.21942	0.22445	0.22947	0.23450	0.23953	0.24455
26.20	0.19918	0.20421	0.20923	0.21425	0.21927	0.22430	0.22932	0.23434	0.23937	0.24439
26.40	0.19905	0.20407	0.20909	0.21411	0.21913	0.22414	0.22916	0.23418	0.23920	0.24422
26.60	0.19892	0.20393	0.20895	0.21396	0.21898	0.22399	0.22901	0.23403	0.23904	0.24406
26.80	0.19878	0.20379	0.20881	0.21382	0.21883	0.22384	0.22886	0.23387	0.23888	0.24390
27.00	0.19865	0.20366	0.20867	0.21367	0.21868	0.22369	0.22870	0.23371	0.23872	0.24373
27.20	0.19852	0.20352	0.20853	0.21353	0.21854	0.22354	0.22855	0.23356	0.23856	0.24357
27.40	0.19838	0.20338	0.20839	0.21339	0.21839	0.22339	0.22840	0.23340	0.23840	0.24340
27.60	0.19825	0.20325	0.20825	0.21325	0.21824	0.22324	0.22824	0.23324	0.23824	0.24324
27.80	0.19812	0.20311	0.20811	0.21310	0.21810	0.22309	0.22809	0.23309	0.23808	0.24308
28.00	0.19799	0.20298	0.20797	0.21296	0.21795	0.22294	0.22794	0.23293	0.23792	0.24292
28.20	0.19785	0.20284	0.20783	0.21282	0.21781	0.22280	0.22778	0.23277	0.23776	0.24275
28.40	0.19772	0.20271	0.20769	0.21268	0.21766	0.22265	0.22763	0.23262	0.23760	0.24259
28.60	0.19759	0.20257	0.20755	0.21253	0.21752	0.22250	0.22748	0.23246	0.23745	0.24243
28.80	0.19746	0.20244	0.20741	0.21239	0.21737	0.22235	0.22733	0.23231	0.23729	0.24227
29.00	0.19733	0.20230	0.20727	0.21225	0.21723	0.22220	0.22718	0.23215	0.23713	0.24210
29.20	0.19719	0.20217	0.20714	0.21211	0.21708	0.22205	0.22702	0.23200	0.23697	0.24194
29.40	0.19706	0.20203	0.20700	0.21197	0.21694	0.22190	0.22687	0.23184	0.23681	0.24178
29.60	0.19693	0.20190	0.20686	0.21183	0.21679	0.22176	0.22672	0.23169	0.23665	0.24162
29.80	0.19680	0.20176	0.20672	0.21169	0.21665	0.22161	0.22657	0.23153	0.23650	0.24146
30.00	0.19667	0.20163	0.20659	0.21154	0.21650	0.22146	0.22642	0.23138	0.23634	0.24130

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF AIR¹
(LB/FT³)

TEMPERATURE (C)	35.00 (PSIG)	36.00 (PSIG)	37.00 (PSIG)	38.00 (PSIG)	39.00 (PSIG)	40.00 (PSIG)	41.00 (PSIG)	42.00 (PSIG)	43.00 (PSIG)	44.00 (PSIG)
20.00	0.25474	0.25987	0.26500	0.27013	0.27527	0.28040	0.28553	0.29067	0.29580	0.30094
20.20	0.25455	0.25969	0.26482	0.26995	0.27508	0.28021	0.28534	0.29047	0.29560	0.30073
20.40	0.25439	0.25951	0.26464	0.26976	0.27489	0.28002	0.28514	0.29027	0.29540	0.30052
20.60	0.25421	0.25933	0.26445	0.26958	0.27470	0.27982	0.28495	0.29007	0.29519	0.30032
20.80	0.25404	0.25916	0.26427	0.26939	0.27451	0.27963	0.28475	0.28987	0.29499	0.30011
21.00	0.25386	0.25898	0.26409	0.26921	0.27432	0.27944	0.28455	0.28967	0.29479	0.29990
21.20	0.25369	0.25880	0.26391	0.26902	0.27413	0.27925	0.28436	0.28947	0.29458	0.29970
21.40	0.25351	0.25862	0.26373	0.26884	0.27395	0.27905	0.28416	0.28927	0.29438	0.29949
21.60	0.25334	0.25844	0.26355	0.26865	0.27376	0.27886	0.28397	0.28907	0.29418	0.29929
21.80	0.25317	0.25827	0.26337	0.26847	0.27357	0.27867	0.28377	0.28888	0.29398	0.29908
22.00	0.25299	0.25809	0.26319	0.26829	0.27338	0.27848	0.28358	0.28868	0.29378	0.29888
22.20	0.25282	0.25791	0.26301	0.26810	0.27320	0.27829	0.28339	0.28848	0.29358	0.29867
22.40	0.25265	0.25774	0.26283	0.26792	0.27301	0.27810	0.28319	0.28828	0.29337	0.29847
22.60	0.25248	0.25756	0.26265	0.26774	0.27282	0.27791	0.28300	0.28809	0.29317	0.29826
22.80	0.25230	0.25739	0.26247	0.26755	0.27264	0.27772	0.28281	0.28789	0.29297	0.29806
23.00	0.25213	0.25721	0.26229	0.26737	0.27245	0.27753	0.28261	0.28769	0.29277	0.29785
23.20	0.25196	0.25704	0.26211	0.26719	0.27227	0.27734	0.28242	0.28750	0.29257	0.29765
23.40	0.25179	0.25686	0.26193	0.26701	0.27208	0.27715	0.28223	0.28730	0.29237	0.29745
23.60	0.25162	0.25669	0.26176	0.26683	0.27189	0.27696	0.28203	0.28711	0.29218	0.29725
23.80	0.25145	0.25651	0.26158	0.26664	0.27171	0.27678	0.28184	0.28691	0.29198	0.29704
24.00	0.25128	0.25634	0.26140	0.26646	0.27153	0.27659	0.28165	0.28671	0.29178	0.29684
24.20	0.25111	0.25616	0.26122	0.26628	0.27134	0.27640	0.28146	0.28652	0.29158	0.29664
24.40	0.25094	0.25599	0.26105	0.26610	0.27116	0.27621	0.28127	0.28633	0.29138	0.29644
24.60	0.25077	0.25582	0.26087	0.26592	0.27097	0.27603	0.28108	0.28613	0.29118	0.29624
24.80	0.25060	0.25564	0.26069	0.26574	0.27079	0.27584	0.28089	0.28594	0.29099	0.29604
25.00	0.25043	0.25547	0.26052	0.26556	0.27061	0.27565	0.28070	0.28574	0.29079	0.29584
25.20	0.25026	0.25530	0.26034	0.26538	0.27042	0.27546	0.28051	0.28555	0.29059	0.29564
25.40	0.25009	0.25512	0.26016	0.26520	0.27024	0.27528	0.28032	0.28536	0.29040	0.29544
25.60	0.24992	0.25495	0.25999	0.26502	0.27006	0.27509	0.28013	0.28516	0.29020	0.29524
25.80	0.24975	0.25478	0.25981	0.26484	0.26987	0.27491	0.27994	0.28497	0.29000	0.29504
26.00	0.24958	0.25461	0.25964	0.26466	0.26969	0.27472	0.27975	0.28478	0.28981	0.29484
26.20	0.24941	0.25444	0.25946	0.26449	0.26951	0.27454	0.27956	0.28459	0.28961	0.29464
26.40	0.24924	0.25427	0.25929	0.26431	0.26933	0.27435	0.27937	0.28439	0.28942	0.29444
26.60	0.24908	0.25409	0.25911	0.26413	0.26915	0.27417	0.27918	0.28420	0.28922	0.29424
26.80	0.24891	0.25392	0.25894	0.26395	0.26897	0.27398	0.27900	0.28401	0.28903	0.29404
27.00	0.24874	0.25375	0.25876	0.26377	0.26879	0.27380	0.27881	0.28382	0.28883	0.29384
27.20	0.24857	0.25358	0.25859	0.26360	0.26860	0.27361	0.27862	0.28363	0.28864	0.29365
27.40	0.24841	0.25341	0.25842	0.26342	0.26842	0.27343	0.27843	0.28344	0.28844	0.29345
27.60	0.24824	0.25324	0.25824	0.26324	0.26824	0.27324	0.27825	0.28325	0.28825	0.29325
27.80	0.24808	0.25307	0.25807	0.26307	0.26806	0.27306	0.27806	0.28306	0.28806	0.29305
28.00	0.24791	0.25290	0.25790	0.26289	0.26788	0.27288	0.27787	0.28287	0.28786	0.29286
28.20	0.24774	0.25273	0.25772	0.26271	0.26770	0.27270	0.27769	0.28268	0.28767	0.29266
28.40	0.24758	0.25256	0.25755	0.26254	0.26753	0.27251	0.27750	0.28249	0.28748	0.29247
28.60	0.24741	0.25240	0.25738	0.26236	0.26735	0.27233	0.27731	0.28230	0.28728	0.29227
28.80	0.24725	0.25223	0.25721	0.26219	0.26717	0.27215	0.27713	0.28211	0.28709	0.29207
29.00	0.24708	0.25206	0.25703	0.26201	0.26699	0.27197	0.27694	0.28192	0.28690	0.29188
29.20	0.24692	0.25189	0.25686	0.26184	0.26681	0.27179	0.27676	0.28173	0.28671	0.29168
29.40	0.24675	0.25172	0.25669	0.26166	0.26663	0.27160	0.27657	0.28155	0.28652	0.29149
29.60	0.24659	0.25155	0.25652	0.26149	0.26645	0.27142	0.27639	0.28136	0.28633	0.29129
29.80	0.24642	0.25139	0.25635	0.26131	0.26628	0.27124	0.27621	0.28117	0.28614	0.29110
30.00	0.24626	0.25122	0.25618	0.26114	0.26610	0.27106	0.27602	0.28098	0.28594	0.29091

¹CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF AIR'
(LB/FT³)

TEMPERATURE (C)	100.00 (PSIG)	110.00 (PSIG)	120.00 (PSIG)	130.00 (PSIG)	140.00 (PSIG)	150.00 (PSIG)	160.00 (PSIG)	170.00 (PSIG)	180.00 (PSIG)	190.00 (PSIG)
20.00	0.58887	0.64037	0.69190	0.74345	0.79502	0.84661	0.89823	0.94986	1.00152	1.05320
20.20	0.58846	0.63993	0.69141	0.74292	0.79446	0.84601	0.89759	0.94919	1.00082	1.05246
20.40	0.58805	0.63948	0.69093	0.74240	0.79390	0.84542	0.89696	0.94852	1.00011	1.05171
20.60	0.58765	0.63904	0.69045	0.74189	0.79334	0.84483	0.89633	0.94786	0.99940	1.05097
20.80	0.58724	0.63859	0.68997	0.74137	0.79279	0.84423	0.89570	0.94719	0.99870	1.05023
21.00	0.58683	0.63815	0.68949	0.74085	0.79223	0.84364	0.89507	0.94652	0.99799	1.04949
21.20	0.58642	0.63770	0.68901	0.74033	0.79168	0.84305	0.89444	0.94586	0.99729	1.04875
21.40	0.58602	0.63726	0.68853	0.73981	0.79113	0.84246	0.89382	0.94519	0.99659	1.04801
21.60	0.58561	0.63682	0.68805	0.73930	0.79057	0.84187	0.89319	0.94453	0.99589	1.04727
21.80	0.58520	0.63637	0.68757	0.73878	0.79002	0.84128	0.89256	0.94387	0.99519	1.04653
22.00	0.58480	0.63593	0.68709	0.73827	0.78947	0.84069	0.89194	0.94320	0.99449	1.04579
22.20	0.58439	0.63549	0.68661	0.73776	0.78892	0.84011	0.89131	0.94254	0.99379	1.04506
22.40	0.58399	0.63505	0.68614	0.73724	0.78837	0.83952	0.89069	0.94188	0.99309	1.04432
22.60	0.58359	0.63461	0.68566	0.73673	0.78782	0.83894	0.89007	0.94122	0.99240	1.04359
22.80	0.58318	0.63417	0.68519	0.73622	0.78728	0.83835	0.88945	0.94057	0.99170	1.04286
23.00	0.58278	0.63374	0.68471	0.73571	0.78673	0.83777	0.88883	0.93991	0.99101	1.04213
23.20	0.58238	0.63330	0.68424	0.73520	0.78618	0.83719	0.88821	0.93925	0.99032	1.04140
23.40	0.58198	0.63286	0.68376	0.73469	0.78564	0.83660	0.88759	0.93860	0.98963	1.04067
23.60	0.58158	0.63242	0.68329	0.73418	0.78509	0.83602	0.88697	0.93795	0.98893	1.03994
23.80	0.58118	0.63199	0.68282	0.73368	0.78455	0.83544	0.88636	0.93729	0.98824	1.03922
24.00	0.58078	0.63155	0.68235	0.73317	0.78400	0.83486	0.88574	0.93664	0.98755	1.03849
24.20	0.58038	0.63112	0.68188	0.73266	0.78346	0.83428	0.88513	0.93599	0.98687	1.03776
24.40	0.57998	0.63069	0.68141	0.73216	0.78292	0.83371	0.88451	0.93534	0.98618	1.03704
24.60	0.57958	0.63025	0.68094	0.73165	0.78238	0.83313	0.88390	0.93469	0.98549	1.03632
24.80	0.57919	0.62982	0.68047	0.73115	0.78184	0.83255	0.88329	0.93404	0.98481	1.03560
25.00	0.57879	0.62939	0.68001	0.73064	0.78130	0.83198	0.88269	0.93339	0.98413	1.03488
25.20	0.57839	0.62896	0.67954	0.73014	0.78076	0.83140	0.88207	0.93274	0.98344	1.03416
25.40	0.57800	0.62852	0.67907	0.72964	0.78023	0.83083	0.88146	0.93210	0.98276	1.03344
25.60	0.57760	0.62809	0.67861	0.72914	0.77969	0.83026	0.88085	0.93145	0.98208	1.03272
25.80	0.57721	0.62766	0.67814	0.72864	0.77915	0.82969	0.88024	0.93081	0.98140	1.03201
26.00	0.57681	0.62724	0.67768	0.72814	0.77862	0.82911	0.87963	0.93017	0.98072	1.03129
26.20	0.57642	0.62681	0.67721	0.72764	0.77808	0.82854	0.87903	0.92953	0.98004	1.03057
26.40	0.57603	0.62638	0.67675	0.72714	0.77755	0.82797	0.87842	0.92888	0.97937	1.02986
26.60	0.57564	0.62595	0.67629	0.72664	0.77702	0.82741	0.87782	0.92824	0.97869	1.02915
26.80	0.57524	0.62553	0.67583	0.72615	0.77648	0.82684	0.87721	0.92760	0.97801	1.02844
27.00	0.57485	0.62510	0.67536	0.72565	0.77595	0.82627	0.87661	0.92697	0.97734	1.02773
27.20	0.57446	0.62467	0.67490	0.72515	0.77542	0.82570	0.87601	0.92633	0.97667	1.02702
27.40	0.57407	0.62425	0.67444	0.72466	0.77489	0.82514	0.87541	0.92569	0.97599	1.02631
27.60	0.57368	0.62382	0.67399	0.72416	0.77436	0.82458	0.87481	0.92506	0.97532	1.02560
27.80	0.57329	0.62340	0.67353	0.72367	0.77383	0.82401	0.87421	0.92442	0.97465	1.02490
28.00	0.57291	0.62298	0.67307	0.72318	0.77330	0.82345	0.87361	0.92379	0.97398	1.02419
28.20	0.57252	0.62255	0.67261	0.72269	0.77278	0.82289	0.87301	0.92315	0.97331	1.02349
28.40	0.57213	0.62213	0.67215	0.72219	0.77225	0.82232	0.87241	0.92252	0.97265	1.02279
28.60	0.57174	0.62171	0.67170	0.72170	0.77172	0.82176	0.87182	0.92189	0.97198	1.02208
28.80	0.57136	0.62129	0.67124	0.72121	0.77120	0.82120	0.87122	0.92126	0.97131	1.02138
29.00	0.57097	0.62087	0.67079	0.72072	0.77068	0.82064	0.87063	0.92063	0.97065	1.02068
29.20	0.57059	0.62045	0.67033	0.72023	0.77015	0.82009	0.87004	0.92000	0.96999	1.01998
29.40	0.57020	0.62003	0.66988	0.71975	0.76963	0.81953	0.86944	0.91938	0.96932	1.01929
29.60	0.56982	0.61961	0.66943	0.71926	0.76911	0.81897	0.86885	0.91875	0.96866	1.01859
29.80	0.56943	0.61920	0.66898	0.71877	0.76859	0.81841	0.86826	0.91812	0.96800	1.01789
30.00	0.56905	0.61878	0.66852	0.71829	0.76806	0.81786	0.86767	0.91750	0.96734	1.01719

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF AIR'
(LB/FT³)

TEMPERATURE (C)	200.00 (PSIG)	210.00 (PSIG)	220.00 (PSIG)	230.00 (PSIG)	240.00 (PSIG)	250.00 (PSIG)	260.00 (PSIG)	270.00 (PSIG)	280.00 (PSIG)	290.00 (PSIG)
20.00	1.10491	1.15663	1.20838	1.26014	1.31193	1.36373	1.41555	1.46740	1.51926	1.57113
20.20	1.10412	1.15581	1.20752	1.25924	1.31099	1.36275	1.41454	1.46634	1.51816	1.57000
20.40	1.10334	1.15499	1.20666	1.25835	1.31005	1.36178	1.41352	1.46529	1.51707	1.56887
20.60	1.10256	1.15417	1.20580	1.25745	1.30912	1.36081	1.41251	1.46424	1.51598	1.56774
20.80	1.10178	1.15335	1.20494	1.25655	1.30818	1.35983	1.41150	1.46319	1.51469	1.56662
21.00	1.10100	1.15253	1.20409	1.25566	1.30725	1.35886	1.41049	1.46214	1.51381	1.56549
21.20	1.10022	1.15172	1.20323	1.25477	1.30632	1.35789	1.40948	1.46109	1.51272	1.56436
21.40	1.09944	1.15090	1.20238	1.25388	1.30539	1.35693	1.40848	1.46005	1.51164	1.56324
21.60	1.09867	1.15009	1.20153	1.25299	1.30446	1.35596	1.40747	1.45901	1.51056	1.56212
21.80	1.09789	1.14928	1.20068	1.25210	1.30354	1.35499	1.40647	1.45796	1.50948	1.56100
22.00	1.09712	1.14846	1.19983	1.25121	1.30261	1.35403	1.40547	1.45692	1.50839	1.55988
22.20	1.09635	1.14765	1.19898	1.25033	1.30169	1.35307	1.40447	1.45588	1.50732	1.55877
22.40	1.09557	1.14685	1.19814	1.24944	1.30077	1.35211	1.40347	1.45485	1.50624	1.55765
22.60	1.09481	1.14604	1.19729	1.24856	1.29984	1.35115	1.40247	1.45381	1.50517	1.55654
22.80	1.09404	1.14523	1.19645	1.24768	1.29893	1.35019	1.40148	1.45278	1.50410	1.55543
23.00	1.09327	1.14443	1.19560	1.24679	1.29801	1.34924	1.40048	1.45175	1.50303	1.55432
23.20	1.09250	1.14362	1.19476	1.24592	1.29709	1.34828	1.39949	1.45072	1.50196	1.55321
23.40	1.09173	1.14282	1.19392	1.24504	1.29617	1.34733	1.39850	1.44969	1.50089	1.55211
23.60	1.09097	1.14202	1.19308	1.24416	1.29526	1.34638	1.39751	1.44866	1.49982	1.55100
23.80	1.09021	1.14122	1.19224	1.24329	1.29435	1.34543	1.39652	1.44763	1.49876	1.54990
24.00	1.08944	1.14041	1.19140	1.24241	1.29343	1.34448	1.39553	1.44660	1.49770	1.54880
24.20	1.08868	1.13962	1.19057	1.24154	1.29252	1.34353	1.39455	1.44558	1.49664	1.54770
24.40	1.08792	1.13882	1.18974	1.24067	1.29161	1.34258	1.39356	1.44456	1.49558	1.54660
24.60	1.08716	1.13802	1.18890	1.23980	1.29071	1.34163	1.39258	1.44354	1.49452	1.54551
24.80	1.08640	1.13723	1.18807	1.23893	1.28980	1.34069	1.39160	1.44252	1.49346	1.54441
25.00	1.08565	1.13643	1.18724	1.23806	1.28890	1.33975	1.39062	1.44151	1.49240	1.54332
25.20	1.08489	1.13564	1.18641	1.23719	1.28799	1.33881	1.38964	1.44049	1.49135	1.54223
25.40	1.08414	1.13485	1.18558	1.23633	1.28709	1.33787	1.38866	1.43948	1.49030	1.54114
25.60	1.08338	1.13406	1.18475	1.23546	1.28619	1.33693	1.38769	1.43846	1.48925	1.54005
25.80	1.08263	1.13327	1.18393	1.23460	1.28529	1.33599	1.38672	1.43745	1.48820	1.53897
26.00	1.08188	1.13248	1.18310	1.23374	1.28439	1.33506	1.38574	1.43644	1.48715	1.53788
26.20	1.08113	1.13169	1.18228	1.23288	1.28349	1.33412	1.38477	1.43543	1.48611	1.53680
26.40	1.08038	1.13091	1.18146	1.23202	1.28260	1.33319	1.38380	1.43443	1.48506	1.53572
26.60	1.07963	1.13012	1.18064	1.23116	1.28170	1.33226	1.38283	1.43342	1.48402	1.53464
26.80	1.07888	1.12934	1.17982	1.23031	1.28081	1.33133	1.38187	1.43242	1.48298	1.53356
27.00	1.07813	1.12856	1.17900	1.22945	1.27992	1.33040	1.38090	1.43141	1.48194	1.53248
27.20	1.07739	1.12778	1.17818	1.22859	1.27903	1.32948	1.37994	1.43041	1.48090	1.53141
27.40	1.07664	1.12700	1.17736	1.22774	1.27814	1.32855	1.37897	1.42941	1.47987	1.53033
27.60	1.07590	1.12622	1.17655	1.22689	1.27725	1.32762	1.37801	1.42842	1.47883	1.52926
27.80	1.07516	1.12544	1.17573	1.22604	1.27636	1.32670	1.37706	1.42742	1.47780	1.52819
28.00	1.07442	1.12466	1.17492	1.22519	1.27548	1.32578	1.37609	1.42642	1.47677	1.52712
28.20	1.07368	1.12389	1.17411	1.22434	1.27459	1.32486	1.37514	1.42543	1.47574	1.52605
28.40	1.07294	1.12311	1.17330	1.22350	1.27371	1.32394	1.37418	1.42444	1.47471	1.52499
28.60	1.07220	1.12234	1.17249	1.22265	1.27283	1.32302	1.37323	1.42345	1.47368	1.52392
28.80	1.07147	1.12157	1.17168	1.22181	1.27195	1.32211	1.37228	1.42246	1.47265	1.52286
29.00	1.07073	1.12079	1.17087	1.22096	1.27107	1.32119	1.37132	1.42147	1.47163	1.52180
29.20	1.06999	1.12002	1.17007	1.22012	1.27019	1.32028	1.37037	1.42048	1.47061	1.52074
29.40	1.06926	1.11926	1.16926	1.21928	1.26932	1.31936	1.36942	1.41950	1.46959	1.51968
29.60	1.06853	1.11849	1.16846	1.21844	1.26844	1.31845	1.36848	1.41852	1.46857	1.51863
29.80	1.06780	1.11772	1.16765	1.21760	1.26757	1.31754	1.36753	1.41753	1.46755	1.51757
30.00	1.06707	1.11695	1.16685	1.21677	1.26669	1.31663	1.36659	1.41655	1.46653	1.51652

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

DENSITY OF AIR'
(LB/FT³)

TEMPERATURE (C)	300.00 (PSIG)	310.00 (PSIG)	320.00 (PSIG)	330.00 (PSIG)	340.00 (PSIG)	350.00 (PSIG)	360.00 (PSIG)	370.00 (PSIG)	380.00 (PSIG)	390.00 (PSIG)
20.00	1.62303	1.67495	1.72688	1.77882	1.83078	1.88276	1.93476	1.98677	2.03879	2.09083
20.20	1.62186	1.67374	1.72563	1.77753	1.82945	1.88139	1.93335	1.98532	2.03730	2.08930
20.40	1.62069	1.67252	1.72437	1.77624	1.82813	1.88002	1.93194	1.98387	2.03581	2.08777
20.60	1.61952	1.67132	1.72313	1.77496	1.82680	1.87865	1.93053	1.98242	2.03432	2.08624
20.80	1.61835	1.67011	1.72188	1.77367	1.82547	1.87729	1.92913	1.98098	2.03284	2.08472
21.00	1.61719	1.66891	1.72064	1.77239	1.82415	1.87593	1.92772	1.97953	2.03135	2.08319
21.20	1.61602	1.66770	1.71940	1.77111	1.82283	1.87457	1.92632	1.97809	2.02987	2.08167
21.40	1.61486	1.66650	1.71815	1.76983	1.82151	1.87321	1.92492	1.97665	2.02839	2.08015
21.60	1.61370	1.66530	1.71692	1.76855	1.82019	1.87185	1.92353	1.97521	2.02692	2.07864
21.80	1.61255	1.66411	1.71568	1.76727	1.81888	1.87050	1.92213	1.97378	2.02544	2.07712
22.00	1.61139	1.66291	1.71445	1.76600	1.81756	1.86914	1.92074	1.97235	2.02397	2.07561
22.20	1.61023	1.66172	1.71321	1.76473	1.81625	1.86779	1.91935	1.97092	2.02250	2.07410
22.40	1.60908	1.66052	1.71198	1.76346	1.81494	1.86644	1.91796	1.96949	2.02103	2.07259
22.60	1.60793	1.65934	1.71076	1.76219	1.81364	1.86510	1.91658	1.96807	2.01957	2.07109
22.80	1.60678	1.65815	1.70953	1.76093	1.81233	1.86375	1.91519	1.96665	2.01811	2.06958
23.00	1.60563	1.65696	1.70830	1.75966	1.81103	1.86241	1.91381	1.96522	2.01664	2.06808
23.20	1.60449	1.65578	1.70708	1.75840	1.80973	1.86107	1.91243	1.96380	2.01519	2.06658
23.40	1.60334	1.65459	1.70586	1.75714	1.80843	1.85973	1.91105	1.96239	2.01373	2.06509
23.60	1.60220	1.65341	1.70464	1.75588	1.80713	1.85840	1.90968	1.96097	2.01228	2.06360
23.80	1.60106	1.65223	1.70342	1.75462	1.80584	1.85706	1.90831	1.95956	2.01083	2.06211
24.00	1.59992	1.65106	1.70220	1.75337	1.80454	1.85573	1.90693	1.95815	2.00937	2.06062
24.20	1.59878	1.64988	1.70099	1.75212	1.80325	1.85440	1.90556	1.95674	2.00793	2.05913
24.40	1.59765	1.64870	1.69978	1.75087	1.80196	1.85307	1.90420	1.95534	2.00648	2.05765
24.60	1.59651	1.64753	1.69857	1.74961	1.80068	1.85175	1.90283	1.95393	2.00504	2.05616
24.80	1.59538	1.64636	1.69736	1.74837	1.79939	1.85042	1.90147	1.95253	2.00360	2.05469
25.00	1.59425	1.64519	1.69615	1.74712	1.79811	1.84910	1.90011	1.95113	2.00216	2.05321
25.20	1.59312	1.64403	1.69495	1.74588	1.79682	1.84778	1.89875	1.94973	2.00073	2.05173
25.40	1.59199	1.64286	1.69374	1.74464	1.79554	1.84646	1.89740	1.94834	1.99929	2.05026
25.60	1.59087	1.64170	1.69254	1.74340	1.79427	1.84515	1.89604	1.94694	1.99786	2.04879
25.80	1.58974	1.64054	1.69134	1.74216	1.79299	1.84383	1.89469	1.94555	1.99643	2.04732
26.00	1.58862	1.63938	1.69014	1.74092	1.79172	1.84252	1.89334	1.94416	1.99500	2.04585
26.20	1.58750	1.63822	1.68895	1.73969	1.79044	1.84121	1.89199	1.94278	1.99358	2.04439
26.40	1.58638	1.63706	1.68775	1.73846	1.78917	1.83990	1.89064	1.94139	1.99216	2.04293
26.60	1.58527	1.63591	1.68656	1.73723	1.78791	1.83860	1.88930	1.94001	1.99074	2.04147
26.80	1.58415	1.63476	1.68537	1.73600	1.78664	1.83729	1.88796	1.93863	1.98932	2.04001
27.00	1.58303	1.63360	1.68418	1.73477	1.78537	1.83599	1.88661	1.93725	1.98790	2.03855
27.20	1.58192	1.63245	1.68299	1.73355	1.78411	1.83469	1.88527	1.93587	1.98648	2.03710
27.40	1.58081	1.63130	1.68181	1.73233	1.78285	1.83339	1.88394	1.93450	1.98507	2.03565
27.60	1.57971	1.63016	1.68062	1.73111	1.78159	1.83210	1.88261	1.93313	1.98366	2.03421
27.80	1.57860	1.62901	1.67944	1.72989	1.78034	1.83080	1.88124	1.93176	1.98226	2.03276
28.00	1.57749	1.62787	1.67826	1.72867	1.77908	1.82951	1.87994	1.93039	1.98085	2.03131
28.20	1.57639	1.62673	1.67708	1.72745	1.77783	1.82821	1.87862	1.92902	1.97944	2.02987
28.40	1.57528	1.62559	1.67591	1.72624	1.77658	1.82693	1.87729	1.92766	1.97804	2.02843
28.60	1.57418	1.62445	1.67473	1.72503	1.77533	1.82564	1.87597	1.92630	1.97664	2.02700
28.80	1.57308	1.62332	1.67356	1.72381	1.77408	1.82435	1.87464	1.92494	1.97524	2.02556
29.00	1.57199	1.62218	1.67239	1.72261	1.77284	1.82307	1.87332	1.92358	1.97385	2.02413
29.20	1.57089	1.62105	1.67122	1.72140	1.77159	1.82179	1.87200	1.92222	1.97245	2.02270
29.40	1.56980	1.61992	1.67005	1.72020	1.77035	1.82051	1.87069	1.92087	1.97106	2.02127
29.60	1.56870	1.61879	1.66888	1.71899	1.76911	1.81923	1.86937	1.91952	1.96967	2.01984
29.80	1.56761	1.61766	1.66772	1.71779	1.76787	1.81796	1.86806	1.91817	1.96829	2.01842
30.00	1.56652	1.61653	1.66655	1.71659	1.76663	1.81669	1.86675	1.91682	1.96690	2.01699

*CALCULATED FROM THE BEATTIE-BRIGEMAN EQUATION

DENSITY OF AIR*
(LB/FT³)

TEMPERATURE (°C)	400.00 (PSIG)	410.00 (PSIG)	420.00 (PSIG)	430.00 (PSIG)	440.00 (PSIG)	450.00 (PSIG)	460.00 (PSIG)	470.00 (PSIG)	480.00 (PSIG)	490.00 (PSIG)
20.00	2.14289	2.19495	2.24703	2.29913	2.35123	2.40335	2.45548	2.50762	2.55977	2.61193
20.20	2.14131	2.19334	2.24538	2.29743	2.34949	2.40157	2.45366	2.50575	2.55787	2.60999
20.40	2.13974	2.19173	2.24372	2.29574	2.34776	2.39979	2.45184	2.50390	2.55596	2.60805
20.60	2.13817	2.19011	2.24207	2.29404	2.34602	2.39802	2.45002	2.50204	2.55407	2.60610
20.80	2.13661	2.18851	2.24042	2.29236	2.34429	2.39625	2.44821	2.50019	2.55217	2.60417
21.00	2.13504	2.18690	2.23878	2.29067	2.34257	2.39448	2.44640	2.49833	2.55028	2.60223
21.20	2.13348	2.18530	2.23713	2.28899	2.34084	2.39271	2.44460	2.49649	2.54839	2.60030
21.40	2.13192	2.18370	2.23549	2.28730	2.33912	2.39095	2.44279	2.49464	2.54650	2.59837
21.60	2.13036	2.18211	2.23386	2.28562	2.33740	2.38919	2.44099	2.49280	2.54462	2.59645
21.80	2.12881	2.18051	2.23222	2.28395	2.33568	2.38743	2.43919	2.49096	2.54274	2.59453
22.00	2.12726	2.17892	2.23059	2.28227	2.33397	2.38568	2.43740	2.48912	2.54086	2.59260
22.20	2.12571	2.17733	2.22896	2.28060	2.33226	2.38393	2.43560	2.48729	2.53898	2.59069
22.40	2.12416	2.17574	2.22733	2.27894	2.33055	2.38218	2.43381	2.48546	2.53711	2.58878
22.60	2.12262	2.17416	2.22571	2.27727	2.32884	2.38043	2.43203	2.48363	2.53524	2.58687
22.80	2.12107	2.17257	2.22409	2.27561	2.32714	2.37869	2.43024	2.48181	2.53338	2.58496
23.00	2.11953	2.17099	2.22246	2.27395	2.32544	2.37694	2.42846	2.47998	2.53151	2.58306
23.20	2.11800	2.16941	2.22085	2.27229	2.32374	2.37521	2.42668	2.47816	2.52966	2.58116
23.40	2.11646	2.16784	2.21923	2.27064	2.32205	2.37347	2.42491	2.47635	2.52780	2.57926
23.60	2.11493	2.16627	2.21762	2.26898	2.32036	2.37174	2.42314	2.47454	2.52595	2.57737
23.80	2.11340	2.16470	2.21601	2.26733	2.31867	2.37001	2.42137	2.47273	2.52410	2.57548
24.00	2.11187	2.16313	2.21440	2.26569	2.31698	2.36828	2.41960	2.47092	2.52224	2.57358
24.20	2.11034	2.16156	2.21280	2.26404	2.31529	2.36656	2.41783	2.46911	2.52040	2.57176
24.40	2.10882	2.16000	2.21119	2.26240	2.31361	2.36484	2.41607	2.46731	2.51856	2.56982
24.60	2.10730	2.15844	2.20959	2.26076	2.31193	2.36312	2.41431	2.46551	2.51672	2.56794
24.80	2.10578	2.15688	2.20800	2.25912	2.31026	2.36140	2.41255	2.46371	2.51488	2.56606
25.00	2.10426	2.15533	2.20640	2.25749	2.30858	2.35969	2.41080	2.46192	2.51305	2.56419
25.20	2.10275	2.15377	2.20481	2.25586	2.30691	2.35798	2.40905	2.46013	2.51122	2.56232
25.40	2.10124	2.15222	2.20322	2.25423	2.30524	2.35627	2.40730	2.45834	2.50939	2.56045
25.60	2.09973	2.15067	2.20163	2.25260	2.30358	2.35456	2.40556	2.45656	2.50757	2.55858
25.80	2.09822	2.14913	2.20005	2.25098	2.30191	2.35286	2.40382	2.45478	2.50575	2.55672
26.00	2.09672	2.14758	2.19846	2.24935	2.30025	2.35116	2.40207	2.45300	2.50392	2.55486
26.20	2.09521	2.14604	2.19688	2.24773	2.29859	2.34946	2.40033	2.45122	2.50211	2.55301
26.40	2.09371	2.14450	2.19530	2.24612	2.29694	2.34776	2.39860	2.44944	2.50029	2.55115
26.60	2.09221	2.14297	2.19373	2.24450	2.29528	2.34607	2.39687	2.44767	2.49849	2.54931
26.80	2.09072	2.14143	2.19216	2.24289	2.29363	2.34438	2.39514	2.44591	2.49668	2.54746
27.00	2.08922	2.13990	2.19059	2.24128	2.29198	2.34269	2.39341	2.44414	2.49487	2.54551
27.20	2.08773	2.13837	2.18902	2.23967	2.29034	2.34101	2.39169	2.44237	2.49307	2.54377
27.40	2.08624	2.13684	2.18745	2.23807	2.28870	2.33932	2.38997	2.44062	2.49127	2.54193
27.60	2.08476	2.13532	2.18589	2.23647	2.28705	2.33765	2.38825	2.43886	2.48947	2.54010
27.80	2.08327	2.13380	2.18433	2.23487	2.28542	2.33597	2.38653	2.43710	2.48768	2.53827
28.00	2.08179	2.13227	2.18277	2.23327	2.28378	2.33429	2.38482	2.43535	2.48589	2.53643
28.20	2.08031	2.13076	2.18121	2.23168	2.28215	2.33262	2.38311	2.43360	2.48410	2.53460
28.40	2.07883	2.12924	2.17966	2.23008	2.28051	2.33095	2.38140	2.43186	2.48232	2.53278
28.60	2.07736	2.12773	2.17811	2.22849	2.27889	2.32929	2.37970	2.43011	2.48053	2.53096
28.80	2.07588	2.12622	2.17656	2.22690	2.27726	2.32762	2.37799	2.42837	2.47875	2.52914
29.00	2.07441	2.12471	2.17501	2.22532	2.27564	2.32596	2.37629	2.42663	2.47697	2.52733
29.20	2.07295	2.12320	2.17347	2.22375	2.27402	2.32430	2.37460	2.42490	2.47520	2.52551
29.40	2.07148	2.12170	2.17192	2.22216	2.27240	2.32265	2.37290	2.42316	2.47343	2.52370
29.60	2.07001	2.12020	2.17038	2.22058	2.27078	2.32099	2.37121	2.42143	2.47166	2.52189
29.80	2.06855	2.11870	2.16885	2.21900	2.26917	2.31934	2.36952	2.41971	2.46989	2.52009
30.00	2.06709	2.11720	2.16731	2.21743	2.26756	2.31769	2.36783	2.41798	2.46813	2.51929

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

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C      J DENOTES GAS TYPE
C      J=1 - N2
C      J=2 - O2
C      J=3 - AIR
C      J=4 - CO2
0001      DIMENSION GAS(4,5),GOOD(4,51,40),P2(40),AW(4)
0002      DATA GAS/1.3445,1.4911,1.3012,5.0065,0.02617,0.02562,0.01931,
      *0.07132,0.05046,0.04624,0.04611,0.10476,-0.00691,0.004208,
      *-0.01101,0.07235,4.2E04,4.8E04,4.34E04,6.6E05/
0003      DATA AW/28.02,32.0,29.0,44.01/
0004      R=0.08205
0005      DO 50 J=1,4,1
0006      IF (J.EQ.1) WRITE(6,81)
0007      IF (J.EQ.2) WRITE(6,82)
0008      IF (J.EQ.3) WRITE(6,83)
0009      IF (J.EQ.4) WRITE(6,84)
0010      81 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR N2',//)
0011      82 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR O2',//)
0012      83 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR AIR',//)
0013      84 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR CO2',//)
0014      V=1.0
0015      II=0
0016      DO 40 I=200,300,2
0017      II=II+1
0018      T=FLOAT(I)/10.0 + 273.2
0019      ALPHA=R*T
0020      BETA= -GAS(J,1)+GAS(J,3)*ALPHA-GAS(J,5)*R/T**2
0021      GAMMA= GAS(J,2)*GAS(J,1)-GAS(J,4)*GAS(J,3)*ALPHA-GAS(J,5)*GAS(J,3)*
      * R/T**2
0022      SIGMA=GAS(J,4)*GAS(J,5)*GAS(J,3)*R/T**2
0023      K=4
0024      DO 30 KK=5,44,1
0025      P=(FLOAT(KK) + 14.7)/14.7
0026      K=K+1
0027      P2(K-4)=FLOAT(KK)
0028      DO 25 L=1,100,1
0029      10 VN= 1.0/P*(ALPHA+BETA/V+GAMMA/V**2+SIGMA/V**3)
0030      IF (ABS(V-VN) .LE. 0.0001) GO TO 26
0031      V=VN
0032      25 CONTINUE
0033      T1= T-273.2
0034      P1= P*14.7-14.7
0035      WRITE(6,77) T1,P1,V,VN
0036      77 FORMAT(' T=',E15.7,' P=',E15.7,' V=',E15.7,' VN=',E15.7)
0037      VN=0.0
0038      26 GOOD(J,II,(K-4)) =VN
0039      30 CONTINUE
0040      40 CONTINUE
0041      50 CONTINUE
0042      DO 900 J=1,4,1
0043      DO 875 I=1,51,1
0044      DO 850 N=1,40,1
0045      IF (GOOD(J,I,N) .EQ. 0.0) GO TO 850
0046      GOOD(J,I,N)=1.0/GOOD(J,I,N)
0047      GOOD(J,I,N)=GOOD(J,I,N)*AW(J)/453.59/0.03532
0048      850 CONTINUE
0049      875 CONTINUE
0050      900 CONTINUE

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0051      DO 100 J=1,4,1
0052      LL=1
0053      NN=10
0054      114 IF (J.EQ.1) WRITE(6,201)
0055      IF (J.EQ.2) WRITE(6,200)
0056      IF (J.EQ.3) WRITE(6,203)
0057      IF (J.EQ.4) WRITE(6,204)
0058      200 FORMAT(1H1,60X,'DENSITY OF O2',/,
*        64X,'(LB/FT3)',/,
*        61X,13(' '),/,11X,120(' '))
0059      201 FORMAT(1H1,60X,'DENSITY OF N2',/,
*        64X,'(LB/FT3)',/,
*        61X,13(' '),/,11X,120(' '))
0060      203 FORMAT(1H1,60X,'DENSITY OF AIR',/,
*        64X,'(LB/FT3)',/,
*        61X,14(' '),/,11X,120(' '))
0061      204 FORMAT(1H1,60X,'DENSITY OF CO2',/,
*        64X,'(LB/FT3)',/,
*        61X,14(' '),/,11X,120(' '))
0062      IF ((NN-LL).NE. 9) GO TO 500
0063      WRITE(6,155) (P2(KK),KK=LL,NN,1)
0064      155 FORMAT(10X,' TEMPERATURE',10(P9.2,2X),/,
*        14X,'( C)',7X,'(PSIG)',5X,
*        11('PSIG)',5X,'(PSIG)',5X,'(PSIG)',5X,'(PSIG)',5X,
*        11('PSIG)',5X,'(PSIG)',5X,'(PSIG)',5X,'(PSIG)',/,11X,120(' '))
0065      GO TO 600
0066      500 WRITE(6,160) (P2(KK),KK=LL,NN,1)
0067      160 FORMAT(' TEMPERATURE',9(P9.2,2X),/,4X,'( C)',7X,'(PSIA)',5X,
*        11('PSIA)',5X,'(PSIA)',5X,'(PSIA)',5X,'(PSIA)',5X,
*        11('PSIA)',5X,'(PSIA)',5X,'(PSIA)',5X,/)
0068      600 LA=0
0069      DO 175 LP=200,300,2
0070      T=FLOAT(LP)/10.0
0071      LA=LA+1
0072      WRITE(6,179) T,(J=1,LA,10),LB=LL,NN,1)
0073      179 FORMAT(13X,F6.2,3X,P10.5,9(1X,P10.5))
0074      175 CONTINUE
0075      WRITE(6,601)
0076      601 FORMAT(11X,120(' '),/,
*        11X,' CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION')
0077      LL=LL+10
0078      NN=NN+10
0079      IF (NN.GT.40) GO TO 100
0080      GO TO 114
0081      100 CONTINUE
0082      CALL EXIT
0083      END

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      C      J DENOTES GAS TYPE
      C      J=1 - N2
      C      J=2 - O2
      C      J=3 - AIR
      C      J=4 - CO2
0001      DIMENSION GAS(4,5),GOOD(4,51,40),P2(40),AW(4)
0002      DATA GAS/1.3445,1.4911,1.3012,5.0065,0.02617,0.02562,0.01931,
      *0.07132,0.05046,0.04624,0.04611,0.10476,-0.00691,0.004208,
      *-0.01101,0.07235,4.2204,4.8E04,4.34E04,6.6E05/
0003      DATA AW/28.02,32.0,29.0,44.01/
0004      R=0.08205
0005      DO 50 J=1,4,1
0006      IF (J.EQ.1) WRITE(6,81)
0007      IF (J.EQ.2) WRITE(6,82)
0008      IF (J.EQ.3) WRITE(6,83)
0009      IF (J.EQ.4) WRITE(6,84)
0010      81 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR N2',//)
0011      82 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR O2',//)
0012      83 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR AIR',//)
0013      84 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR CO2',//)
0014      V=1.0
0015      II=0
0016      DO 40 I=200,300,2
0017      II=II+1
0018      T=273.2 + FLOAT(I)/10.0
0019      ALPHA=R*T
0020      BETA= -GAS(J,1)*GAS(J,3)*ALPHA-GAS(J,5)*R/T**2
0021      GAMA= GAS(J,2)*GAS(J,1)-GAS(J,4)*GAS(J,3)*ALPHA-GAS(J,5)*GAS(J,3)*
      *R/T**2
0022      SIGMA=GAS(J,4)*GAS(J,5)*GAS(J,3)*R/T**2
0023      K=4
0024      DO 30 KK=100,490,10
0025      P=(FLOAT(KK) + 14.7)/14.7
0026      K=K+1
0027      P2(K-4)=FLOAT(KK)
0028      DO 25 L=1,100,1
0029      VN= 1.0/P*(ALPHA+BETA/V+GAMA/V**2+SIGMA/V**3)
0030      IF (ABS(V-VN) .LE. 0.0001) GO TO 26
0031      V=VN
0032      25 CONTINUE
0033      T1= T-273.2
0034      P1= P*14.7-14.7
0035      WRITE(6,77) T1,P1,V,VN
0036      77 FORMAT(' T=',E15.7,' P=',E15.7,' V=',E15.7,' VN=',E15.7)
0037      VN=0.0
0038      26 GOOD(J,II,(K-4)) =VN
0039      30 CONTINUE
0040      40 CONTINUE
0041      50 CONTINUE
0042      DO 900 J=1,4,1
0043      DO 875 I=1,51,1
0044      DO 850 N=1,40,1
0045      IF (GOOD(J,I,N) .EQ. 0.0) GO TO 850
0046      GOOD(J,I,N)=1.0/GOOD(J,I,N)
0047      GOOD(J,I,N)=GOOD(J,I,N)*AW(J)/453.59/0.03532
0048      850 CONTINUE
0049      875 CONTINUE
0050      900 CONTINUE

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0051      DO 100 J=1,4,1
0052      LL=1
0053      NN=10
0054      114 IP (J.EQ.1) WRITE(6,201)
0055      IP (J.EQ.2) WRITE(6,200)
0056      IP (J.EQ.3) WRITE(6,203)
0057      IP (J.EQ.4) WRITE(6,204)
0058      200 FORMAT(1H1,60X,'DENSITY OF O2',/,
*          64X,' (LB/FT3) ',/,
*          61X,13(' ',//,11X,120(' '))
0059      201 FORMAT(1H1,60X,'DENSITY OF N2',/,
*          64X,' (LB/FT3) ',/,
*          61X,13(' ',//,11X,120(' '))
0060      203 FORMAT(1H1,60X,'DENSITY OF AIR',/,
*          64X,' (LB/FT3) ',/,
*          61X,14(' ',//,11X,120(' '))
0061      204 FORMAT(1H1,60X,'DENSITY OF CO2',/,
*          64X,' (LB/FT3) ',/,
*          61X,14(' ',//,11X,120(' '))
0062      IF ((NN-LL).NE. 9) GO TO 500
0063      WRITE(6,155) (P2(KK),KK=LL,NN,1)
0064      155 FORMAT(10X,' TEMPERATURE',10(F9.2,2X),/,
*          14X,' ( C) ',7X,' (PSIG) ',5X,
*          *(PSIG) ',5X,' (PSIG) ',5X,' (PSIG) ',5X,' (PSIG) ',5X,' (PSIG) ',5X,
*          *(PSIG) ',5X,' (PSIG) ',5X,' (PSIG) ',5X,' (PSIG) ',5X,' (PSIG) ',5X,
*          11X,120(' '))
0065      GO TO 600
0066      500 WRITE(6,160) (P2(KK),KK=LL,NN,1)
0067      160 FORMAT(' TEMPERATURE', 9(F9.2,2X),/,4X,' ( C) ',7X,' (PSIA) ',5X,
*          *(PSIA) ',5X,' (PSIA) ',5X,' (PSIA) ',5X,' (PSIA) ',5X,' (PSIA) ',5X,
*          *(PSIA) ',5X,' (PSIA) ',5X,' (PSIA) ',5X,/)
0068      600 LA=0
0069      DO 175 LP=200,300,2
0070      T=FLOAT(LP)/10.0
0071      LA=LA+1
0072      WRITE(6,179) T, (GOOD(J,LA,LB),LB=LL,NN,1)
0073      179 FORMAT(13X,F6.2,3X,F10.5,9(1X,F10.5))
0074      175 CONTINUE
0075      WRITE(6,601)
0076      601 FORMAT(11X,120(' '),/,
*          11X,' CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION')
0077      LL=LL+10
0078      NN=NN+10
0079      IF (NN.GT.40) GO TO 100
0080      GO TO 114
0081      100 CONTINUE
0082      CALL EXIT
0083      END

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COMPRESSIBILITY FACTORS OF CO₂¹

TEMPERATURE (C)	5.00 (PSIG)	6.00 (PSIG)	7.00 (PSIG)	8.00 (PSIG)	9.00 (PSIG)	10.00 (PSIG)	11.00 (PSIG)	12.00 (PSIG)	13.00 (PSIG)	14.00 (PSIG)
20.00	0.99274	0.99237	0.99200	0.99163	0.99126	0.99089	0.99052	0.99015	0.98978	0.98940
20.20	0.99276	0.99239	0.99202	0.99165	0.99128	0.99091	0.99054	0.99017	0.98980	0.98943
20.40	0.99278	0.99241	0.99204	0.99167	0.99130	0.99093	0.99056	0.99019	0.98982	0.98945
20.60	0.99279	0.99242	0.99206	0.99169	0.99132	0.99095	0.99058	0.99021	0.98984	0.98947
20.80	0.99281	0.99244	0.99207	0.99171	0.99134	0.99097	0.99060	0.99023	0.98987	0.98950
21.00	0.99282	0.99245	0.99209	0.99172	0.99136	0.99099	0.99062	0.99026	0.98989	0.98952
21.20	0.99284	0.99247	0.99211	0.99174	0.99138	0.99101	0.99064	0.99028	0.98991	0.98954
21.40	0.99285	0.99249	0.99213	0.99176	0.99140	0.99103	0.99066	0.99030	0.98993	0.98957
21.60	0.99287	0.99251	0.99214	0.99178	0.99141	0.99105	0.99068	0.99032	0.98995	0.98959
21.80	0.99289	0.99252	0.99216	0.99180	0.99143	0.99107	0.99071	0.99034	0.98998	0.98961
22.00	0.99290	0.99254	0.99218	0.99181	0.99145	0.99109	0.99073	0.99036	0.99000	0.98964
22.20	0.99292	0.99256	0.99219	0.99183	0.99147	0.99111	0.99075	0.99038	0.99002	0.98966
22.40	0.99293	0.99257	0.99221	0.99185	0.99149	0.99113	0.99077	0.99040	0.99004	0.98968
22.60	0.99295	0.99259	0.99223	0.99187	0.99151	0.99115	0.99079	0.99043	0.99006	0.98970
22.80	0.99296	0.99260	0.99225	0.99189	0.99153	0.99117	0.99081	0.99045	0.99009	0.98973
23.00	0.99298	0.99262	0.99226	0.99190	0.99155	0.99119	0.99083	0.99047	0.99011	0.98975
23.20	0.99299	0.99264	0.99228	0.99192	0.99156	0.99121	0.99085	0.99049	0.99013	0.98977
23.40	0.99301	0.99265	0.99230	0.99194	0.99158	0.99122	0.99087	0.99051	0.99015	0.98979
23.60	0.99302	0.99267	0.99231	0.99196	0.99160	0.99124	0.99089	0.99053	0.99017	0.98982
23.80	0.99304	0.99269	0.99233	0.99197	0.99162	0.99126	0.99091	0.99055	0.99019	0.98984
24.00	0.99306	0.99270	0.99235	0.99199	0.99164	0.99128	0.99093	0.99057	0.99022	0.98986
24.20	0.99307	0.99272	0.99236	0.99201	0.99166	0.99130	0.99095	0.99059	0.99024	0.98988
24.40	0.99309	0.99273	0.99238	0.99203	0.99167	0.99132	0.99097	0.99061	0.99026	0.98991
24.60	0.99310	0.99275	0.99240	0.99205	0.99169	0.99134	0.99099	0.99063	0.99028	0.98993
24.80	0.99312	0.99277	0.99241	0.99206	0.99171	0.99136	0.99101	0.99065	0.99030	0.98995
25.00	0.99313	0.99278	0.99243	0.99208	0.99173	0.99138	0.99103	0.99067	0.99032	0.98997
25.20	0.99315	0.99280	0.99245	0.99210	0.99175	0.99140	0.99105	0.99069	0.99034	0.98999
25.40	0.99316	0.99281	0.99246	0.99211	0.99177	0.99142	0.99107	0.99072	0.99037	0.99002
25.60	0.99318	0.99283	0.99248	0.99213	0.99178	0.99143	0.99108	0.99074	0.99039	0.99004
25.80	0.99319	0.99284	0.99250	0.99215	0.99180	0.99145	0.99110	0.99076	0.99041	0.99006
26.00	0.99321	0.99286	0.99251	0.99217	0.99182	0.99147	0.99112	0.99078	0.99043	0.99008
26.20	0.99322	0.99287	0.99253	0.99218	0.99184	0.99149	0.99114	0.99080	0.99045	0.99010
26.40	0.99324	0.99289	0.99255	0.99220	0.99185	0.99151	0.99116	0.99082	0.99047	0.99012
26.60	0.99325	0.99291	0.99256	0.99222	0.99187	0.99153	0.99118	0.99084	0.99049	0.99015
26.80	0.99326	0.99292	0.99258	0.99223	0.99189	0.99155	0.99120	0.99086	0.99051	0.99017
27.00	0.99328	0.99294	0.99259	0.99225	0.99191	0.99156	0.99122	0.99088	0.99053	0.99019
27.20	0.99330	0.99295	0.99261	0.99227	0.99193	0.99158	0.99124	0.99090	0.99055	0.99021
27.40	0.99331	0.99297	0.99263	0.99228	0.99194	0.99160	0.99126	0.99092	0.99057	0.99023
27.60	0.99332	0.99298	0.99264	0.99230	0.99196	0.99162	0.99128	0.99094	0.99059	0.99025
27.80	0.99334	0.99300	0.99266	0.99232	0.99198	0.99164	0.99130	0.99096	0.99061	0.99027
28.00	0.99335	0.99301	0.99267	0.99233	0.99200	0.99166	0.99132	0.99098	0.99064	0.99030
28.20	0.99337	0.99303	0.99269	0.99235	0.99201	0.99167	0.99133	0.99099	0.99066	0.99032
28.40	0.99338	0.99304	0.99271	0.99237	0.99203	0.99169	0.99135	0.99101	0.99068	0.99034
28.60	0.99339	0.99306	0.99272	0.99238	0.99205	0.99171	0.99137	0.99103	0.99070	0.99036
28.80	0.99341	0.99307	0.99274	0.99240	0.99207	0.99173	0.99139	0.99105	0.99072	0.99038
29.00	0.99342	0.99309	0.99275	0.99242	0.99208	0.99175	0.99141	0.99107	0.99074	0.99040
29.20	0.99344	0.99310	0.99277	0.99243	0.99210	0.99176	0.99143	0.99109	0.99076	0.99042
29.40	0.99345	0.99312	0.99278	0.99245	0.99212	0.99178	0.99145	0.99111	0.99078	0.99044
29.60	0.99347	0.99313	0.99280	0.99247	0.99213	0.99180	0.99147	0.99113	0.99080	0.99046
29.80	0.99348	0.99315	0.99282	0.99248	0.99215	0.99182	0.99148	0.99115	0.99082	0.99048
30.00	0.99349	0.99316	0.99283	0.99250	0.99217	0.99183	0.99150	0.99117	0.99084	0.99050

¹ CALCULATED FROM THE BATTIE-SPIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF CO₂¹

TEMPERATURE (°C)	15.00 (PSIG)	16.00 (PSIG)	17.00 (PSIG)	18.00 (PSIG)	19.00 (PSIG)	20.00 (PSIG)	21.00 (PSIG)	22.00 (PSIG)	23.00 (PSIG)	24.00 (PSIG)
20.00	0.98903	0.98866	0.98829	0.98791	0.98754	0.98717	0.98679	0.98642	0.98605	0.98567
20.20	0.98906	0.98869	0.98831	0.98794	0.98757	0.98720	0.98682	0.98645	0.98608	0.98570
20.40	0.98908	0.98871	0.98834	0.98797	0.98760	0.98722	0.98685	0.98648	0.98611	0.98574
20.60	0.98910	0.98873	0.98836	0.98799	0.98762	0.98725	0.98688	0.98651	0.98614	0.98577
20.80	0.98913	0.98876	0.98839	0.98802	0.98765	0.98728	0.98691	0.98654	0.98617	0.98580
21.00	0.98915	0.98878	0.98842	0.98805	0.98768	0.98731	0.98694	0.98657	0.98620	0.98583
21.20	0.98918	0.98881	0.98844	0.98807	0.98770	0.98734	0.98697	0.98660	0.98623	0.98586
21.40	0.98920	0.98883	0.98847	0.98810	0.98773	0.98736	0.98700	0.98663	0.98626	0.98589
21.60	0.98922	0.98886	0.98849	0.98813	0.98776	0.98739	0.98703	0.98666	0.98629	0.98592
21.80	0.98925	0.98888	0.98852	0.98815	0.98779	0.98742	0.98705	0.98669	0.98632	0.98596
22.00	0.98927	0.98891	0.98854	0.98818	0.98781	0.98745	0.98708	0.98672	0.98635	0.98599
22.20	0.98930	0.98893	0.98857	0.98820	0.98784	0.98748	0.98711	0.98675	0.98638	0.98602
22.40	0.98932	0.98896	0.98859	0.98823	0.98787	0.98750	0.98714	0.98678	0.98641	0.98605
22.60	0.98934	0.98898	0.98862	0.98826	0.98789	0.98753	0.98717	0.98681	0.98644	0.98608
22.80	0.98937	0.98900	0.98864	0.98828	0.98792	0.98756	0.98720	0.98683	0.98647	0.98611
23.00	0.98939	0.98903	0.98867	0.98831	0.98795	0.98759	0.98723	0.98686	0.98650	0.98614
23.20	0.98941	0.98905	0.98869	0.98833	0.98797	0.98761	0.98725	0.98689	0.98653	0.98617
23.40	0.98944	0.98908	0.98872	0.98836	0.98800	0.98764	0.98728	0.98692	0.98656	0.98620
23.60	0.98946	0.98910	0.98874	0.98838	0.98803	0.98767	0.98731	0.98695	0.98659	0.98623
23.80	0.98948	0.98912	0.98877	0.98841	0.98805	0.98770	0.98734	0.98698	0.98662	0.98626
24.00	0.98950	0.98915	0.98879	0.98844	0.98808	0.98772	0.98737	0.98701	0.98665	0.98629
24.20	0.98953	0.98917	0.98882	0.98846	0.98810	0.98775	0.98739	0.98704	0.98668	0.98632
24.40	0.98955	0.98920	0.98884	0.98849	0.98813	0.98778	0.98742	0.98707	0.98671	0.98635
24.60	0.98957	0.98922	0.98887	0.98851	0.98816	0.98780	0.98745	0.98709	0.98674	0.98638
24.80	0.98960	0.98924	0.98889	0.98854	0.98818	0.98783	0.98748	0.98712	0.98677	0.98641
25.00	0.98962	0.98927	0.98892	0.98856	0.98821	0.98786	0.98750	0.98715	0.98680	0.98644
25.20	0.98964	0.98929	0.98894	0.98859	0.98823	0.98788	0.98753	0.98718	0.98683	0.98647
25.40	0.98967	0.98931	0.98896	0.98861	0.98826	0.98791	0.98756	0.98721	0.98686	0.98650
25.60	0.98969	0.98934	0.98899	0.98864	0.98829	0.98794	0.98759	0.98723	0.98688	0.98653
25.80	0.98971	0.98936	0.98901	0.98866	0.98831	0.98796	0.98761	0.98726	0.98691	0.98656
26.00	0.98973	0.98938	0.98904	0.98869	0.98834	0.98799	0.98764	0.98729	0.98694	0.98659
26.20	0.98975	0.98941	0.98906	0.98871	0.98836	0.98802	0.98767	0.98732	0.98697	0.98662
26.40	0.98978	0.98943	0.98908	0.98874	0.98839	0.98804	0.98769	0.98735	0.98700	0.98665
26.60	0.98980	0.98945	0.98911	0.98876	0.98841	0.98807	0.98772	0.98737	0.98703	0.98668
26.80	0.98982	0.98948	0.98913	0.98878	0.98844	0.98809	0.98775	0.98740	0.98705	0.98671
27.00	0.98984	0.98950	0.98916	0.98881	0.98847	0.98812	0.98778	0.98743	0.98708	0.98674
27.20	0.98987	0.98952	0.98918	0.98883	0.98849	0.98815	0.98780	0.98746	0.98711	0.98677
27.40	0.98989	0.98955	0.98920	0.98886	0.98852	0.98817	0.98783	0.98748	0.98714	0.98680
27.60	0.98991	0.98957	0.98923	0.98888	0.98854	0.98820	0.98785	0.98751	0.98717	0.98682
27.80	0.98993	0.98959	0.98925	0.98891	0.98857	0.98822	0.98788	0.98754	0.98720	0.98685
28.00	0.98995	0.98961	0.98927	0.98893	0.98859	0.98825	0.98791	0.98757	0.98722	0.98688
28.20	0.98998	0.98964	0.98930	0.98896	0.98862	0.98827	0.98793	0.98759	0.98725	0.98691
28.40	0.99000	0.98966	0.98932	0.98898	0.98864	0.98830	0.98796	0.98762	0.98728	0.98694
28.60	0.99002	0.98968	0.98934	0.98900	0.98866	0.98833	0.98799	0.98765	0.98731	0.98697
28.80	0.99004	0.98970	0.98937	0.98903	0.98869	0.98835	0.98801	0.98767	0.98734	0.98700
29.00	0.99006	0.98973	0.98939	0.98905	0.98871	0.98838	0.98804	0.98770	0.98736	0.98702
29.20	0.99009	0.98975	0.98941	0.98908	0.98874	0.98840	0.98807	0.98773	0.98739	0.98705
29.40	0.99011	0.98977	0.98943	0.98910	0.98876	0.98843	0.98809	0.98775	0.98742	0.98708
29.60	0.99013	0.98979	0.98946	0.98912	0.98879	0.98845	0.98812	0.98778	0.98745	0.98711
29.80	0.99015	0.98982	0.98948	0.98915	0.98881	0.98848	0.98814	0.98781	0.98747	0.98714
30.00	0.99017	0.98984	0.98950	0.98917	0.98884	0.98850	0.98817	0.98783	0.98750	0.98717

¹CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF CO2¹

TEMPERATURE (C)	25.00 (PSIG)	26.00 (PSIG)	27.00 (PSIG)	28.00 (PSIG)	29.00 (PSIG)	30.00 (PSIG)	31.00 (PSIG)	32.00 (PSIG)	33.00 (PSIG)	34.00 (PSIG)
20.00	0.98530	0.98492	0.98455	0.98417	0.98380	0.98342	0.98305	0.98267	0.98230	0.98192
20.20	0.98533	0.98496	0.98458	0.98421	0.98383	0.98346	0.98309	0.98271	0.98234	0.98196
20.40	0.98536	0.98499	0.98462	0.98424	0.98387	0.98350	0.98312	0.98275	0.98237	0.98200
20.60	0.98540	0.98502	0.98465	0.98428	0.98391	0.98353	0.98316	0.98279	0.98241	0.98204
20.80	0.98543	0.98506	0.98469	0.98431	0.98394	0.98357	0.98320	0.98283	0.98245	0.98208
21.00	0.98546	0.98509	0.98472	0.98435	0.98398	0.98361	0.98324	0.98286	0.98249	0.98212
21.20	0.98549	0.98512	0.98475	0.98438	0.98401	0.98364	0.98327	0.98290	0.98253	0.98216
21.40	0.98553	0.98516	0.98479	0.98442	0.98405	0.98368	0.98331	0.98294	0.98257	0.98220
21.60	0.98556	0.98519	0.98482	0.98445	0.98408	0.98372	0.98335	0.98298	0.98261	0.98224
21.80	0.98559	0.98522	0.98485	0.98449	0.98412	0.98375	0.98338	0.98302	0.98265	0.98228
22.00	0.98562	0.98525	0.98489	0.98452	0.98416	0.98379	0.98342	0.98305	0.98269	0.98232
22.20	0.98565	0.98529	0.98492	0.98456	0.98419	0.98382	0.98346	0.98309	0.98272	0.98236
22.40	0.98568	0.98532	0.98496	0.98459	0.98422	0.98386	0.98349	0.98313	0.98276	0.98240
22.60	0.98572	0.98535	0.98499	0.98462	0.98426	0.98390	0.98353	0.98317	0.98280	0.98244
22.80	0.98575	0.98538	0.98502	0.98466	0.98429	0.98393	0.98357	0.98320	0.98284	0.98247
23.00	0.98578	0.98542	0.98505	0.98469	0.98433	0.98397	0.98360	0.98324	0.98288	0.98251
23.20	0.98581	0.98545	0.98509	0.98473	0.98436	0.98400	0.98364	0.98328	0.98292	0.98255
23.40	0.98584	0.98548	0.98512	0.98476	0.98440	0.98404	0.98368	0.98331	0.98295	0.98259
23.60	0.98587	0.98551	0.98515	0.98479	0.98443	0.98407	0.98371	0.98335	0.98299	0.98263
23.80	0.98590	0.98555	0.98519	0.98483	0.98447	0.98411	0.98375	0.98339	0.98303	0.98267
24.00	0.98593	0.98558	0.98522	0.98486	0.98450	0.98414	0.98378	0.98343	0.98307	0.98271
24.20	0.98597	0.98561	0.98525	0.98489	0.98454	0.98418	0.98382	0.98346	0.98310	0.98275
24.40	0.98600	0.98564	0.98528	0.98493	0.98457	0.98421	0.98386	0.98350	0.98314	0.98278
24.60	0.98603	0.98567	0.98532	0.98496	0.98460	0.98425	0.98389	0.98353	0.98318	0.98282
24.80	0.98606	0.98570	0.98535	0.98499	0.98464	0.98428	0.98393	0.98357	0.98321	0.98286
25.00	0.98609	0.98574	0.98538	0.98503	0.98467	0.98432	0.98396	0.98361	0.98325	0.98290
25.20	0.98612	0.98577	0.98541	0.98506	0.98471	0.98435	0.98400	0.98364	0.98329	0.98293
25.40	0.98615	0.98580	0.98545	0.98509	0.98474	0.98439	0.98403	0.98368	0.98333	0.98297
25.60	0.98618	0.98583	0.98548	0.98513	0.98477	0.98442	0.98407	0.98372	0.98336	0.98301
25.80	0.98621	0.98586	0.98551	0.98516	0.98481	0.98445	0.98410	0.98375	0.98340	0.98305
26.00	0.98624	0.98589	0.98554	0.98519	0.98484	0.98449	0.98414	0.98379	0.98344	0.98308
26.20	0.98627	0.98592	0.98557	0.98522	0.98487	0.98452	0.98417	0.98382	0.98347	0.98312
26.40	0.98630	0.98595	0.98560	0.98525	0.98491	0.98456	0.98421	0.98386	0.98351	0.98316
26.60	0.98633	0.98598	0.98564	0.98529	0.98494	0.98459	0.98424	0.98389	0.98354	0.98320
26.80	0.98636	0.98601	0.98567	0.98532	0.98497	0.98462	0.98428	0.98393	0.98358	0.98323
27.00	0.98639	0.98605	0.98570	0.98535	0.98501	0.98466	0.98431	0.98396	0.98362	0.98327
27.20	0.98642	0.98608	0.98573	0.98538	0.98504	0.98469	0.98435	0.98400	0.98365	0.98331
27.40	0.98645	0.98611	0.98576	0.98542	0.98507	0.98473	0.98438	0.98403	0.98369	0.98334
27.60	0.98648	0.98614	0.98579	0.98545	0.98510	0.98476	0.98441	0.98407	0.98372	0.98338
27.80	0.98651	0.98617	0.98582	0.98548	0.98514	0.98479	0.98445	0.98410	0.98376	0.98342
28.00	0.98654	0.98620	0.98585	0.98551	0.98517	0.98483	0.98448	0.98414	0.98380	0.98345
28.20	0.98657	0.98623	0.98589	0.98554	0.98520	0.98486	0.98452	0.98417	0.98383	0.98349
28.40	0.98660	0.98626	0.98592	0.98558	0.98523	0.98489	0.98455	0.98421	0.98387	0.98353
28.60	0.98663	0.98629	0.98595	0.98561	0.98527	0.98493	0.98458	0.98424	0.98390	0.98356
28.80	0.98666	0.98632	0.98598	0.98564	0.98530	0.98496	0.98462	0.98428	0.98394	0.98360
29.00	0.98669	0.98635	0.98601	0.98567	0.98533	0.98499	0.98465	0.98431	0.98397	0.98363
29.20	0.98672	0.98638	0.98604	0.98570	0.98536	0.98502	0.98469	0.98435	0.98401	0.98367
29.40	0.98674	0.98641	0.98607	0.98573	0.98540	0.98506	0.98472	0.98438	0.98404	0.98370
29.60	0.98677	0.98644	0.98610	0.98576	0.98543	0.98509	0.98475	0.98442	0.98408	0.98374
29.80	0.98680	0.98647	0.98613	0.98580	0.98546	0.98512	0.98479	0.98445	0.98411	0.98378
30.00	0.98683	0.98650	0.98616	0.98583	0.98549	0.98515	0.98482	0.98448	0.98415	0.98381

¹CALCULATED FROM THE SEATTIE-BRIDGEMAN EQUATION

 COMPRESSIBILITY FACTORS OF CO2'

TEMPERATURE (C)	35.00 (PSIG)	36.00 (PSIG)	37.00 (PSIG)	38.00 (PSIG)	39.00 (PSIG)	40.00 (PSIG)	41.00 (PSIG)	42.00 (PSIG)	43.00 (PSIG)	44.00 (PSIG)
20.00	0.98154	0.98117	0.98079	0.98041	0.98004	0.97966	0.97928	0.97890	0.97853	0.97815
20.20	0.98158	0.98121	0.98083	0.98046	0.98008	0.97970	0.97933	0.97895	0.97857	0.97820
20.40	0.98163	0.98125	0.98088	0.98050	0.98013	0.97975	0.97937	0.97900	0.97862	0.97824
20.60	0.98167	0.98129	0.98092	0.98055	0.98017	0.97980	0.97942	0.97905	0.97867	0.97829
20.80	0.98171	0.98133	0.98096	0.98059	0.98021	0.97984	0.97947	0.97909	0.97872	0.97834
21.00	0.98175	0.98138	0.98100	0.98063	0.98026	0.97989	0.97951	0.97914	0.97876	0.97839
21.20	0.98179	0.98142	0.98105	0.98067	0.98030	0.97993	0.97956	0.97918	0.97881	0.97844
21.40	0.98183	0.98146	0.98109	0.98072	0.98035	0.97998	0.97960	0.97923	0.97886	0.97849
21.60	0.98187	0.98150	0.98113	0.98076	0.98039	0.98002	0.97965	0.97928	0.97891	0.97853
21.80	0.98191	0.98154	0.98117	0.98080	0.98043	0.98006	0.97969	0.97932	0.97895	0.97858
22.00	0.98195	0.98158	0.98121	0.98085	0.98048	0.98011	0.97974	0.97937	0.97900	0.97863
22.20	0.98199	0.98162	0.98126	0.98089	0.98052	0.98015	0.97978	0.97942	0.97905	0.97868
22.40	0.98203	0.98166	0.98130	0.98093	0.98056	0.98020	0.97983	0.97946	0.97909	0.97873
22.60	0.98207	0.98170	0.98134	0.98097	0.98061	0.98024	0.97987	0.97951	0.97914	0.97877
22.80	0.98211	0.98175	0.98138	0.98102	0.98065	0.98028	0.97992	0.97955	0.97919	0.97882
23.00	0.98215	0.98179	0.98142	0.98106	0.98069	0.98033	0.97996	0.97960	0.97923	0.97887
23.20	0.98219	0.98183	0.98146	0.98110	0.98074	0.98037	0.98001	0.97964	0.97928	0.97891
23.40	0.98223	0.98187	0.98150	0.98114	0.98078	0.98042	0.98005	0.97969	0.97932	0.97896
23.60	0.98227	0.98191	0.98154	0.98118	0.98082	0.98046	0.98010	0.97973	0.97937	0.97901
23.80	0.98231	0.98195	0.98159	0.98123	0.98086	0.98050	0.98014	0.97978	0.97942	0.97905
24.00	0.98235	0.98199	0.98163	0.98127	0.98091	0.98055	0.98018	0.97982	0.97946	0.97910
24.20	0.98239	0.98203	0.98167	0.98131	0.98095	0.98059	0.98023	0.97987	0.97951	0.97915
24.40	0.98242	0.98207	0.98171	0.98135	0.98099	0.98063	0.98027	0.97991	0.97955	0.97919
24.60	0.98246	0.98211	0.98175	0.98139	0.98103	0.98068	0.98032	0.97996	0.97960	0.97924
24.80	0.98250	0.98214	0.98179	0.98143	0.98107	0.98072	0.98036	0.98000	0.97964	0.97929
25.00	0.98254	0.98218	0.98183	0.98147	0.98112	0.98076	0.98040	0.98005	0.97969	0.97933
25.20	0.98258	0.98222	0.98187	0.98151	0.98116	0.98080	0.98045	0.98009	0.97973	0.97938
25.40	0.98262	0.98226	0.98191	0.98155	0.98120	0.98085	0.98049	0.98014	0.97978	0.97942
25.60	0.98266	0.98230	0.98195	0.98160	0.98124	0.98089	0.98053	0.98018	0.97982	0.97947
25.80	0.98269	0.98234	0.98199	0.98164	0.98128	0.98093	0.98058	0.98022	0.97987	0.97951
26.00	0.98273	0.98238	0.98203	0.98168	0.98132	0.98097	0.98062	0.98027	0.97991	0.97956
26.20	0.98277	0.98242	0.98207	0.98172	0.98136	0.98101	0.98066	0.98031	0.97996	0.97961
26.40	0.98281	0.98246	0.98211	0.98176	0.98141	0.98106	0.98071	0.98035	0.98000	0.97965
26.60	0.98285	0.98250	0.98215	0.98180	0.98145	0.98110	0.98075	0.98040	0.98005	0.97969
26.80	0.98288	0.98254	0.98219	0.98184	0.98149	0.98114	0.98079	0.98044	0.98009	0.97974
27.00	0.98292	0.98257	0.98223	0.98188	0.98153	0.98118	0.98083	0.98048	0.98013	0.97978
27.20	0.98296	0.98261	0.98226	0.98192	0.98157	0.98122	0.98087	0.98053	0.98018	0.97983
27.40	0.98300	0.98265	0.98230	0.98196	0.98161	0.98126	0.98092	0.98057	0.98022	0.97987
27.60	0.98303	0.98269	0.98234	0.98200	0.98165	0.98130	0.98096	0.98061	0.98026	0.97992
27.80	0.98307	0.98273	0.98238	0.98204	0.98169	0.98135	0.98100	0.98065	0.98031	0.97996
28.00	0.98311	0.98276	0.98242	0.98208	0.98173	0.98139	0.98104	0.98070	0.98035	0.98001
28.20	0.98314	0.98280	0.98246	0.98212	0.98177	0.98143	0.98108	0.98074	0.98040	0.98005
28.40	0.98318	0.98284	0.98250	0.98215	0.98181	0.98147	0.98113	0.98078	0.98044	0.98009
28.60	0.98322	0.98288	0.98254	0.98219	0.98185	0.98151	0.98117	0.98082	0.98048	0.98014
28.80	0.98326	0.98292	0.98257	0.98223	0.98189	0.98155	0.98121	0.98087	0.98052	0.98018
29.00	0.98329	0.98295	0.98261	0.98227	0.98193	0.98159	0.98125	0.98091	0.98057	0.98022
29.20	0.98333	0.98299	0.98265	0.98231	0.98197	0.98163	0.98129	0.98095	0.98061	0.98027
29.40	0.98337	0.98303	0.98269	0.98235	0.98201	0.98167	0.98133	0.98099	0.98065	0.98031
29.60	0.98340	0.98306	0.98273	0.98239	0.98205	0.98171	0.98137	0.98103	0.98069	0.98036
29.80	0.98344	0.98310	0.98276	0.98243	0.98209	0.98175	0.98141	0.98108	0.98074	0.98040
30.00	0.98347	0.98314	0.98280	0.98246	0.98213	0.98179	0.98145	0.98112	0.98078	0.98044

14R

*CALCULATED FROM THE BATTIE-BRIDGEMAN EQUATION

 COMPRESSIBILITY FACTORS OF CO₂¹

TEMPERATURE (C)	100.00 (PSIG)	110.00 (PSIG)	120.00 (PSIG)	130.00 (PSIG)	140.00 (PSIG)	150.00 (PSIG)	160.00 (PSIG)	170.00 (PSIG)	180.00 (PSIG)	190.00 (PSIG)
20.00	0.95661	0.95268	0.94873	0.94476	0.94076	0.93674	0.93269	0.92861	0.92450	0.92037
20.20	0.95670	0.95279	0.94885	0.94489	0.94090	0.93689	0.93285	0.92878	0.92468	0.92056
20.40	0.95680	0.95290	0.94897	0.94502	0.94104	0.93703	0.93300	0.92894	0.92486	0.92075
20.60	0.95690	0.95301	0.94909	0.94514	0.94118	0.93718	0.93316	0.92911	0.92504	0.92094
20.80	0.95700	0.95312	0.94921	0.94527	0.94131	0.93733	0.93332	0.92928	0.92522	0.92113
21.00	0.95710	0.95322	0.94932	0.94540	0.94145	0.93747	0.93347	0.92945	0.92539	0.92131
21.20	0.95720	0.95333	0.94944	0.94552	0.94158	0.93762	0.93363	0.92961	0.92557	0.92150
21.40	0.95729	0.95344	0.94956	0.94565	0.94172	0.93777	0.93379	0.92978	0.92575	0.92164
21.60	0.95739	0.95354	0.94967	0.94577	0.94186	0.93791	0.93394	0.92994	0.92592	0.92187
21.80	0.95749	0.95365	0.94979	0.94590	0.94199	0.93806	0.93409	0.93011	0.92610	0.92206
22.00	0.95759	0.95376	0.94990	0.94603	0.94213	0.93820	0.93425	0.93027	0.92627	0.92224
22.20	0.95768	0.95386	0.95002	0.94615	0.94226	0.93834	0.93440	0.93044	0.92645	0.92243
22.40	0.95778	0.95397	0.95013	0.94627	0.94239	0.93849	0.93456	0.93060	0.92662	0.92261
22.60	0.95788	0.95407	0.95025	0.94640	0.94253	0.93863	0.93471	0.93076	0.92679	0.92279
22.80	0.95797	0.95418	0.95036	0.94652	0.94266	0.93877	0.93486	0.93092	0.92696	0.92298
23.00	0.95807	0.95428	0.95048	0.94664	0.94279	0.93891	0.93501	0.93109	0.92714	0.92316
23.20	0.95816	0.95439	0.95059	0.94677	0.94292	0.93906	0.93516	0.93125	0.92731	0.92334
23.40	0.95826	0.95449	0.95070	0.94689	0.94305	0.93920	0.93532	0.93141	0.92748	0.92352
23.60	0.95835	0.95459	0.95081	0.94701	0.94319	0.93934	0.93547	0.93157	0.92765	0.92370
23.80	0.95845	0.95470	0.95093	0.94713	0.94332	0.93948	0.93562	0.93173	0.92782	0.92386
24.00	0.95854	0.95480	0.95104	0.94725	0.94345	0.93962	0.93577	0.93189	0.92799	0.92406
24.20	0.95863	0.95490	0.95115	0.94738	0.94358	0.93976	0.93592	0.93205	0.92816	0.92424
24.40	0.95873	0.95501	0.95126	0.94750	0.94371	0.93990	0.93606	0.93221	0.92832	0.92442
24.60	0.95882	0.95511	0.95137	0.94762	0.94384	0.94004	0.93621	0.93236	0.92849	0.92460
24.80	0.95891	0.95521	0.95148	0.94774	0.94397	0.94018	0.93636	0.93252	0.92866	0.92478
25.00	0.95901	0.95531	0.95160	0.94786	0.94410	0.94031	0.93651	0.93268	0.92883	0.92495
25.20	0.95910	0.95541	0.95171	0.94798	0.94422	0.94045	0.93666	0.93284	0.92899	0.92513
25.40	0.95919	0.95552	0.95182	0.94809	0.94435	0.94059	0.93680	0.93299	0.92916	0.92530
25.60	0.95929	0.95562	0.95193	0.94821	0.94448	0.94073	0.93695	0.93315	0.92932	0.92548
25.80	0.95938	0.95572	0.95204	0.94833	0.94461	0.94086	0.93709	0.93330	0.92949	0.92565
26.00	0.95947	0.95582	0.95214	0.94845	0.94474	0.94100	0.93724	0.93346	0.92965	0.92583
26.20	0.95956	0.95592	0.95225	0.94857	0.94486	0.94114	0.93739	0.93361	0.92982	0.92600
26.40	0.95965	0.95602	0.95236	0.94869	0.94499	0.94127	0.93753	0.93377	0.92998	0.92618
26.60	0.95974	0.95612	0.95247	0.94880	0.94511	0.94141	0.93767	0.93392	0.93015	0.92635
26.80	0.95983	0.95621	0.95258	0.94892	0.94524	0.94154	0.93782	0.93407	0.93031	0.92652
27.00	0.95992	0.95631	0.95269	0.94904	0.94537	0.94167	0.93796	0.93423	0.93047	0.92669
27.20	0.96001	0.95641	0.95279	0.94915	0.94549	0.94181	0.93811	0.93438	0.93063	0.92686
27.40	0.96010	0.95651	0.95290	0.94927	0.94562	0.94194	0.93825	0.93453	0.93079	0.92703
27.60	0.96019	0.95661	0.95301	0.94938	0.94574	0.94207	0.93839	0.93468	0.93095	0.92720
27.80	0.96028	0.95671	0.95311	0.94950	0.94586	0.94221	0.93853	0.93483	0.93111	0.92737
28.00	0.96037	0.95681	0.95322	0.94961	0.94599	0.94234	0.93867	0.93498	0.93128	0.92754
28.20	0.96046	0.95690	0.95333	0.94973	0.94611	0.94247	0.93881	0.93513	0.93143	0.92771
28.40	0.96055	0.95700	0.95343	0.94984	0.94623	0.94260	0.93896	0.93528	0.93159	0.92788
28.60	0.96064	0.95710	0.95354	0.94995	0.94636	0.94274	0.93910	0.93543	0.93175	0.92805
28.80	0.96073	0.95719	0.95364	0.95007	0.94648	0.94287	0.93924	0.93558	0.93191	0.92822
29.00	0.96082	0.95729	0.95375	0.95018	0.94660	0.94300	0.93938	0.93573	0.93207	0.92838
29.20	0.96090	0.95739	0.95385	0.95030	0.94672	0.94313	0.93951	0.93588	0.93222	0.92855
29.40	0.96099	0.95748	0.95395	0.95041	0.94684	0.94326	0.93965	0.93603	0.93238	0.92871
29.60	0.96108	0.95758	0.95406	0.95052	0.94696	0.94339	0.93979	0.93618	0.93254	0.92889
29.80	0.96117	0.95767	0.95416	0.95063	0.94708	0.94352	0.93993	0.93632	0.93269	0.92905
30.00	0.96125	0.95777	0.95427	0.95075	0.94720	0.94365	0.94007	0.93647	0.93285	0.92921

¹ CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

 COMPRESSIBILITY FACTORS OF CO₂¹

TEMPERATURE (C)	200.00 (PSIG)	210.00 (PSIG)	220.00 (PSIG)	230.00 (PSIG)	240.00 (PSIG)	250.00 (PSIG)	260.00 (PSIG)	270.00 (PSIG)	280.00 (PSIG)	290.00 (PSIG)
20.00	0.91621	0.91202	0.90779	0.90354	0.89926	0.89494	0.89059	0.88621	0.88179	0.87734
20.20	0.91641	0.91223	0.90802	0.90378	0.89950	0.89520	0.89086	0.88649	0.88209	0.87765
20.40	0.91661	0.91244	0.90824	0.90401	0.89975	0.89546	0.89113	0.88678	0.88238	0.87796
20.60	0.91681	0.91265	0.90846	0.90424	0.90000	0.89571	0.89140	0.88706	0.88268	0.87827
20.80	0.91701	0.91286	0.90868	0.90448	0.90024	0.89597	0.89167	0.88734	0.88297	0.87857
21.00	0.91721	0.91307	0.90890	0.90471	0.90048	0.89623	0.89194	0.88762	0.88326	0.87887
21.20	0.91740	0.91328	0.90912	0.90494	0.90072	0.89648	0.89220	0.88790	0.88355	0.87918
21.40	0.91760	0.91349	0.90934	0.90517	0.90097	0.89673	0.89247	0.88817	0.88384	0.87948
21.60	0.91780	0.91369	0.90956	0.90540	0.90121	0.89699	0.89273	0.88845	0.88413	0.87978
21.80	0.91799	0.91390	0.90978	0.90563	0.90145	0.89724	0.89300	0.88872	0.88442	0.88008
22.00	0.91819	0.91411	0.91000	0.90586	0.90169	0.89749	0.89326	0.88900	0.88471	0.88038
22.20	0.91838	0.91431	0.91021	0.90609	0.90193	0.89774	0.89352	0.88928	0.88500	0.88068
22.40	0.91858	0.91452	0.91043	0.90631	0.90217	0.89799	0.89378	0.88955	0.88528	0.88098
22.60	0.91877	0.91472	0.91064	0.90654	0.90240	0.89824	0.89404	0.88982	0.88556	0.88127
22.80	0.91896	0.91492	0.91086	0.90676	0.90264	0.89849	0.89430	0.89009	0.88585	0.88157
23.00	0.91916	0.91513	0.91107	0.90699	0.90288	0.89873	0.89456	0.89036	0.88613	0.88187
23.20	0.91935	0.91533	0.91128	0.90721	0.90311	0.89898	0.89482	0.89063	0.88641	0.88216
23.40	0.91954	0.91553	0.91150	0.90743	0.90334	0.89923	0.89508	0.89090	0.88669	0.88245
23.60	0.91973	0.91573	0.91171	0.90765	0.90358	0.89947	0.89533	0.89117	0.88697	0.88274
23.80	0.91992	0.91593	0.91192	0.90788	0.90381	0.89971	0.89559	0.89144	0.88725	0.88304
24.00	0.92011	0.91613	0.91213	0.90810	0.90404	0.89996	0.89585	0.89170	0.88753	0.88333
24.20	0.92030	0.91633	0.91234	0.90832	0.90428	0.90020	0.89610	0.89197	0.88781	0.88361
24.40	0.92049	0.91653	0.91255	0.90854	0.90451	0.90044	0.89635	0.89223	0.88808	0.88390
24.60	0.92068	0.91673	0.91276	0.90876	0.90474	0.90069	0.89660	0.89250	0.88836	0.88419
24.80	0.92086	0.91693	0.91297	0.90898	0.90497	0.90092	0.89685	0.89276	0.88863	0.88448
25.00	0.92105	0.91712	0.91317	0.90920	0.90519	0.90116	0.89711	0.89302	0.88890	0.88476
25.20	0.92124	0.91732	0.91338	0.90942	0.90542	0.90140	0.89736	0.89328	0.88918	0.88505
25.40	0.92142	0.91752	0.91359	0.90963	0.90565	0.90164	0.89761	0.89354	0.88945	0.88533
25.60	0.92161	0.91771	0.91379	0.90985	0.90588	0.90188	0.89785	0.89380	0.88972	0.88561
25.80	0.92179	0.91791	0.91400	0.91006	0.90610	0.90212	0.89810	0.89406	0.88999	0.88589
26.00	0.92198	0.91810	0.91420	0.91028	0.90633	0.90235	0.89835	0.89432	0.89026	0.88617
26.20	0.92216	0.91830	0.91441	0.91049	0.90655	0.90259	0.89860	0.89458	0.89053	0.88645
26.40	0.92234	0.91849	0.91461	0.91071	0.90678	0.90282	0.89884	0.89483	0.89080	0.88673
26.60	0.92253	0.91868	0.91481	0.91092	0.90700	0.90306	0.89908	0.89509	0.89106	0.88701
26.80	0.92271	0.91887	0.91501	0.91113	0.90722	0.90329	0.89933	0.89534	0.89133	0.88729
27.00	0.92289	0.91906	0.91522	0.91134	0.90745	0.90352	0.89957	0.89560	0.89159	0.88756
27.20	0.92307	0.91925	0.91542	0.91155	0.90767	0.90375	0.89981	0.89585	0.89186	0.88784
27.40	0.92325	0.91944	0.91562	0.91176	0.90789	0.90398	0.90006	0.89610	0.89212	0.88811
27.60	0.92343	0.91963	0.91582	0.91197	0.90811	0.90421	0.90030	0.89635	0.89238	0.88839
27.80	0.92361	0.91982	0.91601	0.91218	0.90832	0.90444	0.90054	0.89660	0.89265	0.88866
28.00	0.92379	0.92001	0.91621	0.91239	0.90854	0.90467	0.90079	0.89685	0.89291	0.88893
28.20	0.92397	0.92020	0.91641	0.91260	0.90876	0.90490	0.90101	0.89710	0.89317	0.88920
28.40	0.92414	0.92039	0.91661	0.91280	0.90898	0.90513	0.90125	0.89735	0.89343	0.88947
28.60	0.92432	0.92057	0.91680	0.91301	0.90919	0.90535	0.90149	0.89760	0.89368	0.88974
28.80	0.92450	0.92076	0.91700	0.91322	0.90941	0.90558	0.90173	0.89785	0.89394	0.89001
29.00	0.92468	0.92095	0.91720	0.91342	0.90963	0.90581	0.90196	0.89809	0.89420	0.89028
29.20	0.92485	0.92113	0.91739	0.91363	0.90984	0.90603	0.90220	0.89834	0.89446	0.89055
29.40	0.92503	0.92132	0.91759	0.91383	0.91006	0.90625	0.90243	0.89858	0.89471	0.89081
29.60	0.92520	0.92150	0.91778	0.91404	0.91027	0.90648	0.90267	0.89883	0.89497	0.89106
29.80	0.92538	0.92168	0.91797	0.91424	0.91048	0.90670	0.90290	0.89907	0.89522	0.89134
30.00	0.92555	0.92187	0.91816	0.91444	0.91069	0.90692	0.90313	0.89931	0.89547	0.89161

¹CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

 COMPRESSIBILITY FACTORS OF CO₂*

TEMPERATURE (C)	300.00 (PSIG)	310.00 (PSIG)	320.00 (PSIG)	330.00 (PSIG)	340.00 (PSIG)	350.00 (PSIG)	360.00 (PSIG)	370.00 (PSIG)	380.00 (PSIG)	390.00 (PSIG)
20.00	0.87285	0.86833	0.86377	0.85916	0.85450	0.84982	0.84509	0.84032	0.83550	0.83064
20.20	0.87317	0.86866	0.86411	0.85953	0.85488	0.85021	0.84550	0.84074	0.83594	0.83109
20.40	0.87349	0.86900	0.86446	0.85989	0.85527	0.85060	0.84590	0.84116	0.83638	0.83155
20.60	0.87382	0.86933	0.86481	0.86025	0.85565	0.85099	0.84631	0.84158	0.83681	0.83200
20.80	0.87413	0.86966	0.86515	0.86061	0.85602	0.85138	0.84671	0.84200	0.83725	0.83245
21.00	0.87445	0.86999	0.86550	0.86097	0.85640	0.85177	0.84711	0.84242	0.83768	0.83290
21.20	0.87477	0.87032	0.86584	0.86132	0.85677	0.85215	0.84752	0.84284	0.83811	0.83335
21.40	0.87508	0.87065	0.86619	0.86168	0.85714	0.85254	0.84791	0.84325	0.83854	0.83379
21.60	0.87540	0.87098	0.86652	0.86203	0.85751	0.85294	0.84831	0.84366	0.83897	0.83424
21.80	0.87571	0.87131	0.86686	0.86239	0.85787	0.85332	0.84871	0.84407	0.83940	0.83466
22.00	0.87602	0.87163	0.86720	0.86274	0.85824	0.85370	0.84910	0.84448	0.83982	0.83512
22.20	0.87634	0.87196	0.86754	0.86309	0.85860	0.85408	0.84950	0.84489	0.84024	0.83556
22.40	0.87665	0.87228	0.86788	0.86344	0.85897	0.85445	0.84989	0.84530	0.84067	0.83599
22.60	0.87695	0.87260	0.86821	0.86379	0.85933	0.85483	0.85028	0.84570	0.84109	0.83643
22.80	0.87726	0.87292	0.86854	0.86414	0.85969	0.85521	0.85068	0.84611	0.84150	0.83686
23.00	0.87757	0.87324	0.86888	0.86448	0.86005	0.85558	0.85107	0.84651	0.84192	0.83730
23.20	0.87788	0.87356	0.86921	0.86483	0.86041	0.85595	0.85146	0.84691	0.84234	0.83773
23.40	0.87818	0.87388	0.86954	0.86517	0.86076	0.85632	0.85184	0.84731	0.84275	0.83815
23.60	0.87849	0.87419	0.86987	0.86551	0.86112	0.85669	0.85223	0.84771	0.84316	0.83858
23.80	0.87879	0.87451	0.87020	0.86585	0.86147	0.85706	0.85261	0.84810	0.84357	0.83901
24.00	0.87909	0.87482	0.87053	0.86619	0.86183	0.85743	0.85299	0.84852	0.84398	0.83943
24.20	0.87939	0.87514	0.87085	0.86653	0.86218	0.85779	0.85337	0.84891	0.84439	0.83985
24.40	0.87969	0.87545	0.87118	0.86687	0.86253	0.85816	0.85375	0.84930	0.84480	0.84027
24.60	0.87999	0.87576	0.87150	0.86721	0.86288	0.85852	0.85412	0.84969	0.84520	0.84069
24.80	0.88029	0.87607	0.87182	0.86754	0.86323	0.85888	0.85450	0.85008	0.84563	0.84111
25.00	0.88059	0.87636	0.87215	0.86788	0.86358	0.85924	0.85487	0.85047	0.84603	0.84153
25.20	0.88088	0.87669	0.87247	0.86821	0.86392	0.85960	0.85525	0.85085	0.84643	0.84194
25.40	0.88118	0.87700	0.87279	0.86854	0.86427	0.85996	0.85562	0.85124	0.84683	0.84236
25.60	0.88147	0.87730	0.87310	0.86887	0.86461	0.86032	0.85599	0.85162	0.84722	0.84277
25.80	0.88177	0.87761	0.87342	0.86920	0.86495	0.86067	0.85635	0.85201	0.84762	0.84318
26.00	0.88206	0.87791	0.87374	0.86953	0.86530	0.86103	0.85672	0.85239	0.84802	0.84361
26.20	0.88235	0.87822	0.87406	0.86986	0.86564	0.86138	0.85709	0.85277	0.84841	0.84402
26.40	0.88264	0.87852	0.87437	0.87019	0.86598	0.86173	0.85745	0.85315	0.84880	0.84442
26.60	0.88293	0.87882	0.87468	0.87051	0.86631	0.86208	0.85782	0.85352	0.84919	0.84483
26.80	0.88322	0.87912	0.87499	0.87084	0.86665	0.86241	0.85818	0.85390	0.84958	0.84523
27.00	0.88351	0.87942	0.87531	0.87116	0.86699	0.86278	0.85854	0.85427	0.84997	0.84563
27.20	0.88379	0.87972	0.87562	0.87148	0.86732	0.86313	0.85890	0.85465	0.85035	0.84603
27.40	0.88408	0.88002	0.87593	0.87180	0.86765	0.86347	0.85926	0.85502	0.85074	0.84643
27.60	0.88437	0.88031	0.87623	0.87213	0.86799	0.86382	0.85962	0.85539	0.85112	0.84683
27.80	0.88465	0.88061	0.87654	0.87244	0.86832	0.86416	0.85998	0.85576	0.85150	0.84722
28.00	0.88493	0.88090	0.87685	0.87276	0.86865	0.86451	0.86033	0.85612	0.85189	0.84762
28.20	0.88521	0.88120	0.87715	0.87308	0.86898	0.86485	0.86069	0.85649	0.85227	0.84801
28.40	0.88550	0.88149	0.87746	0.87340	0.86931	0.86519	0.86104	0.85686	0.85264	0.84840
28.60	0.88578	0.88178	0.87776	0.87371	0.86963	0.86553	0.86139	0.85722	0.85302	0.84879
28.80	0.88606	0.88207	0.87806	0.87402	0.86996	0.86586	0.86174	0.85759	0.85340	0.84918
29.00	0.88633	0.88236	0.87836	0.87434	0.87028	0.86620	0.86209	0.85795	0.85377	0.84957
29.20	0.88661	0.88265	0.87867	0.87465	0.87061	0.86654	0.86244	0.85831	0.85415	0.84995
29.40	0.88689	0.88294	0.87896	0.87496	0.87093	0.86687	0.86278	0.85866	0.85452	0.85034
29.60	0.88717	0.88323	0.87926	0.87527	0.87125	0.86721	0.86313	0.85902	0.85489	0.85072
29.80	0.88744	0.88351	0.87956	0.87558	0.87157	0.86754	0.86347	0.85938	0.85526	0.85110
30.00	0.88772	0.88380	0.87986	0.87589	0.87189	0.86787	0.86382	0.85974	0.85563	0.85149

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

 COMPRESSIBILITY FACTORS OF CO₂¹

TEMPERATURE (C)	400.00 (PSIG)	410.00 (PSIG)	420.00 (PSIG)	430.00 (PSIG)	440.00 (PSIG)	450.00 (PSIG)	460.00 (PSIG)	470.00 (PSIG)	480.00 (PSIG)	490.00 (PSIG)
20.00	0.82573	0.82077	0.81576	0.81070	0.80558	0.80041	0.79518	0.78989	0.78454	0.77913
20.20	0.82620	0.82126	0.81627	0.81122	0.80613	0.80097	0.79576	0.79050	0.78517	0.77977
20.40	0.82667	0.82175	0.81677	0.81175	0.80667	0.80153	0.79634	0.79110	0.78579	0.78042
20.60	0.82714	0.82223	0.81727	0.81227	0.80721	0.80209	0.79692	0.79169	0.78641	0.78106
20.80	0.82761	0.82272	0.81778	0.81279	0.80774	0.80265	0.79750	0.79229	0.78702	0.78170
21.00	0.82807	0.82320	0.81828	0.81330	0.80828	0.80320	0.79807	0.79288	0.78764	0.78233
21.20	0.82854	0.82368	0.81877	0.81382	0.80881	0.80375	0.79864	0.79347	0.78825	0.78296
21.40	0.82900	0.82416	0.81927	0.81433	0.80934	0.80430	0.79921	0.79406	0.78886	0.78359
21.60	0.82946	0.82463	0.81976	0.81484	0.80987	0.80485	0.79978	0.79465	0.78946	0.78422
21.80	0.82991	0.82511	0.82025	0.81535	0.81040	0.80539	0.80034	0.79523	0.79006	0.78484
22.00	0.83037	0.82558	0.82074	0.81586	0.81092	0.80594	0.80090	0.79581	0.79067	0.78546
22.20	0.83083	0.82605	0.82123	0.81636	0.81144	0.80648	0.80146	0.79639	0.79126	0.78608
22.40	0.83128	0.82652	0.82171	0.81686	0.81196	0.80702	0.80202	0.79696	0.79186	0.78670
22.60	0.83173	0.82699	0.82220	0.81736	0.81248	0.80755	0.80257	0.79754	0.79245	0.78731
22.80	0.83218	0.82745	0.82268	0.81786	0.81300	0.80808	0.80312	0.79811	0.79304	0.78792
23.00	0.83263	0.82792	0.82316	0.81836	0.81351	0.80862	0.80367	0.79868	0.79363	0.78853
23.20	0.83307	0.82838	0.82364	0.81885	0.81402	0.80915	0.80422	0.79924	0.79421	0.78913
23.40	0.83352	0.82884	0.82411	0.81935	0.81453	0.80967	0.80476	0.79981	0.79479	0.78973
23.60	0.83396	0.82929	0.82459	0.81984	0.81504	0.81020	0.80531	0.80037	0.79537	0.79033
23.80	0.83440	0.82975	0.82506	0.82033	0.81555	0.81072	0.80585	0.80092	0.79595	0.79093
24.00	0.83484	0.83021	0.82553	0.82081	0.81605	0.81124	0.80639	0.80148	0.79653	0.79152
24.20	0.83528	0.83066	0.82600	0.82130	0.81655	0.81176	0.80692	0.80204	0.79710	0.79211
24.40	0.83571	0.83111	0.82647	0.82178	0.81705	0.81228	0.80746	0.80259	0.79767	0.79270
24.60	0.83615	0.83156	0.82693	0.82226	0.81755	0.81279	0.80799	0.80314	0.79824	0.79329
24.80	0.83658	0.83201	0.82740	0.82274	0.81804	0.81330	0.80852	0.80368	0.79880	0.79387
25.00	0.83701	0.83245	0.82786	0.82322	0.81854	0.81381	0.80904	0.80423	0.79937	0.79445
25.20	0.83744	0.83290	0.82832	0.82369	0.81903	0.81432	0.80957	0.80477	0.79993	0.79503
25.40	0.83787	0.83334	0.82878	0.82417	0.81952	0.81483	0.81009	0.80531	0.80048	0.79561
25.60	0.83830	0.83378	0.82923	0.82464	0.82001	0.81533	0.81061	0.80585	0.80104	0.79618
25.80	0.83872	0.83422	0.82969	0.82511	0.82049	0.81583	0.81113	0.80639	0.80159	0.79675
26.00	0.83914	0.83466	0.83014	0.82558	0.82098	0.81633	0.81165	0.80692	0.80215	0.79732
26.20	0.83957	0.83510	0.83059	0.82605	0.82146	0.81683	0.81216	0.80745	0.80269	0.79789
26.40	0.83999	0.83553	0.83104	0.82651	0.82194	0.81733	0.81268	0.80796	0.80324	0.79845
26.60	0.84040	0.83596	0.83149	0.82697	0.82242	0.81782	0.81319	0.80851	0.80379	0.79902
26.80	0.84082	0.83640	0.83193	0.82744	0.82290	0.81832	0.81370	0.80903	0.80433	0.79958
27.00	0.84124	0.83683	0.83238	0.82790	0.82337	0.81881	0.81420	0.80956	0.80487	0.80014
27.20	0.84167	0.83726	0.83282	0.82835	0.82384	0.81930	0.81471	0.81008	0.80541	0.80069
27.40	0.84208	0.83768	0.83326	0.82881	0.82432	0.81978	0.81521	0.81060	0.80594	0.80124
27.60	0.84250	0.83811	0.83370	0.82926	0.82478	0.82027	0.81571	0.81111	0.80647	0.80179
27.80	0.84290	0.83853	0.83414	0.82972	0.82525	0.82075	0.81621	0.81163	0.80701	0.80234
28.00	0.84331	0.83897	0.83458	0.83017	0.82572	0.82123	0.81671	0.81214	0.80754	0.80289
28.20	0.84372	0.83940	0.83501	0.83062	0.82618	0.82171	0.81720	0.81265	0.80806	0.80343
28.40	0.84412	0.83981	0.83545	0.83106	0.82665	0.82219	0.81770	0.81316	0.80859	0.80397
28.60	0.84453	0.84023	0.83588	0.83151	0.82711	0.82266	0.81819	0.81367	0.80911	0.80451
28.80	0.84493	0.84065	0.83631	0.83195	0.82757	0.82314	0.81868	0.81417	0.80963	0.80505
29.00	0.84533	0.84106	0.83676	0.83240	0.82802	0.82361	0.81916	0.81468	0.81015	0.80559
29.20	0.84573	0.84147	0.83719	0.83284	0.82848	0.82408	0.81965	0.81518	0.81067	0.80612
29.40	0.84613	0.84189	0.83761	0.83328	0.82893	0.82455	0.82013	0.81568	0.81118	0.80665
29.60	0.84653	0.84230	0.83803	0.83372	0.82939	0.82502	0.82061	0.81617	0.81170	0.80716
29.80	0.84692	0.84271	0.83846	0.83417	0.82983	0.82548	0.82109	0.81667	0.81221	0.80771
30.00	0.84731	0.84311	0.83888	0.83461	0.83028	0.82595	0.82157	0.81716	0.81272	0.80823

¹CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF CO₂

TEMPERATURE (C)	5.00 (PSIG)	6.00 (PSIG)	7.00 (PSIG)	8.00 (PSIG)	9.00 (PSIG)	10.00 (PSIG)	11.00 (PSIG)	12.00 (PSIG)	13.00 (PSIG)	14.00 (PSIG)
20.00	0.99902	0.99897	0.99892	0.99887	0.99882	0.99877	0.99872	0.99867	0.99862	0.99857
20.20	0.99902	0.99897	0.99892	0.99887	0.99882	0.99877	0.99872	0.99868	0.99863	0.99858
20.40	0.99902	0.99897	0.99893	0.99888	0.99883	0.99878	0.99873	0.99868	0.99863	0.99858
20.60	0.99903	0.99898	0.99893	0.99888	0.99883	0.99878	0.99873	0.99868	0.99864	0.99859
20.80	0.99903	0.99898	0.99893	0.99888	0.99884	0.99879	0.99874	0.99869	0.99864	0.99859
21.00	0.99903	0.99899	0.99894	0.99889	0.99884	0.99879	0.99874	0.99869	0.99864	0.99860
21.20	0.99904	0.99899	0.99894	0.99889	0.99884	0.99879	0.99875	0.99870	0.99865	0.99860
21.40	0.99904	0.99899	0.99894	0.99890	0.99885	0.99880	0.99875	0.99870	0.99865	0.99861
21.60	0.99904	0.99900	0.99895	0.99890	0.99885	0.99880	0.99875	0.99871	0.99866	0.99861
21.80	0.99905	0.99900	0.99895	0.99890	0.99886	0.99881	0.99876	0.99871	0.99866	0.99861
22.00	0.99905	0.99900	0.99895	0.99891	0.99886	0.99881	0.99875	0.99871	0.99867	0.99862
22.20	0.99905	0.99901	0.99896	0.99891	0.99886	0.99881	0.99877	0.99872	0.99867	0.99862
22.40	0.99906	0.99901	0.99896	0.99891	0.99887	0.99882	0.99877	0.99872	0.99868	0.99863
22.60	0.99906	0.99901	0.99896	0.99892	0.99887	0.99882	0.99877	0.99873	0.99868	0.99863
22.80	0.99906	0.99901	0.99897	0.99892	0.99887	0.99883	0.99878	0.99873	0.99868	0.99864
23.00	0.99907	0.99902	0.99897	0.99892	0.99888	0.99883	0.99878	0.99874	0.99869	0.99864
23.20	0.99907	0.99902	0.99897	0.99893	0.99888	0.99883	0.99879	0.99874	0.99869	0.99865
23.40	0.99907	0.99902	0.99898	0.99893	0.99888	0.99884	0.99879	0.99874	0.99870	0.99865
23.60	0.99907	0.99903	0.99898	0.99893	0.99889	0.99884	0.99879	0.99875	0.99870	0.99866
23.80	0.99908	0.99903	0.99898	0.99894	0.99889	0.99885	0.99880	0.99875	0.99871	0.99866
24.00	0.99908	0.99903	0.99899	0.99894	0.99890	0.99885	0.99880	0.99876	0.99871	0.99866
24.20	0.99908	0.99904	0.99899	0.99895	0.99890	0.99885	0.99881	0.99876	0.99872	0.99867
24.40	0.99909	0.99904	0.99900	0.99895	0.99890	0.99886	0.99881	0.99877	0.99872	0.99867
24.60	0.99909	0.99904	0.99900	0.99895	0.99891	0.99886	0.99882	0.99877	0.99872	0.99868
24.80	0.99909	0.99905	0.99900	0.99896	0.99891	0.99887	0.99882	0.99877	0.99873	0.99868
25.00	0.99910	0.99905	0.99901	0.99896	0.99891	0.99887	0.99882	0.99878	0.99873	0.99869
25.20	0.99910	0.99905	0.99901	0.99896	0.99892	0.99887	0.99883	0.99878	0.99874	0.99869
25.40	0.99910	0.99906	0.99901	0.99897	0.99892	0.99888	0.99883	0.99879	0.99874	0.99870
25.60	0.99911	0.99906	0.99902	0.99897	0.99893	0.99888	0.99884	0.99879	0.99874	0.99870
25.80	0.99911	0.99906	0.99902	0.99897	0.99893	0.99888	0.99884	0.99879	0.99875	0.99870
26.00	0.99911	0.99907	0.99902	0.99898	0.99893	0.99889	0.99884	0.99880	0.99875	0.99871
26.20	0.99912	0.99907	0.99903	0.99898	0.99894	0.99889	0.99885	0.99880	0.99876	0.99871
26.40	0.99912	0.99907	0.99903	0.99898	0.99894	0.99889	0.99885	0.99881	0.99876	0.99872
26.60	0.99912	0.99908	0.99903	0.99899	0.99894	0.99890	0.99885	0.99881	0.99877	0.99872
26.80	0.99912	0.99908	0.99903	0.99899	0.99895	0.99890	0.99885	0.99881	0.99877	0.99873
27.00	0.99913	0.99908	0.99904	0.99900	0.99895	0.99891	0.99886	0.99882	0.99878	0.99873
27.20	0.99913	0.99909	0.99904	0.99900	0.99895	0.99891	0.99887	0.99882	0.99878	0.99873
27.40	0.99913	0.99909	0.99905	0.99900	0.99896	0.99891	0.99887	0.99883	0.99878	0.99874
27.60	0.99913	0.99909	0.99905	0.99900	0.99896	0.99892	0.99887	0.99883	0.99879	0.99874
27.80	0.99914	0.99909	0.99905	0.99901	0.99896	0.99892	0.99888	0.99883	0.99879	0.99875
28.00	0.99914	0.99910	0.99906	0.99901	0.99897	0.99893	0.99888	0.99884	0.99880	0.99875
28.20	0.99914	0.99910	0.99906	0.99901	0.99897	0.99893	0.99889	0.99884	0.99880	0.99876
28.40	0.99915	0.99910	0.99906	0.99902	0.99898	0.99894	0.99889	0.99885	0.99880	0.99876
28.60	0.99915	0.99911	0.99906	0.99902	0.99898	0.99894	0.99889	0.99885	0.99881	0.99876
28.80	0.99915	0.99911	0.99907	0.99903	0.99898	0.99894	0.99890	0.99885	0.99881	0.99877
29.00	0.99916	0.99911	0.99907	0.99903	0.99899	0.99894	0.99890	0.99886	0.99881	0.99877
29.20	0.99916	0.99912	0.99907	0.99903	0.99899	0.99895	0.99890	0.99886	0.99882	0.99878
29.40	0.99916	0.99912	0.99908	0.99903	0.99899	0.99895	0.99891	0.99887	0.99883	0.99879
29.60	0.99916	0.99912	0.99908	0.99904	0.99900	0.99895	0.99891	0.99887	0.99883	0.99879
29.80	0.99917	0.99913	0.99908	0.99904	0.99900	0.99896	0.99892	0.99887	0.99883	0.99879
30.00	0.99917	0.99913	0.99909	0.99905	0.99900	0.99896	0.99892	0.99888	0.99884	0.99879

* CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF O2'

TEMPERATURE (°C)	15.00 (PSIG)	15.00 (PSIG)	17.00 (PSIG)	18.00 (PSIG)	19.00 (PSIG)	20.00 (PSIG)	21.00 (PSIG)	22.00 (PSIG)	23.00 (PSIG)	24.00 (PSIG)
20.00	0.99852	0.99847	0.99842	0.99837	0.99833	0.99828	0.99823	0.99818	0.99813	0.99808
20.20	0.99853	0.99848	0.99843	0.99838	0.99833	0.99828	0.99823	0.99818	0.99813	0.99809
20.40	0.99853	0.99848	0.99843	0.99839	0.99834	0.99829	0.99824	0.99819	0.99814	0.99809
20.60	0.99854	0.99849	0.99844	0.99839	0.99834	0.99829	0.99824	0.99820	0.99815	0.99810
20.80	0.99854	0.99849	0.99845	0.99840	0.99835	0.99830	0.99825	0.99820	0.99815	0.99810
21.00	0.99855	0.99850	0.99845	0.99840	0.99835	0.99830	0.99826	0.99821	0.99816	0.99811
21.20	0.99855	0.99850	0.99845	0.99841	0.99836	0.99831	0.99826	0.99821	0.99816	0.99812
21.40	0.99856	0.99851	0.99846	0.99841	0.99836	0.99832	0.99827	0.99822	0.99817	0.99812
21.60	0.99856	0.99851	0.99847	0.99842	0.99837	0.99832	0.99827	0.99823	0.99818	0.99813
21.80	0.99857	0.99852	0.99847	0.99842	0.99837	0.99833	0.99828	0.99823	0.99818	0.99814
22.00	0.99857	0.99852	0.99848	0.99843	0.99838	0.99833	0.99828	0.99824	0.99819	0.99815
22.20	0.99858	0.99853	0.99848	0.99843	0.99839	0.99834	0.99829	0.99824	0.99820	0.99815
22.40	0.99858	0.99853	0.99849	0.99844	0.99839	0.99834	0.99830	0.99825	0.99820	0.99815
22.60	0.99859	0.99854	0.99849	0.99844	0.99840	0.99835	0.99830	0.99825	0.99821	0.99816
22.80	0.99859	0.99854	0.99850	0.99845	0.99840	0.99835	0.99831	0.99826	0.99821	0.99817
23.00	0.99860	0.99855	0.99850	0.99845	0.99841	0.99836	0.99831	0.99827	0.99822	0.99817
23.20	0.99860	0.99855	0.99851	0.99846	0.99841	0.99837	0.99832	0.99827	0.99822	0.99818
23.40	0.99860	0.99856	0.99851	0.99846	0.99842	0.99837	0.99832	0.99828	0.99823	0.99818
23.60	0.99861	0.99856	0.99852	0.99847	0.99842	0.99838	0.99833	0.99828	0.99824	0.99819
23.80	0.99861	0.99857	0.99852	0.99847	0.99843	0.99838	0.99834	0.99829	0.99824	0.99820
24.00	0.99862	0.99857	0.99853	0.99848	0.99843	0.99839	0.99834	0.99830	0.99825	0.99820
24.20	0.99862	0.99858	0.99853	0.99849	0.99844	0.99839	0.99835	0.99830	0.99825	0.99821
24.40	0.99863	0.99858	0.99854	0.99849	0.99844	0.99840	0.99835	0.99831	0.99826	0.99821
24.60	0.99863	0.99859	0.99854	0.99850	0.99845	0.99840	0.99836	0.99831	0.99827	0.99822
24.80	0.99864	0.99859	0.99855	0.99850	0.99845	0.99841	0.99836	0.99832	0.99827	0.99823
25.00	0.99864	0.99860	0.99855	0.99851	0.99846	0.99841	0.99837	0.99832	0.99828	0.99823
25.20	0.99865	0.99860	0.99856	0.99851	0.99847	0.99842	0.99837	0.99833	0.99828	0.99824
25.40	0.99865	0.99861	0.99856	0.99852	0.99847	0.99843	0.99838	0.99834	0.99829	0.99825
25.60	0.99866	0.99861	0.99857	0.99852	0.99848	0.99843	0.99839	0.99834	0.99830	0.99825
25.80	0.99866	0.99862	0.99857	0.99853	0.99848	0.99844	0.99839	0.99835	0.99830	0.99826
26.00	0.99866	0.99862	0.99857	0.99853	0.99848	0.99844	0.99840	0.99835	0.99831	0.99826
26.20	0.99867	0.99863	0.99858	0.99854	0.99849	0.99845	0.99840	0.99836	0.99831	0.99827
26.40	0.99867	0.99863	0.99858	0.99854	0.99850	0.99845	0.99841	0.99836	0.99832	0.99827
26.60	0.99868	0.99864	0.99859	0.99855	0.99850	0.99846	0.99841	0.99837	0.99832	0.99828
26.80	0.99868	0.99864	0.99859	0.99855	0.99851	0.99846	0.99842	0.99837	0.99833	0.99829
27.00	0.99869	0.99864	0.99860	0.99855	0.99851	0.99847	0.99842	0.99838	0.99834	0.99829
27.20	0.99869	0.99865	0.99860	0.99856	0.99852	0.99847	0.99843	0.99839	0.99835	0.99830
27.40	0.99869	0.99865	0.99861	0.99856	0.99852	0.99848	0.99843	0.99839	0.99835	0.99831
27.60	0.99870	0.99866	0.99861	0.99857	0.99853	0.99848	0.99844	0.99840	0.99836	0.99831
27.80	0.99870	0.99866	0.99862	0.99857	0.99853	0.99849	0.99844	0.99840	0.99836	0.99831
28.00	0.99871	0.99867	0.99862	0.99858	0.99854	0.99849	0.99845	0.99841	0.99836	0.99832
28.20	0.99871	0.99867	0.99863	0.99858	0.99854	0.99850	0.99846	0.99841	0.99837	0.99833
28.40	0.99872	0.99868	0.99863	0.99859	0.99855	0.99850	0.99846	0.99842	0.99838	0.99834
28.60	0.99872	0.99868	0.99864	0.99859	0.99855	0.99851	0.99847	0.99843	0.99839	0.99835
28.80	0.99873	0.99869	0.99864	0.99860	0.99856	0.99852	0.99848	0.99844	0.99840	0.99836
29.00	0.99873	0.99869	0.99865	0.99860	0.99856	0.99852	0.99848	0.99844	0.99840	0.99836
29.20	0.99873	0.99869	0.99865	0.99861	0.99857	0.99853	0.99849	0.99845	0.99841	0.99837
29.40	0.99874	0.99870	0.99866	0.99861	0.99857	0.99853	0.99849	0.99845	0.99841	0.99837
29.60	0.99874	0.99870	0.99866	0.99862	0.99858	0.99854	0.99850	0.99846	0.99842	0.99838
29.80	0.99875	0.99871	0.99866	0.99862	0.99858	0.99854	0.99850	0.99846	0.99842	0.99838
30.00	0.99875	0.99871	0.99867	0.99863	0.99859	0.99855	0.99850	0.99846	0.99842	0.99838

CALCULATED FROM THE REATTIS-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF CO₂

TEMPERATURE (°C)	25.00 (PSIG)	26.00 (PSIG)	27.00 (PSIG)	28.00 (PSIG)	29.00 (PSIG)	30.00 (PSIG)	31.00 (PSIG)	32.00 (PSIG)	33.00 (PSIG)	34.00 (PSIG)
20.00	0.99803	0.99799	0.99793	0.99788	0.99783	0.99778	0.99773	0.99769	0.99764	0.99759
20.20	0.99804	0.99799	0.99794	0.99789	0.99784	0.99779	0.99774	0.99769	0.99764	0.99760
20.40	0.99804	0.99799	0.99794	0.99789	0.99785	0.99780	0.99775	0.99770	0.99765	0.99760
20.60	0.99805	0.99800	0.99795	0.99790	0.99785	0.99781	0.99776	0.99771	0.99766	0.99761
20.80	0.99806	0.99801	0.99796	0.99791	0.99786	0.99781	0.99776	0.99772	0.99767	0.99762
21.00	0.99806	0.99801	0.99797	0.99792	0.99787	0.99782	0.99777	0.99772	0.99767	0.99763
21.20	0.99807	0.99802	0.99797	0.99792	0.99788	0.99783	0.99778	0.99773	0.99768	0.99763
21.40	0.99807	0.99803	0.99798	0.99793	0.99788	0.99783	0.99778	0.99774	0.99769	0.99764
21.60	0.99808	0.99803	0.99799	0.99794	0.99789	0.99784	0.99779	0.99775	0.99770	0.99765
21.80	0.99809	0.99804	0.99799	0.99794	0.99790	0.99785	0.99780	0.99775	0.99771	0.99766
22.00	0.99809	0.99805	0.99800	0.99795	0.99790	0.99786	0.99781	0.99776	0.99771	0.99767
22.20	0.99810	0.99805	0.99801	0.99796	0.99791	0.99786	0.99782	0.99777	0.99772	0.99767
22.40	0.99811	0.99806	0.99801	0.99796	0.99792	0.99787	0.99782	0.99778	0.99773	0.99768
22.60	0.99811	0.99807	0.99802	0.99797	0.99793	0.99788	0.99783	0.99778	0.99774	0.99769
22.80	0.99812	0.99807	0.99803	0.99798	0.99793	0.99788	0.99784	0.99779	0.99774	0.99770
23.00	0.99813	0.99808	0.99803	0.99799	0.99794	0.99789	0.99784	0.99780	0.99775	0.99771
23.20	0.99813	0.99808	0.99804	0.99799	0.99794	0.99790	0.99785	0.99781	0.99776	0.99771
23.40	0.99814	0.99809	0.99805	0.99800	0.99795	0.99791	0.99786	0.99781	0.99777	0.99772
23.60	0.99814	0.99810	0.99805	0.99801	0.99796	0.99791	0.99787	0.99782	0.99777	0.99773
23.80	0.99815	0.99810	0.99806	0.99801	0.99797	0.99792	0.99787	0.99783	0.99778	0.99774
24.00	0.99816	0.99811	0.99806	0.99802	0.99797	0.99793	0.99788	0.99784	0.99779	0.99774
24.20	0.99816	0.99812	0.99807	0.99803	0.99798	0.99793	0.99789	0.99784	0.99780	0.99775
24.40	0.99817	0.99812	0.99808	0.99803	0.99799	0.99794	0.99789	0.99785	0.99780	0.99776
24.60	0.99818	0.99813	0.99808	0.99804	0.99799	0.99794	0.99789	0.99785	0.99780	0.99777
24.80	0.99818	0.99814	0.99809	0.99805	0.99800	0.99795	0.99791	0.99786	0.99782	0.99777
25.00	0.99819	0.99814	0.99810	0.99805	0.99801	0.99796	0.99792	0.99787	0.99783	0.99778
25.20	0.99819	0.99815	0.99810	0.99806	0.99801	0.99797	0.99792	0.99788	0.99783	0.99779
25.40	0.99820	0.99816	0.99811	0.99807	0.99802	0.99798	0.99793	0.99789	0.99784	0.99780
25.60	0.99821	0.99816	0.99812	0.99807	0.99803	0.99798	0.99794	0.99789	0.99785	0.99780
25.80	0.99821	0.99817	0.99812	0.99808	0.99803	0.99799	0.99794	0.99790	0.99785	0.99781
26.00	0.99822	0.99817	0.99813	0.99808	0.99804	0.99800	0.99795	0.99791	0.99786	0.99782
26.20	0.99822	0.99818	0.99814	0.99809	0.99805	0.99800	0.99796	0.99791	0.99787	0.99783
26.40	0.99823	0.99819	0.99814	0.99810	0.99805	0.99801	0.99797	0.99792	0.99788	0.99783
26.60	0.99824	0.99819	0.99815	0.99810	0.99806	0.99802	0.99797	0.99793	0.99788	0.99784
26.80	0.99824	0.99820	0.99815	0.99811	0.99807	0.99802	0.99798	0.99794	0.99789	0.99785
27.00	0.99825	0.99821	0.99816	0.99812	0.99807	0.99803	0.99799	0.99794	0.99790	0.99786
27.20	0.99825	0.99821	0.99817	0.99812	0.99808	0.99804	0.99799	0.99795	0.99791	0.99786
27.40	0.99826	0.99822	0.99817	0.99813	0.99809	0.99804	0.99800	0.99796	0.99791	0.99787
27.60	0.99827	0.99822	0.99818	0.99814	0.99809	0.99805	0.99801	0.99797	0.99792	0.99788
27.80	0.99827	0.99823	0.99819	0.99814	0.99810	0.99806	0.99801	0.99797	0.99793	0.99789
28.00	0.99828	0.99823	0.99819	0.99815	0.99811	0.99806	0.99802	0.99798	0.99793	0.99789
28.20	0.99828	0.99824	0.99820	0.99816	0.99811	0.99807	0.99803	0.99799	0.99794	0.99790
28.40	0.99829	0.99825	0.99820	0.99816	0.99812	0.99808	0.99803	0.99799	0.99795	0.99791
28.60	0.99830	0.99825	0.99821	0.99817	0.99812	0.99808	0.99804	0.99800	0.99795	0.99791
28.80	0.99830	0.99826	0.99822	0.99817	0.99813	0.99809	0.99805	0.99801	0.99796	0.99792
29.00	0.99831	0.99826	0.99822	0.99818	0.99814	0.99810	0.99806	0.99802	0.99797	0.99793
29.20	0.99831	0.99827	0.99823	0.99819	0.99814	0.99810	0.99806	0.99802	0.99798	0.99794
29.40	0.99832	0.99828	0.99823	0.99819	0.99815	0.99811	0.99807	0.99803	0.99799	0.99795
29.60	0.99833	0.99828	0.99824	0.99820	0.99816	0.99812	0.99808	0.99804	0.99800	0.99796
29.80	0.99833	0.99829	0.99825	0.99821	0.99816	0.99812	0.99808	0.99804	0.99800	0.99796
30.00	0.99834	0.99829	0.99825	0.99821	0.99817	0.99813	0.99809	0.99805	0.99801	0.99797

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

 COMPRESSIBILITY FACTORS OF O₂

TEMPERATURE (°C)	35.00 (PSIG)	36.00 (PSIG)	37.00 (PSIG)	38.00 (PSIG)	39.00 (PSIG)	40.00 (PSIG)	41.00 (PSIG)	42.00 (PSIG)	43.00 (PSIG)	44.00 (PSIG)
20.00	0.99754	0.99749	0.99744	0.99739	0.99734	0.99729	0.99724	0.99719	0.99715	0.99710
20.20	0.99755	0.99750	0.99745	0.99740	0.99735	0.99730	0.99725	0.99720	0.99716	0.99711
20.40	0.99755	0.99751	0.99746	0.99741	0.99736	0.99731	0.99726	0.99721	0.99716	0.99712
20.60	0.99756	0.99751	0.99747	0.99742	0.99737	0.99732	0.99727	0.99722	0.99717	0.99713
20.80	0.99757	0.99752	0.99747	0.99742	0.99738	0.99733	0.99728	0.99723	0.99718	0.99714
21.00	0.99758	0.99753	0.99748	0.99743	0.99739	0.99734	0.99729	0.99724	0.99719	0.99714
21.20	0.99759	0.99754	0.99749	0.99744	0.99739	0.99735	0.99730	0.99725	0.99720	0.99715
21.40	0.99760	0.99755	0.99750	0.99745	0.99740	0.99735	0.99731	0.99726	0.99721	0.99716
21.60	0.99760	0.99756	0.99751	0.99746	0.99741	0.99736	0.99732	0.99727	0.99722	0.99717
21.80	0.99761	0.99756	0.99752	0.99747	0.99742	0.99737	0.99733	0.99728	0.99723	0.99718
22.00	0.99762	0.99757	0.99752	0.99748	0.99743	0.99738	0.99733	0.99729	0.99724	0.99719
22.20	0.99763	0.99758	0.99753	0.99749	0.99744	0.99739	0.99734	0.99730	0.99725	0.99720
22.40	0.99763	0.99759	0.99754	0.99749	0.99745	0.99740	0.99735	0.99731	0.99726	0.99721
22.60	0.99764	0.99759	0.99755	0.99750	0.99745	0.99741	0.99736	0.99731	0.99727	0.99722
22.80	0.99765	0.99760	0.99756	0.99751	0.99746	0.99742	0.99737	0.99732	0.99728	0.99723
23.00	0.99766	0.99761	0.99757	0.99752	0.99747	0.99743	0.99738	0.99733	0.99728	0.99724
23.20	0.99767	0.99762	0.99757	0.99753	0.99748	0.99743	0.99739	0.99734	0.99729	0.99725
23.40	0.99767	0.99763	0.99758	0.99753	0.99749	0.99744	0.99740	0.99735	0.99730	0.99726
23.60	0.99768	0.99764	0.99759	0.99754	0.99750	0.99745	0.99740	0.99736	0.99731	0.99727
23.80	0.99769	0.99764	0.99760	0.99755	0.99751	0.99746	0.99741	0.99737	0.99732	0.99727
24.00	0.99770	0.99765	0.99761	0.99756	0.99751	0.99747	0.99742	0.99738	0.99733	0.99729
24.20	0.99770	0.99766	0.99761	0.99757	0.99752	0.99748	0.99743	0.99738	0.99734	0.99729
24.40	0.99771	0.99767	0.99762	0.99758	0.99753	0.99748	0.99744	0.99739	0.99735	0.99730
24.60	0.99772	0.99768	0.99763	0.99758	0.99754	0.99749	0.99745	0.99740	0.99736	0.99731
24.80	0.99773	0.99768	0.99764	0.99759	0.99755	0.99750	0.99746	0.99741	0.99737	0.99732
25.00	0.99774	0.99769	0.99765	0.99760	0.99756	0.99751	0.99747	0.99742	0.99738	0.99733
25.20	0.99774	0.99770	0.99765	0.99761	0.99756	0.99752	0.99747	0.99743	0.99738	0.99734
25.40	0.99775	0.99771	0.99766	0.99762	0.99757	0.99753	0.99748	0.99744	0.99739	0.99735
25.60	0.99776	0.99771	0.99767	0.99762	0.99758	0.99754	0.99749	0.99745	0.99740	0.99736
25.80	0.99777	0.99772	0.99768	0.99763	0.99759	0.99754	0.99750	0.99746	0.99741	0.99737
26.00	0.99777	0.99773	0.99769	0.99764	0.99760	0.99755	0.99751	0.99746	0.99742	0.99737
26.20	0.99778	0.99774	0.99769	0.99765	0.99761	0.99756	0.99752	0.99747	0.99743	0.99738
26.40	0.99779	0.99775	0.99770	0.99766	0.99761	0.99757	0.99753	0.99748	0.99744	0.99739
26.60	0.99780	0.99775	0.99771	0.99766	0.99762	0.99758	0.99753	0.99749	0.99745	0.99740
26.80	0.99780	0.99776	0.99772	0.99767	0.99763	0.99759	0.99754	0.99750	0.99745	0.99741
27.00	0.99781	0.99777	0.99772	0.99768	0.99764	0.99759	0.99755	0.99751	0.99746	0.99742
27.20	0.99782	0.99778	0.99773	0.99769	0.99765	0.99760	0.99756	0.99751	0.99747	0.99743
27.40	0.99783	0.99778	0.99774	0.99770	0.99765	0.99761	0.99757	0.99752	0.99748	0.99744
27.60	0.99783	0.99779	0.99775	0.99770	0.99766	0.99762	0.99757	0.99753	0.99749	0.99745
27.80	0.99784	0.99780	0.99775	0.99771	0.99767	0.99763	0.99758	0.99754	0.99750	0.99745
28.00	0.99785	0.99781	0.99776	0.99772	0.99768	0.99763	0.99759	0.99755	0.99751	0.99746
28.20	0.99786	0.99781	0.99777	0.99773	0.99769	0.99764	0.99760	0.99756	0.99751	0.99747
28.40	0.99786	0.99782	0.99778	0.99774	0.99769	0.99765	0.99761	0.99757	0.99752	0.99748
28.60	0.99787	0.99783	0.99779	0.99774	0.99770	0.99766	0.99762	0.99757	0.99753	0.99749
28.80	0.99788	0.99784	0.99779	0.99775	0.99771	0.99767	0.99762	0.99758	0.99754	0.99750
29.00	0.99788	0.99784	0.99780	0.99776	0.99772	0.99767	0.99763	0.99759	0.99755	0.99751
29.20	0.99789	0.99785	0.99781	0.99777	0.99772	0.99768	0.99764	0.99760	0.99756	0.99751
29.40	0.99790	0.99786	0.99782	0.99777	0.99773	0.99769	0.99765	0.99761	0.99757	0.99752
29.60	0.99791	0.99786	0.99782	0.99778	0.99774	0.99770	0.99766	0.99762	0.99757	0.99753
29.80	0.99791	0.99787	0.99783	0.99779	0.99775	0.99771	0.99766	0.99762	0.99758	0.99754
30.00	0.99792	0.99788	0.99784	0.99780	0.99776	0.99771	0.99767	0.99763	0.99759	0.99755

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF O₂

TEMPERATURE (°C)	100.00 (PSIG)	110.00 (PSIG)	120.00 (PSIG)	130.00 (PSIG)	140.00 (PSIG)	150.00 (PSIG)	160.00 (PSIG)	170.00 (PSIG)	180.00 (PSIG)	190.00 (PSIG)
20.00	0.99438	0.99390	0.99342	0.99295	0.99247	0.99200	0.99153	0.99106	0.99059	0.99013
20.20	0.99440	0.99392	0.99345	0.99297	0.99250	0.99203	0.99155	0.99109	0.99063	0.99016
20.40	0.99442	0.99394	0.99347	0.99300	0.99252	0.99205	0.99159	0.99112	0.99066	0.99019
20.60	0.99444	0.99396	0.99349	0.99302	0.99255	0.99208	0.99162	0.99115	0.99069	0.99023
20.80	0.99446	0.99399	0.99351	0.99304	0.99257	0.99211	0.99164	0.99118	0.99072	0.99026
21.00	0.99447	0.99400	0.99353	0.99306	0.99260	0.99213	0.99167	0.99121	0.99075	0.99029
21.20	0.99449	0.99402	0.99355	0.99309	0.99262	0.99216	0.99170	0.99124	0.99078	0.99033
21.40	0.99451	0.99404	0.99358	0.99311	0.99265	0.99219	0.99173	0.99127	0.99081	0.99035
21.60	0.99453	0.99406	0.99360	0.99314	0.99267	0.99221	0.99176	0.99130	0.99085	0.99039
21.80	0.99455	0.99408	0.99362	0.99316	0.99270	0.99224	0.99178	0.99133	0.99088	0.99043
22.00	0.99457	0.99410	0.99364	0.99318	0.99272	0.99227	0.99181	0.99136	0.99091	0.99046
22.20	0.99458	0.99412	0.99366	0.99320	0.99275	0.99229	0.99184	0.99139	0.99094	0.99049
22.40	0.99460	0.99414	0.99369	0.99323	0.99277	0.99232	0.99187	0.99142	0.99097	0.99052
22.60	0.99462	0.99416	0.99371	0.99325	0.99280	0.99235	0.99189	0.99145	0.99100	0.99055
22.80	0.99464	0.99418	0.99373	0.99327	0.99282	0.99237	0.99192	0.99148	0.99103	0.99059
23.00	0.99466	0.99420	0.99375	0.99330	0.99285	0.99240	0.99195	0.99151	0.99106	0.99062
23.20	0.99468	0.99422	0.99377	0.99332	0.99287	0.99242	0.99198	0.99153	0.99109	0.99065
23.40	0.99469	0.99424	0.99379	0.99334	0.99290	0.99245	0.99201	0.99156	0.99112	0.99068
23.60	0.99471	0.99426	0.99381	0.99336	0.99292	0.99248	0.99203	0.99159	0.99115	0.99071
23.80	0.99473	0.99428	0.99383	0.99339	0.99294	0.99250	0.99206	0.99162	0.99118	0.99075
24.00	0.99475	0.99430	0.99385	0.99341	0.99297	0.99253	0.99209	0.99165	0.99121	0.99078
24.20	0.99476	0.99432	0.99388	0.99343	0.99299	0.99255	0.99211	0.99168	0.99124	0.99081
24.40	0.99478	0.99434	0.99390	0.99345	0.99302	0.99258	0.99214	0.99171	0.99127	0.99084
24.60	0.99480	0.99436	0.99392	0.99348	0.99304	0.99260	0.99217	0.99174	0.99130	0.99087
24.80	0.99482	0.99438	0.99394	0.99350	0.99306	0.99263	0.99219	0.99176	0.99133	0.99091
25.00	0.99484	0.99440	0.99396	0.99352	0.99309	0.99265	0.99222	0.99179	0.99136	0.99094
25.20	0.99485	0.99442	0.99398	0.99354	0.99311	0.99268	0.99225	0.99182	0.99139	0.99097
25.40	0.99487	0.99444	0.99400	0.99357	0.99313	0.99270	0.99228	0.99185	0.99142	0.99100
25.60	0.99489	0.99446	0.99402	0.99359	0.99316	0.99273	0.99230	0.99188	0.99145	0.99103
25.80	0.99491	0.99447	0.99404	0.99361	0.99318	0.99275	0.99233	0.99190	0.99148	0.99106
26.00	0.99492	0.99449	0.99406	0.99363	0.99320	0.99278	0.99236	0.99193	0.99151	0.99109
26.20	0.99494	0.99451	0.99408	0.99365	0.99323	0.99280	0.99238	0.99196	0.99154	0.99112
26.40	0.99496	0.99453	0.99410	0.99368	0.99325	0.99283	0.99241	0.99199	0.99157	0.99115
26.60	0.99498	0.99455	0.99412	0.99370	0.99328	0.99285	0.99243	0.99202	0.99160	0.99119
26.80	0.99499	0.99457	0.99414	0.99372	0.99330	0.99288	0.99246	0.99204	0.99163	0.99122
27.00	0.99501	0.99459	0.99416	0.99374	0.99332	0.99290	0.99249	0.99207	0.99166	0.99125
27.20	0.99503	0.99461	0.99418	0.99376	0.99334	0.99293	0.99251	0.99210	0.99169	0.99128
27.40	0.99504	0.99462	0.99420	0.99378	0.99337	0.99295	0.99254	0.99213	0.99172	0.99131
27.60	0.99506	0.99464	0.99422	0.99381	0.99339	0.99298	0.99256	0.99215	0.99174	0.99134
27.80	0.99508	0.99466	0.99424	0.99383	0.99341	0.99300	0.99259	0.99218	0.99177	0.99137
28.00	0.99510	0.99468	0.99426	0.99385	0.99344	0.99303	0.99262	0.99221	0.99180	0.99140
28.20	0.99511	0.99470	0.99428	0.99387	0.99346	0.99305	0.99264	0.99224	0.99183	0.99143
28.40	0.99513	0.99472	0.99430	0.99389	0.99348	0.99307	0.99267	0.99226	0.99186	0.99146
28.60	0.99515	0.99473	0.99432	0.99391	0.99350	0.99310	0.99269	0.99229	0.99189	0.99149
28.80	0.99516	0.99475	0.99434	0.99393	0.99353	0.99312	0.99272	0.99232	0.99192	0.99152
29.00	0.99518	0.99477	0.99436	0.99395	0.99355	0.99315	0.99274	0.99234	0.99195	0.99155
29.20	0.99520	0.99479	0.99438	0.99398	0.99357	0.99317	0.99277	0.99237	0.99197	0.99158
29.40	0.99521	0.99481	0.99440	0.99400	0.99360	0.99319	0.99280	0.99240	0.99200	0.99161
29.60	0.99523	0.99483	0.99442	0.99402	0.99362	0.99322	0.99282	0.99242	0.99203	0.99164
29.80	0.99525	0.99484	0.99444	0.99404	0.99364	0.99324	0.99285	0.99245	0.99206	0.99167
30.00	0.99526	0.99486	0.99446	0.99406	0.99366	0.99327	0.99287	0.99248	0.99209	0.99170

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF O₂

TEMPERATURE (°C)	200.00 (PSIG)	210.00 (PSIG)	220.00 (PSIG)	230.00 (PSIG)	240.00 (PSIG)	250.00 (PSIG)	260.00 (PSIG)	270.00 (PSIG)	280.00 (PSIG)	290.00 (PSIG)
20.00	0.98966	0.98920	0.98874	0.98828	0.98783	0.98737	0.98692	0.98647	0.98602	0.98557
20.20	0.98970	0.98924	0.98878	0.98832	0.98787	0.98741	0.98696	0.98651	0.98606	0.98562
20.40	0.98973	0.98927	0.98882	0.98836	0.98791	0.98746	0.98701	0.98656	0.98611	0.98567
20.60	0.98977	0.98931	0.98885	0.98840	0.98795	0.98750	0.98705	0.98660	0.98616	0.98572
20.80	0.98980	0.98935	0.98889	0.98844	0.98799	0.98754	0.98710	0.98665	0.98621	0.98577
21.00	0.98984	0.98938	0.98893	0.98848	0.98803	0.98759	0.98714	0.98670	0.98626	0.98581
21.20	0.98987	0.98942	0.98897	0.98852	0.98807	0.98763	0.98719	0.98674	0.98630	0.98586
21.40	0.98991	0.98946	0.98901	0.98856	0.98811	0.98767	0.98723	0.98679	0.98635	0.98591
21.60	0.98994	0.98949	0.98904	0.98860	0.98815	0.98771	0.98727	0.98683	0.98640	0.98596
21.80	0.98998	0.98953	0.98908	0.98864	0.98820	0.98775	0.98731	0.98688	0.98644	0.98601
22.00	0.99001	0.98956	0.98912	0.98868	0.98824	0.98780	0.98736	0.98692	0.98649	0.98606
22.20	0.99004	0.98960	0.98916	0.98872	0.98828	0.98784	0.98740	0.98697	0.98654	0.98611
22.40	0.99008	0.98963	0.98919	0.98875	0.98832	0.98788	0.98745	0.98701	0.98658	0.98615
22.60	0.99011	0.98967	0.98923	0.98879	0.98836	0.98792	0.98749	0.98706	0.98663	0.98620
22.80	0.99015	0.98971	0.98927	0.98883	0.98840	0.98796	0.98753	0.98710	0.98668	0.98625
23.00	0.99018	0.98974	0.98930	0.98887	0.98844	0.98801	0.98758	0.98715	0.98672	0.98630
23.20	0.99021	0.98978	0.98934	0.98891	0.98848	0.98805	0.98762	0.98719	0.98677	0.98634
23.40	0.99025	0.98981	0.98938	0.98895	0.98852	0.98809	0.98766	0.98724	0.98681	0.98639
23.60	0.99028	0.98985	0.98941	0.98898	0.98856	0.98813	0.98770	0.98728	0.98686	0.98644
23.80	0.99031	0.98988	0.98945	0.98902	0.98859	0.98817	0.98775	0.98733	0.98690	0.98649
24.00	0.99035	0.98992	0.98949	0.98906	0.98863	0.98821	0.98779	0.98737	0.98695	0.98653
24.20	0.99038	0.98995	0.98952	0.98910	0.98867	0.98825	0.98783	0.98741	0.98699	0.98658
24.40	0.99041	0.98998	0.98956	0.98914	0.98871	0.98829	0.98787	0.98746	0.98704	0.98663
24.60	0.99045	0.99002	0.98960	0.98917	0.98875	0.98833	0.98792	0.98750	0.98709	0.98667
24.80	0.99048	0.99005	0.98963	0.98921	0.98879	0.98837	0.98796	0.98754	0.98713	0.98672
25.00	0.99051	0.99009	0.98967	0.98925	0.98883	0.98841	0.98800	0.98759	0.98718	0.98677
25.20	0.99055	0.99012	0.98970	0.98929	0.98887	0.98845	0.98804	0.98763	0.98722	0.98681
25.40	0.99058	0.99016	0.98974	0.98932	0.98891	0.98849	0.98808	0.98767	0.98727	0.98686
25.60	0.99061	0.99019	0.98978	0.98936	0.98895	0.98853	0.98813	0.98772	0.98731	0.98690
25.80	0.99064	0.99023	0.98981	0.98940	0.98899	0.98858	0.98817	0.98776	0.98735	0.98695
26.00	0.99067	0.99026	0.98985	0.98943	0.98902	0.98861	0.98821	0.98780	0.98740	0.98700
26.20	0.99071	0.99029	0.98988	0.98947	0.98906	0.98865	0.98825	0.98785	0.98744	0.98704
26.40	0.99074	0.99033	0.98992	0.98951	0.98910	0.98870	0.98829	0.98789	0.98749	0.98709
26.60	0.99077	0.99036	0.98995	0.98954	0.98914	0.98873	0.98833	0.98793	0.98753	0.98713
26.80	0.99080	0.99039	0.98998	0.98958	0.98918	0.98877	0.98837	0.98797	0.98758	0.98718
27.00	0.99084	0.99043	0.99002	0.98962	0.98921	0.98881	0.98841	0.98802	0.98762	0.98723
27.20	0.99087	0.99046	0.99006	0.98965	0.98925	0.98885	0.98845	0.98806	0.98766	0.98727
27.40	0.99090	0.99050	0.99009	0.98969	0.98929	0.98889	0.98850	0.98810	0.98771	0.98731
27.60	0.99093	0.99053	0.99013	0.98973	0.98933	0.98893	0.98854	0.98814	0.98775	0.98736
27.80	0.99096	0.99056	0.99016	0.98976	0.98937	0.98897	0.98858	0.98818	0.98779	0.98741
28.00	0.99100	0.99060	0.99020	0.98980	0.98940	0.98901	0.98862	0.98822	0.98784	0.98745
28.20	0.99111	0.99071	0.99031	0.98991	0.98951	0.98912	0.98873	0.98834	0.98795	0.98756
28.40	0.99106	0.99066	0.99026	0.98987	0.98948	0.98909	0.98870	0.98831	0.98792	0.98754
28.60	0.99109	0.99069	0.99030	0.98991	0.98951	0.98912	0.98874	0.98835	0.98797	0.98758
28.80	0.99112	0.99073	0.99033	0.98994	0.98955	0.98916	0.98878	0.98839	0.98801	0.98763
29.00	0.99115	0.99076	0.99037	0.98998	0.98959	0.98920	0.98882	0.98843	0.98805	0.98767
29.20	0.99113	0.99074	0.99034	0.99001	0.98963	0.98924	0.98886	0.98847	0.98809	0.98772
29.40	0.99123	0.99084	0.99044	0.99005	0.98966	0.98928	0.98890	0.98852	0.98814	0.98776
29.60	0.99125	0.99086	0.99047	0.99009	0.98970	0.98932	0.98894	0.98856	0.98818	0.98780
29.80	0.99128	0.99089	0.99050	0.99012	0.98974	0.98936	0.98897	0.98860	0.98822	0.98785
30.00	0.99131	0.99092	0.99054	0.99015	0.98977	0.98939	0.98901	0.98864	0.98826	0.98789

Calculated from the Beattie-Bridgeman Equation

COMPRESSIBILITY FACTORS OF CO₂

TEMPERATURE (°C)	300.00 (PSIG)	310.00 (PSIG)	320.00 (PSIG)	330.00 (PSIG)	340.00 (PSIG)	350.00 (PSIG)	360.00 (PSIG)	370.00 (PSIG)	380.00 (PSIG)	390.00 (PSIG)
20.00	0.98512	0.98468	0.98424	0.98380	0.98336	0.98292	0.98247	0.98205	0.98162	0.98119
20.20	0.98517	0.98473	0.98429	0.98385	0.98341	0.98297	0.98255	0.98212	0.98169	0.98126
20.40	0.98522	0.98478	0.98434	0.98391	0.98347	0.98304	0.98261	0.98218	0.98175	0.98132
20.60	0.98528	0.98484	0.98440	0.98396	0.98353	0.98310	0.98267	0.98224	0.98181	0.98139
20.80	0.98533	0.98489	0.98445	0.98402	0.98359	0.98316	0.98273	0.98230	0.98187	0.98145
21.00	0.98538	0.98494	0.98451	0.98407	0.98364	0.98321	0.98279	0.98236	0.98194	0.98152
21.20	0.98543	0.98499	0.98456	0.98413	0.98370	0.98327	0.98285	0.98242	0.98200	0.98158
21.40	0.98548	0.98504	0.98461	0.98418	0.98376	0.98333	0.98291	0.98248	0.98206	0.98164
21.60	0.98553	0.98510	0.98467	0.98424	0.98381	0.98338	0.98297	0.98255	0.98213	0.98171
21.80	0.98558	0.98515	0.98472	0.98429	0.98387	0.98345	0.98303	0.98261	0.98219	0.98177
22.00	0.98563	0.98520	0.98477	0.98435	0.98392	0.98350	0.98308	0.98267	0.98225	0.98184
22.20	0.98568	0.98525	0.98483	0.98440	0.98398	0.98356	0.98314	0.98273	0.98231	0.98190
22.40	0.98573	0.98530	0.98488	0.98446	0.98404	0.98362	0.98320	0.98278	0.98236	0.98195
22.60	0.98578	0.98535	0.98493	0.98451	0.98409	0.98367	0.98325	0.98283	0.98241	0.98200
22.80	0.98583	0.98540	0.98498	0.98456	0.98415	0.98373	0.98331	0.98289	0.98247	0.98206
23.00	0.98587	0.98545	0.98503	0.98462	0.98420	0.98378	0.98336	0.98294	0.98252	0.98211
23.20	0.98592	0.98550	0.98509	0.98467	0.98425	0.98383	0.98341	0.98299	0.98257	0.98216
23.40	0.98597	0.98556	0.98514	0.98473	0.98431	0.98389	0.98347	0.98305	0.98263	0.98222
23.60	0.98602	0.98560	0.98519	0.98478	0.98437	0.98395	0.98353	0.98311	0.98269	0.98228
23.80	0.98607	0.98566	0.98524	0.98483	0.98442	0.98400	0.98358	0.98316	0.98274	0.98233
24.00	0.98612	0.98570	0.98529	0.98488	0.98446	0.98404	0.98362	0.98320	0.98278	0.98237
24.20	0.98617	0.98575	0.98534	0.98493	0.98451	0.98409	0.98367	0.98325	0.98283	0.98242
24.40	0.98622	0.98581	0.98540	0.98499	0.98457	0.98415	0.98373	0.98331	0.98289	0.98248
24.60	0.98626	0.98585	0.98544	0.98503	0.98461	0.98419	0.98377	0.98335	0.98293	0.98252
24.80	0.98631	0.98590	0.98549	0.98508	0.98466	0.98424	0.98382	0.98340	0.98298	0.98257
25.00	0.98636	0.98595	0.98554	0.98513	0.98471	0.98429	0.98387	0.98345	0.98303	0.98262
25.20	0.98641	0.98600	0.98559	0.98518	0.98476	0.98434	0.98392	0.98350	0.98308	0.98267
25.40	0.98646	0.98605	0.98564	0.98523	0.98481	0.98439	0.98397	0.98355	0.98313	0.98272
25.60	0.98650	0.98610	0.98569	0.98528	0.98486	0.98444	0.98402	0.98360	0.98318	0.98277
25.80	0.98655	0.98615	0.98574	0.98533	0.98491	0.98449	0.98407	0.98365	0.98323	0.98282
26.00	0.98660	0.98620	0.98579	0.98538	0.98496	0.98454	0.98412	0.98370	0.98328	0.98287
26.20	0.98664	0.98625	0.98584	0.98543	0.98501	0.98459	0.98417	0.98375	0.98333	0.98292
26.40	0.98669	0.98630	0.98589	0.98548	0.98506	0.98464	0.98422	0.98380	0.98338	0.98297
26.60	0.98674	0.98635	0.98594	0.98553	0.98511	0.98469	0.98427	0.98385	0.98343	0.98302
26.80	0.98679	0.98640	0.98599	0.98558	0.98516	0.98474	0.98432	0.98390	0.98348	0.98307
27.00	0.98683	0.98644	0.98603	0.98562	0.98520	0.98478	0.98436	0.98394	0.98352	0.98311
27.20	0.98688	0.98649	0.98608	0.98567	0.98525	0.98483	0.98441	0.98399	0.98357	0.98316
27.40	0.98692	0.98653	0.98612	0.98571	0.98529	0.98487	0.98445	0.98403	0.98361	0.98320
27.60	0.98697	0.98658	0.98617	0.98576	0.98534	0.98492	0.98450	0.98408	0.98366	0.98325
27.80	0.98702	0.98663	0.98622	0.98581	0.98539	0.98497	0.98455	0.98413	0.98371	0.98330
28.00	0.98706	0.98667	0.98626	0.98585	0.98543	0.98501	0.98459	0.98417	0.98375	0.98334
28.20	0.98711	0.98672	0.98631	0.98590	0.98548	0.98506	0.98464	0.98422	0.98380	0.98339
28.40	0.98716	0.98677	0.98636	0.98595	0.98553	0.98511	0.98469	0.98427	0.98385	0.98344
28.60	0.98720	0.98682	0.98641	0.98600	0.98558	0.98516	0.98474	0.98432	0.98390	0.98349
28.80	0.98725	0.98687	0.98646	0.98605	0.98563	0.98521	0.98479	0.98437	0.98395	0.98354
29.00	0.98729	0.98692	0.98651	0.98610	0.98568	0.98526	0.98484	0.98442	0.98400	0.98359
29.20	0.98734	0.98696	0.98655	0.98614	0.98572	0.98530	0.98488	0.98446	0.98404	0.98363
29.40	0.98738	0.98701	0.98660	0.98619	0.98577	0.98535	0.98493	0.98451	0.98409	0.98368
29.60	0.98743	0.98706	0.98665	0.98624	0.98582	0.98540	0.98498	0.98456	0.98414	0.98373
29.80	0.98747	0.98710	0.98669	0.98628	0.98586	0.98544	0.98502	0.98460	0.98418	0.98377
30.00	0.98752	0.98715	0.98674	0.98633	0.98591	0.98549	0.98507	0.98465	0.98423	0.98382

* CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

TEMPERATURE (°C)	400.00 (PSIG)	410.00 (PSIG)	420.00 (PSIG)	430.00 (PSIG)	440.00 (PSIG)	450.00 (PSIG)	460.00 (PSIG)	470.00 (PSIG)	480.00 (PSIG)	490.00 (PSIG)
20.00	0.97877	0.97834	0.97792	0.97750	0.97709	0.97666	0.97624	0.97583	0.97542	0.97501
20.20	0.97883	0.97841	0.97799	0.97757	0.97715	0.97673	0.97632	0.97591	0.97550	0.97509
20.40	0.97890	0.97848	0.97806	0.97764	0.97722	0.97681	0.97640	0.97599	0.97558	0.97517
20.60	0.97896	0.97855	0.97813	0.97771	0.97730	0.97689	0.97647	0.97606	0.97565	0.97525
20.80	0.97903	0.97861	0.97820	0.97778	0.97737	0.97696	0.97655	0.97614	0.97573	0.97533
21.00	0.97910	0.97868	0.97826	0.97785	0.97744	0.97703	0.97662	0.97622	0.97581	0.97541
21.20	0.97916	0.97875	0.97833	0.97792	0.97751	0.97710	0.97670	0.97629	0.97589	0.97549
21.40	0.97923	0.97882	0.97840	0.97799	0.97758	0.97718	0.97677	0.97637	0.97597	0.97557
21.60	0.97930	0.97889	0.97847	0.97806	0.97766	0.97725	0.97685	0.97645	0.97605	0.97565
21.80	0.97936	0.97895	0.97854	0.97813	0.97773	0.97732	0.97692	0.97652	0.97612	0.97573
22.00	0.97943	0.97902	0.97861	0.97820	0.97780	0.97740	0.97700	0.97660	0.97620	0.97581
22.20	0.97949	0.97908	0.97867	0.97827	0.97787	0.97747	0.97707	0.97667	0.97628	0.97589
22.40	0.97956	0.97915	0.97874	0.97834	0.97794	0.97754	0.97714	0.97675	0.97636	0.97596
22.60	0.97962	0.97922	0.97881	0.97841	0.97801	0.97761	0.97722	0.97682	0.97643	0.97604
22.80	0.97968	0.97928	0.97888	0.97848	0.97808	0.97769	0.97729	0.97690	0.97651	0.97612
23.00	0.97975	0.97935	0.97895	0.97855	0.97815	0.97776	0.97737	0.97697	0.97659	0.97620
23.20	0.97981	0.97941	0.97901	0.97862	0.97822	0.97783	0.97744	0.97705	0.97666	0.97628
23.40	0.97988	0.97948	0.97908	0.97869	0.97829	0.97790	0.97751	0.97712	0.97674	0.97635
23.60	0.97994	0.97954	0.97915	0.97875	0.97836	0.97797	0.97758	0.97720	0.97681	0.97643
23.80	0.97999	0.97960	0.97921	0.97882	0.97843	0.97804	0.97765	0.97727	0.97689	0.97651
24.00	0.98007	0.97967	0.97928	0.97889	0.97850	0.97811	0.97773	0.97735	0.97696	0.97658
24.20	0.98013	0.97974	0.97935	0.97896	0.97857	0.97818	0.97779	0.97742	0.97704	0.97666
24.40	0.98020	0.97981	0.97942	0.97903	0.97864	0.97826	0.97787	0.97749	0.97711	0.97674
24.60	0.98026	0.97987	0.97948	0.97909	0.97871	0.97833	0.97795	0.97757	0.97719	0.97681
24.80	0.98033	0.97994	0.97955	0.97916	0.97878	0.97840	0.97802	0.97764	0.97726	0.97689
25.00	0.98039	0.97999	0.97961	0.97923	0.97885	0.97847	0.97809	0.97771	0.97734	0.97697
25.20	0.98045	0.97996	0.97958	0.97920	0.97882	0.97844	0.97806	0.97768	0.97731	0.97694
25.40	0.98051	0.97992	0.97954	0.97916	0.97878	0.97840	0.97802	0.97764	0.97727	0.97690
25.60	0.98057	0.97998	0.97960	0.97922	0.97884	0.97846	0.97808	0.97770	0.97733	0.97696
25.80	0.98063	0.97994	0.97956	0.97918	0.97880	0.97842	0.97804	0.97766	0.97729	0.97692
26.00	0.98069	0.97999	0.97961	0.97923	0.97885	0.97847	0.97809	0.97771	0.97734	0.97697
26.20	0.98075	0.97996	0.97958	0.97920	0.97882	0.97844	0.97806	0.97768	0.97731	0.97694
26.40	0.98081	0.97992	0.97954	0.97916	0.97878	0.97840	0.97802	0.97764	0.97727	0.97690
26.60	0.98087	0.97998	0.97960	0.97922	0.97884	0.97846	0.97808	0.97770	0.97733	0.97696
26.80	0.98093	0.97994	0.97956	0.97918	0.97880	0.97842	0.97804	0.97766	0.97729	0.97692
27.00	0.98099	0.97999	0.97961	0.97923	0.97885	0.97847	0.97809	0.97771	0.97734	0.97697
27.20	0.98105	0.97996	0.97958	0.97920	0.97882	0.97844	0.97806	0.97768	0.97731	0.97694
27.40	0.98111	0.97992	0.97954	0.97916	0.97878	0.97840	0.97802	0.97764	0.97727	0.97690
27.60	0.98117	0.97998	0.97960	0.97922	0.97884	0.97846	0.97808	0.97770	0.97733	0.97696
27.80	0.98123	0.97994	0.97956	0.97918	0.97880	0.97842	0.97804	0.97766	0.97729	0.97692
28.00	0.98129	0.97995	0.97957	0.97919	0.97881	0.97843	0.97805	0.97767	0.97730	0.97693
28.20	0.98135	0.97996	0.97958	0.97920	0.97882	0.97844	0.97806	0.97768	0.97731	0.97694
28.40	0.98141	0.97992	0.97954	0.97916	0.97878	0.97840	0.97802	0.97764	0.97727	0.97690
28.60	0.98147	0.97993	0.97955	0.97917	0.97879	0.97841	0.97803	0.97765	0.97728	0.97691
28.80	0.98153	0.97994	0.97956	0.97918	0.97880	0.97842	0.97804	0.97766	0.97729	0.97692
29.00	0.98159	0.97995	0.97957	0.97919	0.97881	0.97843	0.97805	0.97767	0.97730	0.97693
29.20	0.98165	0.97996	0.97958	0.97920	0.97882	0.97844	0.97806	0.97768	0.97731	0.97694
29.40	0.98171	0.97992	0.97954	0.97916	0.97878	0.97840	0.97802	0.97764	0.97727	0.97690
29.60	0.98177	0.97993	0.97955	0.97917	0.97879	0.97841	0.97803	0.97765	0.97728	0.97691
29.80	0.98183	0.97994	0.97956	0.97918	0.97880	0.97842	0.97804	0.97766	0.97729	0.97692
30.00	0.98189	0.97995	0.97957	0.97919	0.97881	0.97843	0.97805	0.97767	0.97730	0.97693

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF H_2

TEMPERATURE (°C)	5.00 (PSIG)	6.00 (PSIG)	7.00 (PSIG)	8.00 (PSIG)	9.00 (PSIG)	10.00 (PSIG)	11.00 (PSIG)	12.00 (PSIG)	13.00 (PSIG)	14.00 (PSIG)
20.00	0.99951	0.99959	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947	0.99945	0.99943
20.20	0.99961	0.99959	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947	0.99945	0.99943
20.40	0.99961	0.99959	0.99957	0.99956	0.99954	0.99952	0.99950	0.99948	0.99946	0.99944
20.60	0.99962	0.99960	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948	0.99946	0.99944
20.80	0.99962	0.99960	0.99959	0.99957	0.99954	0.99952	0.99951	0.99949	0.99947	0.99945
21.00	0.99962	0.99960	0.99958	0.99956	0.99955	0.99953	0.99951	0.99949	0.99947	0.99945
21.20	0.99962	0.99960	0.99959	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947	0.99945
21.40	0.99963	0.99961	0.99959	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947	0.99945
21.60	0.99963	0.99961	0.99959	0.99957	0.99955	0.99953	0.99952	0.99950	0.99948	0.99946
21.80	0.99963	0.99961	0.99959	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948	0.99946
22.00	0.99963	0.99962	0.99960	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948	0.99946
22.20	0.99964	0.99962	0.99960	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948	0.99946
22.40	0.99964	0.99962	0.99960	0.99958	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947
22.60	0.99964	0.99962	0.99961	0.99959	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947
22.80	0.99964	0.99963	0.99961	0.99959	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947
23.00	0.99964	0.99963	0.99961	0.99959	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947
23.20	0.99965	0.99963	0.99961	0.99959	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947
23.40	0.99965	0.99963	0.99962	0.99960	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948
23.60	0.99965	0.99964	0.99962	0.99960	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948
23.80	0.99965	0.99964	0.99962	0.99960	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948
24.00	0.99966	0.99964	0.99962	0.99960	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948
24.20	0.99966	0.99964	0.99963	0.99961	0.99959	0.99957	0.99955	0.99953	0.99951	0.99949
24.40	0.99966	0.99965	0.99963	0.99961	0.99959	0.99957	0.99955	0.99953	0.99951	0.99949
24.60	0.99967	0.99965	0.99963	0.99962	0.99960	0.99958	0.99956	0.99954	0.99952	0.99950
24.80	0.99967	0.99965	0.99963	0.99962	0.99960	0.99958	0.99956	0.99954	0.99952	0.99950
25.00	0.99967	0.99965	0.99964	0.99962	0.99960	0.99958	0.99956	0.99954	0.99952	0.99950
25.20	0.99967	0.99966	0.99964	0.99962	0.99961	0.99959	0.99957	0.99955	0.99953	0.99951
25.40	0.99968	0.99966	0.99964	0.99963	0.99961	0.99959	0.99957	0.99955	0.99953	0.99951
25.60	0.99968	0.99966	0.99964	0.99963	0.99961	0.99959	0.99957	0.99955	0.99953	0.99951

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF N₂

TEMPERATURE (°C)	15.00 (PSIG)	16.00 (PSIG)	17.00 (PSIG)	18.00 (PSIG)	19.00 (PSIG)	20.00 (PSIG)	21.00 (PSIG)	22.00 (PSIG)	23.00 (PSIG)	24.00 (PSIG)
20.00	0.99941	0.99939	0.99938	0.99936	0.99934	0.99932	0.99930	0.99928	0.99926	0.99924
20.20	0.99942	0.99940	0.99938	0.99936	0.99934	0.99932	0.99931	0.99929	0.99927	0.99925
20.40	0.99942	0.99940	0.99938	0.99936	0.99935	0.99933	0.99931	0.99929	0.99927	0.99925
20.60	0.99943	0.99941	0.99939	0.99937	0.99935	0.99933	0.99931	0.99929	0.99928	0.99926
20.80	0.99943	0.99941	0.99939	0.99937	0.99935	0.99934	0.99932	0.99930	0.99928	0.99926
21.00	0.99943	0.99941	0.99940	0.99938	0.99936	0.99934	0.99932	0.99930	0.99928	0.99927
21.20	0.99944	0.99942	0.99940	0.99938	0.99936	0.99934	0.99933	0.99931	0.99929	0.99927
21.40	0.99944	0.99942	0.99940	0.99939	0.99937	0.99935	0.99934	0.99931	0.99929	0.99927
21.60	0.99945	0.99943	0.99941	0.99939	0.99937	0.99935	0.99934	0.99932	0.99930	0.99928
21.80	0.99945	0.99943	0.99941	0.99940	0.99938	0.99936	0.99934	0.99932	0.99930	0.99929
22.00	0.99945	0.99943	0.99942	0.99940	0.99938	0.99936	0.99934	0.99933	0.99931	0.99929
22.20	0.99946	0.99944	0.99942	0.99940	0.99939	0.99937	0.99935	0.99933	0.99931	0.99930
22.40	0.99946	0.99944	0.99942	0.99941	0.99939	0.99937	0.99935	0.99934	0.99932	0.99931
22.60	0.99946	0.99945	0.99943	0.99941	0.99939	0.99938	0.99936	0.99934	0.99932	0.99931
22.80	0.99947	0.99945	0.99943	0.99942	0.99940	0.99938	0.99936	0.99934	0.99933	0.99931
23.00	0.99947	0.99945	0.99944	0.99942	0.99940	0.99939	0.99937	0.99936	0.99934	0.99932
23.20	0.99947	0.99946	0.99944	0.99942	0.99941	0.99939	0.99937	0.99936	0.99934	0.99932
23.40	0.99948	0.99946	0.99944	0.99943	0.99941	0.99939	0.99938	0.99936	0.99934	0.99933
23.60	0.99948	0.99947	0.99945	0.99943	0.99941	0.99940	0.99938	0.99936	0.99935	0.99933
23.80	0.99949	0.99947	0.99945	0.99943	0.99942	0.99940	0.99939	0.99937	0.99935	0.99934
24.00	0.99949	0.99947	0.99946	0.99944	0.99942	0.99941	0.99939	0.99937	0.99936	0.99934
24.20	0.99949	0.99948	0.99946	0.99944	0.99943	0.99941	0.99939	0.99937	0.99936	0.99934
24.40	0.99950	0.99948	0.99946	0.99945	0.99943	0.99942	0.99940	0.99938	0.99937	0.99935
24.60	0.99950	0.99949	0.99947	0.99945	0.99944	0.99942	0.99940	0.99938	0.99937	0.99935
24.80	0.99950	0.99949	0.99947	0.99946	0.99944	0.99942	0.99941	0.99939	0.99938	0.99936
25.00	0.99951	0.99949	0.99948	0.99946	0.99944	0.99943	0.99941	0.99940	0.99938	0.99936
25.20	0.99951	0.99950	0.99948	0.99946	0.99945	0.99943	0.99942	0.99940	0.99938	0.99937
25.40	0.99952	0.99950	0.99948	0.99947	0.99945	0.99944	0.99942	0.99940	0.99939	0.99937
25.60	0.99952	0.99950	0.99949	0.99947	0.99946	0.99944	0.99942	0.99941	0.99939	0.99938
25.80	0.99952	0.99951	0.99949	0.99948	0.99946	0.99944	0.99943	0.99941	0.99940	0.99938
26.00	0.99953	0.99951	0.99949	0.99948	0.99946	0.99945	0.99943	0.99942	0.99940	0.99939
26.20	0.99953	0.99951	0.99950	0.99948	0.99947	0.99945	0.99944	0.99942	0.99941	0.99939
26.40	0.99953	0.99952	0.99950	0.99949	0.99947	0.99946	0.99944	0.99943	0.99941	0.99940
26.60	0.99954	0.99952	0.99951	0.99949	0.99948	0.99946	0.99945	0.99943	0.99942	0.99940
26.80	0.99954	0.99952	0.99951	0.99950	0.99948	0.99947	0.99945	0.99944	0.99942	0.99941
27.00	0.99954	0.99953	0.99951	0.99950	0.99948	0.99947	0.99945	0.99944	0.99942	0.99941
27.20	0.99955	0.99953	0.99952	0.99950	0.99949	0.99947	0.99946	0.99944	0.99943	0.99941
27.40	0.99955	0.99954	0.99952	0.99951	0.99949	0.99948	0.99946	0.99945	0.99943	0.99942
27.60	0.99955	0.99954	0.99953	0.99951	0.99950	0.99948	0.99947	0.99945	0.99944	0.99942
27.80	0.99956	0.99954	0.99953	0.99951	0.99950	0.99949	0.99947	0.99946	0.99944	0.99943
28.00	0.99956	0.99955	0.99953	0.99952	0.99950	0.99949	0.99948	0.99946	0.99945	0.99943
28.20	0.99957	0.99955	0.99954	0.99952	0.99951	0.99949	0.99948	0.99947	0.99945	0.99944
28.40	0.99957	0.99955	0.99954	0.99953	0.99951	0.99950	0.99948	0.99947	0.99946	0.99944
28.60	0.99957	0.99956	0.99954	0.99953	0.99952	0.99950	0.99949	0.99947	0.99946	0.99945
28.80	0.99958	0.99956	0.99955	0.99953	0.99952	0.99951	0.99949	0.99948	0.99946	0.99945
29.00	0.99958	0.99956	0.99955	0.99954	0.99952	0.99951	0.99949	0.99948	0.99946	0.99945
29.20	0.99958	0.99957	0.99955	0.99954	0.99953	0.99951	0.99950	0.99949	0.99947	0.99946
29.40	0.99959	0.99957	0.99956	0.99954	0.99953	0.99952	0.99950	0.99949	0.99948	0.99946
29.60	0.99959	0.99958	0.99956	0.99955	0.99954	0.99952	0.99951	0.99950	0.99948	0.99947
29.80	0.99959	0.99958	0.99957	0.99955	0.99954	0.99953	0.99951	0.99950	0.99949	0.99947
30.00	0.99960	0.99958	0.99957	0.99956	0.99954	0.99953	0.99952	0.99950	0.99949	0.99948

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

7

COMPRESSIBILITY FACTORS OF N₂

TEMPERATURE (C)	25.00 (PSIG)	26.00 (PSIG)	27.00 (PSIG)	28.00 (PSIG)	29.00 (PSIG)	30.00 (PSIG)	31.00 (PSIG)	32.00 (PSIG)	33.00 (PSIG)	34.00 (PSIG)
20.00	0.99922	0.99920	0.99918	0.99917	0.99915	0.99913	0.99911	0.99909	0.99907	0.99905
20.20	0.99923	0.99921	0.99919	0.99917	0.99915	0.99913	0.99911	0.99910	0.99908	0.99906
20.40	0.99923	0.99921	0.99920	0.99918	0.99916	0.99914	0.99912	0.99910	0.99908	0.99907
20.60	0.99924	0.99922	0.99920	0.99918	0.99916	0.99915	0.99913	0.99911	0.99909	0.99908
20.80	0.99924	0.99922	0.99921	0.99919	0.99917	0.99915	0.99913	0.99911	0.99910	0.99908
21.00	0.99925	0.99923	0.99921	0.99919	0.99918	0.99916	0.99914	0.99912	0.99910	0.99908
21.20	0.99925	0.99923	0.99922	0.99920	0.99918	0.99916	0.99914	0.99913	0.99911	0.99909
21.40	0.99926	0.99924	0.99922	0.99920	0.99919	0.99917	0.99915	0.99913	0.99911	0.99910
21.60	0.99926	0.99925	0.99923	0.99921	0.99919	0.99917	0.99916	0.99914	0.99912	0.99910
21.80	0.99927	0.99925	0.99923	0.99922	0.99920	0.99918	0.99916	0.99915	0.99913	0.99911
22.00	0.99927	0.99926	0.99924	0.99922	0.99920	0.99919	0.99917	0.99915	0.99913	0.99912
22.20	0.99928	0.99926	0.99924	0.99923	0.99921	0.99919	0.99917	0.99916	0.99914	0.99912
22.40	0.99928	0.99927	0.99925	0.99923	0.99921	0.99920	0.99918	0.99916	0.99915	0.99913
22.60	0.99929	0.99927	0.99925	0.99924	0.99922	0.99920	0.99919	0.99917	0.99915	0.99913
22.80	0.99929	0.99928	0.99926	0.99924	0.99922	0.99921	0.99919	0.99917	0.99916	0.99914
23.00	0.99930	0.99928	0.99926	0.99925	0.99923	0.99921	0.99920	0.99918	0.99916	0.99915
23.20	0.99930	0.99929	0.99927	0.99925	0.99924	0.99922	0.99920	0.99919	0.99917	0.99915
23.40	0.99931	0.99929	0.99927	0.99926	0.99924	0.99922	0.99921	0.99919	0.99918	0.99916
23.60	0.99931	0.99930	0.99928	0.99926	0.99925	0.99923	0.99921	0.99920	0.99918	0.99916
23.80	0.99932	0.99930	0.99928	0.99927	0.99925	0.99924	0.99922	0.99920	0.99919	0.99917
24.00	0.99932	0.99931	0.99929	0.99927	0.99926	0.99924	0.99923	0.99921	0.99919	0.99918
24.20	0.99933	0.99931	0.99930	0.99928	0.99926	0.99925	0.99923	0.99921	0.99920	0.99918
24.40	0.99933	0.99932	0.99930	0.99928	0.99927	0.99925	0.99924	0.99922	0.99920	0.99919
24.60	0.99934	0.99932	0.99931	0.99929	0.99927	0.99926	0.99924	0.99923	0.99921	0.99919
24.80	0.99934	0.99933	0.99931	0.99930	0.99928	0.99926	0.99925	0.99923	0.99922	0.99920
25.00	0.99935	0.99933	0.99932	0.99930	0.99928	0.99927	0.99925	0.99924	0.99922	0.99921
25.20	0.99935	0.99934	0.99932	0.99931	0.99929	0.99927	0.99926	0.99924	0.99923	0.99921
25.40	0.99936	0.99934	0.99933	0.99931	0.99930	0.99928	0.99926	0.99925	0.99923	0.99922
25.60	0.99936	0.99935	0.99933	0.99932	0.99930	0.99929	0.99927	0.99925	0.99924	0.99922
25.80	0.99937	0.99935	0.99934	0.99932	0.99931	0.99929	0.99928	0.99926	0.99924	0.99923
26.00	0.99937	0.99936	0.99934	0.99933	0.99931	0.99930	0.99928	0.99926	0.99925	0.99924
26.20	0.99938	0.99936	0.99935	0.99933	0.99932	0.99930	0.99929	0.99927	0.99926	0.99924
26.40	0.99938	0.99937	0.99935	0.99934	0.99932	0.99931	0.99929	0.99928	0.99926	0.99925
26.60	0.99939	0.99937	0.99936	0.99934	0.99933	0.99931	0.99930	0.99928	0.99927	0.99925
26.80	0.99939	0.99938	0.99936	0.99935	0.99933	0.99932	0.99930	0.99929	0.99927	0.99926
27.00	0.99940	0.99938	0.99937	0.99935	0.99934	0.99932	0.99931	0.99929	0.99928	0.99926
27.20	0.99940	0.99939	0.99937	0.99936	0.99934	0.99933	0.99931	0.99930	0.99928	0.99927
27.40	0.99940	0.99939	0.99938	0.99936	0.99935	0.99933	0.99932	0.99930	0.99929	0.99928
27.60	0.99941	0.99940	0.99938	0.99937	0.99935	0.99934	0.99932	0.99931	0.99930	0.99928
27.80	0.99941	0.99940	0.99939	0.99937	0.99936	0.99934	0.99933	0.99932	0.99930	0.99929
28.00	0.99942	0.99941	0.99939	0.99938	0.99936	0.99935	0.99934	0.99932	0.99931	0.99929
28.20	0.99942	0.99941	0.99940	0.99938	0.99937	0.99935	0.99934	0.99933	0.99931	0.99930
28.40	0.99943	0.99941	0.99940	0.99939	0.99937	0.99936	0.99935	0.99933	0.99932	0.99930
28.60	0.99943	0.99942	0.99941	0.99939	0.99938	0.99936	0.99935	0.99934	0.99932	0.99931
28.80	0.99944	0.99942	0.99941	0.99940	0.99938	0.99937	0.99936	0.99934	0.99933	0.99932
29.00	0.99944	0.99943	0.99942	0.99940	0.99939	0.99938	0.99936	0.99935	0.99934	0.99932
29.20	0.99945	0.99943	0.99942	0.99941	0.99939	0.99938	0.99937	0.99935	0.99934	0.99933
29.40	0.99945	0.99944	0.99942	0.99941	0.99940	0.99939	0.99937	0.99936	0.99935	0.99933
29.60	0.99946	0.99944	0.99943	0.99942	0.99940	0.99939	0.99938	0.99937	0.99935	0.99934
29.80	0.99946	0.99945	0.99943	0.99942	0.99941	0.99940	0.99938	0.99937	0.99936	0.99934
30.00	0.99946	0.99945	0.99944	0.99943	0.99941	0.99940	0.99939	0.99937	0.99936	0.99935

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1 CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF N₂

TEMPERATURE (°C)	35.00 (PSIG)	36.00 (PSIG)	37.00 (PSIG)	38.00 (PSIG)	39.00 (PSIG)	40.00 (PSIG)	41.00 (PSIG)	42.00 (PSIG)	43.00 (PSIG)	44.00 (PSIG)
20.00	0.99903	0.99902	0.99900	0.99898	0.99896	0.99894	0.99892	0.99890	0.99889	0.99887
20.20	0.99904	0.99902	0.99900	0.99898	0.99897	0.99895	0.99893	0.99891	0.99889	0.99887
20.40	0.99905	0.99903	0.99901	0.99899	0.99897	0.99895	0.99894	0.99892	0.99890	0.99888
20.60	0.99905	0.99904	0.99902	0.99900	0.99898	0.99896	0.99894	0.99893	0.99891	0.99889
20.80	0.99906	0.99904	0.99902	0.99901	0.99899	0.99897	0.99895	0.99893	0.99892	0.99890
21.00	0.99907	0.99905	0.99903	0.99901	0.99899	0.99898	0.99896	0.99894	0.99892	0.99890
21.20	0.99907	0.99905	0.99904	0.99902	0.99900	0.99898	0.99897	0.99895	0.99893	0.99891
21.40	0.99908	0.99906	0.99904	0.99903	0.99901	0.99899	0.99897	0.99895	0.99894	0.99892
21.60	0.99908	0.99907	0.99905	0.99903	0.99902	0.99900	0.99898	0.99896	0.99894	0.99893
21.80	0.99909	0.99907	0.99906	0.99904	0.99902	0.99900	0.99899	0.99897	0.99895	0.99893
22.00	0.99910	0.99908	0.99906	0.99905	0.99903	0.99901	0.99899	0.99898	0.99896	0.99894
22.20	0.99910	0.99909	0.99907	0.99905	0.99904	0.99902	0.99900	0.99898	0.99897	0.99895
22.40	0.99911	0.99909	0.99908	0.99906	0.99904	0.99902	0.99901	0.99899	0.99897	0.99896
22.60	0.99912	0.99910	0.99908	0.99907	0.99905	0.99903	0.99901	0.99900	0.99898	0.99896
22.80	0.99912	0.99911	0.99909	0.99907	0.99905	0.99904	0.99902	0.99901	0.99899	0.99897
23.00	0.99913	0.99911	0.99909	0.99908	0.99906	0.99905	0.99903	0.99901	0.99900	0.99898
23.20	0.99914	0.99912	0.99910	0.99909	0.99907	0.99905	0.99904	0.99902	0.99900	0.99899
23.40	0.99914	0.99913	0.99911	0.99909	0.99908	0.99906	0.99904	0.99903	0.99901	0.99899
23.60	0.99915	0.99913	0.99911	0.99910	0.99908	0.99907	0.99905	0.99903	0.99902	0.99900
23.80	0.99915	0.99914	0.99912	0.99910	0.99909	0.99907	0.99906	0.99904	0.99902	0.99901
24.00	0.99916	0.99914	0.99913	0.99911	0.99910	0.99908	0.99906	0.99905	0.99903	0.99902
24.20	0.99917	0.99915	0.99913	0.99912	0.99910	0.99909	0.99907	0.99905	0.99904	0.99902
24.40	0.99917	0.99916	0.99914	0.99912	0.99911	0.99909	0.99908	0.99906	0.99905	0.99903
24.60	0.99918	0.99916	0.99915	0.99913	0.99912	0.99910	0.99908	0.99907	0.99905	0.99904
24.80	0.99918	0.99917	0.99915	0.99914	0.99912	0.99911	0.99909	0.99907	0.99906	0.99904
25.00	0.99919	0.99917	0.99916	0.99914	0.99913	0.99911	0.99910	0.99908	0.99907	0.99905
25.20	0.99920	0.99919	0.99917	0.99916	0.99914	0.99912	0.99910	0.99909	0.99907	0.99906
25.40	0.99920	0.99919	0.99917	0.99916	0.99914	0.99913	0.99911	0.99910	0.99908	0.99907
25.60	0.99921	0.99919	0.99918	0.99916	0.99915	0.99913	0.99912	0.99910	0.99909	0.99907
25.80	0.99922	0.99920	0.99918	0.99917	0.99915	0.99914	0.99912	0.99911	0.99910	0.99908
26.00	0.99922	0.99921	0.99919	0.99918	0.99916	0.99915	0.99913	0.99912	0.99910	0.99909
26.20	0.99923	0.99921	0.99920	0.99918	0.99917	0.99915	0.99914	0.99912	0.99911	0.99909
26.40	0.99923	0.99922	0.99920	0.99919	0.99917	0.99916	0.99914	0.99913	0.99911	0.99910
26.60	0.99924	0.99922	0.99921	0.99919	0.99918	0.99917	0.99915	0.99914	0.99912	0.99911
26.80	0.99924	0.99923	0.99922	0.99920	0.99919	0.99917	0.99916	0.99914	0.99913	0.99911
27.00	0.99925	0.99924	0.99922	0.99921	0.99919	0.99918	0.99916	0.99915	0.99914	0.99912
27.20	0.99926	0.99924	0.99923	0.99921	0.99920	0.99919	0.99917	0.99916	0.99914	0.99913
27.40	0.99926	0.99925	0.99923	0.99922	0.99921	0.99919	0.99918	0.99916	0.99915	0.99914
27.60	0.99927	0.99925	0.99924	0.99922	0.99921	0.99920	0.99918	0.99917	0.99916	0.99914
27.80	0.99927	0.99926	0.99925	0.99923	0.99922	0.99920	0.99919	0.99918	0.99916	0.99915
28.00	0.99928	0.99927	0.99925	0.99924	0.99922	0.99921	0.99920	0.99918	0.99917	0.99916
28.20	0.99929	0.99927	0.99926	0.99924	0.99923	0.99922	0.99920	0.99919	0.99918	0.99916
28.40	0.99929	0.99928	0.99926	0.99925	0.99924	0.99922	0.99921	0.99920	0.99918	0.99917
28.60	0.99930	0.99928	0.99927	0.99926	0.99924	0.99923	0.99922	0.99920	0.99919	0.99918
28.80	0.99930	0.99929	0.99928	0.99926	0.99925	0.99924	0.99922	0.99921	0.99920	0.99918
29.00	0.99931	0.99930	0.99928	0.99927	0.99926	0.99924	0.99923	0.99922	0.99920	0.99919
29.20	0.99931	0.99930	0.99929	0.99927	0.99926	0.99925	0.99924	0.99922	0.99921	0.99920
29.40	0.99932	0.99931	0.99929	0.99928	0.99927	0.99925	0.99924	0.99923	0.99922	0.99920
29.60	0.99933	0.99931	0.99930	0.99929	0.99927	0.99926	0.99925	0.99924	0.99922	0.99921
29.80	0.99933	0.99932	0.99931	0.99929	0.99928	0.99927	0.99925	0.99924	0.99923	0.99922
30.00	0.99934	0.99932	0.99931	0.99930	0.99929	0.99927	0.99926	0.99925	0.99924	0.99922

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF N₂

TEMPERATURE (°C)	100.00 (PSIG)	110.00 (PSIG)	120.00 (PSIG)	130.00 (PSIG)	140.00 (PSIG)	150.00 (PSIG)	160.00 (PSIG)	170.00 (PSIG)	180.00 (PSIG)	190.00 (PSIG)
20.00	0.99787	0.99771	0.99754	0.99738	0.99722	0.99706	0.99691	0.99675	0.99659	0.99643
20.20	0.99789	0.99772	0.99755	0.99740	0.99724	0.99708	0.99693	0.99677	0.99661	0.99645
20.40	0.99790	0.99774	0.99757	0.99741	0.99726	0.99710	0.99695	0.99680	0.99664	0.99648
20.60	0.99792	0.99775	0.99758	0.99743	0.99728	0.99712	0.99697	0.99682	0.99666	0.99650
20.80	0.99793	0.99777	0.99761	0.99745	0.99730	0.99714	0.99699	0.99683	0.99667	0.99651
21.00	0.99795	0.99779	0.99763	0.99747	0.99732	0.99716	0.99702	0.99687	0.99673	0.99659
21.20	0.99796	0.99780	0.99764	0.99749	0.99734	0.99719	0.99704	0.99689	0.99675	0.99661
21.40	0.99799	0.99782	0.99766	0.99751	0.99735	0.99721	0.99706	0.99692	0.99678	0.99664
21.60	0.99799	0.99783	0.99768	0.99752	0.99737	0.99723	0.99709	0.99694	0.99680	0.99667
21.80	0.99801	0.99785	0.99769	0.99754	0.99739	0.99725	0.99711	0.99696	0.99682	0.99669
22.00	0.99802	0.99787	0.99771	0.99756	0.99741	0.99727	0.99713	0.99699	0.99685	0.99671
22.20	0.99803	0.99788	0.99773	0.99758	0.99743	0.99729	0.99715	0.99701	0.99687	0.99674
22.40	0.99805	0.99790	0.99775	0.99760	0.99745	0.99731	0.99717	0.99703	0.99689	0.99677
22.60	0.99806	0.99791	0.99776	0.99761	0.99747	0.99733	0.99719	0.99705	0.99692	0.99679
22.80	0.99808	0.99793	0.99778	0.99763	0.99749	0.99735	0.99721	0.99708	0.99694	0.99681
23.00	0.99809	0.99794	0.99780	0.99765	0.99751	0.99737	0.99723	0.99710	0.99697	0.99684
23.20	0.99811	0.99795	0.99781	0.99767	0.99753	0.99739	0.99725	0.99712	0.99699	0.99687
23.40	0.99812	0.99797	0.99783	0.99769	0.99755	0.99741	0.99728	0.99714	0.99702	0.99689
23.60	0.99813	0.99799	0.99784	0.99770	0.99757	0.99743	0.99730	0.99717	0.99704	0.99691
23.80	0.99815	0.99800	0.99786	0.99772	0.99758	0.99745	0.99732	0.99719	0.99706	0.99694
24.00	0.99816	0.99802	0.99788	0.99774	0.99760	0.99747	0.99734	0.99721	0.99709	0.99696
24.20	0.99818	0.99803	0.99789	0.99776	0.99762	0.99749	0.99736	0.99724	0.99711	0.99699
24.40	0.99819	0.99805	0.99791	0.99777	0.99764	0.99751	0.99738	0.99726	0.99713	0.99701
24.60	0.99820	0.99806	0.99793	0.99779	0.99766	0.99753	0.99740	0.99728	0.99715	0.99704
24.80	0.99822	0.99808	0.99794	0.99781	0.99768	0.99755	0.99742	0.99730	0.99718	0.99706
25.00	0.99823	0.99809	0.99796	0.99783	0.99770	0.99757	0.99744	0.99732	0.99720	0.99708
25.20	0.99825	0.99811	0.99797	0.99784	0.99771	0.99759	0.99746	0.99734	0.99722	0.99711
25.40	0.99826	0.99812	0.99799	0.99786	0.99773	0.99761	0.99749	0.99736	0.99725	0.99713
25.60	0.99827	0.99814	0.99801	0.99788	0.99775	0.99763	0.99751	0.99739	0.99727	0.99716
25.80	0.99829	0.99815	0.99802	0.99789	0.99777	0.99765	0.99753	0.99741	0.99729	0.99718
26.00	0.99830	0.99817	0.99804	0.99791	0.99779	0.99767	0.99755	0.99743	0.99732	0.99721
26.20	0.99831	0.99818	0.99805	0.99793	0.99781	0.99769	0.99757	0.99745	0.99734	0.99723
26.40	0.99833	0.99820	0.99807	0.99795	0.99782	0.99770	0.99759	0.99747	0.99736	0.99725
26.60	0.99834	0.99821	0.99808	0.99796	0.99784	0.99772	0.99761	0.99750	0.99738	0.99728
26.80	0.99835	0.99823	0.99810	0.99798	0.99786	0.99774	0.99763	0.99752	0.99741	0.99731
27.00	0.99837	0.99824	0.99812	0.99800	0.99788	0.99776	0.99765	0.99754	0.99743	0.99733
27.20	0.99838	0.99826	0.99813	0.99801	0.99790	0.99778	0.99767	0.99756	0.99745	0.99735
27.40	0.99839	0.99827	0.99815	0.99803	0.99791	0.99780	0.99769	0.99758	0.99747	0.99737
27.60	0.99841	0.99828	0.99816	0.99805	0.99793	0.99782	0.99771	0.99760	0.99750	0.99740
27.80	0.99842	0.99830	0.99818	0.99806	0.99795	0.99784	0.99773	0.99762	0.99752	0.99742
28.00	0.99843	0.99831	0.99820	0.99808	0.99797	0.99786	0.99775	0.99764	0.99754	0.99744
28.20	0.99845	0.99833	0.99821	0.99810	0.99799	0.99788	0.99777	0.99766	0.99756	0.99746
28.40	0.99846	0.99834	0.99823	0.99811	0.99800	0.99789	0.99779	0.99768	0.99758	0.99748
28.60	0.99847	0.99836	0.99824	0.99813	0.99802	0.99791	0.99781	0.99771	0.99761	0.99751
28.80	0.99849	0.99837	0.99826	0.99815	0.99804	0.99793	0.99783	0.99773	0.99763	0.99754
29.00	0.99850	0.99839	0.99827	0.99816	0.99806	0.99795	0.99785	0.99775	0.99765	0.99756
29.20	0.99851	0.99840	0.99829	0.99818	0.99807	0.99797	0.99787	0.99777	0.99767	0.99758
29.40	0.99853	0.99841	0.99830	0.99820	0.99809	0.99799	0.99789	0.99779	0.99769	0.99760
29.60	0.99854	0.99843	0.99832	0.99821	0.99811	0.99801	0.99791	0.99781	0.99772	0.99763
29.80	0.99855	0.99844	0.99833	0.99823	0.99813	0.99803	0.99793	0.99783	0.99774	0.99765
30.00	0.99857	0.99846	0.99835	0.99824	0.99814	0.99804	0.99795	0.99785	0.99776	0.99767

* CALCULATED FROM THE BEATTIE-BRIDGMAN EQUATION

 COMPRESSIBILITY FACTORS OF N₂

TEMPERATURE (C)	200.00 (PSIG)	210.00 (PSIG)	220.00 (PSIG)	230.00 (PSIG)	240.00 (PSIG)	250.00 (PSIG)	260.00 (PSIG)	270.00 (PSIG)	280.00 (PSIG)	290.00 (PSIG)
20.00	0.99632	0.99617	0.99604	0.99590	0.99577	0.99564	0.99551	0.99539	0.99527	0.99515
20.20	0.99634	0.99620	0.99607	0.99593	0.99580	0.99567	0.99555	0.99543	0.99531	0.99519
20.40	0.99637	0.99623	0.99609	0.99596	0.99583	0.99571	0.99558	0.99546	0.99534	0.99523
20.60	0.99640	0.99626	0.99613	0.99599	0.99587	0.99574	0.99562	0.99550	0.99538	0.99526
20.80	0.99642	0.99629	0.99615	0.99602	0.99590	0.99577	0.99565	0.99553	0.99541	0.99530
21.00	0.99645	0.99632	0.99618	0.99605	0.99593	0.99581	0.99568	0.99557	0.99545	0.99534
21.20	0.99648	0.99634	0.99621	0.99608	0.99596	0.99584	0.99572	0.99560	0.99549	0.99538
21.40	0.99650	0.99637	0.99624	0.99612	0.99599	0.99587	0.99575	0.99564	0.99552	0.99541
21.60	0.99653	0.99640	0.99627	0.99615	0.99602	0.99590	0.99578	0.99567	0.99556	0.99545
21.80	0.99656	0.99643	0.99630	0.99618	0.99605	0.99593	0.99582	0.99571	0.99560	0.99549
22.00	0.99658	0.99645	0.99633	0.99621	0.99609	0.99597	0.99585	0.99574	0.99563	0.99552
22.20	0.99661	0.99648	0.99636	0.99624	0.99612	0.99600	0.99588	0.99577	0.99567	0.99556
22.40	0.99664	0.99651	0.99638	0.99627	0.99615	0.99603	0.99592	0.99581	0.99570	0.99560
22.60	0.99666	0.99654	0.99641	0.99629	0.99618	0.99606	0.99595	0.99584	0.99574	0.99563
22.80	0.99669	0.99656	0.99644	0.99632	0.99621	0.99610	0.99598	0.99588	0.99577	0.99567
23.00	0.99671	0.99659	0.99647	0.99635	0.99624	0.99613	0.99602	0.99591	0.99581	0.99571
23.20	0.99674	0.99662	0.99650	0.99638	0.99627	0.99616	0.99605	0.99595	0.99584	0.99574
23.40	0.99677	0.99665	0.99653	0.99641	0.99630	0.99619	0.99608	0.99598	0.99588	0.99578
23.60	0.99679	0.99667	0.99656	0.99644	0.99633	0.99622	0.99612	0.99601	0.99591	0.99581
23.80	0.99682	0.99670	0.99658	0.99647	0.99636	0.99625	0.99615	0.99605	0.99595	0.99585
24.00	0.99684	0.99673	0.99661	0.99650	0.99639	0.99629	0.99618	0.99608	0.99598	0.99589
24.20	0.99687	0.99675	0.99664	0.99653	0.99642	0.99632	0.99621	0.99611	0.99602	0.99592
24.40	0.99689	0.99678	0.99667	0.99656	0.99645	0.99635	0.99625	0.99615	0.99605	0.99596
24.60	0.99692	0.99681	0.99670	0.99659	0.99648	0.99638	0.99628	0.99618	0.99609	0.99600
24.80	0.99695	0.99683	0.99672	0.99662	0.99651	0.99641	0.99631	0.99621	0.99612	0.99603
25.00	0.99697	0.99686	0.99675	0.99665	0.99654	0.99644	0.99634	0.99625	0.99616	0.99606
25.20	0.99700	0.99689	0.99678	0.99667	0.99657	0.99647	0.99638	0.99628	0.99619	0.99610
25.40	0.99702	0.99691	0.99681	0.99670	0.99660	0.99650	0.99641	0.99631	0.99622	0.99614
25.60	0.99705	0.99694	0.99683	0.99673	0.99663	0.99653	0.99644	0.99635	0.99626	0.99617
25.80	0.99707	0.99696	0.99686	0.99676	0.99666	0.99656	0.99647	0.99638	0.99629	0.99621
26.00	0.99710	0.99699	0.99689	0.99679	0.99669	0.99660	0.99650	0.99641	0.99633	0.99624
26.20	0.99712	0.99702	0.99692	0.99682	0.99672	0.99663	0.99653	0.99645	0.99636	0.99628
26.40	0.99715	0.99704	0.99694	0.99685	0.99675	0.99666	0.99657	0.99648	0.99639	0.99631
26.60	0.99717	0.99707	0.99697	0.99687	0.99678	0.99669	0.99660	0.99651	0.99643	0.99635
26.80	0.99720	0.99710	0.99700	0.99690	0.99681	0.99672	0.99663	0.99654	0.99646	0.99638
27.00	0.99722	0.99712	0.99702	0.99693	0.99684	0.99675	0.99666	0.99658	0.99649	0.99641
27.20	0.99725	0.99715	0.99705	0.99696	0.99687	0.99678	0.99669	0.99661	0.99653	0.99645
27.40	0.99727	0.99717	0.99708	0.99699	0.99690	0.99681	0.99672	0.99664	0.99656	0.99648
27.60	0.99730	0.99720	0.99710	0.99701	0.99692	0.99684	0.99675	0.99667	0.99659	0.99652
27.80	0.99732	0.99722	0.99713	0.99704	0.99695	0.99687	0.99678	0.99670	0.99663	0.99655
28.00	0.99734	0.99725	0.99716	0.99707	0.99698	0.99690	0.99682	0.99674	0.99666	0.99659
28.20	0.99737	0.99727	0.99718	0.99710	0.99701	0.99693	0.99685	0.99677	0.99669	0.99662
28.40	0.99739	0.99730	0.99721	0.99712	0.99704	0.99696	0.99688	0.99680	0.99672	0.99665
28.60	0.99742	0.99732	0.99724	0.99715	0.99707	0.99699	0.99691	0.99683	0.99676	0.99669
28.80	0.99744	0.99735	0.99726	0.99718	0.99710	0.99701	0.99694	0.99686	0.99679	0.99672
29.00	0.99747	0.99738	0.99729	0.99721	0.99712	0.99704	0.99697	0.99689	0.99682	0.99675
29.20	0.99749	0.99740	0.99732	0.99723	0.99715	0.99707	0.99700	0.99693	0.99686	0.99679
29.40	0.99751	0.99743	0.99734	0.99726	0.99718	0.99710	0.99703	0.99696	0.99689	0.99682
29.60	0.99754	0.99745	0.99737	0.99729	0.99721	0.99713	0.99706	0.99699	0.99692	0.99685
29.80	0.99756	0.99748	0.99739	0.99731	0.99724	0.99716	0.99709	0.99702	0.99695	0.99689
30.00	0.99759	0.99750	0.99742	0.99734	0.99726	0.99719	0.99712	0.99705	0.99698	0.99692

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

 COMPRESSIBILITY FACTORS OF N₂¹

TEMPERATURE (C)	300.00 (PSIG)	310.00 (PSIG)	320.00 (PSIG)	330.00 (PSIG)	340.00 (PSIG)	350.00 (PSIG)	360.00 (PSIG)	370.00 (PSIG)	380.00 (PSIG)	390.00 (PSIG)
20.00	0.99503	0.99492	0.99481	0.99470	0.99460	0.99450	0.99440	0.99430	0.99421	0.99412
20.20	0.99507	0.99496	0.99485	0.99475	0.99464	0.99454	0.99444	0.99435	0.99426	0.99417
20.40	0.99511	0.99500	0.99489	0.99479	0.99469	0.99459	0.99449	0.99440	0.99431	0.99422
20.60	0.99515	0.99504	0.99493	0.99483	0.99473	0.99463	0.99454	0.99444	0.99435	0.99427
20.80	0.99519	0.99508	0.99498	0.99487	0.99477	0.99468	0.99458	0.99449	0.99440	0.99431
21.00	0.99523	0.99512	0.99502	0.99491	0.99482	0.99472	0.99463	0.99454	0.99445	0.99436
21.20	0.99527	0.99516	0.99506	0.99496	0.99486	0.99476	0.99467	0.99458	0.99450	0.99441
21.40	0.99531	0.99520	0.99510	0.99500	0.99490	0.99481	0.99472	0.99463	0.99454	0.99446
21.60	0.99534	0.99524	0.99514	0.99504	0.99495	0.99485	0.99476	0.99468	0.99459	0.99451
21.80	0.99538	0.99528	0.99518	0.99508	0.99499	0.99490	0.99481	0.99472	0.99464	0.99456
22.00	0.99542	0.99532	0.99522	0.99512	0.99503	0.99494	0.99485	0.99477	0.99469	0.99461
22.20	0.99546	0.99536	0.99526	0.99516	0.99507	0.99498	0.99490	0.99481	0.99473	0.99465
22.40	0.99549	0.99540	0.99530	0.99521	0.99512	0.99503	0.99494	0.99486	0.99478	0.99470
22.60	0.99553	0.99543	0.99534	0.99525	0.99516	0.99507	0.99499	0.99490	0.99483	0.99475
22.80	0.99557	0.99547	0.99538	0.99529	0.99520	0.99511	0.99503	0.99495	0.99487	0.99480
23.00	0.99561	0.99551	0.99542	0.99533	0.99524	0.99516	0.99507	0.99500	0.99492	0.99484
23.20	0.99565	0.99555	0.99546	0.99537	0.99528	0.99520	0.99512	0.99504	0.99496	0.99489
23.40	0.99568	0.99559	0.99550	0.99541	0.99532	0.99524	0.99516	0.99509	0.99501	0.99494
23.60	0.99572	0.99563	0.99554	0.99545	0.99537	0.99528	0.99521	0.99513	0.99506	0.99499
23.80	0.99576	0.99567	0.99558	0.99549	0.99541	0.99533	0.99525	0.99517	0.99510	0.99503
24.00	0.99579	0.99570	0.99562	0.99553	0.99545	0.99537	0.99529	0.99522	0.99515	0.99508
24.20	0.99583	0.99574	0.99566	0.99557	0.99549	0.99541	0.99534	0.99526	0.99519	0.99513
24.40	0.99587	0.99578	0.99569	0.99561	0.99553	0.99546	0.99538	0.99531	0.99524	0.99517
24.60	0.99591	0.99582	0.99573	0.99565	0.99557	0.99550	0.99542	0.99535	0.99528	0.99522
24.80	0.99594	0.99586	0.99577	0.99569	0.99561	0.99554	0.99547	0.99540	0.99533	0.99526
25.00	0.99598	0.99589	0.99581	0.99573	0.99565	0.99558	0.99551	0.99544	0.99537	0.99531
25.20	0.99601	0.99593	0.99585	0.99577	0.99570	0.99562	0.99555	0.99548	0.99542	0.99536
25.40	0.99605	0.99597	0.99589	0.99581	0.99574	0.99566	0.99560	0.99553	0.99546	0.99540
25.60	0.99609	0.99601	0.99593	0.99585	0.99578	0.99571	0.99564	0.99557	0.99551	0.99545
25.80	0.99612	0.99604	0.99597	0.99589	0.99582	0.99575	0.99568	0.99562	0.99555	0.99549
26.00	0.99616	0.99608	0.99600	0.99593	0.99586	0.99579	0.99572	0.99566	0.99560	0.99554
26.20	0.99620	0.99612	0.99604	0.99597	0.99590	0.99583	0.99576	0.99570	0.99564	0.99559
26.40	0.99623	0.99615	0.99608	0.99601	0.99594	0.99587	0.99581	0.99574	0.99569	0.99563
26.60	0.99627	0.99619	0.99612	0.99605	0.99598	0.99591	0.99585	0.99579	0.99573	0.99567
26.80	0.99630	0.99623	0.99615	0.99608	0.99602	0.99595	0.99589	0.99583	0.99577	0.99572
27.00	0.99634	0.99626	0.99619	0.99612	0.99606	0.99599	0.99593	0.99587	0.99582	0.99576
27.20	0.99637	0.99630	0.99623	0.99616	0.99610	0.99603	0.99597	0.99592	0.99586	0.99581
27.40	0.99641	0.99634	0.99627	0.99620	0.99614	0.99607	0.99602	0.99596	0.99590	0.99585
27.60	0.99644	0.99637	0.99630	0.99624	0.99617	0.99612	0.99606	0.99600	0.99595	0.99590
27.80	0.99648	0.99641	0.99634	0.99628	0.99621	0.99616	0.99610	0.99604	0.99599	0.99594
28.00	0.99651	0.99645	0.99638	0.99632	0.99625	0.99620	0.99614	0.99609	0.99604	0.99599
28.20	0.99655	0.99648	0.99641	0.99635	0.99629	0.99624	0.99618	0.99613	0.99608	0.99603
28.40	0.99658	0.99652	0.99645	0.99639	0.99633	0.99628	0.99622	0.99617	0.99612	0.99607
28.60	0.99662	0.99655	0.99649	0.99643	0.99637	0.99632	0.99626	0.99621	0.99616	0.99612
28.80	0.99665	0.99659	0.99653	0.99647	0.99641	0.99635	0.99630	0.99625	0.99621	0.99616
29.00	0.99669	0.99662	0.99656	0.99650	0.99645	0.99640	0.99634	0.99630	0.99625	0.99621
29.20	0.99672	0.99666	0.99660	0.99654	0.99649	0.99643	0.99638	0.99634	0.99629	0.99625
29.40	0.99676	0.99669	0.99664	0.99658	0.99653	0.99647	0.99642	0.99638	0.99634	0.99630
29.60	0.99679	0.99673	0.99667	0.99662	0.99656	0.99651	0.99647	0.99642	0.99638	0.99634
29.80	0.99682	0.99677	0.99671	0.99665	0.99660	0.99655	0.99651	0.99646	0.99642	0.99638
30.00	0.99686	0.99680	0.99674	0.99669	0.99664	0.99659	0.99655	0.99650	0.99646	0.99642

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¹CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF N₂¹

TEMPERATURE (C)	400.00 (PSIG)	410.00 (PSIG)	420.00 (PSIG)	430.00 (PSIG)	440.00 (PSIG)	450.00 (PSIG)	460.00 (PSIG)	470.00 (PSIG)	480.00 (PSIG)	490.00 (PSIG)
20.00	0.99403	0.99395	0.99386	0.99379	0.99371	0.99363	0.99356	0.99350	0.99343	0.99337
20.20	0.99408	0.99400	0.99392	0.99384	0.99376	0.99369	0.99362	0.99355	0.99349	0.99343
20.40	0.99413	0.99405	0.99397	0.99389	0.99382	0.99375	0.99368	0.99361	0.99355	0.99349
20.60	0.99418	0.99410	0.99402	0.99395	0.99387	0.99380	0.99374	0.99367	0.99361	0.99355
20.80	0.99423	0.99415	0.99407	0.99400	0.99393	0.99386	0.99379	0.99373	0.99367	0.99361
21.00	0.99428	0.99420	0.99413	0.99405	0.99398	0.99391	0.99385	0.99378	0.99372	0.99367
21.20	0.99433	0.99425	0.99418	0.99411	0.99403	0.99397	0.99390	0.99384	0.99378	0.99373
21.40	0.99438	0.99430	0.99423	0.99416	0.99409	0.99402	0.99396	0.99390	0.99384	0.99379
21.60	0.99443	0.99435	0.99428	0.99421	0.99414	0.99408	0.99401	0.99396	0.99390	0.99385
21.80	0.99448	0.99440	0.99433	0.99426	0.99420	0.99413	0.99407	0.99401	0.99396	0.99390
22.00	0.99453	0.99446	0.99438	0.99432	0.99425	0.99419	0.99413	0.99407	0.99402	0.99396
22.20	0.99458	0.99451	0.99444	0.99437	0.99430	0.99424	0.99418	0.99413	0.99407	0.99402
22.40	0.99463	0.99456	0.99449	0.99442	0.99436	0.99430	0.99424	0.99418	0.99413	0.99408
22.60	0.99468	0.99460	0.99454	0.99447	0.99441	0.99435	0.99429	0.99424	0.99419	0.99414
22.80	0.99472	0.99465	0.99459	0.99452	0.99446	0.99440	0.99435	0.99429	0.99424	0.99420
23.00	0.99477	0.99470	0.99464	0.99458	0.99452	0.99446	0.99440	0.99435	0.99430	0.99425
23.20	0.99482	0.99475	0.99469	0.99463	0.99457	0.99451	0.99446	0.99441	0.99436	0.99431
23.40	0.99487	0.99480	0.99474	0.99468	0.99462	0.99456	0.99451	0.99446	0.99441	0.99437
23.60	0.99492	0.99485	0.99479	0.99473	0.99467	0.99462	0.99456	0.99452	0.99447	0.99443
23.80	0.99497	0.99490	0.99484	0.99478	0.99472	0.99467	0.99462	0.99457	0.99453	0.99448
24.00	0.99501	0.99495	0.99489	0.99483	0.99478	0.99472	0.99467	0.99463	0.99458	0.99454
24.20	0.99506	0.99500	0.99494	0.99488	0.99483	0.99478	0.99473	0.99468	0.99464	0.99460
24.40	0.99511	0.99505	0.99499	0.99493	0.99488	0.99483	0.99478	0.99474	0.99469	0.99465
24.60	0.99516	0.99510	0.99504	0.99498	0.99493	0.99488	0.99484	0.99479	0.99475	0.99471
24.80	0.99520	0.99514	0.99509	0.99503	0.99498	0.99493	0.99489	0.99485	0.99481	0.99477
25.00	0.99525	0.99519	0.99514	0.99508	0.99503	0.99499	0.99494	0.99490	0.99486	0.99482
25.20	0.99530	0.99524	0.99519	0.99513	0.99509	0.99504	0.99499	0.99495	0.99492	0.99488
25.40	0.99534	0.99529	0.99523	0.99518	0.99514	0.99509	0.99505	0.99501	0.99497	0.99494
25.60	0.99539	0.99534	0.99528	0.99523	0.99519	0.99514	0.99510	0.99506	0.99503	0.99499
25.80	0.99544	0.99538	0.99533	0.99528	0.99524	0.99519	0.99515	0.99511	0.99508	0.99505
26.00	0.99548	0.99543	0.99538	0.99533	0.99529	0.99525	0.99521	0.99517	0.99513	0.99510
26.20	0.99553	0.99548	0.99543	0.99538	0.99534	0.99530	0.99526	0.99522	0.99519	0.99516
26.40	0.99558	0.99553	0.99548	0.99543	0.99539	0.99535	0.99531	0.99528	0.99524	0.99521
26.60	0.99562	0.99557	0.99553	0.99548	0.99544	0.99540	0.99536	0.99533	0.99530	0.99527
26.80	0.99567	0.99562	0.99557	0.99553	0.99549	0.99545	0.99542	0.99538	0.99535	0.99532
27.00	0.99571	0.99567	0.99562	0.99558	0.99554	0.99550	0.99547	0.99543	0.99541	0.99538
27.20	0.99576	0.99571	0.99567	0.99563	0.99559	0.99555	0.99552	0.99549	0.99546	0.99543
27.40	0.99581	0.99576	0.99572	0.99568	0.99564	0.99560	0.99557	0.99554	0.99551	0.99549
27.60	0.99585	0.99581	0.99576	0.99572	0.99569	0.99565	0.99562	0.99559	0.99556	0.99554
27.80	0.99590	0.99585	0.99581	0.99577	0.99574	0.99570	0.99567	0.99564	0.99562	0.99559
28.00	0.99594	0.99590	0.99586	0.99582	0.99579	0.99575	0.99572	0.99570	0.99567	0.99565
28.20	0.99599	0.99594	0.99591	0.99587	0.99583	0.99580	0.99577	0.99575	0.99572	0.99570
28.40	0.99603	0.99599	0.99595	0.99592	0.99588	0.99585	0.99583	0.99580	0.99578	0.99576
28.60	0.99608	0.99604	0.99600	0.99596	0.99593	0.99590	0.99588	0.99585	0.99583	0.99581
28.80	0.99612	0.99608	0.99605	0.99601	0.99598	0.99595	0.99593	0.99590	0.99588	0.99586
29.00	0.99617	0.99613	0.99609	0.99606	0.99603	0.99600	0.99598	0.99595	0.99593	0.99592
29.20	0.99621	0.99617	0.99614	0.99611	0.99608	0.99605	0.99603	0.99601	0.99599	0.99597
29.40	0.99625	0.99622	0.99619	0.99615	0.99613	0.99610	0.99608	0.99606	0.99604	0.99602
29.60	0.99630	0.99626	0.99623	0.99620	0.99617	0.99615	0.99613	0.99611	0.99609	0.99608
29.80	0.99634	0.99631	0.99628	0.99625	0.99622	0.99620	0.99618	0.99616	0.99614	0.99613
30.00	0.99639	0.99635	0.99632	0.99630	0.99627	0.99625	0.99623	0.99621	0.99619	0.99618

¹ CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

 COMPRESSIBILITY FACTORS OF AIR¹

TEMPERATURE (C)	5.00 (PSIG)	6.00 (PSIG)	7.00 (PSIG)	8.00 (PSIG)	9.00 (PSIG)	10.00 (PSIG)	11.00 (PSIG)	12.00 (PSIG)	13.00 (PSIG)	14.00 (PSIG)
20.00	0.99946	0.99943	0.99941	0.99938	0.99935	0.99933	0.99930	0.99927	0.99925	0.99922
20.20	0.99946	0.99944	0.99941	0.99938	0.99936	0.99933	0.99930	0.99928	0.99925	0.99922
20.40	0.99947	0.99944	0.99941	0.99939	0.99936	0.99933	0.99931	0.99928	0.99925	0.99923
20.60	0.99947	0.99944	0.99942	0.99939	0.99936	0.99934	0.99931	0.99928	0.99926	0.99923
20.80	0.99947	0.99945	0.99942	0.99939	0.99937	0.99934	0.99931	0.99929	0.99926	0.99924
21.00	0.99947	0.99945	0.99942	0.99940	0.99937	0.99934	0.99932	0.99929	0.99927	0.99924
21.20	0.99948	0.99945	0.99942	0.99940	0.99937	0.99935	0.99932	0.99929	0.99927	0.99924
21.40	0.99948	0.99945	0.99943	0.99941	0.99938	0.99935	0.99933	0.99930	0.99928	0.99925
21.60	0.99948	0.99946	0.99943	0.99941	0.99938	0.99936	0.99933	0.99930	0.99928	0.99925
21.80	0.99949	0.99946	0.99943	0.99941	0.99938	0.99936	0.99933	0.99930	0.99928	0.99926
22.00	0.99949	0.99946	0.99944	0.99941	0.99939	0.99936	0.99934	0.99931	0.99929	0.99926
22.20	0.99949	0.99946	0.99944	0.99941	0.99939	0.99937	0.99934	0.99932	0.99929	0.99926
22.40	0.99949	0.99947	0.99944	0.99942	0.99939	0.99937	0.99934	0.99932	0.99929	0.99927
22.60	0.99950	0.99947	0.99944	0.99942	0.99940	0.99937	0.99935	0.99932	0.99930	0.99927
22.80	0.99950	0.99947	0.99945	0.99942	0.99940	0.99937	0.99935	0.99932	0.99930	0.99928
23.00	0.99950	0.99947	0.99945	0.99943	0.99940	0.99938	0.99935	0.99933	0.99930	0.99928
23.20	0.99950	0.99948	0.99945	0.99943	0.99941	0.99938	0.99936	0.99933	0.99931	0.99928
23.40	0.99951	0.99948	0.99946	0.99943	0.99941	0.99938	0.99936	0.99934	0.99931	0.99929
23.60	0.99951	0.99948	0.99946	0.99944	0.99941	0.99939	0.99936	0.99934	0.99931	0.99929
23.80	0.99951	0.99949	0.99946	0.99944	0.99942	0.99939	0.99937	0.99934	0.99932	0.99929
24.00	0.99951	0.99949	0.99946	0.99944	0.99942	0.99939	0.99937	0.99935	0.99932	0.99930
24.20	0.99952	0.99949	0.99947	0.99945	0.99942	0.99939	0.99937	0.99935	0.99932	0.99930
24.40	0.99952	0.99949	0.99947	0.99945	0.99943	0.99940	0.99938	0.99935	0.99933	0.99931
24.60	0.99952	0.99950	0.99947	0.99945	0.99943	0.99940	0.99938	0.99936	0.99933	0.99931
24.80	0.99952	0.99950	0.99947	0.99945	0.99943	0.99941	0.99938	0.99936	0.99934	0.99931
25.00	0.99953	0.99950	0.99948	0.99946	0.99943	0.99941	0.99939	0.99936	0.99934	0.99932
25.20	0.99953	0.99950	0.99948	0.99946	0.99943	0.99941	0.99939	0.99937	0.99934	0.99932
25.40	0.99953	0.99951	0.99948	0.99946	0.99944	0.99942	0.99939	0.99937	0.99935	0.99932
25.60	0.99953	0.99951	0.99949	0.99947	0.99944	0.99942	0.99940	0.99937	0.99935	0.99933
25.80	0.99953	0.99951	0.99949	0.99947	0.99944	0.99942	0.99940	0.99937	0.99935	0.99933
26.00	0.99954	0.99951	0.99949	0.99947	0.99944	0.99942	0.99940	0.99937	0.99935	0.99933
26.20	0.99954	0.99952	0.99949	0.99947	0.99945	0.99943	0.99941	0.99938	0.99936	0.99934
26.40	0.99954	0.99952	0.99950	0.99948	0.99945	0.99943	0.99941	0.99939	0.99936	0.99934
26.60	0.99954	0.99952	0.99950	0.99948	0.99946	0.99943	0.99941	0.99939	0.99937	0.99934
26.80	0.99955	0.99952	0.99950	0.99948	0.99946	0.99944	0.99941	0.99939	0.99937	0.99935
27.00	0.99955	0.99953	0.99951	0.99949	0.99946	0.99944	0.99942	0.99940	0.99937	0.99935
27.20	0.99955	0.99953	0.99951	0.99949	0.99947	0.99944	0.99942	0.99940	0.99938	0.99935
27.40	0.99955	0.99953	0.99951	0.99949	0.99947	0.99944	0.99942	0.99940	0.99938	0.99936
27.60	0.99956	0.99954	0.99951	0.99949	0.99947	0.99945	0.99943	0.99940	0.99938	0.99936
27.80	0.99956	0.99954	0.99952	0.99950	0.99948	0.99945	0.99943	0.99941	0.99939	0.99937
28.00	0.99956	0.99954	0.99952	0.99950	0.99948	0.99946	0.99944	0.99941	0.99939	0.99937
28.20	0.99956	0.99954	0.99952	0.99950	0.99948	0.99946	0.99944	0.99941	0.99939	0.99937
28.40	0.99957	0.99955	0.99952	0.99950	0.99948	0.99946	0.99944	0.99942	0.99940	0.99938
28.60	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947	0.99945	0.99942	0.99940	0.99938
28.80	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947	0.99945	0.99942	0.99940	0.99938
29.00	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947	0.99945	0.99942	0.99940	0.99938
29.20	0.99957	0.99955	0.99953	0.99951	0.99949	0.99947	0.99945	0.99943	0.99941	0.99939
29.40	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948	0.99945	0.99943	0.99941	0.99939
29.60	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948	0.99946	0.99944	0.99942	0.99940
29.80	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948	0.99946	0.99944	0.99942	0.99940
30.00	0.99958	0.99956	0.99954	0.99952	0.99950	0.99948	0.99946	0.99944	0.99942	0.99940

¹CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF AIR¹

TEMPERATURE (C)	15.00 (PSIG)	16.00 (PSIG)	17.00 (PSIG)	18.00 (PSIG)	19.00 (PSIG)	20.00 (PSIG)	21.00 (PSIG)	22.00 (PSIG)	23.00 (PSIG)	24.00 (PSIG)
20.00	0.99919	0.99917	0.99914	0.99911	0.99909	0.99906	0.99903	0.99901	0.99898	0.99895
20.20	0.99920	0.99917	0.99914	0.99912	0.99909	0.99906	0.99904	0.99901	0.99898	0.99896
20.40	0.99920	0.99917	0.99915	0.99912	0.99910	0.99907	0.99904	0.99902	0.99899	0.99896
20.60	0.99920	0.99918	0.99915	0.99913	0.99910	0.99907	0.99905	0.99902	0.99900	0.99897
20.80	0.99921	0.99918	0.99916	0.99913	0.99910	0.99908	0.99905	0.99903	0.99900	0.99897
21.00	0.99921	0.99919	0.99916	0.99913	0.99911	0.99908	0.99906	0.99903	0.99901	0.99898
21.20	0.99922	0.99919	0.99916	0.99914	0.99911	0.99909	0.99906	0.99903	0.99901	0.99898
21.40	0.99922	0.99919	0.99917	0.99914	0.99912	0.99909	0.99907	0.99904	0.99901	0.99898
21.60	0.99922	0.99920	0.99917	0.99915	0.99912	0.99910	0.99907	0.99905	0.99902	0.99899
21.80	0.99923	0.99920	0.99918	0.99915	0.99913	0.99910	0.99907	0.99905	0.99902	0.99900
22.00	0.99923	0.99921	0.99918	0.99916	0.99913	0.99911	0.99908	0.99905	0.99903	0.99900
22.20	0.99924	0.99921	0.99919	0.99916	0.99913	0.99911	0.99909	0.99906	0.99903	0.99901
22.40	0.99924	0.99921	0.99919	0.99916	0.99914	0.99911	0.99909	0.99906	0.99904	0.99901
22.60	0.99924	0.99922	0.99919	0.99917	0.99914	0.99912	0.99909	0.99907	0.99904	0.99902
22.80	0.99925	0.99922	0.99920	0.99917	0.99915	0.99912	0.99910	0.99907	0.99905	0.99902
23.00	0.99925	0.99923	0.99920	0.99918	0.99915	0.99913	0.99910	0.99908	0.99905	0.99903
23.20	0.99926	0.99923	0.99921	0.99918	0.99916	0.99913	0.99911	0.99908	0.99906	0.99903
23.40	0.99926	0.99923	0.99921	0.99919	0.99916	0.99914	0.99911	0.99909	0.99906	0.99904
23.60	0.99926	0.99924	0.99921	0.99919	0.99916	0.99914	0.99912	0.99909	0.99907	0.99904
23.80	0.99927	0.99924	0.99922	0.99919	0.99917	0.99914	0.99912	0.99910	0.99907	0.99905
24.00	0.99927	0.99925	0.99922	0.99920	0.99917	0.99915	0.99913	0.99911	0.99908	0.99906
24.20	0.99927	0.99925	0.99923	0.99920	0.99918	0.99915	0.99913	0.99911	0.99909	0.99906
24.40	0.99928	0.99925	0.99923	0.99921	0.99918	0.99916	0.99913	0.99911	0.99909	0.99907
24.60	0.99928	0.99926	0.99923	0.99921	0.99919	0.99916	0.99914	0.99912	0.99910	0.99907
24.80	0.99928	0.99926	0.99924	0.99921	0.99919	0.99917	0.99914	0.99912	0.99910	0.99908
25.00	0.99929	0.99926	0.99924	0.99922	0.99919	0.99917	0.99915	0.99912	0.99910	0.99908
25.20	0.99929	0.99927	0.99924	0.99922	0.99920	0.99917	0.99915	0.99913	0.99910	0.99908
25.40	0.99930	0.99927	0.99925	0.99923	0.99920	0.99918	0.99916	0.99913	0.99911	0.99909
25.60	0.99930	0.99928	0.99925	0.99923	0.99921	0.99918	0.99916	0.99914	0.99911	0.99909
25.80	0.99930	0.99928	0.99926	0.99923	0.99921	0.99919	0.99916	0.99914	0.99912	0.99910
26.00	0.99931	0.99928	0.99926	0.99924	0.99921	0.99919	0.99917	0.99915	0.99912	0.99910
26.20	0.99931	0.99929	0.99927	0.99924	0.99922	0.99920	0.99917	0.99915	0.99913	0.99911
26.40	0.99931	0.99929	0.99927	0.99925	0.99922	0.99920	0.99918	0.99916	0.99914	0.99911
26.60	0.99932	0.99929	0.99927	0.99925	0.99923	0.99920	0.99918	0.99916	0.99914	0.99912
26.80	0.99932	0.99930	0.99928	0.99925	0.99923	0.99921	0.99919	0.99916	0.99914	0.99912
27.00	0.99932	0.99930	0.99928	0.99926	0.99924	0.99921	0.99919	0.99917	0.99915	0.99913
27.20	0.99933	0.99931	0.99928	0.99926	0.99924	0.99922	0.99920	0.99917	0.99915	0.99913
27.40	0.99933	0.99931	0.99929	0.99927	0.99924	0.99922	0.99920	0.99918	0.99916	0.99914
27.60	0.99934	0.99931	0.99929	0.99927	0.99925	0.99923	0.99920	0.99918	0.99916	0.99914
27.80	0.99934	0.99932	0.99929	0.99927	0.99925	0.99923	0.99921	0.99919	0.99916	0.99914
28.00	0.99934	0.99932	0.99930	0.99928	0.99926	0.99923	0.99921	0.99919	0.99917	0.99915
28.20	0.99935	0.99932	0.99930	0.99928	0.99926	0.99924	0.99922	0.99920	0.99917	0.99915
28.40	0.99935	0.99933	0.99931	0.99929	0.99926	0.99924	0.99922	0.99920	0.99918	0.99916
28.60	0.99935	0.99933	0.99931	0.99929	0.99927	0.99925	0.99923	0.99921	0.99919	0.99917
28.80	0.99936	0.99934	0.99931	0.99929	0.99927	0.99925	0.99923	0.99921	0.99919	0.99917
29.00	0.99936	0.99934	0.99932	0.99930	0.99928	0.99925	0.99923	0.99921	0.99919	0.99917
29.20	0.99936	0.99934	0.99932	0.99930	0.99928	0.99926	0.99924	0.99922	0.99920	0.99918
29.40	0.99937	0.99935	0.99932	0.99930	0.99928	0.99926	0.99924	0.99922	0.99920	0.99918
29.60	0.99937	0.99935	0.99933	0.99931	0.99929	0.99927	0.99925	0.99923	0.99921	0.99919
29.80	0.99937	0.99935	0.99933	0.99931	0.99929	0.99927	0.99925	0.99923	0.99921	0.99919
30.00	0.99938	0.99936	0.99934	0.99932	0.99930	0.99928	0.99925	0.99923	0.99921	0.99919

¹CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF AIR*

TEMPERATURE (C)	25.00 (PSIG)	26.00 (PSIG)	27.00 (PSIG)	28.00 (PSIG)	29.00 (PSIG)	30.00 (PSIG)	31.00 (PSIG)	32.00 (PSIG)	33.00 (PSIG)	34.00 (PSIG)
20.00	0.99893	0.99890	0.99887	0.99885	0.99882	0.99879	0.99877	0.99874	0.99872	0.99869
20.20	0.99893	0.99890	0.99888	0.99885	0.99883	0.99880	0.99877	0.99875	0.99872	0.99870
20.40	0.99894	0.99891	0.99888	0.99886	0.99883	0.99881	0.99878	0.99875	0.99873	0.99870
20.60	0.99894	0.99892	0.99889	0.99886	0.99884	0.99881	0.99879	0.99876	0.99873	0.99871
20.80	0.99895	0.99892	0.99890	0.99887	0.99884	0.99882	0.99879	0.99877	0.99874	0.99871
21.00	0.99895	0.99893	0.99890	0.99887	0.99885	0.99882	0.99880	0.99877	0.99875	0.99872
21.20	0.99896	0.99893	0.99891	0.99888	0.99885	0.99883	0.99880	0.99878	0.99875	0.99873
21.40	0.99896	0.99894	0.99891	0.99889	0.99886	0.99883	0.99881	0.99878	0.99876	0.99873
21.60	0.99897	0.99894	0.99892	0.99889	0.99887	0.99884	0.99881	0.99879	0.99877	0.99874
21.80	0.99897	0.99895	0.99892	0.99890	0.99887	0.99885	0.99882	0.99880	0.99877	0.99875
22.00	0.99898	0.99895	0.99893	0.99890	0.99888	0.99885	0.99883	0.99880	0.99878	0.99875
22.20	0.99898	0.99896	0.99893	0.99891	0.99888	0.99886	0.99883	0.99881	0.99878	0.99876
22.40	0.99899	0.99896	0.99894	0.99891	0.99889	0.99886	0.99884	0.99881	0.99879	0.99876
22.60	0.99899	0.99897	0.99894	0.99892	0.99889	0.99887	0.99885	0.99882	0.99879	0.99877
22.80	0.99900	0.99897	0.99895	0.99892	0.99890	0.99887	0.99885	0.99883	0.99880	0.99878
23.00	0.99900	0.99898	0.99895	0.99893	0.99891	0.99888	0.99886	0.99883	0.99881	0.99878
23.20	0.99901	0.99898	0.99896	0.99894	0.99891	0.99889	0.99886	0.99884	0.99881	0.99879
23.40	0.99901	0.99899	0.99897	0.99894	0.99892	0.99889	0.99887	0.99884	0.99882	0.99880
23.60	0.99902	0.99899	0.99897	0.99895	0.99892	0.99890	0.99887	0.99885	0.99883	0.99880
23.80	0.99902	0.99900	0.99897	0.99895	0.99893	0.99890	0.99888	0.99886	0.99883	0.99881
24.00	0.99903	0.99901	0.99898	0.99896	0.99893	0.99891	0.99889	0.99886	0.99884	0.99881
24.20	0.99903	0.99901	0.99899	0.99896	0.99894	0.99891	0.99889	0.99887	0.99884	0.99882
24.40	0.99904	0.99902	0.99899	0.99897	0.99894	0.99892	0.99890	0.99887	0.99885	0.99883
24.60	0.99904	0.99902	0.99900	0.99897	0.99895	0.99893	0.99890	0.99888	0.99886	0.99883
24.80	0.99905	0.99903	0.99900	0.99898	0.99896	0.99893	0.99891	0.99888	0.99886	0.99884
25.00	0.99905	0.99903	0.99901	0.99898	0.99896	0.99894	0.99891	0.99889	0.99887	0.99884
25.20	0.99906	0.99903	0.99901	0.99899	0.99897	0.99894	0.99892	0.99890	0.99887	0.99885
25.40	0.99906	0.99904	0.99902	0.99899	0.99897	0.99895	0.99892	0.99890	0.99888	0.99886
25.60	0.99907	0.99905	0.99902	0.99900	0.99898	0.99895	0.99893	0.99891	0.99889	0.99886
25.80	0.99907	0.99905	0.99903	0.99900	0.99898	0.99896	0.99894	0.99891	0.99889	0.99887
26.00	0.99908	0.99906	0.99903	0.99901	0.99899	0.99896	0.99894	0.99892	0.99890	0.99887
26.20	0.99908	0.99906	0.99904	0.99902	0.99899	0.99897	0.99895	0.99893	0.99890	0.99888
26.40	0.99909	0.99907	0.99904	0.99902	0.99900	0.99898	0.99895	0.99893	0.99891	0.99889
26.60	0.99909	0.99907	0.99905	0.99903	0.99900	0.99898	0.99896	0.99894	0.99891	0.99889
26.80	0.99910	0.99907	0.99905	0.99903	0.99901	0.99899	0.99896	0.99894	0.99892	0.99890
27.00	0.99910	0.99908	0.99906	0.99904	0.99901	0.99899	0.99897	0.99895	0.99893	0.99890
27.20	0.99911	0.99908	0.99906	0.99904	0.99902	0.99900	0.99898	0.99895	0.99893	0.99891
27.40	0.99911	0.99909	0.99907	0.99905	0.99902	0.99900	0.99898	0.99896	0.99894	0.99892
27.60	0.99912	0.99910	0.99907	0.99905	0.99903	0.99901	0.99899	0.99896	0.99894	0.99892
27.80	0.99912	0.99910	0.99908	0.99906	0.99904	0.99901	0.99899	0.99897	0.99895	0.99893
28.00	0.99913	0.99910	0.99908	0.99906	0.99904	0.99902	0.99900	0.99898	0.99896	0.99894
28.20	0.99913	0.99911	0.99909	0.99907	0.99905	0.99902	0.99900	0.99898	0.99896	0.99894
28.40	0.99914	0.99911	0.99909	0.99907	0.99905	0.99903	0.99901	0.99899	0.99897	0.99895
28.60	0.99914	0.99912	0.99910	0.99908	0.99906	0.99904	0.99902	0.99900	0.99898	0.99896
28.80	0.99915	0.99912	0.99910	0.99908	0.99906	0.99904	0.99902	0.99900	0.99898	0.99896
29.00	0.99915	0.99913	0.99911	0.99909	0.99907	0.99905	0.99903	0.99901	0.99899	0.99897
29.20	0.99915	0.99913	0.99911	0.99909	0.99907	0.99905	0.99903	0.99901	0.99899	0.99897
29.40	0.99916	0.99914	0.99912	0.99910	0.99908	0.99906	0.99904	0.99901	0.99899	0.99897
29.60	0.99916	0.99914	0.99912	0.99910	0.99908	0.99906	0.99904	0.99902	0.99900	0.99898
29.80	0.99917	0.99915	0.99913	0.99911	0.99909	0.99907	0.99905	0.99903	0.99901	0.99898
30.00	0.99917	0.99915	0.99913	0.99911	0.99909	0.99907	0.99905	0.99903	0.99901	0.99899

*CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

 COMPRESSIBILITY FACTORS OF AIR

TEMPERATURE (C)	35.00 (PSIG)	36.00 (PSIG)	37.00 (PSIG)	38.00 (PSIG)	39.00 (PSIG)	40.00 (PSIG)	41.00 (PSIG)	42.00 (PSIG)	43.00 (PSIG)	44.00 (PSIG)
20.00	0.99866	0.99864	0.99861	0.99858	0.99856	0.99853	0.99850	0.99848	0.99845	0.99843
20.20	0.99867	0.99864	0.99862	0.99859	0.99856	0.99854	0.99851	0.99849	0.99846	0.99843
20.40	0.99867	0.99865	0.99862	0.99860	0.99857	0.99854	0.99852	0.99849	0.99847	0.99844
20.60	0.99868	0.99866	0.99863	0.99860	0.99858	0.99855	0.99853	0.99850	0.99848	0.99845
20.80	0.99869	0.99866	0.99864	0.99861	0.99859	0.99856	0.99853	0.99851	0.99848	0.99846
21.00	0.99869	0.99867	0.99864	0.99862	0.99859	0.99857	0.99854	0.99852	0.99849	0.99846
21.20	0.99870	0.99868	0.99865	0.99862	0.99860	0.99857	0.99855	0.99852	0.99850	0.99847
21.40	0.99871	0.99868	0.99866	0.99863	0.99861	0.99858	0.99856	0.99853	0.99850	0.99848
21.60	0.99871	0.99869	0.99866	0.99864	0.99861	0.99859	0.99856	0.99854	0.99851	0.99849
21.80	0.99872	0.99870	0.99867	0.99865	0.99862	0.99860	0.99857	0.99855	0.99852	0.99850
22.00	0.99873	0.99870	0.99868	0.99865	0.99863	0.99860	0.99858	0.99855	0.99853	0.99850
22.20	0.99873	0.99871	0.99868	0.99866	0.99863	0.99861	0.99859	0.99856	0.99854	0.99851
22.40	0.99874	0.99872	0.99869	0.99867	0.99864	0.99862	0.99859	0.99857	0.99854	0.99852
22.60	0.99875	0.99872	0.99870	0.99867	0.99865	0.99862	0.99860	0.99857	0.99855	0.99853
22.80	0.99875	0.99873	0.99870	0.99868	0.99865	0.99863	0.99861	0.99858	0.99856	0.99853
23.00	0.99876	0.99873	0.99871	0.99869	0.99866	0.99864	0.99861	0.99859	0.99856	0.99854
23.20	0.99877	0.99874	0.99872	0.99869	0.99867	0.99864	0.99862	0.99860	0.99857	0.99855
23.40	0.99877	0.99875	0.99872	0.99870	0.99867	0.99865	0.99863	0.99860	0.99858	0.99856
23.60	0.99878	0.99875	0.99873	0.99871	0.99868	0.99866	0.99863	0.99861	0.99859	0.99856
23.80	0.99878	0.99876	0.99874	0.99871	0.99869	0.99867	0.99864	0.99862	0.99859	0.99857
24.00	0.99879	0.99877	0.99874	0.99872	0.99870	0.99867	0.99865	0.99862	0.99860	0.99858
24.20	0.99880	0.99877	0.99875	0.99873	0.99870	0.99868	0.99865	0.99863	0.99861	0.99858
24.40	0.99880	0.99878	0.99876	0.99873	0.99871	0.99869	0.99866	0.99864	0.99862	0.99859
24.60	0.99881	0.99879	0.99876	0.99874	0.99872	0.99869	0.99867	0.99865	0.99863	0.99861
24.80	0.99882	0.99879	0.99877	0.99875	0.99872	0.99870	0.99868	0.99865	0.99863	0.99861
25.00	0.99882	0.99880	0.99878	0.99875	0.99873	0.99871	0.99868	0.99866	0.99864	0.99862
25.20	0.99883	0.99880	0.99878	0.99876	0.99874	0.99872	0.99869	0.99867	0.99865	0.99863
25.40	0.99883	0.99881	0.99879	0.99877	0.99874	0.99872	0.99870	0.99868	0.99866	0.99864
25.60	0.99884	0.99882	0.99879	0.99877	0.99875	0.99873	0.99870	0.99868	0.99866	0.99864
25.80	0.99885	0.99882	0.99880	0.99878	0.99876	0.99873	0.99871	0.99869	0.99867	0.99865
26.00	0.99885	0.99883	0.99881	0.99878	0.99876	0.99874	0.99872	0.99869	0.99867	0.99865
26.20	0.99886	0.99884	0.99881	0.99879	0.99877	0.99875	0.99872	0.99870	0.99868	0.99866
26.40	0.99886	0.99884	0.99882	0.99880	0.99877	0.99875	0.99873	0.99871	0.99869	0.99867
26.60	0.99887	0.99885	0.99883	0.99880	0.99878	0.99876	0.99874	0.99871	0.99869	0.99867
26.80	0.99888	0.99885	0.99883	0.99881	0.99879	0.99877	0.99874	0.99872	0.99870	0.99868
27.00	0.99888	0.99886	0.99884	0.99882	0.99879	0.99877	0.99875	0.99873	0.99871	0.99869
27.20	0.99889	0.99887	0.99884	0.99882	0.99880	0.99878	0.99876	0.99874	0.99871	0.99869
27.40	0.99889	0.99887	0.99885	0.99883	0.99881	0.99879	0.99876	0.99874	0.99872	0.99870
27.60	0.99890	0.99888	0.99886	0.99884	0.99881	0.99879	0.99877	0.99875	0.99873	0.99871
27.80	0.99891	0.99888	0.99886	0.99884	0.99882	0.99880	0.99878	0.99876	0.99873	0.99871
28.00	0.99891	0.99889	0.99887	0.99885	0.99883	0.99881	0.99878	0.99876	0.99874	0.99872
28.20	0.99892	0.99890	0.99888	0.99886	0.99884	0.99882	0.99879	0.99877	0.99875	0.99873
28.40	0.99892	0.99890	0.99888	0.99886	0.99884	0.99882	0.99880	0.99878	0.99876	0.99873
28.60	0.99893	0.99891	0.99889	0.99887	0.99885	0.99883	0.99880	0.99878	0.99876	0.99874
28.80	0.99894	0.99891	0.99889	0.99887	0.99885	0.99883	0.99881	0.99879	0.99877	0.99875
29.00	0.99894	0.99892	0.99890	0.99888	0.99886	0.99884	0.99882	0.99880	0.99878	0.99876
29.20	0.99895	0.99893	0.99891	0.99889	0.99886	0.99884	0.99882	0.99880	0.99878	0.99876
29.40	0.99895	0.99893	0.99891	0.99889	0.99887	0.99885	0.99883	0.99881	0.99879	0.99877
29.60	0.99896	0.99894	0.99892	0.99890	0.99888	0.99886	0.99884	0.99882	0.99880	0.99878
29.80	0.99896	0.99894	0.99892	0.99890	0.99888	0.99886	0.99884	0.99882	0.99880	0.99878
30.00	0.99897	0.99895	0.99893	0.99891	0.99889	0.99887	0.99885	0.99883	0.99881	0.99879

*CALCULATED FROM THE BERTHE-BRIDGMAN EQUATION

 COMPRESSIBILITY FACTORS OF AIR¹

TEMPERATURE (C)	100.00 (PSIG)	110.00 (PSIG)	120.00 (PSIG)	130.00 (PSIG)	140.00 (PSIG)	150.00 (PSIG)	160.00 (PSIG)	170.00 (PSIG)	180.00 (PSIG)	190.00 (PSIG)
20.00	0.99700	0.99575	0.99651	0.99626	0.99602	0.99578	0.99555	0.99531	0.99508	0.99485
20.20	0.99701	0.99577	0.99652	0.99628	0.99604	0.99580	0.99557	0.99534	0.99511	0.99488
20.40	0.99703	0.99578	0.99654	0.99630	0.99606	0.99583	0.99559	0.99536	0.99513	0.99491
20.60	0.99704	0.99580	0.99656	0.99632	0.99608	0.99585	0.99561	0.99538	0.99516	0.99493
20.80	0.99706	0.99582	0.99658	0.99634	0.99610	0.99587	0.99564	0.99541	0.99518	0.99496
21.00	0.99707	0.99583	0.99659	0.99636	0.99612	0.99589	0.99566	0.99543	0.99521	0.99498
21.20	0.99709	0.99585	0.99661	0.99637	0.99614	0.99591	0.99568	0.99546	0.99523	0.99501
21.40	0.99710	0.99586	0.99663	0.99639	0.99616	0.99593	0.99570	0.99548	0.99526	0.99504
21.60	0.99712	0.99588	0.99665	0.99641	0.99618	0.99595	0.99573	0.99550	0.99528	0.99506
21.80	0.99713	0.99590	0.99666	0.99643	0.99620	0.99597	0.99575	0.99553	0.99531	0.99509
22.00	0.99715	0.99591	0.99668	0.99645	0.99622	0.99600	0.99577	0.99555	0.99533	0.99512
22.20	0.99716	0.99593	0.99670	0.99647	0.99624	0.99602	0.99579	0.99557	0.99536	0.99514
22.40	0.99718	0.99594	0.99671	0.99648	0.99626	0.99604	0.99582	0.99560	0.99538	0.99517
22.60	0.99719	0.99596	0.99673	0.99650	0.99628	0.99606	0.99584	0.99562	0.99540	0.99519
22.80	0.99721	0.99598	0.99675	0.99652	0.99630	0.99608	0.99586	0.99564	0.99543	0.99522
23.00	0.99722	0.99599	0.99676	0.99654	0.99632	0.99610	0.99588	0.99567	0.99545	0.99524
23.20	0.99723	0.99701	0.99678	0.99656	0.99634	0.99612	0.99590	0.99569	0.99548	0.99527
23.40	0.99725	0.99702	0.99680	0.99658	0.99636	0.99614	0.99593	0.99571	0.99550	0.99529
23.60	0.99726	0.99704	0.99681	0.99659	0.99638	0.99616	0.99595	0.99573	0.99553	0.99532
23.80	0.99728	0.99705	0.99683	0.99661	0.99640	0.99618	0.99597	0.99576	0.99555	0.99534
24.00	0.99729	0.99707	0.99685	0.99663	0.99642	0.99620	0.99599	0.99578	0.99557	0.99537
24.20	0.99731	0.99708	0.99687	0.99665	0.99643	0.99622	0.99601	0.99580	0.99560	0.99540
24.40	0.99732	0.99710	0.99689	0.99667	0.99645	0.99624	0.99603	0.99583	0.99562	0.99542
24.60	0.99733	0.99712	0.99690	0.99668	0.99647	0.99626	0.99606	0.99585	0.99565	0.99545
24.80	0.99735	0.99713	0.99692	0.99670	0.99649	0.99628	0.99608	0.99587	0.99567	0.99547
25.00	0.99736	0.99715	0.99693	0.99672	0.99651	0.99630	0.99610	0.99589	0.99569	0.99550
25.20	0.99738	0.99716	0.99695	0.99674	0.99653	0.99632	0.99612	0.99592	0.99572	0.99552
25.40	0.99739	0.99718	0.99696	0.99676	0.99655	0.99634	0.99614	0.99594	0.99574	0.99555
25.60	0.99740	0.99719	0.99698	0.99677	0.99657	0.99636	0.99616	0.99596	0.99576	0.99557
25.80	0.99742	0.99721	0.99700	0.99679	0.99659	0.99638	0.99618	0.99598	0.99579	0.99559
26.00	0.99743	0.99722	0.99701	0.99681	0.99660	0.99640	0.99620	0.99601	0.99581	0.99562
26.20	0.99745	0.99724	0.99703	0.99683	0.99662	0.99642	0.99623	0.99603	0.99584	0.99564
26.40	0.99746	0.99725	0.99705	0.99684	0.99664	0.99644	0.99625	0.99605	0.99586	0.99567
26.60	0.99747	0.99727	0.99706	0.99686	0.99666	0.99646	0.99627	0.99607	0.99588	0.99569
26.80	0.99749	0.99728	0.99708	0.99688	0.99668	0.99648	0.99629	0.99610	0.99590	0.99572
27.00	0.99750	0.99730	0.99709	0.99689	0.99670	0.99650	0.99631	0.99612	0.99593	0.99574
27.20	0.99752	0.99731	0.99711	0.99691	0.99672	0.99652	0.99633	0.99614	0.99595	0.99577
27.40	0.99753	0.99733	0.99713	0.99693	0.99673	0.99654	0.99635	0.99616	0.99597	0.99579
27.60	0.99754	0.99734	0.99714	0.99695	0.99675	0.99656	0.99637	0.99618	0.99599	0.99581
27.80	0.99756	0.99736	0.99716	0.99696	0.99677	0.99658	0.99639	0.99620	0.99602	0.99584
28.00	0.99757	0.99737	0.99718	0.99698	0.99679	0.99660	0.99641	0.99623	0.99604	0.99586
28.20	0.99758	0.99739	0.99719	0.99700	0.99681	0.99662	0.99643	0.99625	0.99606	0.99589
28.40	0.99760	0.99740	0.99721	0.99701	0.99683	0.99664	0.99645	0.99627	0.99609	0.99591
28.60	0.99761	0.99742	0.99722	0.99703	0.99684	0.99666	0.99647	0.99629	0.99611	0.99593
28.80	0.99762	0.99743	0.99724	0.99705	0.99686	0.99668	0.99649	0.99631	0.99613	0.99596
29.00	0.99764	0.99744	0.99725	0.99706	0.99688	0.99669	0.99651	0.99633	0.99616	0.99598
29.20	0.99765	0.99746	0.99727	0.99708	0.99690	0.99671	0.99653	0.99635	0.99618	0.99600
29.40	0.99766	0.99747	0.99729	0.99710	0.99691	0.99673	0.99655	0.99638	0.99620	0.99603
29.60	0.99768	0.99749	0.99730	0.99712	0.99693	0.99675	0.99657	0.99640	0.99622	0.99605
29.80	0.99769	0.99750	0.99732	0.99713	0.99695	0.99677	0.99659	0.99642	0.99625	0.99608
30.00	0.99770	0.99752	0.99733	0.99715	0.99697	0.99679	0.99661	0.99644	0.99627	0.99610

¹ CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF AIR¹

TEMPERATURE (°C)	200.00 (PSIG)	210.00 (PSIG)	220.00 (PSIG)	230.00 (PSIG)	240.00 (PSIG)	250.00 (PSIG)	260.00 (PSIG)	270.00 (PSIG)	280.00 (PSIG)	290.00 (PSIG)
20.00	0.99463	0.99440	0.99418	0.99396	0.99374	0.99352	0.99331	0.99310	0.99289	0.99269
20.20	0.99465	0.99443	0.99421	0.99399	0.99377	0.99356	0.99335	0.99314	0.99293	0.99273
20.40	0.99468	0.99446	0.99424	0.99402	0.99381	0.99359	0.99338	0.99317	0.99297	0.99276
20.60	0.99471	0.99449	0.99427	0.99405	0.99384	0.99363	0.99342	0.99321	0.99301	0.99281
20.80	0.99474	0.99452	0.99430	0.99408	0.99387	0.99366	0.99345	0.99325	0.99304	0.99284
21.00	0.99476	0.99454	0.99433	0.99412	0.99390	0.99369	0.99349	0.99328	0.99308	0.99288
21.20	0.99479	0.99457	0.99436	0.99415	0.99394	0.99373	0.99352	0.99332	0.99311	0.99292
21.40	0.99482	0.99460	0.99439	0.99418	0.99397	0.99376	0.99356	0.99336	0.99316	0.99296
21.60	0.99485	0.99463	0.99442	0.99421	0.99400	0.99380	0.99359	0.99339	0.99319	0.99300
21.80	0.99487	0.99466	0.99445	0.99424	0.99403	0.99383	0.99363	0.99343	0.99323	0.99304
22.00	0.99490	0.99469	0.99448	0.99427	0.99407	0.99386	0.99366	0.99346	0.99327	0.99307
22.20	0.99493	0.99472	0.99451	0.99430	0.99410	0.99390	0.99370	0.99350	0.99330	0.99311
22.40	0.99495	0.99474	0.99454	0.99433	0.99413	0.99393	0.99373	0.99353	0.99334	0.99315
22.60	0.99498	0.99477	0.99457	0.99436	0.99416	0.99396	0.99377	0.99357	0.99338	0.99319
22.80	0.99501	0.99480	0.99460	0.99439	0.99419	0.99399	0.99380	0.99361	0.99341	0.99322
23.00	0.99503	0.99483	0.99463	0.99442	0.99422	0.99403	0.99383	0.99364	0.99345	0.99326
23.20	0.99506	0.99486	0.99465	0.99445	0.99425	0.99406	0.99387	0.99368	0.99349	0.99330
23.40	0.99509	0.99489	0.99468	0.99448	0.99429	0.99409	0.99390	0.99371	0.99352	0.99334
23.60	0.99512	0.99491	0.99471	0.99451	0.99432	0.99413	0.99393	0.99375	0.99356	0.99338
23.80	0.99514	0.99494	0.99474	0.99454	0.99435	0.99416	0.99397	0.99378	0.99359	0.99341
24.00	0.99517	0.99497	0.99477	0.99457	0.99438	0.99419	0.99400	0.99382	0.99363	0.99345
24.20	0.99519	0.99500	0.99480	0.99460	0.99441	0.99422	0.99404	0.99385	0.99367	0.99349
24.40	0.99522	0.99502	0.99483	0.99463	0.99444	0.99425	0.99407	0.99388	0.99370	0.99352
24.60	0.99525	0.99505	0.99486	0.99466	0.99448	0.99429	0.99410	0.99392	0.99374	0.99356
24.80	0.99527	0.99508	0.99488	0.99469	0.99451	0.99432	0.99414	0.99395	0.99377	0.99360
25.00	0.99530	0.99510	0.99491	0.99472	0.99454	0.99435	0.99417	0.99399	0.99381	0.99363
25.20	0.99533	0.99513	0.99494	0.99475	0.99457	0.99438	0.99420	0.99402	0.99384	0.99367
25.40	0.99535	0.99516	0.99497	0.99478	0.99460	0.99442	0.99423	0.99406	0.99388	0.99371
25.60	0.99538	0.99519	0.99500	0.99481	0.99463	0.99445	0.99427	0.99409	0.99392	0.99374
25.80	0.99540	0.99521	0.99503	0.99484	0.99466	0.99448	0.99430	0.99413	0.99395	0.99378
26.00	0.99543	0.99524	0.99505	0.99487	0.99469	0.99451	0.99433	0.99416	0.99399	0.99381
26.20	0.99546	0.99527	0.99508	0.99490	0.99472	0.99454	0.99437	0.99419	0.99402	0.99385
26.40	0.99548	0.99529	0.99511	0.99493	0.99475	0.99457	0.99440	0.99423	0.99406	0.99389
26.60	0.99551	0.99532	0.99514	0.99496	0.99478	0.99460	0.99443	0.99426	0.99409	0.99392
26.80	0.99553	0.99535	0.99517	0.99499	0.99481	0.99464	0.99446	0.99429	0.99413	0.99396
27.00	0.99556	0.99537	0.99519	0.99502	0.99484	0.99467	0.99450	0.99433	0.99416	0.99400
27.20	0.99558	0.99540	0.99522	0.99505	0.99487	0.99470	0.99453	0.99436	0.99419	0.99403
27.40	0.99561	0.99543	0.99525	0.99507	0.99490	0.99473	0.99456	0.99439	0.99423	0.99407
27.60	0.99563	0.99545	0.99528	0.99510	0.99493	0.99476	0.99459	0.99442	0.99426	0.99410
27.80	0.99566	0.99548	0.99530	0.99513	0.99496	0.99479	0.99462	0.99446	0.99430	0.99414
28.00	0.99569	0.99551	0.99533	0.99516	0.99499	0.99482	0.99466	0.99449	0.99433	0.99417
28.20	0.99571	0.99553	0.99536	0.99519	0.99502	0.99485	0.99469	0.99453	0.99436	0.99421
28.40	0.99573	0.99556	0.99539	0.99522	0.99505	0.99488	0.99472	0.99456	0.99440	0.99424
28.60	0.99576	0.99558	0.99541	0.99524	0.99508	0.99491	0.99475	0.99459	0.99443	0.99428
28.80	0.99578	0.99561	0.99544	0.99527	0.99511	0.99494	0.99478	0.99462	0.99447	0.99431
29.00	0.99581	0.99564	0.99547	0.99530	0.99514	0.99497	0.99481	0.99466	0.99450	0.99435
29.20	0.99583	0.99566	0.99549	0.99533	0.99517	0.99500	0.99485	0.99469	0.99453	0.99438
29.40	0.99586	0.99569	0.99552	0.99536	0.99519	0.99503	0.99488	0.99472	0.99457	0.99442
29.60	0.99588	0.99571	0.99555	0.99538	0.99522	0.99506	0.99491	0.99475	0.99460	0.99445
29.80	0.99591	0.99574	0.99557	0.99541	0.99525	0.99509	0.99494	0.99479	0.99463	0.99448
30.00	0.99593	0.99576	0.99560	0.99544	0.99528	0.99512	0.99497	0.99482	0.99467	0.99452

¹CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

COMPRESSIBILITY FACTORS OF AIR¹

TEMPERATURE (°C)	300.00 (PSIG)	310.00 (PSIG)	320.00 (PSIG)	330.00 (PSIG)	340.00 (PSIG)	350.00 (PSIG)	360.00 (PSIG)	370.00 (PSIG)	380.00 (PSIG)	390.00 (PSIG)
20.00	0.99248	0.99228	0.99208	0.99189	0.99169	0.99150	0.99131	0.99112	0.99094	0.99076
20.20	0.99252	0.99232	0.99213	0.99193	0.99174	0.99155	0.99136	0.99117	0.99099	0.99081
20.40	0.99256	0.99236	0.99217	0.99197	0.99178	0.99159	0.99141	0.99122	0.99104	0.99086
20.60	0.99261	0.99241	0.99221	0.99202	0.99183	0.99164	0.99145	0.99127	0.99109	0.99091
20.80	0.99265	0.99245	0.99225	0.99206	0.99187	0.99169	0.99150	0.99132	0.99114	0.99096
21.00	0.99268	0.99249	0.99230	0.99210	0.99192	0.99173	0.99155	0.99137	0.99119	0.99101
21.20	0.99272	0.99253	0.99234	0.99215	0.99196	0.99178	0.99160	0.99142	0.99124	0.99106
21.40	0.99276	0.99257	0.99238	0.99219	0.99201	0.99182	0.99164	0.99146	0.99129	0.99111
21.60	0.99280	0.99261	0.99242	0.99224	0.99205	0.99187	0.99169	0.99151	0.99134	0.99116
21.80	0.99284	0.99265	0.99246	0.99228	0.99209	0.99191	0.99174	0.99156	0.99139	0.99121
22.00	0.99288	0.99269	0.99251	0.99232	0.99214	0.99196	0.99178	0.99161	0.99143	0.99126
22.20	0.99292	0.99273	0.99255	0.99236	0.99218	0.99200	0.99183	0.99165	0.99148	0.99131
22.40	0.99296	0.99277	0.99259	0.99241	0.99223	0.99205	0.99187	0.99170	0.99153	0.99136
22.60	0.99300	0.99281	0.99263	0.99245	0.99227	0.99209	0.99192	0.99175	0.99158	0.99141
22.80	0.99304	0.99285	0.99267	0.99249	0.99231	0.99214	0.99197	0.99180	0.99163	0.99146
23.00	0.99308	0.99290	0.99271	0.99253	0.99236	0.99218	0.99201	0.99184	0.99168	0.99151
23.20	0.99312	0.99293	0.99275	0.99258	0.99240	0.99223	0.99206	0.99189	0.99172	0.99156
23.40	0.99315	0.99297	0.99279	0.99262	0.99244	0.99227	0.99210	0.99194	0.99177	0.99161
23.60	0.99319	0.99301	0.99283	0.99266	0.99249	0.99232	0.99215	0.99198	0.99182	0.99166
23.80	0.99323	0.99305	0.99288	0.99270	0.99253	0.99236	0.99219	0.99203	0.99187	0.99171
24.00	0.99327	0.99309	0.99292	0.99274	0.99257	0.99240	0.99224	0.99208	0.99192	0.99176
24.20	0.99331	0.99313	0.99296	0.99278	0.99262	0.99245	0.99229	0.99212	0.99196	0.99180
24.40	0.99335	0.99317	0.99300	0.99283	0.99266	0.99249	0.99233	0.99217	0.99201	0.99185
24.60	0.99338	0.99321	0.99304	0.99287	0.99270	0.99254	0.99237	0.99222	0.99206	0.99190
24.80	0.99342	0.99325	0.99308	0.99291	0.99274	0.99258	0.99242	0.99226	0.99210	0.99195
25.00	0.99346	0.99329	0.99312	0.99295	0.99279	0.99262	0.99246	0.99231	0.99215	0.99200
25.20	0.99350	0.99333	0.99316	0.99299	0.99283	0.99267	0.99251	0.99235	0.99220	0.99204
25.40	0.99354	0.99337	0.99320	0.99303	0.99287	0.99271	0.99255	0.99240	0.99224	0.99209
25.60	0.99357	0.99340	0.99324	0.99307	0.99291	0.99275	0.99260	0.99244	0.99229	0.99214
25.80	0.99361	0.99344	0.99328	0.99311	0.99295	0.99280	0.99264	0.99249	0.99234	0.99219
26.00	0.99365	0.99348	0.99332	0.99316	0.99300	0.99284	0.99268	0.99253	0.99238	0.99223
26.20	0.99368	0.99352	0.99336	0.99320	0.99304	0.99288	0.99273	0.99258	0.99243	0.99228
26.40	0.99372	0.99356	0.99340	0.99324	0.99308	0.99293	0.99277	0.99262	0.99248	0.99233
26.60	0.99376	0.99360	0.99344	0.99328	0.99312	0.99297	0.99282	0.99267	0.99252	0.99238
26.80	0.99379	0.99363	0.99347	0.99332	0.99316	0.99301	0.99286	0.99271	0.99257	0.99242
27.00	0.99383	0.99367	0.99351	0.99336	0.99320	0.99305	0.99290	0.99276	0.99261	0.99247
27.20	0.99387	0.99371	0.99355	0.99340	0.99324	0.99310	0.99295	0.99280	0.99266	0.99252
27.40	0.99391	0.99375	0.99359	0.99344	0.99329	0.99314	0.99299	0.99284	0.99270	0.99256
27.60	0.99394	0.99378	0.99363	0.99348	0.99333	0.99318	0.99303	0.99289	0.99275	0.99261
27.80	0.99398	0.99382	0.99367	0.99352	0.99337	0.99322	0.99308	0.99293	0.99279	0.99265
28.00	0.99401	0.99386	0.99371	0.99356	0.99341	0.99326	0.99312	0.99298	0.99284	0.99270
28.20	0.99405	0.99390	0.99375	0.99360	0.99345	0.99330	0.99316	0.99302	0.99288	0.99275
28.40	0.99409	0.99393	0.99378	0.99363	0.99349	0.99335	0.99320	0.99306	0.99293	0.99279
28.60	0.99412	0.99397	0.99382	0.99367	0.99353	0.99339	0.99325	0.99311	0.99297	0.99284
28.80	0.99416	0.99401	0.99386	0.99371	0.99357	0.99343	0.99329	0.99315	0.99302	0.99288
29.00	0.99419	0.99405	0.99390	0.99375	0.99361	0.99347	0.99333	0.99320	0.99306	0.99293
29.20	0.99423	0.99409	0.99394	0.99379	0.99365	0.99351	0.99337	0.99324	0.99311	0.99297
29.40	0.99427	0.99412	0.99397	0.99383	0.99369	0.99355	0.99341	0.99328	0.99315	0.99302
29.60	0.99430	0.99416	0.99401	0.99387	0.99373	0.99359	0.99346	0.99332	0.99319	0.99307
29.80	0.99434	0.99419	0.99405	0.99391	0.99377	0.99363	0.99350	0.99337	0.99324	0.99311
30.00	0.99437	0.99423	0.99409	0.99395	0.99381	0.99367	0.99354	0.99341	0.99328	0.99315

¹CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

 COMPRESSIBILITY FACTORS OF AIR¹

TEMPERATURE (°C)	400.00 (PSIG)	410.00 (PSIG)	420.00 (PSIG)	430.00 (PSIG)	440.00 (PSIG)	450.00 (PSIG)	460.00 (PSIG)	470.00 (PSIG)	480.00 (PSIG)	490.00 (PSIG)
20.00	0.99058	0.99040	0.99022	0.99005	0.98988	0.98971	0.98955	0.98938	0.98922	0.98907
20.20	0.99063	0.99045	0.99028	0.99011	0.98994	0.98977	0.98961	0.98944	0.98928	0.98913
20.40	0.99068	0.99051	0.99033	0.99016	0.99000	0.98983	0.98967	0.98951	0.98935	0.98919
20.60	0.99073	0.99056	0.99039	0.99022	0.99005	0.98989	0.98973	0.98957	0.98941	0.98925
20.80	0.99079	0.99061	0.99044	0.99027	0.99011	0.98995	0.98978	0.98963	0.98947	0.98932
21.00	0.99084	0.99067	0.99050	0.99033	0.99017	0.99000	0.98984	0.98968	0.98953	0.98938
21.20	0.99089	0.99072	0.99055	0.99038	0.99022	0.99006	0.98990	0.98975	0.98959	0.98944
21.40	0.99094	0.99077	0.99060	0.99044	0.99028	0.99012	0.98996	0.98981	0.98965	0.98950
21.60	0.99099	0.99082	0.99066	0.99050	0.99033	0.99017	0.99002	0.98987	0.98971	0.98956
21.80	0.99104	0.99088	0.99071	0.99055	0.99039	0.99023	0.99008	0.98992	0.98977	0.98963
22.00	0.99109	0.99093	0.99077	0.99060	0.99045	0.99029	0.99014	0.98998	0.98983	0.98969
22.20	0.99115	0.99098	0.99082	0.99066	0.99050	0.99035	0.99019	0.99004	0.98989	0.98975
22.40	0.99120	0.99103	0.99087	0.99071	0.99056	0.99040	0.99025	0.99010	0.98995	0.98981
22.60	0.99125	0.99108	0.99093	0.99077	0.99061	0.99046	0.99031	0.99016	0.99001	0.98987
22.80	0.99130	0.99114	0.99098	0.99082	0.99067	0.99051	0.99037	0.99022	0.99007	0.98993
23.00	0.99135	0.99119	0.99103	0.99088	0.99072	0.99057	0.99042	0.99028	0.99013	0.98999
23.20	0.99140	0.99124	0.99108	0.99093	0.99078	0.99063	0.99048	0.99033	0.99019	0.99005
23.40	0.99145	0.99129	0.99114	0.99098	0.99083	0.99068	0.99054	0.99039	0.99025	0.99011
23.60	0.99150	0.99134	0.99119	0.99104	0.99089	0.99074	0.99059	0.99045	0.99031	0.99017
23.80	0.99155	0.99139	0.99124	0.99109	0.99094	0.99079	0.99065	0.99051	0.99037	0.99023
24.00	0.99160	0.99144	0.99129	0.99114	0.99100	0.99085	0.99071	0.99057	0.99043	0.99029
24.20	0.99165	0.99149	0.99134	0.99119	0.99105	0.99091	0.99076	0.99062	0.99049	0.99035
24.40	0.99170	0.99155	0.99140	0.99125	0.99110	0.99096	0.99082	0.99068	0.99055	0.99041
24.60	0.99175	0.99160	0.99145	0.99130	0.99116	0.99101	0.99087	0.99074	0.99060	0.99047
24.80	0.99180	0.99165	0.99150	0.99135	0.99121	0.99107	0.99093	0.99079	0.99066	0.99053
25.00	0.99184	0.99170	0.99155	0.99141	0.99126	0.99112	0.99099	0.99085	0.99072	0.99059
25.20	0.99189	0.99175	0.99160	0.99146	0.99132	0.99118	0.99104	0.99091	0.99078	0.99065
25.40	0.99194	0.99180	0.99165	0.99151	0.99137	0.99123	0.99110	0.99097	0.99083	0.99071
25.60	0.99199	0.99185	0.99170	0.99156	0.99142	0.99129	0.99115	0.99102	0.99089	0.99077
25.80	0.99204	0.99190	0.99175	0.99161	0.99148	0.99134	0.99121	0.99108	0.99095	0.99082
26.00	0.99209	0.99195	0.99180	0.99167	0.99153	0.99139	0.99126	0.99113	0.99101	0.99088
26.20	0.99214	0.99199	0.99186	0.99172	0.99158	0.99145	0.99132	0.99119	0.99106	0.99094
26.40	0.99219	0.99204	0.99190	0.99177	0.99163	0.99150	0.99137	0.99125	0.99112	0.99100
26.60	0.99223	0.99209	0.99196	0.99182	0.99169	0.99156	0.99143	0.99130	0.99118	0.99105
26.80	0.99228	0.99214	0.99201	0.99187	0.99174	0.99161	0.99148	0.99136	0.99123	0.99111
27.00	0.99233	0.99219	0.99206	0.99192	0.99179	0.99166	0.99154	0.99141	0.99129	0.99117
27.20	0.99238	0.99224	0.99211	0.99197	0.99184	0.99172	0.99159	0.99147	0.99135	0.99123
27.40	0.99242	0.99229	0.99216	0.99202	0.99189	0.99177	0.99164	0.99152	0.99140	0.99128
27.60	0.99247	0.99234	0.99220	0.99207	0.99195	0.99182	0.99170	0.99158	0.99146	0.99134
27.80	0.99252	0.99239	0.99225	0.99212	0.99200	0.99187	0.99175	0.99163	0.99151	0.99140
28.00	0.99257	0.99243	0.99230	0.99218	0.99205	0.99193	0.99181	0.99169	0.99157	0.99145
28.20	0.99261	0.99248	0.99235	0.99222	0.99210	0.99198	0.99186	0.99174	0.99162	0.99151
28.40	0.99266	0.99253	0.99240	0.99228	0.99215	0.99203	0.99191	0.99179	0.99168	0.99157
28.60	0.99271	0.99258	0.99245	0.99232	0.99220	0.99208	0.99196	0.99185	0.99173	0.99162
28.80	0.99275	0.99262	0.99250	0.99238	0.99225	0.99213	0.99202	0.99190	0.99179	0.99168
29.00	0.99280	0.99267	0.99255	0.99242	0.99230	0.99219	0.99207	0.99196	0.99184	0.99173
29.20	0.99285	0.99272	0.99260	0.99247	0.99235	0.99224	0.99212	0.99201	0.99190	0.99179
29.40	0.99289	0.99277	0.99264	0.99252	0.99240	0.99229	0.99217	0.99206	0.99195	0.99185
29.60	0.99294	0.99281	0.99269	0.99257	0.99246	0.99234	0.99223	0.99212	0.99201	0.99190
29.80	0.99298	0.99286	0.99274	0.99262	0.99251	0.99239	0.99228	0.99217	0.99206	0.99196
30.00	0.99303	0.99291	0.99279	0.99267	0.99255	0.99244	0.99233	0.99222	0.99212	0.99201

¹CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION

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C      J DENOTES GAS TYPE
C      J=1 - N2
C      J=2 - O2
C      J=3 - AIR
C      J=4 - CO2
0001      DIMENSION GAS(4,5),GOOD(4,51,40),P2(40),AH(4)
0002      DATA GAS/1.3445,1.4911,1.3012,5.0065,0.02617,0.02562,0.01931,
*0.07132,0.05046,0.04624,0.01511,0.10476,-0.00691,0.004208,
*-0.01101,0.07235,4.2E04,4.6E04,4.34E04,6.6E05/
0003      P=14.7/28.02,32.0,29.0,44
0004      R=1.0/205
0005      DO 10 J=1,4,1
0006      IF (J.EQ.1) WRITE(6,81)
0007      IF (J.EQ.2) WRITE(6,82)
0008      IF (J.EQ.3) WRITE(6,83)
0009      IF (J.EQ.4) WRITE(6,84)
0010      81 FORMAT('AD CONVERGENCE VALUES FOR N2',//)
0011      82 FORMAT('AD CONVERGENCE VALUES FOR O2',//)
0012      83 FORMAT('AD CONVERGENCE VALUES FOR AIR',//)
0013      84 FORMAT('AD CONVERGENCE VALUES FOR CO2',//)
0014      T=273.2
0015      T=273.2
0016      T=273.2
0017      T=273.2
0018      T=273.2
0019      ALPHA=1.0 - 273.2
0020      BETA=1.0 + GAS(J,3)*ALPHA-GAS(J,5)*R/T**2
0021      GAMMA=1.0 - GAS(J,1)-GAS(J,4)*GAS(J,3)*ALPHA-GAS(J,5)*GAS(J,3)*
*GAS(J,5)
0022      SIGMA=1.0 - GAS(J,5)*GAS(J,3)*R/T**2
0023      K=1
0024      DO 20 K=1,100,1
0025      P=(14.7-K)/14.7
0026      K=K+1
0027      P=(K-4)=FLOAT(KK)
0028      DO 25 L=1,100,1
0029      10 VN=1.0/P*(ALPHA+BETA/V+GAMMA/V**2+SIGMA/V**3)
0030      IF (ABS(V-VN) .LE. 0.0001) GO TO 26
0031      VN=VN
0032      25 CONTINUE
0033      T=273.2
0034      P1=P*14.7-14.7
0035      WRITE(6,77) T1,P1,V,VN
0036      77 FORMAT(' T=',E15.7,' P=',E15.7,' V=',E15.7,' VN=',E15.7)
0037      VN=0.0
0038      26 GOOD(J,IJ,(K-4))=VN*P/R/T
0039      30 CONTINUE
0040      40 CONTINUE
0041      70 CONTINUE
0042      DO 100 J=1,4,1
0043      LL=1
0044      NN=10
0045      14 IF (J.EQ.1) WRITE(6,201)
0046      IF (J.EQ.2) WRITE(6,200)
0047      IF (J.EQ.3) WRITE(6,203)
0048      IF (J.EQ.4) WRITE(6,204)
0049      200 FORMAT(1H1,52X,'COMPRESSIBILITY FACTORS OF O2',/,
* 53X,30(' '),//,11X,120(' '))

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C      J DENOTES GAS TYPE
C      J=1 - N2
C      J=2 - O2
C      J=3 - AIR
C      J=4 - CO2
0001      DIMENSION GAS(4,5),GOOD(4,51,40),P2(40),AW(4)
0002      DATA GAS/1.3445,1.4911,1.3012,5.0065,0.02617,0.02562,0.01931,
      *0.07132,0.05046,0.04624,0.04611,0.10476,-0.00691,0.004208,
      *-0.01101,0.07235,4.2E04,4.8E04,4.34E04,6.6E05/
0003      DATA AW/28.02,32.0,29.0,44.01/
0004      R=0.08205
0005      DO 50 J=1,4,1
0006      IF(J.EQ.1) WRITE(6,81)
0007      IF(J.EQ.2) WRITE(6,82)
0008      IF(J.EQ.3) WRITE(6,83)
0009      IF(J.EQ.4) WRITE(6,84)
0010      81 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR N2',//)
0011      82 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR O2',//)
0012      83 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR AIR',//)
0013      84 FORMAT(1H1,'BAD CONVERGENCE VALUES FOR CO2',//)
0014      V=1.0
0015      II=0
0016      DO 40 I=200,300,2
0017      II=II+1
0018      T=FLOAT(I)/10.0 + 273.2
0019      ALPHA=R*T
0020      BETA= -GAS(J,1)+GAS(J,3)*ALPHA-GAS(J,5)*R/T**2
0021      GAMMA= GAS(J,2)*GAS(J,1)-GAS(J,4)*GAS(J,3)*ALPHA-GAS(J,5)*GAS(J,3)*
      * R/T**2
0022      SIGMA=GAS(J,4)*GAS(J,5)*GAS(J,3)*R/T**2
0023      K=4
0024      DO 30 KK=100,490,10
0025      P=(FLOAT(KK) + 14.7)/14.7
0026      K=K+1
0027      P2(K-4)=FLOAT(KK)
0028      DO 25 L=1,100,1
0029      10 VN= 1.0/P*(ALPHA+BETA/V+GAMMA/V**2+SIGMA/V**3)
0030      IF(ABS(V-VN).LE. 0.0001) GO TO 26
0031      V=VN
0032      25 CONTINUE
0033      T1= T-273.2
0034      P1= P*14.7- 14.7
0035      WRITE(6,77) T1,P1,V,VN
0036      77 FORMAT(' T=',E15.7,' P=',E15.7,' V=',E15.7,' VN=',E15.7)
0037      VN=0.0
0038      26 GOOD(J,II,(K-4)) =VN*P/R/T
0039      30 CONTINUE
0040      40 CONTINUE
0041      50 CONTINUE
0042      DO 100 J=1,4,1
0043      LL=1
0044      NN=10
0045      114 IF(J.EQ.1) WRITE(6,201)
0046      IF(J.EQ.2) WRITE(6,200)
0047      IF(J.EQ.3) WRITE(6,203)
0048      IF(J.EQ.4) WRITE(6,204)
0049      200 FORMAT(1H1,52X,'COMPRESSIBILITY FACTORS OF O2',/,
      * 53X,30('-',),//,11X,120('-',))

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0050      201 FORMAT(1H1,52X,'COMPRESSIBILITY FACTORS OF N2',/,
      * 53X,30(' '),/,11X,120(' '))
0051      203 FORMAT(1H1,52X,'COMPRESSIBILITY FACTORS OF AIR',/,
      * 53X,31(' '),/,11X,120(' '))
0052      204 FORMAT(1H1,52X,'COMPRESSIBILITY FACTORS OF CO2',/,
      * 53X,31(' '),/,11X,120(' '))
0053      IF((NN-LL).NE. 9) GO TO 500
0054      WRITE(6,155) (P2(KK),KK=LL,NN,1)
0055      155  FORMAT(10X,' TEMPERATURE',10(P9.2,2X),/,
      *
      * 14X,'( C)',7X,'(PSIG)',5X,
      * '(PSIG)',5X,'(PSIG)',5X,'(PSIG)',5X,'(PSIG)',5X,'(PSIG)',5X,
      * '(PSIG)',5X,'(PSIG)',5X,'(PSIG)',5X,'(PSIG)',5X,'(PSIG)',5X,
      * '(PSIG)',/,11X,120(' '))
      GO TO 600
0056
0057      500  WRITE(6,160) (P2(KK),KK=LL,NN,1)
0058      160  FORMAT(' TEMPERATURE', 9(P9.2,2X),/,4X,'( C)',7X,'(PSIA)',5X,
      * '(PSIA)',5X,'(PSIA)',5X,'(PSIA)',5X,'(PSIA)',5X,'(PSIA)',5X,
      * '(PSIA)',5X,'(PSIA)',5X,'(PSIA)',5X,/,)
0059      600  LA=0
0060      DO 175 LP=200,300,2
0061      T=FLOAT(LP)/10.0
0062      LA=LA+1
0063      WRITE(6,179) T,(GOOD(J,LA,LB),LB=LL,NN,1)
0064      179  FORMAT(13X,P6.2,3X,P10.5,9(1X,P10.5))
0065      175  CONTINUE
0066      WRITE(6,601)
0067      601  FORMAT(11X,120(' '),/,
      *
      * 11X,'''CALCULATED FROM THE BEATTIE-BRIDGEMAN EQUATION'')
0068      LL=LL+10
0069      NN=NN+10
0070      IF(NN.GT.40) GO TO 100
0071      GO TO 114
0072      100  CONTINUE
0073      CALL EXIT
0074      END

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