

DuPont™ Suva®
refrigerants

**Thermodynamic
Properties
of**

**DuPont™
Suva® HP80**

Refrigerant

(R-402A)

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The miracles of science™

Thermodynamic Properties of Suva® HP80 Refrigerant

Engineering (I/P) Units

New tables of the thermodynamic properties of Suva® HP80 refrigerant [ASHRAE designation: R-402A (60/2/38)], a near azeotropic blend of HFC-125/HC-290/HCFC-22, have been developed and are presented here. These tables are based on extensive experimental measurements. Equations have been developed, based on the Peng-Robinson-Stryjek-Vera (PRSV) equation of state, which represent the data with accuracy and consistency throughout the entire range of temperature, pressure, and density presented in these tables.

Physical Properties

Chemical Formula	CHF ₂ CF ₃ /CH ₃ CH ₂ CH ₃ /CHClF ₂ (60/2/38% by weight)	
Molecular Weight	101.55	
Boiling Point at One Atmosphere	-56.04°F	(-48.91°C)
Critical Temperature, T _c	167.89°F 627.56°R	(75.50°C) (348.65 K)
Critical Pressure, P _c	599.7 psia	(4134.7 kPa [abs])
Critical Density, D _c	33.82 lb/ft ³	(541.7 kg/m ³)
Critical Volume, V _c	0.0296 ft ³ /lb	(0.00185 m ³ /kg)

Units and Factors

t	= temperature in °F
T	= temperature in °R = °F + 459.67
p _f	= pressure of saturated liquid (bubble point) in psia
p _g	= pressure of saturated vapor (dew point) in psia
v _f	= volume of saturated liquid in ft ³ /lb
v _g	= volume of saturated vapor in ft ³ /lb
\bar{V}	= volume of superheated vapor in ft ³ /lb
d _f	= 1/v _f = density of saturated liquid in lb/ft ³
d _g	= 1/v _g = density of saturated vapor in lb/ft ³
h _f	= enthalpy of saturated liquid in Btu/lb
h _{fg}	= enthalpy of vaporization in Btu/lb
h _g	= enthalpy of saturated vapor in Btu/lb
H	= enthalpy of superheated vapor in Btu/lb
s _f	= entropy of saturated liquid in Btu/(lb) (°R)
s _g	= entropy of saturated vapor in Btu/(lb) (°R)
S	= entropy of superheated vapor in Btu/(lb) (°R)
C _p	= heat capacity at constant pressure in Btu/(lb) (°F)
C _v	= heat capacity at constant volume in Btu/(lb) (°F)
The gas constant, R	= 10.732 (psia) (ft ³)/(lb-mole) (°R) for Suva® HP80, R = 0.1057 (psia) (ft ³)/(lb) (°R)
Conversion factor from Work Units to Heat Units:	
J	= 0.185053
Btu/lb	= [(psia) (ft ³)/lb] ∞ J
One atmosphere	= 14.696 psia

Reference point for enthalpy and entropy:

$$h_f = 0.0 \text{ Btu/lb at } -40^\circ\text{F}$$

$$s_f = 0.0 \text{ Btu/(lb) (}^\circ\text{R) at } -40^\circ\text{F}$$

Equations

The Peng-Robinson-Stryjek-Vera (PRSV) equation of state was used to calculate the tables of thermodynamic properties. It was chosen as the preferred equation of state because it provided an accurate fit of the thermodynamic data over the entire range of temperatures and pressures presented in these tables.

The constants for the PRSV equation of state were calculated in SI units. For conversion of thermodynamic properties to Engineering (I/P) units, conversion factors are provided for each property derived from the PRSV equation of state.

1. Equation of State (PRSV)

$$P = RT/(V-b) - a/(V^2 + 2bV - b^2)$$

where P is in kPa, T is in K, V is in m³/mole, and R = 0.008314 kJ/(mole) (K). The constants a and b are calculated as follows:

$$a = \sum_{i=1}^3 \sum_{j=1}^3 x_i x_j a_{ij} \quad b = \sum_{i=1}^3 x_i b_i$$

where

$$a_{ij} = (a_i a_j)^{0.5} (1 - k_{ij}) \quad b_i = 0.077796 RT_{c_i}/P_{c_i}$$

x_i = mole fraction of component i

x_j = mole fraction of component j

$$a_i = (0.457235 R^2 T_{c_i}^2/P_{c_i}) \alpha_i$$

$$a_j = (0.457235 R^2 T_{c_j}^2/P_{c_j}) \alpha_j$$

k_{ij} = binary interaction parameter for components i and j

$$\alpha_i = [1 + \kappa_i (1 - T_r^{0.5})]^2$$

$$\kappa_i = \kappa_{0i} + \kappa_{1i} [(1 + T_r^{0.5}) (0.7 - T_r)]$$

(Note: $\kappa_i = \kappa_{0i}$ for $T_r > 0.7$)

$$\kappa_{0i} = 0.378893 + 1.4897153\omega_i - 0.17131848\omega_i^2 + 0.019655\omega_i^3$$

κ_{1i} = adjustable parameter for component i

$$T_{r_i} = T_i/T_{c_i} \text{ for component } i$$

Values for R , T_{c_i} , P_{c_i} , ω_i , κ_{1_i} , x_i , and k_{ij} are needed to calculate constants a and b . $R = 0.008314$ kJ/(mole) (K). The remaining constants for Suva® HP80 are summarized below:

Component	T_{c_i}	P_{c_i}	ω_i	κ_{1_i}	x_i
HFC-125 (i = 1)	339.19	3595.0	0.3010	0.0390	0.50766
HC-290 (i = 2)	369.90	4257.0	0.1520	0.0320	0.04606
HCFC-22 (i = 3)	369.16	4977.0	0.2214	0.0360	0.44628

The binary interaction parameters, k_{ij} , for Suva® 80 are:

$k_{11} = 0.0000$	$k_{12} = 0.1478$	$k_{13} = 0.0158$
$k_{21} = 0.1478$	$k_{22} = 0.0000$	$k_{23} = 0.0839$
$k_{31} = 0.0158$	$k_{32} = 0.0839$	$k_{33} = 0.0000$

Ideal Gas Heat Capacity Equation (at constant pressure):

$$C_p^{\circ}(\text{mixture}) = \sum_{i=1}^3 x_i C_{p_i}^{\circ}$$

$$C_{p_i}^{\circ} = 4.184 (A_i + B_i T + C_i T^2 + D_i T^3 + E_i T^4 + F_i T^5)$$

where C_p° and $C_{p_i}^{\circ}$ are in J/(mole) (K) and T is in K. x_i is the mole fraction of component i in the mixture (use same values listed in PRSV constants for Suva® HP80).

A_i , B_i , C_i , D_i , E_i , and F_i are constants:

$A_1 = 1.170140$ E+01	$B_1 = 0.216411$ E-01
$A_2 = -1.009000$ E+00	$B_2 = 0.731500$ E-01
$A_3 = 6.164370$ E+00	$B_3 = 0.173407$ E-01
$C_1 = 0.868526$ E-04	$D_1 = -0.112776$ E-06
$C_2 = -0.378900$ E-04	$D_2 = 0.767800$ E-08
$C_3 = 0.557618$ E-04	$D_3 = -0.140596$ E-06
$E_1 = 0.000000$ E+00	$F_1 = 0.000000$ E+00
$E_2 = 0.000000$ E+00	$F_2 = 0.000000$ E+00
$E_3 = 0.120557$ E-09	$F_3 = -0.368814$ E-13

Properties calculated in SI units from the equations and constants listed above can be converted to I/P units using the conversion factors shown below. Please note that in converting enthalpy and entropy from SI to I/P units, a change in reference states must be included (from $H = 200$ and $S = 1$ at 0°C for SI units to $H = 0$ and $S = 0$ at -40°F for I/P units). In the conversion equations below, $H(\text{ref})$ and $S(\text{ref})$ are the saturated liquid enthalpy and entropy at -40°C . For Suva® HP80: $H(\text{ref}) = 150.8$ kJ/kg and $S(\text{ref}) = 0.8070$ kJ/kg · K.

Conversion Factors (SI units to I/P units):

P (psia)	$= P$ (kPa) · 0.14504
T ($^{\circ}\text{F}$)	$= (T[^{\circ}\text{C}] \cdot 1.8) + 32$
D (lb/ft ³)	$= D$ (kg/m ³) · 0.062428
V (ft ³ /lb)	$= V$ (m ³ /kg) · 16.018
H (Btu/lb)	$= [H$ (kJ/kg) $- H(\text{ref})] \cdot 0.43021$
S (Btu/lb · $^{\circ}\text{R}$)	$= [S$ (kJ/kg · K) $- S(\text{ref})] \cdot 0.23901$
C_p (Btu/lb · $^{\circ}\text{F}$)	$= C_p$ (kJ/kg · K) · 0.23901
C_v (Btu/lb · $^{\circ}\text{F}$)	$= C_v$ (kJ/kg · K) · 0.23901

2. Vapor Pressure

$$\log_n P = A + B/T + C \log_n T + D T^2$$

For SI units

T is in K and P is in kPa (abs)

A , B , C and D are constants.

Constants for vapor pressure of saturated liquid (bubble point), p_f :

$$A = 5.10069 \text{ E}+01 \quad C = -5.84437 \text{ E}+00$$

$$B = -3.43829 \text{ E}+03 \quad D = 1.15066 \text{ E}-05$$

Constants for vapor pressure of saturated vapor (dew point), p_g :

$$A = 6.84431 \text{ E}+01 \quad C = -8.62823 \text{ E}+00$$

$$B = -4.04659 \text{ E}+03 \quad D = 1.64590 \text{ E}-05$$

For I/P units

T is in $^{\circ}\text{R}$ and P is in psia

A , B , C and D are constants.

Constants for vapor pressure of saturated liquid (bubble point), p_f :

$$A = 5.25076 \text{ E}+01 \quad C = -5.84437 \text{ E}+00$$

$$B = -6.18779 \text{ E}+03 \quad D = 0.35578 \text{ E}-05$$

Constants for vapor pressure of saturated vapor (dew point), p_g :

$$A = 7.15846 \text{ E}+01 \quad C = -8.62823 \text{ E}+00$$

$$B = -7.28408 \text{ E}+03 \quad D = 0.50786 \text{ E}-05$$

3. Density of the Saturated Liquid

$$d_f/D_c = a_0 + a_1 z + a_2 z^2 + a_3 z^3 + a_4 z^4$$

$$\text{where } z = (1 - T/T_c)^{1/3} - t_0$$

Because both density and temperature appear in the reduced form in the equation, the same constants can be used for either SI or I/P units.

d_f and D_c are in kg/m^3 in SI units and lb/ft^3 in I/P units; T and T_c are in K in SI units and $^\circ\text{R}$ in I/P units; $a_0, a_1, a_2, a_3, a_4,$ and t_0 are constants:

$$a_0 = 2.256102 \quad a_3 = -1.975586$$

$$a_1 = 2.805985 \quad a_4 = -5.888184$$

$$a_2 = 1.878483 \quad t_0 = 0.5735863$$

Table 1
Suva® HP80 Saturation Properties—Temperature Table

TEMP. °F	PRESSURE psia		VOLUME ft ³ /lb		DENSITY lb/ft ³		ENTHALPY Btu/lb			ENTROPY Btu/(lb)(°R)		TEMP. °F
	LIQUID p _f	VAPOR p _g	LIQUID v _f	VAPOR v _g	LIQUID 1/v _f	VAPOR 1/v _g	LIQUID h _f	LATENT h _{fg}	VAPOR h _g	LIQUID s _f	VAPOR s _g	
-150	0.53	0.39	0.0099	82.6446	101.02	0.0121	-28.0	94.0	66.0	-0.0769	0.2284	-150
-149	0.56	0.41	0.0099	78.7402	100.92	0.0127	-27.7	93.9	66.2	-0.0761	0.2278	-149
-148	0.58	0.44	0.0099	75.1880	100.82	0.0133	-27.5	93.8	66.3	-0.0754	0.2273	-148
-147	0.61	0.46	0.0099	71.9424	100.72	0.0139	-27.2	93.7	66.4	-0.0746	0.2267	-147
-146	0.64	0.48	0.0099	68.4932	100.62	0.0146	-27.0	93.6	66.6	-0.0738	0.2262	-146
-145	0.67	0.51	0.0099	65.3595	100.52	0.0153	-26.8	93.5	66.7	-0.0731	0.2257	-145
-144	0.70	0.53	0.0100	62.5000	100.42	0.0160	-26.5	93.4	66.9	-0.0723	0.2251	-144
-143	0.73	0.56	0.0100	59.8802	100.32	0.0167	-26.3	93.3	67.0	-0.0715	0.2246	-143
-142	0.77	0.59	0.0100	57.1429	100.22	0.0175	-26.0	93.2	67.1	-0.0708	0.2241	-142
-141	0.80	0.61	0.0100	54.6448	100.12	0.0183	-25.8	93.1	67.3	-0.0700	0.2236	-141
-140	0.84	0.64	0.0100	52.3560	100.02	0.0191	-25.6	93.0	67.4	-0.0693	0.2231	-140
-139	0.87	0.68	0.0100	50.0000	99.91	0.0200	-25.3	92.9	67.5	-0.0685	0.2226	-139
-138	0.91	0.71	0.0100	47.8469	99.81	0.0209	-25.1	92.8	67.7	-0.0678	0.2221	-138
-137	0.95	0.74	0.0100	45.8716	99.71	0.0218	-24.8	92.6	67.8	-0.0670	0.2216	-137
-136	0.99	0.78	0.0100	43.8596	99.61	0.0228	-24.6	92.5	67.9	-0.0663	0.2212	-136
-135	1.04	0.81	0.0101	42.0168	99.51	0.0238	-24.4	92.4	68.1	-0.0655	0.2207	-135
-134	1.08	0.85	0.0101	40.3226	99.40	0.0248	-24.1	92.3	68.2	-0.0648	0.2202	-134
-133	1.13	0.89	0.0101	38.6100	99.30	0.0259	-23.9	92.2	68.4	-0.0640	0.2198	-133
-132	1.18	0.93	0.0101	37.0370	99.20	0.0270	-23.6	92.1	68.5	-0.0633	0.2193	-132
-131	1.23	0.97	0.0101	35.5872	99.10	0.0281	-23.4	92.0	68.6	-0.0625	0.2189	-131
-130	1.28	1.02	0.0101	34.1297	98.99	0.0293	-23.1	91.9	68.8	-0.0618	0.2184	-130
-129	1.33	1.06	0.0101	32.7869	98.89	0.0305	-22.9	91.8	68.9	-0.0611	0.2180	-129
-128	1.39	1.11	0.0101	31.4465	98.78	0.0318	-22.6	91.7	69.1	-0.0603	0.2176	-128
-127	1.44	1.16	0.0101	30.2115	98.68	0.0331	-22.4	91.6	69.2	-0.0596	0.2171	-127
-126	1.50	1.21	0.0101	28.9855	98.58	0.0345	-22.2	91.5	69.3	-0.0589	0.2167	-126
-125	1.57	1.26	0.0102	27.8552	98.47	0.0359	-21.9	91.4	69.5	-0.0581	0.2163	-125
-124	1.63	1.32	0.0102	26.8097	98.37	0.0373	-21.7	91.3	69.6	-0.0574	0.2159	-124
-123	1.69	1.37	0.0102	25.7732	98.26	0.0388	-21.4	91.2	69.7	-0.0567	0.2155	-123
-122	1.76	1.43	0.0102	24.7525	98.16	0.0404	-21.2	91.1	69.9	-0.0559	0.2151	-122
-121	1.83	1.49	0.0102	23.8095	98.05	0.0420	-20.9	91.0	70.0	-0.0552	0.2147	-121
-120	1.90	1.56	0.0102	22.9358	97.95	0.0436	-20.7	90.8	70.2	-0.0545	0.2143	-120
-119	1.98	1.62	0.0102	22.0751	97.84	0.0453	-20.4	90.7	70.3	-0.0538	0.2139	-119
-118	2.05	1.69	0.0102	21.2766	97.73	0.0470	-20.2	90.6	70.4	-0.0530	0.2135	-118
-117	2.13	1.76	0.0102	20.4918	97.63	0.0488	-19.9	90.5	70.6	-0.0523	0.2131	-117
-116	2.22	1.83	0.0103	19.7239	97.52	0.0507	-19.7	90.4	70.7	-0.0516	0.2128	-116
-115	2.30	1.90	0.0103	19.0114	97.41	0.0526	-19.5	90.3	70.9	-0.0509	0.2124	-115
-114	2.39	1.98	0.0103	18.3150	97.31	0.0546	-19.2	90.2	71.0	-0.0502	0.2120	-114
-113	2.48	2.06	0.0103	17.6678	97.20	0.0566	-19.0	90.1	71.1	-0.0495	0.2117	-113
-112	2.57	2.14	0.0103	17.0358	97.09	0.0587	-18.7	90.0	71.3	-0.0487	0.2113	-112
-111	2.67	2.23	0.0103	16.4204	96.98	0.0609	-18.5	89.9	71.4	-0.0480	0.2110	-111
-110	2.76	2.31	0.0103	15.8479	96.88	0.0631	-18.2	89.8	71.6	-0.0473	0.2106	-110
-109	2.87	2.41	0.0103	15.2905	96.77	0.0654	-18.0	89.7	71.7	-0.0466	0.2103	-109
-108	2.97	2.50	0.0103	14.7493	96.66	0.0678	-17.7	89.5	71.8	-0.0459	0.2099	-108
-107	3.08	2.59	0.0104	14.2450	96.55	0.0702	-17.5	89.4	72.0	-0.0452	0.2096	-107
-106	3.19	2.69	0.0104	13.7552	96.44	0.0727	-17.2	89.3	72.1	-0.0445	0.2093	-106
-105	3.30	2.80	0.0104	13.2802	96.33	0.0753	-17.0	89.2	72.3	-0.0438	0.2089	-105
-104	3.42	2.90	0.0104	12.8370	96.22	0.0779	-16.7	89.1	72.4	-0.0431	0.2086	-104
-103	3.54	3.01	0.0104	12.4069	96.11	0.0806	-16.5	89.0	72.5	-0.0424	0.2083	-103
-102	3.67	3.12	0.0104	11.9904	96.00	0.0834	-16.2	88.9	72.7	-0.0417	0.2080	-102
-101	3.80	3.24	0.0104	11.5875	95.89	0.0863	-16.0	88.8	72.8	-0.0410	0.2077	-101
-100	3.93	3.36	0.0104	11.2108	95.78	0.0892	-15.7	88.7	73.0	-0.0403	0.2074	-100
-99	4.06	3.48	0.0105	10.8460	95.67	0.0922	-15.5	88.5	73.1	-0.0396	0.2071	-99
-98	4.20	3.60	0.0105	10.4932	95.56	0.0953	-15.2	88.4	73.2	-0.0389	0.2068	-98
-97	4.35	3.73	0.0105	10.1523	95.45	0.0985	-15.0	88.3	73.4	-0.0382	0.2065	-97
-96	4.49	3.87	0.0105	9.8232	95.34	0.1018	-14.7	88.2	73.5	-0.0375	0.2062	-96
-95	4.64	4.00	0.0105	9.5057	95.23	0.1052	-14.4	88.1	73.7	-0.0368	0.2059	-95
-94	4.80	4.15	0.0105	9.2081	95.12	0.1086	-14.2	88.0	73.8	-0.0361	0.2056	-94
-93	4.96	4.29	0.0105	8.9206	95.01	0.1121	-13.9	87.9	73.9	-0.0354	0.2053	-93
-92	5.12	4.44	0.0105	8.6356	94.89	0.1158	-13.7	87.8	74.1	-0.0347	0.2050	-92
-91	5.29	4.59	0.0106	8.3682	94.78	0.1195	-13.4	87.6	74.2	-0.0340	0.2048	-91

Table 1 (continued)
Suva® HP80 Saturation Properties—Temperature Table

TEMP. °F	PRESSURE psia		VOLUME ft ³ /lb		DENSITY lb/ft ³		ENTHALPY Btu/lb			ENTROPY Btu/(lb)(°R)		TEMP. °F
	LIQUID P _f	VAPOR P _g	LIQUID v _f	VAPOR v _g	LIQUID 1/v _f	VAPOR 1/v _g	LIQUID h _f	LATENT h _{fg}	VAPOR h _g	LIQUID s _f	VAPOR s _g	
-90	5.47	4.75	0.0106	8.1103	94.67	0.1233	-13.2	87.5	74.4	-0.0333	0.2045	-90
-89	5.64	4.91	0.0106	7.8616	94.55	0.1272	-12.9	87.4	74.5	-0.0326	0.2042	-89
-88	5.82	5.08	0.0106	7.6161	94.44	0.1313	-12.7	87.3	74.6	-0.0319	0.2039	-88
-87	6.01	5.25	0.0106	7.3855	94.33	0.1354	-12.4	87.2	74.8	-0.0313	0.2037	-87
-86	6.20	5.43	0.0106	7.1633	94.21	0.1396	-12.2	87.1	74.9	-0.0306	0.2034	-86
-85	6.40	5.61	0.0106	6.9493	94.10	0.1439	-11.9	87.0	75.1	-0.0299	0.2032	-85
-84	6.60	5.79	0.0106	6.7431	93.99	0.1483	-11.6	86.8	75.2	-0.0292	0.2029	-84
-83	6.81	5.99	0.0107	6.5402	93.87	0.1529	-11.4	86.7	75.3	-0.0285	0.2027	-83
-82	7.02	6.18	0.0107	6.3492	93.76	0.1575	-11.1	86.6	75.5	-0.0278	0.2024	-82
-81	7.24	6.38	0.0107	6.1614	93.64	0.1623	-10.9	86.5	75.6	-0.0272	0.2022	-81
-80	7.46	6.59	0.0107	5.9844	93.53	0.1671	-10.6	86.4	75.8	-0.0265	0.2019	-80
-79	7.69	6.80	0.0107	5.8106	93.41	0.1721	-10.4	86.3	75.9	-0.0258	0.2017	-79
-78	7.92	7.02	0.0107	5.6433	93.30	0.1772	-10.1	86.1	76.0	-0.0251	0.2015	-78
-77	8.16	7.24	0.0107	5.4825	93.18	0.1824	-9.8	86.0	76.2	-0.0245	0.2012	-77
-76	8.41	7.47	0.0107	5.3248	93.06	0.1878	-9.6	85.9	76.3	-0.0238	0.2010	-76
-75	8.66	7.70	0.0108	5.1733	92.95	0.1933	-9.3	85.8	76.5	-0.0231	0.2008	-75
-74	8.92	7.94	0.0108	5.0302	92.83	0.1988	-9.1	85.7	76.6	-0.0224	0.2006	-74
-73	9.18	8.18	0.0108	4.8876	92.71	0.2046	-8.8	85.5	76.7	-0.0218	0.2003	-73
-72	9.45	8.43	0.0108	4.7529	92.60	0.2104	-8.5	85.4	76.9	-0.0211	0.2001	-72
-71	9.73	8.69	0.0108	4.6211	92.48	0.2164	-8.3	85.3	77.0	-0.0204	0.1999	-71
-70	10.01	8.96	0.0108	4.4944	92.36	0.2225	-8.0	85.2	77.2	-0.0197	0.1997	-70
-69	10.30	9.23	0.0108	4.3725	92.24	0.2287	-7.8	85.1	77.3	-0.0191	0.1995	-69
-68	10.60	9.50	0.0109	4.2535	92.13	0.2351	-7.5	84.9	77.4	-0.0184	0.1993	-68
-67	10.90	9.79	0.0109	4.1374	92.01	0.2417	-7.2	84.8	77.6	-0.0177	0.1991	-67
-66	11.21	10.08	0.0109	4.0274	91.89	0.2483	-7.0	84.7	77.7	-0.0171	0.1989	-66
-65	11.53	10.37	0.0109	3.9200	91.77	0.2551	-6.7	84.6	77.9	-0.0164	0.1987	-65
-64	11.85	10.68	0.0109	3.8153	91.65	0.2621	-6.4	84.4	78.0	-0.0157	0.1985	-64
-63	12.18	10.99	0.0109	3.7147	91.53	0.2692	-6.2	84.3	78.1	-0.0151	0.1983	-63
-62	12.52	11.30	0.0109	3.6179	91.41	0.2764	-5.9	84.2	78.3	-0.0144	0.1981	-62
-61	12.86	11.63	0.0110	3.5224	91.29	0.2839	-5.6	84.1	78.4	-0.0138	0.1979	-61
-60	13.22	11.96	0.0110	3.4317	91.17	0.2914	-5.4	83.9	78.6	-0.0131	0.1977	-60
-59	13.58	12.30	0.0110	3.3434	91.05	0.2991	-5.1	83.8	78.7	-0.0124	0.1975	-59
-58	13.95	12.65	0.0110	3.2573	90.93	0.3070	-4.8	83.7	78.8	-0.0118	0.1974	-58
-57	14.32	13.00	0.0110	3.1736	90.81	0.3151	-4.6	83.6	79.0	-0.0111	0.1972	-57
-56	14.71	13.37	0.0110	3.0931	90.69	0.3233	-4.3	83.4	79.1	-0.0104	0.1970	-56
-55	15.10	13.74	0.0110	3.0148	90.57	0.3317	-4.0	83.3	79.3	-0.0098	0.1968	-55
-54	15.50	14.12	0.0111	2.9394	90.44	0.3402	-3.8	83.2	79.4	-0.0091	0.1967	-54
-53	15.91	14.50	0.0111	2.8662	90.32	0.3489	-3.5	83.1	79.5	-0.0085	0.1965	-53
-52	16.33	14.90	0.0111	2.7949	90.20	0.3578	-3.2	82.9	79.7	-0.0078	0.1963	-52
-51	16.75	15.30	0.0111	2.7255	90.08	0.3669	-3.0	82.8	79.8	-0.0072	0.1962	-51
-50	17.19	15.72	0.0111	2.6582	89.95	0.3762	-2.7	82.7	80.0	-0.0065	0.1960	-50
-49	17.63	16.14	0.0111	2.5934	89.83	0.3856	-2.4	82.5	80.1	-0.0059	0.1958	-49
-48	18.09	16.57	0.0111	2.5304	89.71	0.3952	-2.2	82.4	80.2	-0.0052	0.1957	-48
-47	18.55	17.01	0.0112	2.4691	89.58	0.4050	-1.9	82.3	80.4	-0.0046	0.1955	-47
-46	19.02	17.46	0.0112	2.4096	89.46	0.4150	-1.6	82.1	80.5	-0.0039	0.1954	-46
-45	19.50	17.91	0.0112	2.3518	89.34	0.4252	-1.4	82.0	80.6	-0.0032	0.1952	-45
-44	19.99	18.38	0.0112	2.2957	89.21	0.4356	-1.1	81.9	80.8	-0.0026	0.1951	-44
-43	20.49	18.86	0.0112	2.2411	89.09	0.4462	-0.8	81.7	80.9	-0.0019	0.1949	-43
-42	21.00	19.34	0.0112	2.1887	88.96	0.4569	-0.5	81.6	81.1	-0.0013	0.1948	-42
-41	21.52	19.84	0.0113	2.1372	88.84	0.4679	-0.3	81.5	81.2	-0.0006	0.1946	-41
-40	22.05	20.34	0.0113	2.0872	88.71	0.4791	0.0	81.3	81.3	0.0000	0.1945	-40
-39	22.59	20.86	0.0113	2.0387	88.59	0.4905	0.3	81.2	81.5	0.0007	0.1943	-39
-38	23.14	21.39	0.0113	1.9916	88.46	0.5021	0.5	81.1	81.6	0.0013	0.1942	-38
-37	23.70	21.92	0.0113	1.9455	88.33	0.5140	0.8	80.9	81.7	0.0019	0.1940	-37
-36	24.28	22.47	0.0113	1.9011	88.21	0.5260	1.1	80.8	81.9	0.0026	0.1939	-36
-35	24.86	23.03	0.0114	1.8577	88.08	0.5383	1.4	80.7	82.0	0.0032	0.1938	-35
-34	25.45	23.59	0.0114	1.8155	87.95	0.5508	1.6	80.5	82.2	0.0039	0.1936	-34
-33	26.06	24.17	0.0114	1.7746	87.82	0.5635	1.9	80.4	82.3	0.0045	0.1935	-33
-32	26.67	24.76	0.0114	1.7349	87.70	0.5764	2.6	79.9	82.4	0.0060	0.1934	-32
-31	27.29	25.36	0.0114	1.6961	87.57	0.5896	2.8	79.7	82.6	0.0066	0.1933	-31

Table 1 (continued)
Suva® HP80 Saturation Properties—Temperature Table

TEMP. °F	PRESSURE psia		VOLUME ft ³ /lb		DENSITY lb/ft ³		ENTHALPY Btu/lb			ENTROPY Btu/(lb)(°R)		TEMP. °F
	LIQUID P _f	VAPOR P _g	LIQUID v _f	VAPOR v _g	LIQUID 1/v _f	VAPOR 1/v _g	LIQUID h _f	LATENT h _{fg}	VAPOR h _g	LIQUID s _f	VAPOR s _g	
-30	27.93	25.97	0.0114	1.6586	87.44	0.6029	3.1	79.6	82.7	0.0073	0.1931	-30
-29	28.57	26.59	0.0115	1.6221	87.31	0.6165	3.4	79.5	82.8	0.0079	0.1930	-29
-28	29.23	27.23	0.0115	1.5865	87.18	0.6303	3.6	79.3	83.0	0.0085	0.1929	-28
-27	29.90	27.87	0.0115	1.5518	87.05	0.6444	3.9	79.2	83.1	0.0092	0.1928	-27
-26	30.58	28.53	0.0115	1.5181	86.93	0.6587	4.2	79.1	83.2	0.0098	0.1926	-26
-25	31.28	29.19	0.0115	1.4852	86.80	0.6733	4.5	78.9	83.4	0.0104	0.1925	-25
-24	31.98	29.87	0.0115	1.4531	86.67	0.6882	4.7	78.8	83.5	0.0110	0.1924	-24
-23	32.70	30.57	0.0116	1.4221	86.54	0.7032	5.0	78.6	83.6	0.0117	0.1923	-23
-22	33.43	31.27	0.0116	1.3916	86.41	0.7186	5.3	78.5	83.8	0.0123	0.1922	-22
-21	34.17	31.99	0.0116	1.3620	86.27	0.7342	5.6	78.4	83.9	0.0129	0.1921	-21
-20	34.93	32.72	0.0116	1.3332	86.14	0.7501	5.8	78.2	84.0	0.0135	0.1920	-20
-19	35.70	33.46	0.0116	1.3051	86.01	0.7662	6.1	78.1	84.2	0.0142	0.1918	-19
-18	36.48	34.22	0.0116	1.2778	85.88	0.7826	6.4	77.9	84.3	0.0148	0.1917	-18
-17	37.28	34.99	0.0117	1.2511	85.75	0.7993	6.7	77.8	84.4	0.0154	0.1916	-17
-16	38.08	35.77	0.0117	1.2250	85.62	0.8163	7.0	77.6	84.6	0.0160	0.1915	-16
-15	38.91	36.56	0.0117	1.1998	85.48	0.8335	7.2	77.5	84.7	0.0167	0.1914	-15
-14	39.74	37.37	0.0117	1.1750	85.35	0.8511	7.5	77.3	84.8	0.0173	0.1913	-14
-13	40.59	38.20	0.0117	1.1509	85.22	0.8689	7.8	77.2	85.0	0.0179	0.1912	-13
-12	41.45	39.03	0.0118	1.1273	85.09	0.8871	8.1	77.0	85.1	0.0185	0.1911	-12
-11	42.33	39.88	0.0118	1.1044	84.95	0.9055	8.4	76.9	85.2	0.0192	0.1910	-11
-10	43.22	40.75	0.0118	1.0820	84.82	0.9242	8.6	76.7	85.4	0.0198	0.1909	-10
-9	44.13	41.63	0.0118	1.0601	84.68	0.9433	8.9	76.6	85.5	0.0204	0.1908	-9
-8	45.05	42.52	0.0118	1.0389	84.55	0.9626	9.2	76.4	85.6	0.0210	0.1907	-8
-7	45.99	43.43	0.0118	1.0180	84.41	0.9823	9.5	76.3	85.8	0.0217	0.1906	-7
-6	46.94	44.35	0.0119	0.9977	84.28	1.0023	9.8	76.1	85.9	0.0223	0.1905	-6
-5	47.90	45.29	0.0119	0.9779	84.14	1.0226	10.0	76.0	86.0	0.0229	0.1904	-5
-4	48.88	46.24	0.0119	0.9586	84.01	1.0432	10.3	75.8	86.1	0.0235	0.1903	-4
-3	49.88	47.21	0.0119	0.9397	83.87	1.0642	10.6	75.7	86.3	0.0241	0.1903	-3
-2	50.89	48.20	0.0119	0.9212	83.74	1.0855	10.9	75.5	86.4	0.0248	0.1902	-2
-1	51.92	49.20	0.0120	0.9033	83.60	1.1071	11.2	75.3	86.5	0.0254	0.1901	-1
0	52.96	50.21	0.0120	0.8857	83.46	1.1291	11.5	75.2	86.7	0.0260	0.1900	0
1	54.02	51.24	0.0120	0.8685	83.33	1.1514	11.8	75.0	86.8	0.0266	0.1899	1
2	55.09	52.29	0.0120	0.8517	83.19	1.1741	12.1	74.9	86.9	0.0272	0.1898	2
3	56.18	53.36	0.0120	0.8353	83.05	1.1972	12.3	74.7	87.0	0.0279	0.1897	3
4	57.29	54.44	0.0121	0.8193	82.91	1.2206	12.6	74.5	87.2	0.0285	0.1896	4
5	58.42	55.53	0.0121	0.8037	82.78	1.2443	12.9	74.4	87.3	0.0291	0.1896	5
6	59.55	56.64	0.0121	0.7884	82.64	1.2684	13.5	74.0	87.4	0.0302	0.1895	6
7	60.71	57.77	0.0121	0.7735	82.50	1.2928	13.8	73.8	87.6	0.0309	0.1894	7
8	61.88	58.91	0.0121	0.7590	82.36	1.3176	14.1	73.6	87.7	0.0315	0.1893	8
9	63.07	60.07	0.0122	0.7447	82.22	1.3428	14.3	73.5	87.8	0.0321	0.1893	9
10	64.28	61.25	0.0122	0.7308	82.08	1.3683	14.6	73.3	87.9	0.0327	0.1892	10
11	65.50	62.45	0.0122	0.7172	81.94	1.3943	14.9	73.1	88.0	0.0333	0.1891	11
12	66.74	63.66	0.0122	0.7039	81.80	1.4206	15.2	73.0	88.2	0.0339	0.1890	12
13	68.00	64.89	0.0122	0.6909	81.66	1.4474	15.5	72.8	88.3	0.0346	0.1889	13
14	69.28	66.14	0.0123	0.6782	81.52	1.4745	15.8	72.6	88.4	0.0352	0.1889	14
15	70.57	67.41	0.0123	0.6657	81.38	1.5021	16.1	72.5	88.5	0.0358	0.1888	15
16	71.89	68.69	0.0123	0.6536	81.23	1.5301	16.4	72.3	88.7	0.0364	0.1887	16
17	73.22	70.00	0.0123	0.6416	81.09	1.5585	16.7	72.1	88.8	0.0370	0.1886	17
18	74.57	71.32	0.0124	0.6300	80.95	1.5874	17.0	71.9	88.9	0.0376	0.1886	18
19	75.94	72.66	0.0124	0.6186	80.81	1.6166	17.3	71.8	89.0	0.0382	0.1885	19
20	77.33	74.02	0.0124	0.6074	80.66	1.6464	17.6	71.6	89.1	0.0388	0.1884	20
21	78.74	75.40	0.0124	0.5965	80.52	1.6765	17.8	71.4	89.3	0.0394	0.1884	21
22	80.16	76.80	0.0124	0.5858	80.38	1.7072	18.1	71.2	89.4	0.0400	0.1883	22
23	81.61	78.22	0.0125	0.5753	80.23	1.7382	18.4	71.1	89.5	0.0406	0.1882	23
24	83.08	79.66	0.0125	0.5650	80.09	1.7698	18.7	70.9	89.6	0.0413	0.1881	24
25	84.57	81.12	0.0125	0.5550	79.94	1.8018	19.0	70.7	89.7	0.0419	0.1881	25
26	86.07	82.60	0.0125	0.5452	79.80	1.8343	19.3	70.5	89.9	0.0425	0.1880	26
27	87.60	84.09	0.0126	0.5355	79.65	1.8673	19.6	70.3	90.0	0.0431	0.1879	27
28	89.15	85.61	0.0126	0.5261	79.51	1.9008	19.9	70.1	90.1	0.0437	0.1879	28
29	90.72	87.15	0.0126	0.5168	79.36	1.9348	20.2	70.0	90.2	0.0443	0.1878	29

Table 1 (continued)
Suva® HP80 Saturation Properties—Temperature Table

TEMP. °F	PRESSURE psia		VOLUME ft ³ /lb		DENSITY lb/ft ³		ENTHALPY Btu/lb			ENTROPY Btu/(lb)(°R)		TEMP. °F
	LIQUID P _l	VAPOR P _g	LIQUID v _l	VAPOR v _g	LIQUID 1/v _l	VAPOR 1/v _g	LIQUID h _l	LATENT h _{fg}	VAPOR h _g	LIQUID s _l	VAPOR s _g	
30	92.31	88.72	0.0126	0.5078	79.22	1.9693	20.5	69.8	90.3	0.0449	0.1877	30
31	93.92	90.30	0.0126	0.4989	79.07	2.0043	20.8	69.6	90.4	0.0455	0.1877	31
32	95.55	91.90	0.0127	0.4902	78.92	2.0398	21.1	69.4	90.5	0.0461	0.1876	32
33	97.20	93.53	0.0127	0.4817	78.78	2.0758	21.5	69.2	90.7	0.0467	0.1875	33
34	98.88	95.17	0.0127	0.4734	78.63	2.1124	21.8	69.0	90.8	0.0474	0.1875	34
35	100.57	96.84	0.0127	0.4652	78.48	2.1495	22.1	68.8	90.9	0.0480	0.1874	35
36	102.29	98.53	0.0128	0.4572	78.33	2.1872	22.4	68.6	91.0	0.0486	0.1873	36
37	104.03	100.25	0.0128	0.4494	78.18	2.2254	22.7	68.4	91.1	0.0492	0.1873	37
38	105.79	101.98	0.0128	0.4417	78.03	2.2642	23.0	68.2	91.2	0.0498	0.1872	38
39	107.58	103.74	0.0128	0.4341	77.88	2.3036	23.3	68.0	91.3	0.0504	0.1871	39
40	109.39	105.52	0.0129	0.4267	77.73	2.3435	23.6	67.8	91.4	0.0510	0.1871	40
41	111.22	107.32	0.0129	0.4195	77.58	2.3840	23.9	67.6	91.5	0.0516	0.1870	41
42	113.07	109.15	0.0129	0.4123	77.43	2.4252	24.2	67.4	91.7	0.0522	0.1869	42
43	114.95	111.00	0.0129	0.4054	77.28	2.4669	24.5	67.2	91.8	0.0529	0.1869	43
44	116.85	112.87	0.0130	0.3985	77.13	2.5093	24.8	67.0	91.9	0.0535	0.1868	44
45	118.77	114.77	0.0130	0.3918	76.98	2.5522	25.2	66.8	92.0	0.0541	0.1868	45
46	120.72	116.69	0.0130	0.3852	76.83	2.5958	25.5	66.6	92.1	0.0547	0.1867	46
47	122.69	118.64	0.0130	0.3788	76.68	2.6401	25.8	66.4	92.2	0.0553	0.1866	47
48	124.69	120.61	0.0131	0.3724	76.53	2.6850	26.1	66.2	92.3	0.0559	0.1866	48
49	126.71	122.60	0.0131	0.3662	76.37	2.7306	26.4	66.0	92.4	0.0565	0.1865	49
50	128.75	124.62	0.0131	0.3601	76.22	2.7768	26.7	65.8	92.5	0.0572	0.1864	50
51	130.82	126.66	0.0131	0.3541	76.07	2.8237	27.1	65.5	92.6	0.0578	0.1864	51
52	132.92	128.73	0.0132	0.3483	75.91	2.8713	27.4	65.3	92.7	0.0584	0.1863	52
53	135.04	130.82	0.0132	0.3425	75.76	2.9197	27.7	65.1	92.8	0.0590	0.1862	53
54	137.18	132.94	0.0132	0.3368	75.60	2.9687	28.0	64.9	92.9	0.0596	0.1862	54
55	139.35	135.09	0.0133	0.3313	75.45	3.0184	28.3	64.7	93.0	0.0602	0.1861	55
56	141.55	137.26	0.0133	0.3258	75.29	3.0689	28.7	64.4	93.1	0.0608	0.1860	56
57	143.77	139.46	0.0133	0.3205	75.14	3.1202	29.0	64.2	93.2	0.0615	0.1860	57
58	146.02	141.68	0.0133	0.3152	74.98	3.1722	29.3	64.0	93.3	0.0621	0.1859	58
59	148.29	143.93	0.0134	0.3101	74.82	3.2249	29.6	63.7	93.4	0.0627	0.1858	59
60	150.59	146.21	0.0134	0.3050	74.67	3.2785	30.0	63.5	93.5	0.0633	0.1858	60
61	152.92	148.51	0.0134	0.3000	74.51	3.3328	30.3	63.3	93.6	0.0639	0.1857	61
62	155.28	150.84	0.0135	0.2952	74.35	3.3880	30.6	63.0	93.7	0.0646	0.1856	62
63	157.66	153.20	0.0135	0.2904	74.19	3.4440	31.0	62.8	93.8	0.0652	0.1856	63
64	160.07	155.58	0.0135	0.2856	74.03	3.5008	31.3	62.6	93.9	0.0658	0.1855	64
65	162.50	158.00	0.0135	0.2810	73.88	3.5585	31.6	62.3	93.9	0.0664	0.1854	65
66	164.97	160.44	0.0136	0.2765	73.72	3.6170	32.0	62.1	94.0	0.0670	0.1854	66
67	167.46	162.91	0.0136	0.2720	73.56	3.6764	32.3	61.8	94.1	0.0677	0.1853	67
68	169.98	165.40	0.0136	0.2676	73.40	3.7367	32.6	61.6	94.2	0.0683	0.1852	68
69	172.53	167.93	0.0137	0.2633	73.23	3.7979	33.0	61.3	94.3	0.0689	0.1852	69
70	175.10	170.49	0.0137	0.2591	73.07	3.8601	33.3	61.1	94.4	0.0695	0.1851	70
71	177.71	173.07	0.0137	0.2549	72.91	3.9231	33.6	60.8	94.5	0.0702	0.1850	71
72	180.35	175.68	0.0137	0.2508	72.75	3.9872	34.0	60.6	94.6	0.0708	0.1849	72
73	183.01	178.33	0.0138	0.2468	72.59	4.0522	34.3	60.3	94.6	0.0714	0.1849	73
74	185.70	181.00	0.0138	0.2428	72.43	4.1182	34.7	60.1	94.7	0.0721	0.1848	74
75	188.42	183.70	0.0138	0.2389	72.26	4.1852	35.0	59.8	94.8	0.0727	0.1847	75
76	191.18	186.43	0.0139	0.2351	72.10	4.2532	35.3	59.5	94.9	0.0733	0.1847	76
77	193.96	189.20	0.0139	0.2314	71.93	4.3223	35.7	59.3	95.0	0.0739	0.1846	77
78	196.77	191.99	0.0139	0.2277	71.77	4.3925	36.0	59.0	95.0	0.0746	0.1845	78
79	199.62	194.81	0.0140	0.2240	71.60	4.4637	36.4	58.7	95.1	0.0752	0.1844	79
80	202.49	197.67	0.0140	0.2205	71.44	4.5361	36.7	58.5	95.2	0.0758	0.1843	80
81	205.39	200.55	0.0140	0.2169	71.27	4.6095	37.1	58.2	95.3	0.0765	0.1843	81
82	208.33	203.47	0.0141	0.2135	71.11	4.6842	37.4	57.9	95.3	0.0771	0.1842	82
83	211.30	206.42	0.0141	0.2101	70.94	4.7600	37.8	57.6	95.4	0.0778	0.1841	83
84	214.29	209.40	0.0141	0.2067	70.77	4.8370	38.2	57.3	95.5	0.0784	0.1840	84
85	217.32	212.41	0.0142	0.2035	70.60	4.9152	38.5	57.0	95.6	0.0790	0.1839	85
86	220.39	215.46	0.0142	0.2002	70.44	4.9946	38.9	56.8	95.6	0.0797	0.1839	86
87	223.48	218.54	0.0142	0.1970	70.27	5.0753	39.2	56.5	95.7	0.0803	0.1838	87
88	226.61	221.65	0.0143	0.1939	70.10	5.1573	39.6	56.2	95.8	0.0810	0.1837	88
89	229.77	224.79	0.0143	0.1908	69.93	5.2407	39.9	55.9	95.8	0.0816	0.1836	89

Table 1 (continued)
Suva® HP80 Saturation Properties—Temperature Table

TEMP. °F	PRESSURE psia		VOLUME ft ³ /lb		DENSITY lb/ft ³		ENTHALPY Btu/lb			ENTROPY Btu/(lb)(°R)		TEMP. °F
	LIQUID P _f	VAPOR P _g	LIQUID v _f	VAPOR v _g	LIQUID 1/v _f	VAPOR 1/v _g	LIQUID h _f	LATENT h _{fg}	VAPOR h _g	LIQUID s _f	VAPOR s _g	
90	232.96	227.97	0.0143	0.1878	69.76	5.3253	40.3	55.6	95.9	0.0823	0.1835	90
91	236.18	231.18	0.0144	0.1848	69.59	5.4114	40.7	55.3	95.9	0.0829	0.1834	91
92	239.44	234.42	0.0144	0.1819	69.42	5.4988	41.0	55.0	96.0	0.0836	0.1833	92
93	242.73	237.70	0.0144	0.1790	69.24	5.5877	41.4	54.6	96.1	0.0842	0.1832	93
94	246.06	241.01	0.0145	0.1761	69.07	5.6781	41.8	54.3	96.1	0.0849	0.1832	94
95	249.41	244.36	0.0145	0.1733	68.90	5.7699	42.2	54.0	96.2	0.0855	0.1831	95
96	252.81	247.74	0.0146	0.1706	68.72	5.8633	42.5	53.7	96.2	0.0862	0.1830	96
97	256.23	251.16	0.0146	0.1678	68.55	5.9583	42.9	53.4	96.3	0.0868	0.1829	97
98	259.70	254.61	0.0146	0.1652	68.38	6.0548	43.3	53.1	96.3	0.0875	0.1828	98
99	263.19	258.10	0.0147	0.1625	68.20	6.1530	43.7	52.7	96.4	0.0881	0.1827	99
100	266.72	261.62	0.0147	0.1599	68.02	6.2529	44.0	52.4	96.4	0.0888	0.1826	100
101	270.29	265.18	0.0147	0.1574	67.85	6.3545	44.4	52.1	96.5	0.0895	0.1825	101
102	273.89	268.77	0.0148	0.1548	67.67	6.4579	44.8	51.7	96.5	0.0901	0.1823	102
103	277.53	272.40	0.0148	0.1524	67.49	6.5630	45.2	51.4	96.6	0.0908	0.1822	103
104	281.20	276.07	0.0149	0.1499	67.32	6.6700	45.6	51.0	96.6	0.0915	0.1821	104
105	284.91	279.77	0.0149	0.1475	67.14	6.7789	46.0	50.7	96.6	0.0921	0.1820	105
106	288.66	283.51	0.0149	0.1451	66.96	6.8898	46.4	50.3	96.7	0.0928	0.1819	106
107	292.44	287.29	0.0150	0.1428	66.78	7.0026	46.8	50.0	96.7	0.0935	0.1818	107
108	296.26	291.11	0.0150	0.1405	66.60	7.1175	47.2	49.6	96.7	0.0942	0.1817	108
109	300.12	294.96	0.0151	0.1382	66.41	7.2344	47.6	49.2	96.8	0.0949	0.1815	109
110	304.01	298.85	0.0151	0.1360	66.23	7.3536	48.0	48.9	96.8	0.0955	0.1814	110
111	307.94	302.78	0.0151	0.1338	66.05	7.4749	48.4	48.5	96.8	0.0962	0.1813	111
112	311.91	306.75	0.0152	0.1316	65.86	7.5985	48.8	48.1	96.9	0.0969	0.1812	112
113	315.92	310.76	0.0152	0.1295	65.68	7.7245	49.2	47.7	96.9	0.0976	0.1810	113
114	319.96	314.81	0.0153	0.1273	65.49	7.8529	49.6	47.3	96.9	0.0983	0.1809	114
115	324.05	318.89	0.0153	0.1253	65.31	7.9837	50.0	46.9	96.9	0.0990	0.1808	115
116	328.17	323.02	0.0154	0.1232	65.12	8.1171	50.4	46.5	96.9	0.0997	0.1806	116
117	332.33	327.19	0.0154	0.1212	64.93	8.2532	50.8	46.1	96.9	0.1004	0.1805	117
118	336.53	331.39	0.0154	0.1192	64.74	8.3919	51.2	45.7	96.9	0.1011	0.1803	118
119	340.77	335.64	0.0155	0.1172	64.55	8.5335	51.7	45.3	97.0	0.1018	0.1802	119
120	345.05	339.93	0.0155	0.1152	64.36	8.6779	52.1	44.9	97.0	0.1025	0.1800	120
121	349.37	344.26	0.0156	0.1133	64.17	8.8253	52.5	44.4	97.0	0.1033	0.1799	121
122	353.73	348.63	0.0156	0.1114	63.98	8.9758	53.0	44.0	97.0	0.1040	0.1797	122
123	358.13	353.04	0.0157	0.1095	63.79	9.1295	53.4	43.6	97.0	0.1047	0.1796	123
124	362.57	357.49	0.0157	0.1077	63.59	9.2865	53.8	43.1	96.9	0.1054	0.1794	124
125	367.05	361.99	0.0158	0.1059	63.40	9.4470	54.3	42.7	96.9	0.1062	0.1792	125
126	371.57	366.52	0.0158	0.1040	63.20	9.6109	54.7	42.2	96.9	0.1069	0.1790	126
127	376.14	371.10	0.0159	0.1023	63.00	9.7786	55.2	41.7	96.9	0.1076	0.1789	127
128	380.74	375.73	0.0159	0.1005	62.80	9.9500	55.6	41.2	96.9	0.1084	0.1787	128
129	385.39	380.40	0.0160	0.0988	62.60	10.1254	56.1	40.8	96.8	0.1091	0.1785	129
130	390.07	385.11	0.0160	0.0970	62.40	10.3050	56.5	40.3	96.8	0.1099	0.1783	130
131	394.81	389.86	0.0161	0.0953	62.20	10.4888	57.0	39.8	96.8	0.1107	0.1781	131
132	399.58	394.66	0.0161	0.0937	61.99	10.6771	57.5	39.3	96.7	0.1114	0.1779	132
133	404.39	399.50	0.0162	0.0920	61.79	10.8701	58.0	38.7	96.7	0.1122	0.1777	133
134	409.25	404.39	0.0162	0.0904	61.58	11.0680	58.4	38.2	96.7	0.1130	0.1774	134
135	414.15	409.32	0.0163	0.0887	61.37	11.2709	58.9	37.7	96.6	0.1138	0.1772	135
136	419.10	414.30	0.0164	0.0871	61.16	11.4792	59.4	37.1	96.5	0.1146	0.1770	136
137	424.09	419.33	0.0164	0.0855	60.95	11.6931	59.9	36.6	96.5	0.1154	0.1767	137
138	429.12	424.40	0.0165	0.0839	60.73	11.9129	60.4	36.0	96.4	0.1162	0.1765	138
139	434.20	429.51	0.0165	0.0824	60.51	12.1389	60.9	35.4	96.3	0.1170	0.1762	139
140	439.32	434.68	0.0166	0.0808	60.29	12.3713	61.4	34.8	96.3	0.1178	0.1760	140
141	444.48	439.89	0.0166	0.0793	60.07	12.6107	61.9	34.2	96.2	0.1186	0.1757	141
142	449.69	445.15	0.0167	0.0778	59.85	12.8573	62.5	33.6	96.1	0.1195	0.1754	142
143	454.95	450.45	0.0168	0.0763	59.62	13.1117	63.0	33.0	96.0	0.1203	0.1751	143
144	460.25	455.81	0.0168	0.0748	59.39	13.3742	63.5	32.3	95.9	0.1212	0.1748	144
145	465.59	461.21	0.0169	0.0733	59.16	13.6455	64.1	31.7	95.8	0.1221	0.1745	145
146	470.98	466.66	0.0170	0.0718	58.92	13.9261	64.6	31.0	95.6	0.1230	0.1742	146
147	476.42	472.17	0.0170	0.0703	58.68	14.2166	65.2	30.3	95.5	0.1239	0.1739	147
148	481.90	477.72	0.0171	0.0689	58.44	14.5179	65.8	29.6	95.4	0.1248	0.1735	148
149	487.43	483.32	0.0172	0.0674	58.19	14.8307	66.4	28.8	95.2	0.1257	0.1731	149

Table 2
Suva® HP80 Superheated Vapor—Constant Pressure Tables

V = Volume in ft³/lb H = Enthalpy in Btu/lb S = Entropy in Btu/(lb) (°R) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, psia													
TEMP. °F	1.00			2.00			3.00			4.00			TEMP. °F
	(-130.39°F)			(-113.76°F)			(-103.09°F)			(-95.03°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(34.6635)	(68.7)	(0.2186)	(18.1531)	(71.0)	(0.2119)	(12.4424)	(72.5)	(0.2083)	(9.5190)	(73.7)	(0.2059)	
-100	37.8921	73.1	0.2313	18.8877	73.0	0.2176	12.5527	73.0	0.2096	—	—	—	-100
-90	38.9539	74.6	0.2353	19.4212	74.5	0.2217	12.9101	74.5	0.2136	9.6545	74.4	0.2079	-90
-80	40.0154	76.1	0.2393	19.9544	76.0	0.2257	13.2672	76.0	0.2176	9.9235	75.9	0.2119	-80
-70	41.0766	77.6	0.2433	20.4872	77.5	0.2296	13.6240	77.5	0.2216	10.1922	77.4	0.2159	-70
-60	42.1376	79.1	0.2471	21.0199	79.1	0.2335	13.9805	79.0	0.2255	10.4607	79.0	0.2198	-60
-50	43.1983	80.7	0.2510	21.5522	80.6	0.2374	14.3368	80.6	0.2294	10.7289	80.5	0.2236	-50
-40	44.2589	82.2	0.2548	22.0844	82.2	0.2412	14.6928	82.2	0.2332	10.9970	82.1	0.2275	-40
-30	45.3192	83.8	0.2585	22.6163	83.8	0.2449	15.0487	83.7	0.2369	11.2647	83.7	0.2312	-30
-20	46.3793	85.5	0.2623	23.1481	85.4	0.2486	15.4043	85.4	0.2406	11.5323	85.3	0.2350	-20
-10	47.4392	87.1	0.2659	23.6797	87.0	0.2523	15.7598	87.0	0.2443	11.7997	87.0	0.2386	-10
0	48.4990	88.7	0.2696	24.2111	88.7	0.2560	16.1151	88.7	0.2480	12.0670	88.6	0.2423	0
10	49.5586	90.4	0.2732	24.7423	90.4	0.2596	16.4702	90.3	0.2516	12.3341	90.3	0.2459	10
20	50.6181	92.1	0.2768	25.2734	92.1	0.2631	16.8252	92.0	0.2552	12.6010	92.0	0.2495	20
30	51.6774	93.8	0.2803	25.8044	93.8	0.2667	17.1801	93.8	0.2587	12.8678	93.7	0.2530	30
40	52.7367	95.6	0.2838	26.3353	95.5	0.2702	17.5348	95.5	0.2622	13.1345	95.5	0.2565	40
50	53.7958	97.3	0.2873	26.8660	97.3	0.2737	17.8894	97.2	0.2657	13.4011	97.2	0.2600	50
60	54.8548	99.1	0.2907	27.3967	99.0	0.2771	18.2440	99.0	0.2691	13.6676	99.0	0.2635	60
70	55.9137	100.9	0.2941	27.9272	100.8	0.2805	18.5984	100.8	0.2725	13.9339	100.8	0.2669	70
80	56.9725	102.7	0.2975	28.4577	102.7	0.2839	18.9527	102.6	0.2759	14.2002	102.6	0.2703	80
90	58.0313	104.5	0.3009	28.9880	104.5	0.2873	19.3069	104.5	0.2793	14.4664	104.4	0.2736	90
100	59.0899	106.4	0.3042	29.5183	106.3	0.2906	19.6611	106.3	0.2826	14.7325	106.3	0.2770	100
110	60.1485	108.2	0.3075	30.0485	108.2	0.2939	20.0152	108.2	0.2860	14.9985	108.1	0.2803	110
120	61.2070	110.1	0.3108	30.5786	110.1	0.2972	20.3692	110.1	0.2892	15.2644	110.0	0.2836	120
130	62.2654	112.0	0.3141	31.1087	112.0	0.3005	20.7231	112.0	0.2925	15.5303	111.9	0.2868	130
140	63.3238	114.0	0.3173	31.6387	113.9	0.3037	21.0770	113.9	0.2957	15.7961	113.9	0.2901	140
150	64.3821	115.9	0.3205	32.1686	115.9	0.3069	21.4308	115.8	0.2990	16.0619	115.8	0.2933	150
160	65.4403	117.9	0.3237	32.6985	117.8	0.3101	21.7845	117.8	0.3022	16.3275	117.8	0.2965	160
170	66.4985	119.8	0.3269	33.2283	119.8	0.3133	22.1382	119.8	0.3053	16.5932	119.8	0.2997	170
180	67.5566	121.8	0.3300	33.7581	121.8	0.3164	22.4919	121.8	0.3085	16.8587	121.8	0.3028	180
190	68.6147	123.9	0.3332	34.2878	123.8	0.3196	22.8454	123.8	0.3116	17.1243	123.8	0.3060	190
200	69.6727	125.9	0.3363	34.8174	125.9	0.3227	23.1990	125.8	0.3147	17.3897	125.8	0.3091	200
210	—	—	—	—	—	—	—	—	—	17.6552	127.9	0.3122	210

TEMP. °F	5.00			6.00			7.00			8.00			TEMP. °F
	(-88.48°F)			(-82.92°F)			(-78.07°F)			(-73.75°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(7.7338)	(74.6)	(0.2041)	(6.5266)	(75.4)	(0.2027)	(5.6541)	(76.0)	(0.2015)	(4.9929)	(76.6)	(0.2005)	
-80	7.9172	75.8	0.2075	6.5795	75.8	0.2038	—	—	—	—	—	—	-80
-70	8.1331	77.4	0.2114	6.7603	77.3	0.2078	5.7796	77.3	0.2047	5.0441	77.2	0.2020	-70
-60	8.3488	78.9	0.2153	6.9407	78.9	0.2117	5.9350	78.8	0.2086	5.1806	78.8	0.2059	-60
-50	8.5642	80.5	0.2192	7.1210	80.4	0.2156	6.0900	80.4	0.2125	5.3168	80.3	0.2098	-50
-40	8.7794	82.1	0.2230	7.3009	82.0	0.2194	6.2449	82.0	0.2163	5.4528	81.9	0.2136	-40
-30	8.9943	83.7	0.2268	7.4807	83.6	0.2232	6.3995	83.6	0.2201	5.5886	83.5	0.2174	-30
-20	9.2091	85.3	0.2305	7.6603	85.2	0.2269	6.5539	85.2	0.2238	5.7241	85.2	0.2211	-20
-10	9.4237	86.9	0.2342	7.8396	86.9	0.2306	6.7081	86.8	0.2275	5.8595	86.8	0.2248	-10
0	9.6381	88.6	0.2379	8.0188	88.5	0.2342	6.8622	88.5	0.2312	5.9947	88.5	0.2285	0
10	9.8524	90.3	0.2415	8.1979	90.2	0.2379	7.0161	90.2	0.2348	6.1297	90.1	0.2321	10
20	10.0665	92.0	0.2451	8.3768	91.9	0.2414	7.1698	91.9	0.2384	6.2646	91.8	0.2357	20
30	10.2805	93.7	0.2486	8.5555	93.6	0.2450	7.3234	93.6	0.2419	6.3993	93.6	0.2393	30
40	10.4943	95.4	0.2521	8.7342	95.4	0.2485	7.4769	95.3	0.2454	6.5340	95.3	0.2428	40
50	10.7081	97.2	0.2556	8.9127	97.1	0.2520	7.6303	97.1	0.2489	6.6685	97.1	0.2463	50
60	10.9217	99.0	0.2591	9.0911	98.9	0.2554	7.7836	98.9	0.2524	6.8029	98.9	0.2497	60
70	11.1352	100.7	0.2625	9.2694	100.7	0.2589	7.9367	100.7	0.2558	6.9372	100.7	0.2532	70
80	11.3487	102.6	0.2659	9.4477	102.5	0.2623	8.0898	102.5	0.2592	7.0713	102.5	0.2566	80
90	11.5620	104.4	0.2692	9.6258	104.4	0.2656	8.2427	104.3	0.2626	7.2055	104.3	0.2599	90
100	11.7753	106.2	0.2726	9.8038	106.2	0.2690	8.3956	106.2	0.2659	7.3395	106.2	0.2633	100
110	11.9885	108.1	0.2759	9.9818	108.1	0.2723	8.5484	108.1	0.2692	7.4734	108.0	0.2666	110
120	12.2016	110.0	0.2792	10.1597	110.0	0.2756	8.7012	110.0	0.2725	7.6073	109.9	0.2699	120
130	12.4146	111.9	0.2824	10.3375	111.9	0.2789	8.8538	111.9	0.2758	7.7411	111.8	0.2732	130
140	12.6276	113.8	0.2857	10.5152	113.8	0.2821	9.0064	113.8	0.2790	7.8748	113.8	0.2764	140
150	12.8405	115.8	0.2889	10.6929	115.8	0.2853	9.1589	115.7	0.2823	8.0084	115.7	0.2796	150
160	13.0534	117.8	0.2921	10.8705	117.7	0.2885	9.3114	117.7	0.2855	8.1420	117.7	0.2828	160
170	13.2661	119.7	0.2953	11.0481	119.7	0.2917	9.4638	119.7	0.2886	8.2756	119.7	0.2860	170
180	13.4789	121.7	0.2984	11.2256	121.7	0.2948	9.6162	121.7	0.2918	8.4091	121.7	0.2892	180
190	13.6916	123.8	0.3016	11.4031	123.7	0.2980	9.7685	123.7	0.2949	8.5425	123.7	0.2923	190
200	13.9042	125.8	0.3047	11.5805	125.8	0.3011	9.9207	125.8	0.2980	8.6759	125.7	0.2954	200
210	14.1168	127.9	0.3078	11.7579	127.8	0.3042	10.0729	127.8	0.3011	8.8092	127.8	0.2985	210
220	14.3293	129.9	0.3108	11.9352	129.9	0.3073	10.2251	129.9	0.3042	8.9425	129.9	0.3016	220
230	—	—	—	—	—	—	10.3772	132.0	0.3073	9.0758	132.0	0.3046	230

Table 2 (continued)
Suva® HP80 Superheated Vapor—Constant Pressure Tables

V = Volume in ft³/lb H = Enthalpy in Btu/lb S = Entropy in Btu/(lb) (°R) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, psia													
TEMP. °F	9.00			10.00			11.00			12.00			TEMP. °F
	(-69.84°F)			(-66.26°F)			(-62.96°F)			(-59.88°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(4.4740)	(77.2)	(0.1997)	(4.0554)	(77.7)	(0.1989)	(3.7105)	(78.2)	(0.1983)	(3.4211)	(78.6)	(0.1977)	
-60	4.5938	78.7	0.2035	4.1243	78.7	0.2014	3.7402	78.6	0.1994	—	—	—	-60
-50	4.7154	80.3	0.2074	4.2342	80.2	0.2053	3.8404	80.2	0.2033	3.5123	80.1	0.2016	-50
-40	4.8367	81.9	0.2112	4.3438	81.8	0.2091	3.9404	81.8	0.2072	3.6043	81.7	0.2054	-40
-30	4.9578	83.5	0.2150	4.4532	83.4	0.2129	4.0402	83.4	0.2110	3.6961	83.4	0.2092	-30
-20	5.0787	85.1	0.2188	4.5623	85.1	0.2167	4.1398	85.0	0.2147	3.7877	85.0	0.2130	-20
-10	5.1994	86.8	0.2225	4.6713	86.7	0.2204	4.2392	86.7	0.2184	3.8791	86.6	0.2167	-10
0	5.3199	88.4	0.2261	4.7801	88.4	0.2240	4.3384	88.3	0.2221	3.9703	88.3	0.2203	0
10	5.4403	90.1	0.2298	4.8887	90.1	0.2277	4.4374	90.0	0.2257	4.0614	90.0	0.2240	10
20	5.5605	91.8	0.2334	4.9972	91.8	0.2312	4.5363	91.7	0.2293	4.1522	91.7	0.2276	20
30	5.6806	93.5	0.2369	5.1056	93.5	0.2348	4.6351	93.5	0.2329	4.2430	93.4	0.2311	30
40	5.8005	95.3	0.2404	5.2138	95.2	0.2383	4.7337	95.2	0.2364	4.3336	95.2	0.2347	40
50	5.9204	97.0	0.2439	5.3219	97.0	0.2418	4.8322	97.0	0.2399	4.4241	96.9	0.2382	50
60	6.0401	98.8	0.2474	5.4299	98.8	0.2453	4.9306	98.8	0.2434	4.5145	98.7	0.2416	60
70	6.1597	100.6	0.2508	5.5377	100.6	0.2487	5.0289	100.6	0.2468	4.6048	100.5	0.2451	70
80	6.2792	102.4	0.2542	5.6455	102.4	0.2521	5.1270	102.4	0.2502	4.6950	102.3	0.2485	80
90	6.3987	104.3	0.2576	5.7532	104.2	0.2555	5.2251	104.2	0.2536	4.7851	104.2	0.2519	90
100	6.5180	106.1	0.2609	5.8608	106.1	0.2588	5.3231	106.1	0.2569	4.8751	106.0	0.2552	100
110	6.6373	108.0	0.2643	5.9684	108.0	0.2622	5.4211	107.9	0.2603	4.9650	107.9	0.2585	110
120	6.7565	109.9	0.2676	6.0758	109.9	0.2655	5.5189	109.8	0.2636	5.0548	109.8	0.2618	120
130	6.8756	111.8	0.2708	6.1832	111.8	0.2687	5.6167	111.8	0.2668	5.1446	111.7	0.2651	130
140	6.9946	113.7	0.2741	6.2905	113.7	0.2720	5.7144	113.7	0.2701	5.2343	113.7	0.2684	140
150	7.1136	115.7	0.2773	6.3977	115.7	0.2752	5.8120	115.6	0.2733	5.3239	115.6	0.2716	150
160	7.2325	117.7	0.2805	6.5049	117.6	0.2784	5.9096	117.6	0.2765	5.4135	117.6	0.2748	160
170	7.3514	119.6	0.2837	6.6120	119.6	0.2816	6.0071	119.6	0.2797	5.5030	119.6	0.2780	170
180	7.4702	121.7	0.2868	6.7191	121.6	0.2847	6.1046	121.6	0.2829	5.5925	121.6	0.2811	180
190	7.5890	123.7	0.2900	6.8261	123.6	0.2879	6.2020	123.6	0.2860	5.6819	123.6	0.2843	190
200	7.7077	125.7	0.2931	6.9331	125.7	0.2910	6.2994	125.7	0.2891	5.7712	125.6	0.2874	200
210	7.8263	127.8	0.2962	7.0400	127.7	0.2941	6.3967	127.7	0.2922	5.8606	127.7	0.2905	210
220	7.9450	129.8	0.2993	7.1469	129.8	0.2972	6.4939	129.8	0.2953	5.9498	129.8	0.2936	220
230	8.0635	131.9	0.3023	7.2537	131.9	0.3002	6.5912	131.9	0.2983	6.0390	131.9	0.2966	230
240	8.1821	134.0	0.3053	7.3605	134.0	0.3033	6.6884	134.0	0.3014	6.1282	134.0	0.2996	240
250	—	—	—	—	—	—	—	—	—	6.2174	136.1	0.3027	250

TEMP. °F	13.00			14.00			14.696			15.00			TEMP. °F
	(-57.01°F)			(-54.31°F)			(-52.51°F)			(-51.75°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(3.1747)	(79.0)	(0.1972)	(2.9622)	(79.4)	(0.1967)	(2.8309)	(79.6)	(0.1964)	(2.7772)	(79.7)	(0.1963)	
-50	3.2346	80.1	0.1999	2.9965	80.0	0.1984	2.8500	80.0	0.1974	2.7902	80.0	0.1970	-50
-40	3.3199	81.7	0.2038	3.0760	81.6	0.2022	2.9259	81.6	0.2012	2.8647	81.6	0.2008	-40
-30	3.4049	83.3	0.2076	3.1553	83.3	0.2061	3.0016	83.2	0.2051	2.9390	83.2	0.2046	-30
-20	3.4898	84.9	0.2113	3.2343	84.9	0.2098	3.0771	84.9	0.2088	3.0130	84.9	0.2084	-20
-10	3.5744	86.6	0.2150	3.3132	86.5	0.2135	3.1524	86.5	0.2125	3.0868	86.5	0.2121	-10
0	3.6588	88.3	0.2187	3.3918	88.2	0.2172	3.2275	88.2	0.2162	3.1604	88.2	0.2158	0
10	3.7431	90.0	0.2224	3.4703	89.9	0.2209	3.3024	89.9	0.2199	3.2339	89.9	0.2195	10
20	3.8272	91.7	0.2260	3.5487	91.6	0.2245	3.3771	91.6	0.2235	3.3072	91.6	0.2231	20
30	3.9112	93.4	0.2295	3.6268	93.4	0.2280	3.4517	93.3	0.2270	3.3804	93.3	0.2266	30
40	3.9951	95.1	0.2331	3.7049	95.1	0.2316	3.5262	95.1	0.2306	3.4534	95.1	0.2302	40
50	4.0788	96.9	0.2366	3.7828	96.9	0.2351	3.6006	96.8	0.2341	3.5263	96.8	0.2337	50
60	4.1624	98.7	0.2400	3.8606	98.7	0.2385	3.6748	98.6	0.2375	3.5991	98.6	0.2371	60
70	4.2459	100.5	0.2435	3.9384	100.5	0.2420	3.7490	100.4	0.2410	3.6718	100.4	0.2406	70
80	4.3294	102.3	0.2469	4.0160	102.3	0.2454	3.8230	102.3	0.2444	3.7444	102.2	0.2440	80
90	4.4127	104.2	0.2502	4.0935	104.1	0.2488	3.8970	104.1	0.2478	3.8168	104.1	0.2474	90
100	4.4959	106.0	0.2536	4.1709	106.0	0.2521	3.9708	106.0	0.2511	3.8892	106.0	0.2507	100
110	4.5791	107.9	0.2569	4.2483	107.9	0.2554	4.0446	107.8	0.2545	3.9616	107.8	0.2541	110
120	4.6621	109.8	0.2602	4.3255	109.8	0.2587	4.1183	109.7	0.2578	4.0338	109.7	0.2574	120
130	4.7451	111.7	0.2635	4.4027	111.7	0.2620	4.1919	111.7	0.2611	4.1060	111.7	0.2606	130
140	4.8280	113.6	0.2668	4.4798	113.6	0.2653	4.2655	113.6	0.2643	4.1781	113.6	0.2639	140
150	4.9109	115.6	0.2700	4.5569	115.6	0.2685	4.3389	115.5	0.2675	4.2501	115.5	0.2671	150
160	4.9937	117.6	0.2732	4.6339	117.5	0.2717	4.4124	117.5	0.2707	4.3221	117.5	0.2703	160
170	5.0765	119.5	0.2764	4.7108	119.5	0.2749	4.4857	119.5	0.2739	4.3940	119.5	0.2735	170
180	5.1591	121.5	0.2795	4.7877	121.5	0.2781	4.5590	121.5	0.2771	4.4658	121.5	0.2767	180
190	5.2418	123.6	0.2827	4.8646	123.6	0.2812	4.6323	123.5	0.2802	4.5376	123.5	0.2798	190
200	5.3244	125.6	0.2858	4.9413	125.6	0.2843	4.7055	125.6	0.2834	4.6094	125.6	0.2829	200
210	5.4069	127.7	0.2889	5.0181	127.7	0.2874	4.7787	127.6	0.2865	4.6811	127.6	0.2860	210
220	5.4894	129.8	0.2920	5.0948	129.7	0.2905	4.8518	129.7	0.2895	4.7527	129.7	0.2891	220
230	5.5719	131.8	0.2950	5.1714	131.8	0.2936	4.9249	131.8	0.2926	4.8243	131.8	0.2922	230
240	5.6543	134.0	0.2981	5.2480	133.9	0.2966	4.9979	133.9	0.2956	4.8959	133.9	0.2952	240
250	5.7366	136.1	0.3011	5.3246	136.1	0.2996	5.0709	136.1	0.2986	4.9675	136.0	0.2982	250

Table 2 (continued)
Suva® HP80 Superheated Vapor—Constant Pressure Tables

V = Volume in ft³/lb H = Enthalpy in Btu/lb S = Entropy in Btu/(lb) (°R) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, psia													
TEMP. °F	16.00			17.00			18.00			19.00			TEMP. °F
	(-49.33°F)			(-47.02°F)			(-44.81°F)			(-42.70°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(2.6144)	(80.1)	(0.1959)	(2.4701)	(80.4)	(0.1955)	(2.3413)	(80.7)	(0.1952)	(2.2255)	(81.0)	(0.1949)	
-40	2.6798	81.5	0.1995	2.5166	81.5	0.1982	2.3715	81.5	0.1970	2.2416	81.4	0.1959	-40
-30	2.7496	83.2	0.2033	2.5826	83.1	0.2020	2.4340	83.1	0.2009	2.3011	83.0	0.1997	-30
-20	2.8193	84.8	0.2071	2.6483	84.8	0.2058	2.4964	84.7	0.2046	2.3604	84.7	0.2035	-20
-10	2.8887	86.5	0.2108	2.7139	86.4	0.2096	2.5585	86.4	0.2084	2.4194	86.3	0.2073	-10
0	2.9579	88.1	0.2145	2.7793	88.1	0.2132	2.6204	88.1	0.2121	2.4783	88.0	0.2109	0
10	3.0270	89.8	0.2181	2.8445	89.8	0.2169	2.6822	89.8	0.2157	2.5370	89.7	0.2146	10
20	3.0959	91.5	0.2217	2.9095	91.5	0.2205	2.7438	91.5	0.2193	2.5955	91.4	0.2182	20
30	3.1647	93.3	0.2253	2.9744	93.2	0.2241	2.8052	93.2	0.2229	2.6538	93.2	0.2218	30
40	3.2333	95.0	0.2289	3.0391	95.0	0.2276	2.8665	95.0	0.2265	2.7121	94.9	0.2253	40
50	3.3018	96.8	0.2324	3.1038	96.8	0.2311	2.9277	96.7	0.2300	2.7702	96.7	0.2289	50
60	3.3702	98.6	0.2358	3.1683	98.6	0.2346	2.9888	98.5	0.2334	2.8281	98.5	0.2323	60
70	3.4385	100.4	0.2393	3.2327	100.4	0.2380	3.0497	100.3	0.2369	2.8860	100.3	0.2358	70
80	3.5067	102.2	0.2427	3.2970	102.2	0.2415	3.1106	102.2	0.2403	2.9438	102.1	0.2392	80
90	3.5748	104.1	0.2461	3.3612	104.0	0.2449	3.1713	104.0	0.2437	3.0015	104.0	0.2426	90
100	3.6428	105.9	0.2494	3.4253	105.9	0.2482	3.2320	105.9	0.2471	3.0590	105.8	0.2460	100
110	3.7107	107.8	0.2528	3.4894	107.8	0.2515	3.2926	107.7	0.2504	3.1165	107.7	0.2493	110
120	3.7785	109.7	0.2561	3.5533	109.7	0.2548	3.3531	109.6	0.2537	3.1740	109.6	0.2526	120
130	3.8463	111.6	0.2593	3.6172	111.6	0.2581	3.4135	111.6	0.2570	3.2313	111.5	0.2559	130
140	3.9140	113.6	0.2626	3.6810	113.5	0.2614	3.4739	113.5	0.2602	3.2886	113.5	0.2592	140
150	3.9816	115.5	0.2658	3.7448	115.5	0.2646	3.5342	115.5	0.2635	3.3458	115.4	0.2624	150
160	4.0492	117.5	0.2690	3.8084	117.5	0.2678	3.5944	117.4	0.2667	3.4029	117.4	0.2656	160
170	4.1167	119.5	0.2722	3.8721	119.5	0.2710	3.6546	119.4	0.2699	3.4600	119.4	0.2688	170
180	4.1842	121.5	0.2754	3.9356	121.5	0.2742	3.7147	121.4	0.2730	3.5170	121.4	0.2720	180
190	4.2516	123.5	0.2785	3.9991	123.5	0.2773	3.7748	123.5	0.2762	3.5740	123.4	0.2751	190
200	4.3189	125.6	0.2817	4.0626	125.5	0.2804	3.8348	125.5	0.2793	3.6309	125.5	0.2782	200
210	4.3862	127.6	0.2848	4.1260	127.6	0.2836	3.8948	127.6	0.2824	3.6878	127.5	0.2813	210
220	4.4535	129.7	0.2878	4.1894	129.7	0.2866	3.9547	129.6	0.2855	3.7447	129.6	0.2844	220
230	4.5207	131.8	0.2909	4.2527	131.8	0.2897	4.0145	131.7	0.2886	3.8014	131.7	0.2875	230
240	4.5878	133.9	0.2939	4.3160	133.9	0.2927	4.0744	133.9	0.2916	3.8582	133.8	0.2905	240
250	4.6550	136.0	0.2970	4.3793	136.0	0.2958	4.1342	136.0	0.2946	3.9149	136.0	0.2935	250
260	4.7221	138.2	0.3000	4.4425	138.2	0.2988	4.1939	138.1	0.2976	3.9716	138.1	0.2965	260

TEMP. °F	20.00			21.00			22.00			23.00			TEMP. °F
	(-40.68°F)			(-38.73°F)			(-36.86°F)			(-35.05°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(2.1209)	(81.2)	(0.1946)	(2.0259)	(81.5)	(0.1943)	(1.9392)	(81.8)	(0.1940)	(1.8598)	(82.0)	(0.1938)	
-40	2.1248	81.4	0.1948	—	—	—	—	—	—	—	—	—	-40
-30	2.1815	83.0	0.1987	2.0732	82.9	0.1976	1.9748	82.9	0.1967	1.8849	82.8	0.1957	-30
-20	2.2380	84.6	0.2024	2.1272	84.6	0.2014	2.0265	84.5	0.2004	1.9346	84.5	0.1995	-20
-10	2.2943	86.3	0.2062	2.1810	86.3	0.2052	2.0780	86.2	0.2042	1.9840	86.2	0.2033	-10
0	2.3503	88.0	0.2099	2.2346	87.9	0.2089	2.1293	87.9	0.2079	2.0332	87.8	0.2070	0
10	2.4063	89.7	0.2135	2.2880	89.6	0.2125	2.1805	89.6	0.2116	2.0823	89.6	0.2106	10
20	2.4620	91.4	0.2172	2.3412	91.4	0.2162	2.2314	91.3	0.2152	2.1312	91.3	0.2143	20
30	2.5176	93.1	0.2207	2.3943	93.1	0.2197	2.2822	93.1	0.2188	2.1799	93.0	0.2179	30
40	2.5730	94.9	0.2243	2.4473	94.8	0.2233	2.3329	94.8	0.2223	2.2285	94.8	0.2214	40
50	2.6284	96.7	0.2278	2.5001	96.6	0.2268	2.3834	96.6	0.2259	2.2770	96.6	0.2249	50
60	2.6836	98.5	0.2313	2.5528	98.4	0.2303	2.4339	98.4	0.2293	2.3253	98.3	0.2284	60
70	2.7387	100.3	0.2347	2.6054	100.2	0.2337	2.4842	100.2	0.2328	2.3735	100.2	0.2319	70
80	2.7937	102.1	0.2382	2.6579	102.1	0.2372	2.5344	102.0	0.2362	2.4216	102.0	0.2353	80
90	2.8486	103.9	0.2416	2.7102	103.9	0.2406	2.5845	103.9	0.2396	2.4696	103.8	0.2387	90
100	2.9034	105.8	0.2449	2.7625	105.8	0.2439	2.6345	105.7	0.2430	2.5176	105.7	0.2421	100
110	2.9581	107.7	0.2483	2.8147	107.7	0.2473	2.6844	107.6	0.2463	2.5654	107.6	0.2454	110
120	3.0127	109.6	0.2516	2.8669	109.6	0.2506	2.7343	109.5	0.2496	2.6132	109.5	0.2487	120
130	3.0673	111.5	0.2549	2.9189	111.5	0.2539	2.7840	111.5	0.2529	2.6609	111.4	0.2520	130
140	3.1218	113.5	0.2581	2.9709	113.4	0.2571	2.8337	113.4	0.2562	2.7085	113.4	0.2553	140
150	3.1762	115.4	0.2614	3.0228	115.4	0.2604	2.8833	115.4	0.2594	2.7560	115.3	0.2585	150
160	3.2306	117.4	0.2646	3.0747	117.4	0.2636	2.9329	117.3	0.2626	2.8035	117.3	0.2618	160
170	3.2849	119.4	0.2678	3.1265	119.4	0.2668	2.9824	119.3	0.2658	2.8509	119.3	0.2649	170
180	3.3391	121.4	0.2709	3.1782	121.4	0.2699	3.0319	121.3	0.2690	2.8983	121.3	0.2681	180
190	3.3933	123.4	0.2741	3.2299	123.4	0.2731	3.0813	123.4	0.2722	2.9456	123.3	0.2713	190
200	3.4475	125.5	0.2772	3.2815	125.4	0.2762	3.1306	125.4	0.2753	2.9928	125.4	0.2744	200
210	3.5016	127.5	0.2803	3.3331	127.5	0.2793	3.1799	127.5	0.2784	3.0400	127.5	0.2775	210
220	3.5556	129.6	0.2834	3.3846	129.6	0.2824	3.2292	129.6	0.2815	3.0872	129.5	0.2806	220
230	3.6096	131.7	0.2864	3.4361	131.7	0.2855	3.2784	131.7	0.2845	3.1343	131.6	0.2836	230
240	3.6636	133.8	0.2895	3.4876	133.8	0.2885	3.3275	133.8	0.2876	3.1814	133.8	0.2867	240
250	3.7175	135.9	0.2925	3.5390	135.9	0.2915	3.3766	135.9	0.2906	3.2284	135.9	0.2897	250
260	3.7714	138.1	0.2955	3.5903	138.1	0.2945	3.4257	138.1	0.2936	3.2754	138.0	0.2927	260
270	—	—	—	3.6417	140.2	0.2975	3.4748	140.2	0.2966	3.3224	140.2	0.2957	270

Table 2 (continued)
Suva® HP80 Superheated Vapor—Constant Pressure Tables

V = Volume in ft³/lb H = Enthalpy in Btu/lb S = Entropy in Btu/(lb) (°R) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, psia													TEMP. °F
TEMP. °F	24.00			25.00			26.00			27.00			
	(-33.30°F)			(-31.60°F)			(-29.95°F)			(-28.35°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
(1.7867)	(82.3)	(0.1935)	(1.7193)	(82.5)	(0.1933)	(1.6569)	(82.7)	(0.1931)	(1.5989)	(82.9)	(0.1929)		
-30	1.8025	82.8	0.1948	1.7267	82.8	0.1939	—	—	—	—	—	—	-30
-20	1.8503	84.5	0.1986	1.7727	84.4	0.1977	1.7011	84.4	0.1969	1.6348	84.3	0.1961	-20
-10	1.8978	86.1	0.2024	1.8185	86.1	0.2015	1.7453	86.0	0.2007	1.6775	86.0	0.1999	-10
0	1.9451	87.8	0.2061	1.8641	87.8	0.2052	1.7893	87.7	0.2044	1.7200	87.7	0.2036	0
10	1.9923	89.5	0.2098	1.9095	89.5	0.2089	1.8330	89.4	0.2081	1.7622	89.4	0.2073	10
20	2.0393	91.2	0.2134	1.9547	91.2	0.2125	1.8766	91.2	0.2117	1.8044	91.1	0.2109	20
30	2.0861	93.0	0.2170	1.9998	92.9	0.2161	1.9201	92.9	0.2153	1.8463	92.9	0.2145	30
40	2.1328	94.7	0.2205	2.0447	94.7	0.2197	1.9634	94.7	0.2189	1.8881	94.6	0.2181	40
50	2.1793	96.5	0.2241	2.0895	96.5	0.2232	2.0066	96.4	0.2224	1.9298	96.4	0.2216	50
60	2.2258	98.3	0.2276	2.1342	98.3	0.2267	2.0496	98.2	0.2259	1.9714	98.2	0.2251	60
70	2.2721	100.1	0.2310	2.1787	100.1	0.2302	2.0926	100.1	0.2294	2.0128	100.0	0.2286	70
80	2.3183	102.0	0.2344	2.2232	101.9	0.2336	2.1354	101.9	0.2328	2.0541	101.9	0.2320	80
90	2.3644	103.8	0.2378	2.2675	103.8	0.2370	2.1781	103.8	0.2362	2.0954	103.7	0.2354	90
100	2.4104	105.7	0.2412	2.3118	105.7	0.2404	2.2208	105.6	0.2396	2.1365	105.6	0.2388	100
110	2.4563	107.6	0.2446	2.3560	107.5	0.2437	2.2633	107.5	0.2429	2.1775	107.5	0.2421	110
120	2.5022	109.5	0.2479	2.4001	109.5	0.2470	2.3058	109.4	0.2462	2.2185	109.4	0.2455	120
130	2.5479	111.4	0.2512	2.4441	111.4	0.2503	2.3482	111.3	0.2495	2.2594	111.3	0.2488	130
140	2.5936	113.3	0.2544	2.4880	113.3	0.2536	2.3905	113.3	0.2528	2.3002	113.3	0.2520	140
150	2.6393	115.3	0.2577	2.5319	115.3	0.2568	2.4327	115.3	0.2560	2.3410	115.2	0.2553	150
160	2.6848	117.3	0.2609	2.5757	117.3	0.2601	2.4749	117.2	0.2593	2.3816	117.2	0.2585	160
170	2.7303	119.3	0.2641	2.6194	119.3	0.2633	2.5171	119.2	0.2625	2.4223	119.2	0.2617	170
180	2.7758	121.3	0.2673	2.6631	121.3	0.2664	2.5591	121.2	0.2656	2.4628	121.2	0.2649	180
190	2.8212	123.3	0.2704	2.7068	123.3	0.2696	2.6011	123.3	0.2688	2.5033	123.3	0.2680	190
200	2.8665	125.4	0.2735	2.7503	125.3	0.2727	2.6431	125.3	0.2719	2.5438	125.3	0.2712	200
210	2.9118	127.4	0.2766	2.7939	127.4	0.2758	2.6850	127.4	0.2750	2.5842	127.4	0.2743	210
220	2.9571	129.5	0.2797	2.8374	129.5	0.2789	2.7269	129.5	0.2781	2.6245	129.5	0.2774	220
230	3.0023	131.6	0.2828	2.8808	131.6	0.2820	2.7687	131.6	0.2812	2.6649	131.6	0.2804	230
240	3.0474	133.7	0.2858	2.9242	133.7	0.2850	2.8105	133.7	0.2842	2.7051	133.7	0.2835	240
250	3.0926	135.9	0.2889	2.9676	135.8	0.2880	2.8522	135.8	0.2873	2.7454	135.8	0.2865	250
260	3.1377	138.0	0.2919	3.0109	138.0	0.2911	2.8939	138.0	0.2903	2.7856	138.0	0.2895	260
270	3.1827	140.2	0.2949	3.0542	140.2	0.2940	2.9356	140.1	0.2933	2.8257	140.1	0.2925	270
280	—	—	—	—	—	—	2.9772	142.3	0.2962	2.8658	142.3	0.2955	280

TEMP. °F	28.00			29.00			30.00			31.00			TEMP. °F
	(-26.80°F)			(-25.29°F)			(-23.82°F)			(-22.38°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
(1.5450)	(83.1)	(0.1927)	(1.4946)	(83.3)	(0.1926)	(1.4474)	(83.5)	(0.1924)	(1.4032)	(83.7)	(0.1922)		
-20	1.5732	84.3	0.1953	1.5158	84.2	0.1946	1.4623	84.2	0.1938	1.4122	84.1	0.1931	-20
-10	1.6145	85.9	0.1991	1.5559	85.9	0.1983	1.5011	85.9	0.1976	1.4499	85.8	0.1969	-10
0	1.6556	87.6	0.2028	1.5957	87.6	0.2021	1.5397	87.6	0.2014	1.4874	87.5	0.2007	0
10	1.6965	89.4	0.2065	1.6353	89.3	0.2058	1.5781	89.3	0.2051	1.5247	89.2	0.2044	10
20	1.7372	91.1	0.2102	1.6747	91.0	0.2094	1.6164	91.0	0.2087	1.5618	91.0	0.2080	20
30	1.7778	92.8	0.2138	1.7140	92.8	0.2130	1.6545	92.8	0.2123	1.5987	92.7	0.2116	30
40	1.8182	94.6	0.2173	1.7531	94.6	0.2166	1.6924	94.5	0.2159	1.6355	94.5	0.2152	40
50	1.8585	96.4	0.2209	1.7921	96.3	0.2201	1.7302	96.3	0.2194	1.6722	96.3	0.2187	50
60	1.8987	98.2	0.2244	1.8310	98.1	0.2236	1.7678	98.1	0.2229	1.7087	98.1	0.2222	60
70	1.9387	100.0	0.2278	1.8697	100.0	0.2271	1.8054	99.9	0.2264	1.7451	99.9	0.2257	70
80	1.9787	101.8	0.2313	1.9084	101.8	0.2305	1.8428	101.8	0.2298	1.7814	101.7	0.2292	80
90	2.0185	103.7	0.2347	1.9469	103.7	0.2339	1.8801	103.6	0.2332	1.8176	103.6	0.2326	90
100	2.0582	105.6	0.2381	1.9854	105.5	0.2373	1.9174	105.5	0.2366	1.8537	105.5	0.2360	100
110	2.0979	107.5	0.2414	2.0237	107.4	0.2407	1.9545	107.4	0.2400	1.8897	107.4	0.2393	110
120	2.1375	109.4	0.2447	2.0620	109.3	0.2440	1.9916	109.3	0.2433	1.9257	109.3	0.2426	120
130	2.1769	111.3	0.2480	2.1002	111.3	0.2473	2.0285	111.2	0.2466	1.9615	111.2	0.2459	130
140	2.2164	113.2	0.2513	2.1383	113.2	0.2506	2.0654	113.2	0.2499	1.9973	113.2	0.2492	140
150	2.2557	115.2	0.2545	2.1764	115.2	0.2538	2.1023	115.1	0.2531	2.0330	115.1	0.2525	150
160	2.2950	117.2	0.2578	2.2143	117.2	0.2570	2.1391	117.1	0.2564	2.0686	117.1	0.2557	160
170	2.3342	119.2	0.2610	2.2523	119.2	0.2602	2.1758	119.1	0.2596	2.1042	119.1	0.2589	170
180	2.3734	121.2	0.2641	2.2901	121.2	0.2634	2.2124	121.1	0.2627	2.1397	121.1	0.2621	180
190	2.4125	123.2	0.2673	2.3279	123.2	0.2666	2.2490	123.2	0.2659	2.1752	123.2	0.2652	190
200	2.4516	125.3	0.2704	2.3657	125.3	0.2697	2.2856	125.2	0.2690	2.2106	125.2	0.2684	200
210	2.4906	127.3	0.2735	2.4034	127.3	0.2728	2.3221	127.3	0.2721	2.2460	127.3	0.2715	210
220	2.5295	129.4	0.2766	2.4411	129.4	0.2759	2.3585	129.4	0.2752	2.2813	129.4	0.2746	220
230	2.5684	131.5	0.2797	2.4787	131.5	0.2790	2.3949	131.5	0.2783	2.3165	131.5	0.2776	230
240	2.6073	133.7	0.2827	2.5163	133.6	0.2820	2.4313	133.6	0.2813	2.3518	133.6	0.2807	240
250	2.6462	135.8	0.2858	2.5538	135.8	0.2851	2.4676	135.7	0.2844	2.3870	135.7	0.2837	250
260	2.6850	137.9	0.2888	2.5913	137.9	0.2881	2.5039	137.9	0.2874	2.4221	137.9	0.2867	260
270	2.7237	140.1	0.2918	2.6288	140.1	0.2911	2.5401	140.1	0.2904	2.4572	140.0	0.2897	270
280	2.7624	142.3	0.2947	2.6662	142.3	0.2940	2.5763	142.2	0.2934	2.4923	142.2	0.2927	280

Table 2 (continued)
Suva® HP80 Superheated Vapor—Constant Pressure Tables

V = Volume in ft³/lb H = Enthalpy in Btu/lb S = Entropy in Btu/(lb) (°R) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, psia													
TEMP. °F	32.00			33.00			34.00			35.00			TEMP. °F
	(-20.98°F)			(-19.62°F)			(-18.29°F)			(-16.98°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(1.3616)	(83.9)	(0.1921)	(1.3224)	(84.1)	(0.1919)	(1.2855)	(84.3)	(0.1918)	(1.2506)	(84.5)	(0.1916)	
-20	1.3652	84.1	0.1924	—	—	—	—	—	—	—	—	—	-20
-10	1.4019	85.8	0.1962	1.3568	85.7	0.1956	1.3143	85.7	0.1949	1.2742	85.6	0.1943	-10
0	1.4383	87.5	0.2000	1.3922	87.4	0.1993	1.3488	87.4	0.1987	1.3079	87.3	0.1980	0
10	1.4746	89.2	0.2037	1.4275	89.1	0.2030	1.3831	89.1	0.2024	1.3413	89.1	0.2017	10
20	1.5106	90.9	0.2073	1.4625	90.9	0.2067	1.4173	90.8	0.2060	1.3746	90.8	0.2054	20
30	1.5465	92.7	0.2109	1.4974	92.6	0.2103	1.4512	92.6	0.2097	1.4077	92.6	0.2090	30
40	1.5822	94.4	0.2145	1.5322	94.4	0.2139	1.4850	94.4	0.2132	1.4406	94.3	0.2126	40
50	1.6178	96.2	0.2181	1.5668	96.2	0.2174	1.5187	96.2	0.2168	1.4734	96.1	0.2162	50
60	1.6533	98.0	0.2216	1.6013	98.0	0.2209	1.5523	98.0	0.2203	1.5061	97.9	0.2197	60
70	1.6887	99.9	0.2251	1.6356	99.8	0.2244	1.5857	99.8	0.2238	1.5386	99.8	0.2232	70
80	1.7239	101.7	0.2285	1.6699	101.7	0.2279	1.6190	101.6	0.2272	1.5710	101.6	0.2266	80
90	1.7590	103.6	0.2319	1.7040	103.5	0.2313	1.6522	103.5	0.2306	1.6033	103.5	0.2300	90
100	1.7941	105.4	0.2353	1.7380	105.4	0.2347	1.6853	105.4	0.2340	1.6356	105.4	0.2334	100
110	1.8290	107.3	0.2386	1.7720	107.3	0.2380	1.7183	107.3	0.2374	1.6677	107.2	0.2368	110
120	1.8639	109.3	0.2420	1.8059	109.2	0.2413	1.7512	109.2	0.2407	1.6997	109.2	0.2401	120
130	1.8987	111.2	0.2453	1.8396	111.2	0.2446	1.7841	111.1	0.2440	1.7317	111.1	0.2434	130
140	1.9334	113.1	0.2486	1.8734	113.1	0.2479	1.8169	113.1	0.2473	1.7636	113.0	0.2467	140
150	1.9680	115.1	0.2518	1.9070	115.1	0.2512	1.8496	115.0	0.2506	1.7954	115.0	0.2500	150
160	2.0026	117.1	0.2550	1.9406	117.1	0.2544	1.8822	117.0	0.2538	1.8272	117.0	0.2532	160
170	2.0371	119.1	0.2582	1.9741	119.1	0.2576	1.9148	119.0	0.2570	1.8588	119.0	0.2564	170
180	2.0716	121.1	0.2614	2.0075	121.1	0.2608	1.9473	121.1	0.2602	1.8905	121.0	0.2596	180
190	2.1060	123.1	0.2646	2.0409	123.1	0.2640	1.9797	123.1	0.2633	1.9220	123.1	0.2627	190
200	2.1403	125.2	0.2677	2.0743	125.2	0.2671	2.0122	125.1	0.2665	1.9536	125.1	0.2659	200
210	2.1746	127.3	0.2708	2.1076	127.2	0.2702	2.0445	127.2	0.2696	1.9850	127.2	0.2690	210
220	2.2089	129.3	0.2739	2.1408	129.3	0.2733	2.0768	129.3	0.2727	2.0165	129.3	0.2721	220
230	2.2431	131.4	0.2770	2.1740	131.4	0.2764	2.1091	131.4	0.2758	2.0478	131.4	0.2752	230
240	2.2772	133.6	0.2800	2.2072	133.5	0.2794	2.1413	133.5	0.2788	2.0792	133.5	0.2782	240
250	2.3114	135.7	0.2831	2.2403	135.7	0.2825	2.1735	135.7	0.2819	2.1105	135.6	0.2813	250
260	2.3454	137.9	0.2861	2.2734	137.8	0.2855	2.2056	137.8	0.2849	2.1417	137.8	0.2843	260
270	2.3795	140.0	0.2891	2.3065	140.0	0.2885	2.2377	140.0	0.2879	2.1729	140.0	0.2837	270
280	2.4135	142.2	0.2921	2.3395	142.2	0.2914	2.2698	142.2	0.2908	2.2041	142.2	0.2902	280
290	—	—	—	2.3725	144.4	0.2944	2.3018	144.4	0.2938	2.2353	144.4	0.2932	290

TEMP. °F	36.00			37.00			38.00			39.00			TEMP. °F
	(-15.71°F)			(-14.46°F)			(-13.24°F)			(-12.04°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(1.2175)	(84.6)	(0.1915)	(1.1862)	(84.8)	(0.1914)	(1.1565)	(84.9)	(0.1912)	(1.1282)	(85.1)	(0.1911)	
-10	1.2364	85.6	0.1937	1.2006	85.5	0.1931	1.1667	85.5	0.1925	1.1345	85.5	0.1919	-10
0	1.2692	87.3	0.1974	1.2326	87.3	0.1968	1.1980	87.2	0.1962	1.1651	87.2	0.1957	0
10	1.3018	89.0	0.2011	1.2645	89.0	0.2005	1.2291	88.9	0.2000	1.1955	88.9	0.1994	10
20	1.3343	90.8	0.2048	1.2961	90.7	0.2042	1.2600	90.7	0.2036	1.2257	90.6	0.2031	20
30	1.3665	92.5	0.2084	1.3276	92.5	0.2078	1.2907	92.4	0.2073	1.2557	92.4	0.2067	30
40	1.3986	94.3	0.2120	1.3589	94.3	0.2114	1.3213	94.2	0.2109	1.2856	94.2	0.2103	40
50	1.4306	96.1	0.2156	1.3901	96.1	0.2150	1.3517	96.0	0.2144	1.3153	96.0	0.2139	50
60	1.4624	97.9	0.2191	1.4211	97.9	0.2185	1.3820	97.8	0.2179	1.3449	97.8	0.2174	60
70	1.4941	99.7	0.2226	1.4521	99.7	0.2220	1.4122	99.7	0.2214	1.3744	99.6	0.2209	70
80	1.5257	101.6	0.2260	1.4829	101.5	0.2255	1.4423	101.5	0.2249	1.4037	101.5	0.2243	80
90	1.5572	103.4	0.2295	1.5136	103.4	0.2289	1.4722	103.4	0.2283	1.4330	103.3	0.2278	90
100	1.5886	105.3	0.2328	1.5442	105.3	0.2323	1.5021	105.3	0.2317	1.4621	105.2	0.2312	100
110	1.6199	107.2	0.2362	1.5747	107.2	0.2356	1.5318	107.2	0.2351	1.4912	107.1	0.2345	110
120	1.6511	109.1	0.2395	1.6051	109.1	0.2390	1.5615	109.1	0.2384	1.5201	109.0	0.2379	120
130	1.6822	111.1	0.2428	1.6354	111.0	0.2423	1.5911	111.0	0.2417	1.5490	111.0	0.2412	130
140	1.7133	113.0	0.2461	1.6657	113.0	0.2456	1.6206	113.0	0.2450	1.5778	112.9	0.2445	140
150	1.7443	115.0	0.2494	1.6959	115.0	0.2488	1.6500	114.9	0.2483	1.6065	114.9	0.2477	150
160	1.7752	117.0	0.2526	1.7260	117.0	0.2521	1.6794	116.9	0.2515	1.6352	116.9	0.2510	160
170	1.8060	119.0	0.2558	1.7561	119.0	0.2553	1.7087	118.9	0.2547	1.6638	118.9	0.2542	170
180	1.8368	121.0	0.2590	1.7861	121.0	0.2584	1.7380	121.0	0.2579	1.6923	120.9	0.2574	180
190	1.8676	123.0	0.2622	1.8160	123.0	0.2616	1.7672	123.0	0.2611	1.7208	123.0	0.2605	190
200	1.8982	125.1	0.2653	1.8459	125.1	0.2648	1.7963	125.1	0.2642	1.7493	125.0	0.2637	200
210	1.9289	127.2	0.2684	1.8757	127.1	0.2679	1.8254	127.1	0.2673	1.7776	127.1	0.2668	210
220	1.9594	129.3	0.2715	1.9055	129.2	0.2710	1.8544	129.2	0.2704	1.8060	129.2	0.2699	220
230	1.9900	131.4	0.2746	1.9353	131.3	0.2740	1.8834	131.3	0.2735	1.8342	131.3	0.2730	230
240	2.0205	133.5	0.2777	1.9650	133.5	0.2771	1.9124	133.4	0.2766	1.8625	133.4	0.2760	240
250	2.0509	135.6	0.2807	1.9946	135.6	0.2801	1.9413	135.6	0.2796	1.8907	135.6	0.2791	250
260	2.0814	137.8	0.2837	2.0243	137.8	0.2832	1.9702	137.7	0.2826	1.9188	137.7	0.2821	260
270	2.1117	139.9	0.2867	2.0538	139.9	0.2861	1.9990	139.9	0.2856	1.9470	139.9	0.2851	270
280	2.1421	142.1	0.2897	2.0834	142.1	0.2891	2.0278	142.1	0.2886	1.9751	142.1	0.2881	280
290	2.1724	144.3	0.2926	2.1129	144.3	0.2921	2.0566	144.3	0.2915	2.0031	144.3	0.2910	290

Table 2 (continued)
Suva® HP80 Superheated Vapor—Constant Pressure Tables

V = Volume in ft³/lb H = Enthalpy in Btu/lb S = Entropy in Btu/(lb) (°R) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, psia													
TEMP. °F	40.00			41.00			42.00			43.00			TEMP. °F
	(-10.86°F)			(-9.71°F)			(-8.58°F)			(-7.47°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(1.1013)	(85.3)	(0.1910)	(1.0756)	(85.4)	(0.1909)	(1.0511)	(85.6)	(0.1908)	(1.0278)	(85.7)	(0.1907)	
-10	1.1039	85.4	0.1913	—	—	—	—	—	—	—	—	—	-10
0	1.1338	87.1	0.1951	1.1041	87.1	0.1946	1.0758	87.0	0.1940	1.0488	87.0	0.1935	0
10	1.1636	88.9	0.1988	1.1332	88.8	0.1983	1.1043	88.8	0.1978	1.0767	88.7	0.1972	10
20	1.1931	90.6	0.2025	1.1621	90.6	0.2020	1.1326	90.5	0.2015	1.1044	90.5	0.2009	20
30	1.2225	92.4	0.2062	1.1909	92.3	0.2056	1.1607	92.3	0.2051	1.1320	92.2	0.2046	30
40	1.2517	94.1	0.2098	1.2194	94.1	0.2092	1.1887	94.1	0.2087	1.1594	94.0	0.2082	40
50	1.2808	95.9	0.2133	1.2478	95.9	0.2128	1.2165	95.9	0.2123	1.1866	95.8	0.2118	50
60	1.3097	97.8	0.2169	1.2761	97.7	0.2163	1.2442	97.7	0.2158	1.2137	97.7	0.2153	60
70	1.3385	99.6	0.2203	1.3043	99.6	0.2198	1.2717	99.5	0.2193	1.2407	99.5	0.2188	70
80	1.3671	101.4	0.2238	1.3323	101.4	0.2233	1.2992	101.4	0.2228	1.2675	101.3	0.2223	80
90	1.3957	103.3	0.2272	1.3603	103.3	0.2267	1.3265	103.2	0.2262	1.2943	103.2	0.2257	90
100	1.4242	105.2	0.2306	1.3881	105.2	0.2301	1.3537	105.1	0.2296	1.3209	105.1	0.2291	100
110	1.4526	107.1	0.2340	1.4158	107.1	0.2335	1.3808	107.0	0.2330	1.3475	107.0	0.2325	110
120	1.4808	109.0	0.2373	1.4435	109.0	0.2368	1.4079	109.0	0.2363	1.3739	108.9	0.2358	120
130	1.5090	111.0	0.2407	1.4710	110.9	0.2401	1.4348	110.9	0.2396	1.4003	110.9	0.2391	130
140	1.5372	112.9	0.2439	1.4985	112.9	0.2434	1.4617	112.9	0.2429	1.4266	112.8	0.2424	140
150	1.5652	114.9	0.2472	1.5259	114.9	0.2467	1.4885	114.8	0.2462	1.4528	114.8	0.2457	150
160	1.5932	116.9	0.2504	1.5533	116.8	0.2499	1.5152	116.8	0.2494	1.4790	116.8	0.2489	160
170	1.6211	118.9	0.2537	1.5806	118.9	0.2531	1.5419	118.8	0.2526	1.5050	118.8	0.2522	170
180	1.6490	120.9	0.2568	1.6078	120.9	0.2563	1.5685	120.9	0.2558	1.5311	120.8	0.2554	180
190	1.6768	122.9	0.2600	1.6349	122.9	0.2595	1.5951	122.9	0.2590	1.5570	122.9	0.2585	190
200	1.7046	125.0	0.2632	1.6620	125.0	0.2626	1.6216	125.0	0.2622	1.5829	124.9	0.2617	200
210	1.7323	127.1	0.2663	1.6891	127.1	0.2658	1.6480	127.0	0.2653	1.6088	127.0	0.2648	210
220	1.7599	129.2	0.2694	1.7161	129.1	0.2689	1.6744	129.1	0.2684	1.6346	129.1	0.2679	220
230	1.7875	131.3	0.2725	1.7431	131.3	0.2719	1.7007	131.2	0.2715	1.6604	131.2	0.2710	230
240	1.8151	133.4	0.2755	1.7700	133.4	0.2750	1.7271	133.4	0.2745	1.6861	133.3	0.2740	240
250	1.8426	135.5	0.2785	1.7969	135.5	0.2780	1.7533	135.5	0.2776	1.7118	135.5	0.2771	250
260	1.8701	137.7	0.2816	1.8237	137.7	0.2811	1.7796	137.7	0.2806	1.7374	137.6	0.2801	260
270	1.8975	139.9	0.2846	1.8505	139.9	0.2841	1.8057	139.8	0.2836	1.7630	139.8	0.2831	270
280	1.9250	142.1	0.2875	1.8773	142.0	0.2870	1.8319	142.0	0.2866	1.7886	142.0	0.2861	280
290	1.9523	144.3	0.2905	1.9040	144.2	0.2900	1.8580	144.2	0.2895	1.8142	144.2	0.2890	290
300	—	—	—	1.9307	146.5	0.2929	1.8841	146.4	0.2925	1.8397	146.4	0.2920	300

TEMP. °F	44.00			45.00			46.00			47.00			TEMP. °F
	(-6.38°F)			(-5.31°F)			(-4.25°F)			(-3.22°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(1.0054)	(85.8)	(0.1906)	(0.9840)	(86.0)	(0.1905)	(0.9635)	(86.1)	(0.1904)	(0.9438)	(86.2)	(0.1903)	
0	1.0230	86.9	0.1930	0.9983	86.9	0.1925	0.9747	86.9	0.1920	0.9522	86.8	0.1915	0
10	1.0504	88.7	0.1967	1.0252	88.6	0.1962	1.0011	88.6	0.1957	0.9781	88.6	0.1953	10
20	1.0776	90.4	0.2004	1.0519	90.4	0.1999	1.0273	90.4	0.1994	1.0038	90.3	0.1990	20
30	1.1046	92.2	0.2041	1.0784	92.2	0.2036	1.0533	92.1	0.2031	1.0293	92.1	0.2026	30
40	1.1314	94.0	0.2077	1.1047	94.0	0.2072	1.0791	93.9	0.2067	1.0546	93.9	0.2062	40
50	1.1581	95.8	0.2113	1.1308	95.8	0.2108	1.1048	95.7	0.2103	1.0798	95.7	0.2098	50
60	1.1846	97.6	0.2148	1.1569	97.6	0.2143	1.1303	97.5	0.2138	1.1048	97.5	0.2134	60
70	1.2111	99.5	0.2183	1.1828	99.4	0.2178	1.1557	99.4	0.2174	1.1297	99.4	0.2169	70
80	1.2374	101.3	0.2218	1.2085	101.3	0.2213	1.1809	101.2	0.2208	1.1545	101.2	0.2204	80
90	1.2636	103.2	0.2252	1.2342	103.2	0.2247	1.2061	103.1	0.2243	1.1792	103.1	0.2238	90
100	1.2896	105.1	0.2286	1.2597	105.0	0.2281	1.2311	105.0	0.2277	1.2037	105.0	0.2272	100
110	1.3156	107.0	0.2320	1.2852	107.0	0.2315	1.2561	106.9	0.2311	1.2282	106.9	0.2306	110
120	1.3415	108.9	0.2353	1.3106	108.9	0.2349	1.2809	108.8	0.2344	1.2526	108.8	0.2339	120
130	1.3673	110.8	0.2387	1.3358	110.8	0.2382	1.3057	110.8	0.2377	1.2769	110.8	0.2373	130
140	1.3931	112.8	0.2420	1.3610	112.8	0.2415	1.3304	112.7	0.2410	1.3011	112.7	0.2406	140
150	1.4187	114.8	0.2452	1.3862	114.8	0.2448	1.3550	114.7	0.2443	1.3252	114.7	0.2438	150
160	1.4443	116.8	0.2485	1.4112	116.7	0.2480	1.3796	116.7	0.2475	1.3493	116.7	0.2471	160
170	1.4699	118.8	0.2517	1.4362	118.8	0.2512	1.4041	118.7	0.2508	1.3733	118.7	0.2503	170
180	1.4953	120.8	0.2549	1.4612	120.8	0.2544	1.4285	120.8	0.2540	1.3972	120.7	0.2535	180
190	1.5207	122.9	0.2580	1.4861	122.8	0.2576	1.4529	122.8	0.2571	1.4211	122.8	0.2567	190
200	1.5461	124.9	0.2612	1.5109	124.9	0.2607	1.4772	124.9	0.2603	1.4449	124.8	0.2598	200
210	1.5714	127.0	0.2643	1.5356	127.0	0.2639	1.5015	126.9	0.2634	1.4687	126.9	0.2630	210
220	1.5967	129.1	0.2674	1.5604	129.1	0.2670	1.5257	129.0	0.2665	1.4924	129.0	0.2661	220
230	1.6219	131.2	0.2705	1.5850	131.2	0.2700	1.5498	131.2	0.2696	1.5161	131.1	0.2691	230
240	1.6470	133.3	0.2736	1.6097	133.3	0.2731	1.5740	133.3	0.2727	1.5398	133.3	0.2722	240
250	1.6722	135.5	0.2766	1.6343	135.4	0.2761	1.5980	135.4	0.2757	1.5634	135.4	0.2753	250
260	1.6972	137.6	0.2796	1.6588	137.6	0.2792	1.6221	137.6	0.2787	1.5869	137.6	0.2783	260
270	1.7223	139.8	0.2826	1.6833	139.8	0.2822	1.6461	139.8	0.2817	1.6104	139.7	0.2813	270
280	1.7473	142.0	0.2856	1.7078	142.0	0.2851	1.6701	141.9	0.2847	1.6339	141.9	0.2843	280
290	1.7723	144.2	0.2886	1.7323	144.2	0.2881	1.6940	144.2	0.2877	1.6574	144.1	0.2872	290
300	1.7972	146.4	0.2915	1.7567	146.4	0.2911	1.7179	146.4	0.2906	1.6808	146.4	0.2902	300

Table 2 (continued)
Suva® HP80 Superheated Vapor—Constant Pressure Tables

V = Volume in ft³/lb H = Enthalpy in Btu/lb S = Entropy in Btu/(lb) (°R) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, psia													
TEMP. °F	48.00			49.00			50.00			55.00			TEMP. °F
	(-2.20°F)			(-1.20°F)			(-0.21°F)			(4.52°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.9249)	(86.4)	(0.1902)	(0.9067)	(86.5)	(0.1901)	(0.8893)	(86.6)	(0.1900)	(0.8112)	(87.2)	(0.1896)	
0	0.9305	86.8	0.1910	0.9097	86.7	0.1905	0.8898	86.7	0.1901	—	—	—	0
10	0.9560	88.5	0.1948	0.9348	88.5	0.1943	0.9144	88.4	0.1939	0.8236	88.2	0.1917	10
20	0.9812	90.3	0.1985	0.9596	90.2	0.1980	0.9388	90.2	0.1976	0.8461	90.0	0.1954	20
30	1.0063	92.1	0.2022	0.9842	92.0	0.2017	0.9630	92.0	0.2013	0.8685	91.8	0.1991	30
40	1.0311	93.8	0.2058	1.0086	93.8	0.2053	0.9870	93.8	0.2049	0.8906	93.6	0.2028	40
50	1.0559	95.7	0.2094	1.0329	95.6	0.2089	1.0108	95.6	0.2085	0.9126	95.4	0.2064	50
60	1.0804	97.5	0.2129	1.0570	97.4	0.2125	1.0346	97.4	0.2120	0.9344	97.2	0.2099	60
70	1.1049	99.3	0.2164	1.0810	99.3	0.2160	1.0581	99.3	0.2155	0.9561	99.1	0.2135	70
80	1.1292	101.2	0.2199	1.1049	101.1	0.2195	1.0816	101.1	0.2190	0.9777	100.9	0.2170	80
90	1.1534	103.1	0.2234	1.1287	103.0	0.2229	1.1049	103.0	0.2225	0.9991	102.8	0.2204	90
100	1.1775	104.9	0.2268	1.1523	104.9	0.2263	1.1281	104.9	0.2259	1.0204	104.7	0.2238	100
110	1.2015	106.9	0.2301	1.1759	106.8	0.2297	1.1513	106.8	0.2293	1.0417	106.6	0.2272	110
120	1.2254	108.8	0.2335	1.1993	108.8	0.2331	1.1743	108.7	0.2326	1.0628	108.6	0.2306	120
130	1.2492	110.7	0.2368	1.2227	110.7	0.2364	1.1973	110.7	0.2360	1.0838	110.5	0.2339	130
140	1.2730	112.7	0.2401	1.2460	112.7	0.2397	1.2201	112.6	0.2393	1.1048	112.5	0.2372	140
150	1.2966	114.7	0.2434	1.2692	114.6	0.2430	1.2429	114.6	0.2425	1.1257	114.5	0.2405	150
160	1.3202	116.7	0.2466	1.2924	116.6	0.2462	1.2656	116.6	0.2458	1.1465	116.5	0.2438	160
170	1.3438	118.7	0.2499	1.3155	118.7	0.2494	1.2883	118.6	0.2490	1.1673	118.5	0.2470	170
180	1.3673	120.7	0.2531	1.3385	120.7	0.2526	1.3109	120.7	0.2522	1.1879	120.5	0.2502	180
190	1.3907	122.8	0.2562	1.3615	122.7	0.2558	1.3334	122.7	0.2554	1.2086	122.6	0.2534	190
200	1.4140	124.8	0.2594	1.3844	124.8	0.2590	1.3559	124.8	0.2585	1.2291	124.7	0.2566	200
210	1.4373	126.9	0.2625	1.4072	126.9	0.2621	1.3784	126.9	0.2617	1.2496	126.7	0.2597	210
220	1.4606	129.0	0.2656	1.4301	129.0	0.2652	1.4007	129.0	0.2648	1.2701	128.8	0.2628	220
230	1.4838	131.1	0.2687	1.4528	131.1	0.2683	1.4231	131.1	0.2679	1.2905	131.0	0.2659	230
240	1.5070	133.2	0.2718	1.4755	133.2	0.2714	1.4454	133.2	0.2709	1.3109	133.1	0.2690	240
250	1.5301	135.4	0.2748	1.4982	135.4	0.2744	1.4676	135.3	0.2740	1.3312	135.2	0.2720	250
260	1.5532	137.5	0.2778	1.5209	137.5	0.2774	1.4898	137.5	0.2770	1.3515	137.4	0.2750	260
270	1.5762	139.7	0.2808	1.5435	139.7	0.2804	1.5120	139.7	0.2800	1.3718	139.6	0.2781	270
280	1.5993	141.9	0.2838	1.5660	141.9	0.2834	1.5341	141.9	0.2830	1.3920	141.8	0.2810	280
290	1.6222	144.1	0.2868	1.5885	144.1	0.2864	1.5562	144.1	0.2860	1.4122	144.0	0.2840	290
300	1.6452	146.3	0.2897	1.6110	146.3	0.2893	1.5783	146.3	0.2889	1.4323	146.2	0.2870	300
310	—	—	—	—	—	—	—	—	—	1.4524	148.5	0.2899	310

TEMP. °F	60.00			65.00			70.00			75.00			TEMP. °F
	(8.94°F)			(13.09°F)			(17.00°F)			(20.71°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.7456)	(87.8)	(0.1893)	(0.6898)	(88.3)	(0.1889)	(0.6416)	(88.8)	(0.1886)	(0.5996)	(89.2)	(0.1884)	
10	0.7479	88.0	0.1897	—	—	—	—	—	—	—	—	—	10
20	0.7689	89.8	0.1934	0.7034	89.5	0.1915	0.6472	89.3	0.1898	—	—	—	20
30	0.7897	91.6	0.1971	0.7229	91.4	0.1953	0.6656	91.1	0.1935	0.6158	90.9	0.1919	30
40	0.8102	93.4	0.2008	0.7422	93.2	0.1990	0.6838	93.0	0.1972	0.6331	92.8	0.1956	40
50	0.8307	95.2	0.2044	0.7613	95.0	0.2026	0.7018	94.8	0.2009	0.6501	94.6	0.1993	50
60	0.8509	97.0	0.2080	0.7802	96.9	0.2062	0.7196	96.7	0.2045	0.6670	96.5	0.2029	60
70	0.8711	98.9	0.2115	0.7990	98.7	0.2097	0.7373	98.5	0.2081	0.6837	98.4	0.2065	70
80	0.8910	100.8	0.2150	0.8177	100.6	0.2133	0.7548	100.4	0.2116	0.7003	100.3	0.2100	80
90	0.9109	102.7	0.2185	0.8362	102.5	0.2167	0.7722	102.3	0.2151	0.7167	102.2	0.2135	90
100	0.9307	104.6	0.2219	0.8547	104.4	0.2202	0.7895	104.3	0.2185	0.7330	104.1	0.2170	100
110	0.9503	106.5	0.2253	0.8730	106.3	0.2236	0.8067	106.2	0.2220	0.7492	106.0	0.2204	110
120	0.9699	108.4	0.2287	0.8912	108.3	0.2270	0.8237	108.1	0.2254	0.7653	108.0	0.2238	120
130	0.9893	110.4	0.2321	0.9093	110.2	0.2303	0.8407	110.1	0.2287	0.7813	110.0	0.2272	130
140	1.0087	112.4	0.2354	0.9273	112.2	0.2337	0.8576	112.1	0.2320	0.7972	111.9	0.2305	140
150	1.0280	114.3	0.2387	0.9453	114.2	0.2370	0.8744	114.1	0.2353	0.8130	113.9	0.2338	150
160	1.0472	116.4	0.2419	0.9632	116.2	0.2402	0.8911	116.1	0.2386	0.8287	116.0	0.2371	160
170	1.0664	118.4	0.2452	0.9810	118.2	0.2435	0.9078	118.1	0.2419	0.8444	118.0	0.2404	170
180	1.0855	120.4	0.2484	0.9987	120.3	0.2467	0.9244	120.2	0.2451	0.8600	120.0	0.2436	180
190	1.1045	122.5	0.2516	1.0164	122.3	0.2499	0.9409	122.2	0.2483	0.8755	122.1	0.2468	190
200	1.1235	124.5	0.2547	1.0341	124.4	0.2530	0.9574	124.3	0.2515	0.8910	124.2	0.2500	200
210	1.1424	126.6	0.2579	1.0516	126.5	0.2562	0.9738	126.4	0.2546	0.9064	126.3	0.2531	210
220	1.1613	128.7	0.2610	1.0691	128.6	0.2593	0.9902	128.5	0.2577	0.9217	128.4	0.2563	220
230	1.1801	130.9	0.2641	1.0866	130.7	0.2624	1.0065	130.6	0.2608	0.9371	130.5	0.2594	230
240	1.1989	133.0	0.2672	1.1040	132.9	0.2655	1.0228	132.8	0.2639	0.9523	132.7	0.2625	240
250	1.2176	135.1	0.2702	1.1214	135.0	0.2685	1.0390	134.9	0.2670	0.9676	134.8	0.2655	250
260	1.2363	137.3	0.2732	1.1388	137.2	0.2716	1.0552	137.1	0.2700	0.9827	137.0	0.2686	260
270	1.2549	139.5	0.2763	1.1561	139.4	0.2746	1.0713	139.3	0.2730	0.9979	139.2	0.2716	270
280	1.2736	141.7	0.2792	1.1733	141.6	0.2776	1.0874	141.5	0.2760	1.0130	141.4	0.2746	280
290	1.2921	143.9	0.2822	1.1906	143.8	0.2806	1.1035	143.7	0.2790	1.0280	143.6	0.2776	290
300	1.3107	146.1	0.2852	1.2078	146.0	0.2835	1.1195	145.9	0.2820	1.0431	145.9	0.2805	300
310	1.3292	148.4	0.2881	1.2249	148.3	0.2865	1.1355	148.2	0.2849	1.0581	148.1	0.2835	310
320	—	—	—	1.2421	150.5	0.2894	1.1515	150.5	0.2878	1.0731	150.4	0.2864	320
330	—	—	—	—	—	—	—	—	—	1.0880	152.6	0.2893	330

Table 2 (continued)
Suva® HP80 Superheated Vapor—Constant Pressure Tables

V = Volume in ft³/lb H = Enthalpy in Btu/lb S = Entropy in Btu/(lb) (°R) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, psia													
TEMP. °F	80.00			85.00			90.00			95.00			TEMP. °F
	(24.24°F)			(27.60°F)			(30.81°F)			(33.89°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.5626)	(89.6)	(0.1881)	(0.5299)	(90.0)	(0.1879)	(0.5006)	(90.4)	(0.1877)	(0.4743)	(90.8)	(0.1875)	
30	0.5722	90.7	0.1903	0.5337	90.5	0.1888	—	—	—	—	—	—	30
40	0.5887	92.6	0.1940	0.5494	92.3	0.1926	0.5145	92.1	0.1912	0.4831	91.9	0.1898	40
50	0.6049	94.4	0.1977	0.5649	94.2	0.1963	0.5293	94.0	0.1949	0.4974	93.8	0.1935	50
60	0.6209	96.3	0.2014	0.5802	96.1	0.1999	0.5440	95.9	0.1986	0.5115	95.7	0.1972	60
70	0.6368	98.2	0.2050	0.5954	98.0	0.2035	0.5585	97.8	0.2022	0.5255	97.6	0.2009	70
80	0.6525	100.1	0.2085	0.6103	99.9	0.2071	0.5728	99.7	0.2058	0.5392	99.5	0.2045	80
90	0.6681	102.0	0.2120	0.6252	101.8	0.2106	0.5870	101.7	0.2093	0.5528	101.5	0.2080	90
100	0.6835	103.9	0.2155	0.6399	103.8	0.2141	0.6010	103.6	0.2128	0.5662	103.4	0.2115	100
110	0.6989	105.9	0.2190	0.6544	105.7	0.2176	0.6149	105.5	0.2163	0.5795	105.4	0.2150	110
120	0.7141	107.8	0.2224	0.6689	107.7	0.2210	0.6287	107.5	0.2197	0.5927	107.4	0.2185	120
130	0.7292	109.8	0.2258	0.6833	109.7	0.2244	0.6424	109.5	0.2231	0.6058	109.4	0.2219	130
140	0.7442	111.8	0.2291	0.6975	111.7	0.2278	0.6560	111.5	0.2265	0.6188	111.4	0.2252	140
150	0.7592	113.8	0.2324	0.7117	113.7	0.2311	0.6695	113.5	0.2298	0.6317	113.4	0.2286	150
160	0.7741	115.8	0.2357	0.7258	115.7	0.2344	0.6829	115.6	0.2331	0.6446	115.4	0.2319	160
170	0.7888	117.9	0.2390	0.7398	117.7	0.2376	0.6963	117.6	0.2364	0.6573	117.5	0.2352	170
180	0.8036	119.9	0.2422	0.7538	119.8	0.2409	0.7096	119.7	0.2396	0.6700	119.5	0.2384	180
190	0.8182	122.0	0.2454	0.7677	121.9	0.2441	0.7228	121.7	0.2428	0.6826	121.6	0.2417	190
200	0.8328	124.1	0.2486	0.7815	123.9	0.2473	0.7359	123.8	0.2460	0.6951	123.7	0.2449	200
210	0.8474	126.2	0.2518	0.7953	126.1	0.2505	0.7490	125.9	0.2492	0.7076	125.8	0.2480	210
220	0.8619	128.3	0.2549	0.8090	128.2	0.2536	0.7620	128.1	0.2524	0.7200	127.9	0.2512	220
230	0.8763	130.4	0.2580	0.8227	130.3	0.2567	0.7750	130.2	0.2555	0.7324	130.1	0.2543	230
240	0.8907	132.6	0.2611	0.8363	132.5	0.2598	0.7880	132.4	0.2586	0.7447	132.2	0.2574	240
250	0.9050	134.7	0.2642	0.8499	134.6	0.2629	0.8008	134.5	0.2617	0.7570	134.4	0.2605	250
260	0.9193	136.9	0.2672	0.8634	136.8	0.2659	0.8137	136.7	0.2647	0.7692	136.6	0.2636	260
270	0.9336	139.1	0.2702	0.8769	139.0	0.2690	0.8265	138.9	0.2677	0.7814	138.8	0.2666	270
280	0.9478	141.3	0.2732	0.8904	141.2	0.2720	0.8393	141.1	0.2708	0.7935	141.0	0.2696	280
290	0.9620	143.5	0.2762	0.9038	143.4	0.2750	0.8520	143.3	0.2737	0.8057	143.2	0.2726	290
300	0.9762	145.8	0.2792	0.9172	145.7	0.2779	0.8647	145.6	0.2767	0.8177	145.5	0.2756	300
310	0.9903	148.0	0.2821	0.9305	147.9	0.2809	0.8773	147.8	0.2797	0.8298	147.7	0.2785	310
320	1.0044	150.3	0.2851	0.9438	150.2	0.2838	0.8900	150.1	0.2826	0.8418	150.0	0.2815	320
330	1.0185	152.6	0.2880	0.9571	152.5	0.2867	0.9026	152.4	0.2855	0.8538	152.3	0.2844	330
340	—	—	—	—	—	—	0.9151	154.7	0.2884	0.8657	154.6	0.2873	340

TEMP. °F	100.00			110.00			120.00			130.00			TEMP. °F
	(36.86°F)			(42.46°F)			(47.69°F)			(52.61°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.4505)	(91.1)	(0.1873)	(0.4091)	(91.7)	(0.1869)	(0.3744)	(92.3)	(0.1866)	(0.3448)	(92.8)	(0.1863)	
40	0.4549	91.7	0.1885	—	—	—	—	—	—	—	—	—	40
50	0.4687	93.6	0.1922	0.4189	93.2	0.1898	0.3772	92.7	0.1875	—	—	—	50
60	0.4823	95.5	0.1960	0.4317	95.1	0.1935	0.3893	94.7	0.1913	0.3533	94.2	0.1891	60
70	0.4957	97.4	0.1996	0.4442	97.0	0.1972	0.4011	96.6	0.1950	0.3646	96.2	0.1929	70
80	0.5089	99.4	0.2032	0.4565	99.0	0.2009	0.4128	98.6	0.1987	0.3756	98.2	0.1966	80
90	0.5220	101.3	0.2068	0.4687	100.9	0.2045	0.4242	100.6	0.2023	0.3865	100.2	0.2003	90
100	0.5349	103.3	0.2103	0.4807	102.9	0.2080	0.4355	102.6	0.2059	0.3972	102.2	0.2039	100
110	0.5477	105.2	0.2138	0.4926	104.9	0.2115	0.4467	104.6	0.2094	0.4077	104.2	0.2074	110
120	0.5604	107.2	0.2173	0.5044	106.9	0.2150	0.4577	106.6	0.2129	0.4181	106.2	0.2110	120
130	0.5729	109.2	0.2207	0.5160	108.9	0.2185	0.4685	108.6	0.2164	0.4283	108.3	0.2144	130
140	0.5854	111.2	0.2241	0.5275	110.9	0.2219	0.4793	110.6	0.2198	0.4384	110.3	0.2179	140
150	0.5977	113.2	0.2274	0.5390	113.0	0.2252	0.4900	112.7	0.2232	0.4485	112.4	0.2213	150
160	0.6100	115.3	0.2307	0.5503	115.0	0.2286	0.5005	114.7	0.2265	0.4584	114.4	0.2247	160
170	0.6222	117.3	0.2340	0.5616	117.1	0.2319	0.5110	116.8	0.2299	0.4682	116.5	0.2280	170
180	0.6343	119.4	0.2373	0.5728	119.1	0.2351	0.5214	118.9	0.2331	0.4780	118.6	0.2313	180
190	0.6464	121.5	0.2405	0.5839	121.2	0.2384	0.5317	121.0	0.2364	0.4876	120.7	0.2346	190
200	0.6584	123.6	0.2437	0.5949	123.3	0.2416	0.5420	123.1	0.2396	0.4972	122.9	0.2378	200
210	0.6703	125.7	0.2469	0.6059	125.5	0.2448	0.5522	125.2	0.2428	0.5068	125.0	0.2410	210
220	0.6822	127.8	0.2501	0.6168	127.6	0.2480	0.5623	127.4	0.2460	0.5162	127.1	0.2442	220
230	0.6940	130.0	0.2532	0.6277	129.8	0.2511	0.5724	129.5	0.2492	0.5256	129.3	0.2474	230
240	0.7058	132.1	0.2563	0.6385	131.9	0.2542	0.5824	131.7	0.2523	0.5350	131.5	0.2505	240
250	0.7175	134.3	0.2594	0.6493	134.1	0.2573	0.5924	133.9	0.2554	0.5443	133.7	0.2536	250
260	0.7292	136.5	0.2625	0.6600	136.3	0.2604	0.6024	136.1	0.2585	0.5536	135.9	0.2567	260
270	0.7408	138.7	0.2655	0.6707	138.5	0.2634	0.6122	138.3	0.2615	0.5628	138.1	0.2598	270
280	0.7524	140.9	0.2685	0.6813	140.7	0.2665	0.6221	140.5	0.2646	0.5720	140.3	0.2628	280
290	0.7640	143.2	0.2715	0.6919	143.0	0.2695	0.6319	142.8	0.2676	0.5811	142.6	0.2658	290
300	0.7755	145.4	0.2745	0.7025	145.2	0.2724	0.6417	145.0	0.2706	0.5902	144.8	0.2688	300
310	0.7870	147.7	0.2774	0.7130	147.5	0.2754	0.6514	147.3	0.2735	0.5993	147.1	0.2718	310
320	0.7984	149.9	0.2804	0.7235	149.8	0.2783	0.6611	149.6	0.2765	0.6083	149.4	0.2748	320
330	0.8099	152.2	0.2833	0.7340	152.1	0.2813	0.6708	151.9	0.2794	0.6173	151.7	0.2777	330
340	0.8212	154.5	0.2862	0.7444	154.4	0.2842	0.6804	154.2	0.2823	0.6263	154.0	0.2806	340
350	—	—	—	0.7548	156.7	0.2871	0.6900	156.5	0.2852	0.6352	156.4	0.2835	350
360	—	—	—	—	—	—	—	—	—	0.6441	158.7	0.2864	360

Table 2 (continued)
Suva® HP80 Superheated Vapor—Constant Pressure Tables

V = Volume in ft³/lb H = Enthalpy in Btu/lb S = Entropy in Btu/(lb) (°R) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, psia													
TEMP. °F	140.00			150.00			160.00			170.00			TEMP. °F
	(57.25°F)			(61.64°F)			(65.82°F)			(69.81°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.3192)	(93.2)	(0.1860)	(0.2969)	(93.6)	(0.1857)	(0.2773)	(94.0)	(0.1854)	(0.2599)	(94.4)	(0.1851)	
60	0.3222	93.8	0.1870	—	—	—	—	—	—	—	—	—	60
70	0.3331	95.8	0.1909	0.3057	95.3	0.1889	0.2815	94.9	0.1870	0.2600	94.4	0.1852	70
80	0.3437	97.8	0.1946	0.3159	97.4	0.1927	0.2914	96.9	0.1909	0.2697	96.5	0.1891	80
90	0.3541	99.8	0.1983	0.3258	99.4	0.1965	0.3011	99.0	0.1947	0.2791	98.6	0.1929	90
100	0.3642	101.8	0.2020	0.3356	101.5	0.2001	0.3105	101.1	0.1984	0.2882	100.7	0.1967	100
110	0.3742	103.9	0.2056	0.3452	103.5	0.2038	0.3197	103.1	0.2020	0.2971	102.8	0.2004	110
120	0.3841	105.9	0.2091	0.3546	105.6	0.2073	0.3287	105.2	0.2056	0.3058	104.9	0.2040	120
130	0.3938	107.9	0.2126	0.3638	107.6	0.2109	0.3375	107.3	0.2092	0.3143	107.0	0.2076	130
140	0.4034	110.0	0.2161	0.3729	109.7	0.2143	0.3463	109.4	0.2127	0.3227	109.1	0.2111	140
150	0.4128	112.1	0.2195	0.3819	111.8	0.2178	0.3549	111.5	0.2162	0.3310	111.2	0.2146	150
160	0.4222	114.2	0.2229	0.3908	113.9	0.2212	0.3634	113.6	0.2196	0.3391	113.3	0.2181	160
170	0.4315	116.3	0.2262	0.3996	116.0	0.2246	0.3718	115.7	0.2230	0.3471	115.4	0.2215	170
180	0.4407	118.4	0.2295	0.4084	118.1	0.2279	0.3801	117.8	0.2263	0.3551	117.5	0.2248	180
190	0.4498	120.5	0.2328	0.4170	120.2	0.2312	0.3883	120.0	0.2296	0.3629	119.7	0.2282	190
200	0.4588	122.6	0.2361	0.4255	122.4	0.2345	0.3964	122.1	0.2329	0.3707	121.8	0.2315	200
210	0.4678	124.8	0.2393	0.4340	124.5	0.2377	0.4044	124.3	0.2362	0.3783	124.0	0.2347	210
220	0.4767	126.9	0.2425	0.4424	126.7	0.2409	0.4124	126.4	0.2394	0.3860	126.2	0.2380	220
230	0.4855	129.1	0.2457	0.4508	128.9	0.2441	0.4204	128.6	0.2426	0.3935	128.4	0.2412	230
240	0.4943	131.3	0.2488	0.4591	131.0	0.2473	0.4282	130.8	0.2458	0.4010	130.6	0.2444	240
250	0.5031	133.5	0.2520	0.4673	133.3	0.2504	0.4360	133.0	0.2489	0.4084	132.8	0.2475	250
260	0.5118	135.7	0.2550	0.4755	135.5	0.2535	0.4438	135.3	0.2520	0.4158	135.1	0.2506	260
270	0.5204	137.9	0.2581	0.4837	137.7	0.2566	0.4515	137.5	0.2551	0.4232	137.3	0.2537	270
280	0.5290	140.1	0.2612	0.4918	139.9	0.2596	0.4592	139.8	0.2582	0.4304	139.6	0.2568	280
290	0.5376	142.4	0.2642	0.4998	142.2	0.2627	0.4668	142.0	0.2612	0.4377	141.8	0.2598	290
300	0.5461	144.7	0.2672	0.5079	144.5	0.2657	0.4744	144.3	0.2642	0.4449	144.1	0.2629	300
310	0.5546	146.9	0.2702	0.5159	146.8	0.2687	0.4820	146.6	0.2672	0.4521	146.4	0.2659	310
320	0.5630	149.2	0.2731	0.5238	149.1	0.2716	0.4895	148.9	0.2702	0.4592	148.7	0.2688	320
330	0.5715	151.5	0.2761	0.5317	151.4	0.2746	0.4970	151.2	0.2731	0.4663	151.0	0.2718	330
340	0.5798	153.9	0.2790	0.5396	153.7	0.2775	0.5044	153.5	0.2761	0.4734	153.4	0.2747	340
350	0.5882	156.2	0.2819	0.5475	156.0	0.2804	0.5118	155.9	0.2790	0.4804	155.7	0.2776	350
360	0.5965	158.5	0.2848	0.5553	158.4	0.2833	0.5192	158.2	0.2819	0.4874	158.1	0.2805	360
370	—	—	—	0.5631	160.7	0.2861	0.5266	160.6	0.2847	0.4944	160.4	0.2834	370

TEMP. °F	180.00			190.00			200.00			220.00			TEMP. °F
	(73.63°F)			(77.29°F)			(80.81°F)			(87.47°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.2443)	(94.7)	(0.1848)	(0.2303)	(95.0)	(0.1846)	(0.2176)	(95.3)	(0.1843)	(0.1955)	(95.7)	(0.1837)	
80	0.2503	96.0	0.1874	0.2328	95.6	0.1856	—	—	—	—	—	—	80
90	0.2594	98.2	0.1912	0.2418	97.7	0.1896	0.2258	97.3	0.1880	0.1977	96.3	0.1848	90
100	0.2683	100.3	0.1950	0.2505	99.9	0.1934	0.2343	99.4	0.1919	0.2061	98.5	0.1888	100
110	0.2770	102.4	0.1988	0.2589	102.0	0.1972	0.2425	101.6	0.1957	0.2141	100.8	0.1928	110
120	0.2854	104.5	0.2025	0.2671	104.1	0.2009	0.2505	103.7	0.1995	0.2218	103.0	0.1966	120
130	0.2936	106.6	0.2061	0.2751	106.3	0.2046	0.2583	105.9	0.2031	0.2293	105.2	0.2003	130
140	0.3017	108.7	0.2096	0.2829	108.4	0.2082	0.2659	108.0	0.2068	0.2365	107.3	0.2040	140
150	0.3097	110.8	0.2131	0.2906	110.5	0.2117	0.2734	110.2	0.2103	0.2436	109.5	0.2077	150
160	0.3175	113.0	0.2166	0.2981	112.7	0.2152	0.2807	112.4	0.2138	0.2505	111.7	0.2112	160
170	0.3252	115.1	0.2200	0.3056	114.8	0.2186	0.2879	114.5	0.2173	0.2573	113.9	0.2147	170
180	0.3328	117.3	0.2234	0.3129	117.0	0.2220	0.2950	116.7	0.2207	0.2639	116.1	0.2182	180
190	0.3403	119.4	0.2268	0.3201	119.2	0.2254	0.3020	118.9	0.2241	0.2705	118.3	0.2216	190
200	0.3478	121.6	0.2301	0.3273	121.3	0.2287	0.3088	121.1	0.2274	0.2769	120.5	0.2250	200
210	0.3551	123.8	0.2333	0.3344	123.5	0.2320	0.3156	123.3	0.2307	0.2833	122.8	0.2283	210
220	0.3624	126.0	0.2366	0.3413	125.7	0.2353	0.3224	125.5	0.2340	0.2896	125.0	0.2316	220
230	0.3696	128.2	0.2398	0.3483	127.9	0.2385	0.3290	127.7	0.2373	0.2958	127.2	0.2349	230
240	0.3768	130.4	0.2430	0.3551	130.1	0.2417	0.3356	129.9	0.2405	0.3019	129.5	0.2381	240
250	0.3839	132.6	0.2462	0.3619	132.4	0.2449	0.3422	132.2	0.2436	0.3080	131.7	0.2413	250
260	0.3909	134.8	0.2493	0.3687	134.6	0.2480	0.3486	134.4	0.2468	0.3140	134.0	0.2445	260
270	0.3979	137.1	0.2524	0.3754	136.9	0.2511	0.3551	136.7	0.2499	0.3200	136.3	0.2476	270
280	0.4049	139.4	0.2555	0.3820	139.2	0.2542	0.3614	139.0	0.2530	0.3259	138.5	0.2508	280
290	0.4118	141.6	0.2585	0.3886	141.4	0.2573	0.3678	141.2	0.2561	0.3317	140.8	0.2538	290
300	0.4187	143.9	0.2616	0.3952	143.7	0.2603	0.3741	143.5	0.2591	0.3376	143.2	0.2569	300
310	0.4255	146.2	0.2646	0.4017	146.0	0.2633	0.3803	145.8	0.2622	0.3433	145.5	0.2599	310
320	0.4323	148.5	0.2676	0.4082	148.4	0.2663	0.3865	148.2	0.2652	0.3491	147.8	0.2630	320
330	0.4390	150.9	0.2705	0.4146	150.7	0.2693	0.3927	150.5	0.2681	0.3548	150.2	0.2659	330
340	0.4458	153.2	0.2735	0.4211	153.0	0.2722	0.3988	152.9	0.2711	0.3605	152.5	0.2689	340
350	0.4525	155.5	0.2764	0.4275	155.4	0.2752	0.4050	155.2	0.2740	0.3661	154.9	0.2718	350
360	0.4591	157.9	0.2793	0.4338	157.7	0.2781	0.4110	157.6	0.2769	0.3717	157.3	0.2748	360
370	0.4658	160.3	0.2822	0.4401	160.1	0.2810	0.4171	160.0	0.2798	0.3773	159.6	0.2777	370
380	0.4724	162.7	0.2850	0.4464	162.5	0.2838	0.4231	162.4	0.2827	0.3828	162.0	0.2805	380
390	—	—	—	—	—	—	0.4291	164.8	0.2855	0.3884	164.5	0.2834	390

Table 2 (continued)
Suva® HP80 Superheated Vapor—Constant Pressure Tables

V = Volume in ft³/lb H = Enthalpy in Btu/lb S = Entropy in Btu/(lb) (°R) (Saturation Properties in parentheses)

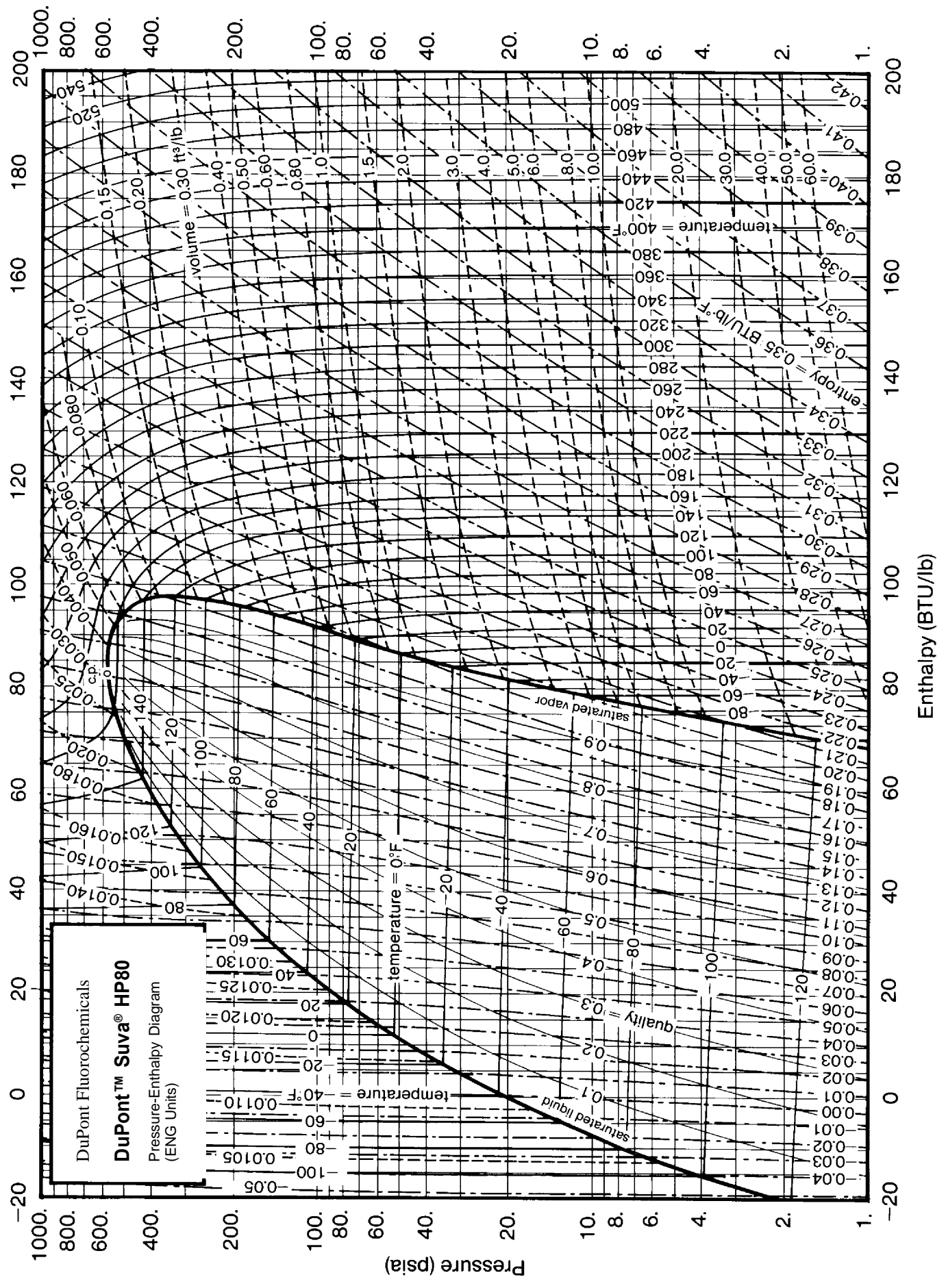
ABSOLUTE PRESSURE, psia													
TEMP. °F	240.00			260.00			280.00			300.00			TEMP. °F
	(93.69°F)			(99.54°F)			(-105.06°F)			(110.29°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.1770)	(96.1)	(0.1832)	(0.1611)	(96.4)	(0.1826)	(0.1474)	(96.6)	(0.1820)	(0.1353)	(96.8)	(0.1814)	
100	0.1822	97.6	0.1858	0.1615	96.5	0.1828	—	—	—	—	—	—	100
110	0.1901	99.9	0.1899	0.1694	98.9	0.1870	0.1513	97.9	0.1842	—	—	—	110
120	0.1976	102.1	0.1938	0.1769	101.3	0.1911	0.1588	100.3	0.1884	0.1428	99.3	0.1857	120
130	0.2048	104.4	0.1977	0.1840	103.6	0.1951	0.1659	102.7	0.1925	0.1499	101.8	0.1900	130
140	0.2118	106.6	0.2014	0.1908	105.9	0.1989	0.1726	105.1	0.1965	0.1566	104.2	0.1941	140
150	0.2186	108.8	0.2051	0.1974	108.1	0.2027	0.1790	107.4	0.2003	0.1630	106.6	0.1980	150
160	0.2252	111.1	0.2087	0.2037	110.4	0.2064	0.1852	109.7	0.2041	0.1691	109.0	0.2018	160
170	0.2317	113.3	0.2123	0.2099	112.7	0.2100	0.1912	112.0	0.2078	0.1749	111.3	0.2056	170
180	0.2380	115.5	0.2158	0.2160	114.9	0.2135	0.1971	114.3	0.2114	0.1806	113.6	0.2093	180
190	0.2442	117.8	0.2193	0.2219	117.2	0.2170	0.2028	116.6	0.2149	0.1861	116.0	0.2129	190
200	0.2503	120.0	0.2227	0.2277	119.4	0.2205	0.2083	118.9	0.2184	0.1915	118.3	0.2164	200
210	0.2563	122.2	0.2261	0.2334	121.7	0.2239	0.2138	121.2	0.2219	0.1967	120.6	0.2199	210
220	0.2622	124.5	0.2294	0.2390	124.0	0.2273	0.2192	123.4	0.2253	0.2019	122.9	0.2233	220
230	0.2681	126.7	0.2327	0.2446	126.2	0.2306	0.2244	125.7	0.2286	0.2069	125.2	0.2267	230
240	0.2738	129.0	0.2359	0.2500	128.5	0.2339	0.2296	128.0	0.2319	0.2119	127.6	0.2301	240
250	0.2795	131.3	0.2392	0.2554	130.8	0.2371	0.2347	130.3	0.2352	0.2168	129.9	0.2334	250
260	0.2851	133.5	0.2424	0.2607	133.1	0.2403	0.2398	132.7	0.2384	0.2216	132.2	0.2366	260
270	0.2907	135.8	0.2455	0.2660	135.4	0.2435	0.2447	135.0	0.2416	0.2263	134.6	0.2399	270
280	0.2962	138.1	0.2487	0.2712	137.7	0.2467	0.2497	137.3	0.2448	0.2310	136.9	0.2430	280
290	0.3017	140.5	0.2518	0.2763	140.1	0.2498	0.2545	139.7	0.2480	0.2357	139.2	0.2462	290
300	0.3071	142.8	0.2548	0.2814	142.4	0.2529	0.2594	142.0	0.2511	0.2402	141.6	0.2493	300
310	0.3125	145.1	0.2579	0.2865	144.7	0.2560	0.2641	144.4	0.2541	0.2448	144.0	0.2524	310
320	0.3179	147.5	0.2609	0.2915	147.1	0.2590	0.2689	146.7	0.2572	0.2493	146.4	0.2555	320
330	0.3232	149.8	0.2639	0.2965	149.5	0.2620	0.2736	149.1	0.2602	0.2537	148.7	0.2585	330
340	0.3285	152.2	0.2669	0.3014	151.8	0.2650	0.2782	151.5	0.2632	0.2581	151.1	0.2616	340
350	0.3337	154.5	0.2698	0.3063	154.2	0.2680	0.2829	153.9	0.2662	0.2625	153.5	0.2646	350
360	0.3389	156.9	0.2728	0.3112	156.6	0.2709	0.2874	156.3	0.2692	0.2669	156.0	0.2675	360
370	0.3441	159.3	0.2757	0.3161	159.0	0.2738	0.2920	158.7	0.2721	0.2712	158.4	0.2705	370
380	0.3493	161.7	0.2786	0.3209	161.4	0.2767	0.2965	161.1	0.2750	0.2755	160.8	0.2734	380
390	0.3544	164.2	0.2814	0.3257	163.9	0.2796	0.3010	163.6	0.2779	0.2797	163.3	0.2763	390
400	0.3595	166.6	0.2843	0.3304	166.3	0.2824	0.3055	166.0	0.2807	0.2839	165.7	0.2791	400
410	—	—	—	—	—	—	0.3100	168.5	0.2836	0.2882	168.2	0.2820	410
420	—	—	—	—	—	—	—	—	—	0.2923	170.7	0.2848	420

TEMP. °F	320.00			340.00			360.00			380.00			TEMP. °F
	(115.27°F)			(120.02°F)			(124.56°F)			(128.92°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.1247)	(96.9)	(0.1807)	(0.1152)	(97.0)	(0.1800)	(0.1067)	(96.9)	(0.1793)	(0.0989)	(96.9)	(0.1785)	
120	0.1284	98.2	0.1829	—	—	—	—	—	—	—	—	—	120
130	0.1357	100.8	0.1874	0.1228	99.7	0.1848	0.1110	98.5	0.1820	0.0998	97.2	0.1791	130
140	0.1425	103.3	0.1916	0.1297	102.4	0.1892	0.1182	101.3	0.1867	0.1075	100.2	0.1842	140
150	0.1488	105.8	0.1957	0.1361	104.9	0.1934	0.1247	104.0	0.1911	0.1142	103.0	0.1888	150
160	0.1548	108.2	0.1997	0.1421	107.4	0.1975	0.1307	106.6	0.1953	0.1204	105.7	0.1932	160
170	0.1606	110.6	0.2035	0.1478	109.9	0.2014	0.1364	109.1	0.1994	0.1261	108.3	0.1973	170
180	0.1661	113.0	0.2072	0.1533	112.3	0.2052	0.1418	111.6	0.2033	0.1314	110.8	0.2013	180
190	0.1715	115.3	0.2109	0.1585	114.7	0.2090	0.1470	114.0	0.2071	0.1366	113.3	0.2052	190
200	0.1767	117.7	0.2145	0.1636	117.1	0.2126	0.1520	116.5	0.2108	0.1415	115.8	0.2090	200
210	0.1818	120.0	0.2180	0.1686	119.5	0.2162	0.1568	118.9	0.2144	0.1462	118.3	0.2127	210
220	0.1868	122.4	0.2215	0.1734	121.8	0.2197	0.1615	121.3	0.2180	0.1508	120.7	0.2163	220
230	0.1916	124.7	0.2249	0.1781	124.2	0.2231	0.1660	123.7	0.2215	0.1553	123.1	0.2198	230
240	0.1964	127.1	0.2283	0.1827	126.6	0.2266	0.1705	126.0	0.2249	0.1596	125.5	0.2233	240
250	0.2011	129.4	0.2316	0.1872	128.9	0.2299	0.1749	128.4	0.2283	0.1638	127.9	0.2267	250
260	0.2057	131.8	0.2349	0.1917	131.3	0.2332	0.1792	130.8	0.2316	0.1680	130.4	0.2301	260
270	0.2102	134.1	0.2381	0.1960	133.7	0.2365	0.1834	133.2	0.2349	0.1721	132.8	0.2334	270
280	0.2147	136.5	0.2414	0.2003	136.0	0.2397	0.1875	135.6	0.2382	0.1761	135.2	0.2367	280
290	0.2191	138.8	0.2445	0.2046	138.4	0.2429	0.1916	138.0	0.2414	0.1800	137.6	0.2399	290
300	0.2235	141.2	0.2477	0.2088	140.8	0.2461	0.1957	140.4	0.2446	0.1839	140.0	0.2431	300
310	0.2278	143.6	0.2508	0.2129	143.2	0.2492	0.1996	142.8	0.2477	0.1878	142.4	0.2463	310
320	0.2321	146.0	0.2539	0.2170	145.6	0.2523	0.2036	145.2	0.2509	0.1915	144.9	0.2494	320
330	0.2364	148.4	0.2569	0.2211	148.0	0.2554	0.2074	147.7	0.2540	0.1953	147.3	0.2526	330
340	0.2406	150.8	0.2600	0.2251	150.4	0.2585	0.2113	150.1	0.2570	0.1990	149.7	0.2556	340
350	0.2447	153.2	0.2630	0.2290	152.9	0.2615	0.2151	152.5	0.2600	0.2026	152.2	0.2587	350
360	0.2489	155.6	0.2660	0.2330	155.3	0.2645	0.2189	155.0	0.2630	0.2063	154.7	0.2617	360
370	0.2530	158.1	0.2689	0.2369	157.8	0.2674	0.2226	157.4	0.2660	0.2098	157.1	0.2647	370
380	0.2570	160.5	0.2718	0.2408	160.2	0.2704	0.2263	159.9	0.2690	0.2134	159.6	0.2676	380
390	0.2611	163.0	0.2747	0.2446	162.7	0.2733	0.2300	162.4	0.2719	0.2169	162.1	0.2706	390
400	0.2651	165.4	0.2776	0.2484	165.1	0.2762	0.2336	164.8	0.2748	0.2204	164.5	0.2735	400
410	0.2691	167.9	0.2805	0.2522	167.6	0.2790	0.2373	167.3	0.2777	0.2239	167.0	0.2764	410
420	0.2730	170.4	0.2833	0.2560	170.1	0.2819	0.2409	169.8	0.2805	0.2273	169.5	0.2792	420
430	—	—	—	0.2597	172.6	0.2847	0.2444	172.3	0.2833	0.2308	172.1	0.2821	430

Table 2 (continued)
Suva® HP80 Superheated Vapor—Constant Pressure Tables

V = Volume in ft³/lb H = Enthalpy in Btu/lb S = Entropy in Btu/(lb) (°R) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, psia													
TEMP. °F	400.00			450.00			500.00			550.00			TEMP. °F
	(133.10°F)			(142.91°F)			(151.93°F)			(160.25°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.0918)	(96.7)	(0.1776)	(0.0764)	(96.0)	(0.1752)	(0.0632)	(94.7)	(0.1720)	(0.0510)	(92.3)	(0.1673)	
140	0.0975	99.0	0.1814	—	—	—	—	—	—	—	—	—	140
150	0.1046	102.0	0.1864	0.0828	98.7	0.1797	—	—	—	—	—	—	150
160	0.1109	104.8	0.1910	0.0900	102.1	0.1851	0.0715	98.6	0.1783	—	—	—	160
170	0.1167	107.5	0.1953	0.0963	105.1	0.1900	0.0790	102.3	0.1843	0.0631	98.6	0.1773	170
180	0.1221	110.1	0.1994	0.1019	108.0	0.1945	0.0851	105.6	0.1894	0.0705	102.7	0.1838	180
190	0.1271	112.6	0.2033	0.1070	110.7	0.1988	0.0905	108.6	0.1941	0.0765	106.2	0.1892	190
200	0.1320	115.1	0.2072	0.1118	113.4	0.2028	0.0954	111.5	0.1985	0.0816	109.4	0.1941	200
210	0.1367	117.6	0.2109	0.1164	116.0	0.2068	0.0999	114.3	0.2027	0.0863	112.4	0.1986	210
220	0.1412	120.1	0.2146	0.1207	118.6	0.2106	0.1042	117.0	0.2067	0.0906	115.2	0.2028	220
230	0.1455	122.6	0.2182	0.1249	121.1	0.2143	0.1083	119.6	0.2106	0.0947	118.0	0.2069	230
240	0.1498	125.0	0.2217	0.1289	123.7	0.2179	0.1122	122.2	0.2143	0.0985	120.8	0.2108	240
250	0.1539	127.4	0.2252	0.1329	126.2	0.2215	0.1160	124.8	0.2180	0.1022	123.4	0.2146	250
260	0.1579	129.9	0.2286	0.1367	128.7	0.2250	0.1197	127.4	0.2216	0.1057	126.1	0.2183	260
270	0.1619	132.3	0.2319	0.1404	131.1	0.2284	0.1232	129.9	0.2251	0.1091	128.7	0.2219	270
280	0.1658	134.7	0.2352	0.1440	133.6	0.2318	0.1266	132.5	0.2286	0.1124	131.3	0.2255	280
290	0.1696	137.2	0.2385	0.1476	136.1	0.2351	0.1300	135.0	0.2320	0.1156	133.9	0.2290	290
300	0.1734	139.6	0.2417	0.1511	138.6	0.2384	0.1333	137.5	0.2353	0.1187	136.5	0.2324	300
310	0.1771	142.0	0.2449	0.1545	141.1	0.2417	0.1365	140.1	0.2386	0.1218	139.0	0.2357	310
320	0.1807	144.5	0.2481	0.1579	143.5	0.2449	0.1397	142.6	0.2418	0.1248	141.6	0.2390	320
330	0.1843	146.9	0.2512	0.1612	146.0	0.2480	0.1428	145.1	0.2451	0.1277	144.1	0.2423	330
340	0.1879	149.4	0.2543	0.1645	148.5	0.2511	0.1459	147.6	0.2482	0.1306	146.7	0.2455	340
350	0.1914	151.9	0.2573	0.1678	151.0	0.2542	0.1489	150.1	0.2514	0.1335	149.3	0.2487	350
360	0.1949	154.3	0.2604	0.1710	153.5	0.2573	0.1519	152.7	0.2545	0.1363	151.8	0.2518	360
370	0.1984	156.8	0.2634	0.1741	156.0	0.2603	0.1548	155.2	0.2575	0.1390	154.4	0.2549	370
380	0.2018	159.3	0.2663	0.1773	158.5	0.2633	0.1577	157.7	0.2606	0.1417	156.9	0.2580	380
390	0.2052	161.8	0.2693	0.1804	161.0	0.2663	0.1606	160.2	0.2636	0.1444	159.5	0.2610	390
400	0.2085	164.3	0.2722	0.1834	163.5	0.2692	0.1634	162.8	0.2665	0.1471	162.0	0.2640	400
410	0.2119	166.8	0.2751	0.1865	166.0	0.2722	0.1662	165.3	0.2695	0.1497	164.6	0.2670	410
420	0.2152	169.3	0.2780	0.1895	168.6	0.2751	0.1690	167.9	0.2724	0.1523	167.2	0.2699	420
430	0.2185	171.8	0.2808	0.1925	171.1	0.2779	0.1718	170.4	0.2753	0.1549	169.8	0.2728	430
440	0.2217	174.3	0.2836	0.1955	173.7	0.2808	0.1745	173.0	0.2781	0.1574	172.3	0.2757	440
450	—	—	—	0.1984	176.2	0.2836	0.1772	175.6	0.2810	0.1599	174.9	0.2786	450
460	—	—	—	—	—	—	0.1799	178.1	0.2838	0.1624	177.5	0.2814	460



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