

DuPont™ Suva®
refrigerants

**Thermodynamic
Properties
of**

**DuPont™
Suva® 407C**
Refrigerant

(R-407C)



Thermodynamic Properties of DuPont™ Suva® 407C Refrigerant

English (I/P) Units

New tables of the thermodynamic properties of DuPont™ Suva® 407C refrigerant [ASHRAE designation: R-407C (23/25/52)], a near azeotropic blend of HFC-32/HFC-125/HFC-134a, 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	CH ₂ F ₂ /CHF ₂ CF ₃ /CH ₂ FCF ₃ (23/25/52% by weight)	
Molecular Weight	86.20	
Boiling Point at One Atmosphere	-46.40°F	(-43.56°C)
Critical Temperature, T _c	188.13°F	(86.74°C)
	647.80°R	(359.89 K)
Critical Pressure, P _c	669.95 psia	(4619.10 kPa [abs])
Critical Density, D _c	32.92 lb/ft ³	(527.30 kg/m ³)
Critical Volume, V _c	0.0304 ft ³ /lb	(0.00190 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
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) (ft³)/(lb-mole) (°R)
for Suva® 407C, R = 0.1245 (psia) (ft³)/(lb) (°R)

Conversion factor from Work Units to heat Units:

$$J = 0.185053$$

$$\text{Btu/lb} = [(\text{psia}) (\text{ft}^3)/\text{lb}] \infty J$$

One atmosphere = 14.696 psia

Reference point for enthalpy and entropy:

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

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

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 English (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

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

x_i = mole fraction of component i

x_j = mole fraction of component j

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

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

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

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

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

(Note: κ_i = κ_{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_{ri} = T_i/T_{ci} for component i

Values for R, T_{ci}, P_{ci}, ω_i, κ_{1i}, x_i, and k_{ij} are needed to calculate constants a and b. R = 0.008314 kJ/(mole) (K). The remaining constants for Suva® 407C are summarized below:

Component		T _{ci}	P _{ci}	ω _i	κ _{1i}	x _i
HFC-32	(i = 1)	351.60	5830.0	0.2763	-0.0250	0.38110
HFC-125	(i = 2)	339.19	3595.0	0.3023	0.0310	0.17956
HFC-134a	(i = 3)	374.20	4056.0	0.3266	-0.0060	0.43934

The binary interaction parameters, k_{ij} , for Suva[®] 407C are:

$$\begin{aligned} k_{11} &= 0.00000 & k_{12} &= -0.00028 & k_{13} &= -0.00815 \\ k_{21} &= -0.00028 & k_{22} &= 0.00000 & k_{23} &= -0.00240 \\ k_{31} &= -0.00815 & k_{32} &= -0.00240 & k_{33} &= 0.00000 \end{aligned}$$

Ideal Gas Heat Capacity Equation (at constant pressure):

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

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

where C_p° and C_{pi}° 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[®] 407C).
 $A_i, B_i, C_i, D_i, E_i,$ and F_i are constants:

$$\begin{aligned} A_1 &= 1.226880 \text{ E+01} & B_1 &= -0.699113 \text{ E-01} \\ A_2 &= 1.170140 \text{ E+01} & B_2 &= 0.216411 \text{ E-01} \\ A_3 &= 0.463685 \text{ E+01} & B_3 &= 0.617904 \text{ E-01} \\ \\ C_1 &= 0.394642 \text{ E-03} & D_1 &= -0.837462 \text{ E-06} \\ C_2 &= 0.868526 \text{ E-04} & D_2 &= -0.112776 \text{ E-06} \\ C_3 &= -0.309907 \text{ E-04} & D_3 &= 0.000000 \text{ E+00} \\ \\ E_1 &= 0.859548 \text{ E-09} & F_1 &= 0.000000 \text{ E+00} \\ E_2 &= 0.000000 \text{ E+00} & F_2 &= 0.000000 \text{ E+00} \\ E_3 &= 0.000000 \text{ E+00} & F_3 &= 0.000000 \text{ E+00} \end{aligned}$$

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[®] 407C, $H(\text{ref}) = 146.6 \text{ kJ/kg}$ and $S(\text{ref}) = 0.7903 \text{ kJ/kg} \cdot \text{K}$.

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

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

2. Vapor Pressure

$$\log_n P_{\text{sat}} = A + B/T + C \log_n T + D T^2$$

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 :

$$\begin{aligned} A &= 4.27103 \text{ E+01} & C &= -4.39387 \text{ E+00} \\ B &= -3.34460 \text{ E+03} & D &= 6.86997 \text{ E-06} \end{aligned}$$

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

$$\begin{aligned} A &= 7.46912 \text{ E+01} & C &= -9.51789 \text{ E+00} \\ B &= -4.50059 \text{ E+03} & D &= 1.73528 \text{ E-05} \end{aligned}$$

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 :

$$\begin{aligned} A &= 4.33622 \text{ E+01} & C &= -4.39387 \text{ E+00} \\ B &= -6.02028 \text{ E+03} & D &= 2.12036 \text{ E-06} \end{aligned}$$

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

$$\begin{aligned} A &= 7.83549 \text{ E+01} & C &= -9.51789 \text{ E+00} \\ B &= -8.10106 \text{ E+03} & D &= 0.53558 \text{ E-05} \end{aligned}$$

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:

$$\begin{aligned} a_0 &= 1.000000 \text{ E+00} & a_3 &= 2.746460 \text{ E+00} \\ a_1 &= 2.350274 \text{ E+00} & a_4 &= 0.000000 \text{ E+00} \\ a_2 &= -2.029024 \text{ E+00} & t_0 &= 0.0000 \end{aligned}$$

Table 1
Suva® 407C 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	0.33	0.15	0.0101	250.0000	99.10	0.0040	-31.0	118.7	87.8	-0.0852	0.3073	-150
-149	0.34	0.16	0.0101	238.0952	98.99	0.0042	-30.7	118.6	87.9	-0.0844	0.3065	-149
-148	0.36	0.17	0.0101	227.2727	98.87	0.0044	-30.4	118.5	88.0	-0.0835	0.3056	-148
-147	0.38	0.18	0.0101	217.3913	98.76	0.0046	-30.2	118.4	88.2	-0.0827	0.3048	-147
-146	0.40	0.19	0.0101	204.0816	98.64	0.0049	-29.9	118.3	88.3	-0.0818	0.3040	-146
-145	0.42	0.20	0.0102	192.3077	98.52	0.0052	-29.6	118.1	88.5	-0.0810	0.3032	-145
-144	0.44	0.21	0.0102	185.1852	98.41	0.0054	-29.4	118.0	88.6	-0.0801	0.3024	-144
-143	0.46	0.22	0.0102	175.4386	98.29	0.0057	-29.1	117.9	88.8	-0.0793	0.3016	-143
-142	0.48	0.24	0.0102	166.6667	98.18	0.0060	-28.8	117.8	88.9	-0.0784	0.3008	-142
-141	0.51	0.25	0.0102	158.7302	98.06	0.0063	-28.6	117.6	89.1	-0.0776	0.3001	-141
-140	0.53	0.26	0.0102	151.5152	97.94	0.0066	-28.3	117.5	89.2	-0.0767	0.2993	-140
-139	0.56	0.28	0.0102	142.8571	97.83	0.0070	-28.0	117.4	89.4	-0.0759	0.2986	-139
-138	0.58	0.29	0.0102	136.9863	97.71	0.0073	-27.8	117.3	89.5	-0.0751	0.2978	-138
-137	0.61	0.31	0.0102	129.8701	97.60	0.0077	-27.5	117.2	89.7	-0.0742	0.2971	-137
-136	0.64	0.33	0.0103	123.4568	97.48	0.0081	-27.2	117.0	89.8	-0.0734	0.2963	-136
-135	0.67	0.34	0.0103	117.6471	97.36	0.0085	-27.0	116.9	90.0	-0.0726	0.2956	-135
-134	0.70	0.36	0.0103	112.3596	97.25	0.0089	-26.7	116.8	90.1	-0.0717	0.2949	-134
-133	0.74	0.38	0.0103	107.5269	97.13	0.0093	-26.4	116.7	90.3	-0.0709	0.2942	-133
-132	0.77	0.40	0.0103	102.0408	97.01	0.0098	-26.2	116.6	90.4	-0.0701	0.2935	-132
-131	0.80	0.42	0.0103	98.0392	96.90	0.0102	-25.9	116.4	90.6	-0.0693	0.2928	-131
-130	0.84	0.44	0.0103	93.4579	96.78	0.0107	-25.6	116.3	90.7	-0.0684	0.2921	-130
-129	0.88	0.46	0.0103	89.2857	96.67	0.0112	-25.3	116.2	90.9	-0.0676	0.2915	-129
-128	0.92	0.48	0.0104	84.7458	96.55	0.0118	-25.1	116.1	91.0	-0.0668	0.2908	-128
-127	0.96	0.51	0.0104	81.3008	96.43	0.0123	-24.8	116.0	91.2	-0.0660	0.2901	-127
-126	1.00	0.53	0.0104	77.5194	96.32	0.0129	-24.5	115.8	91.3	-0.0652	0.2895	-126
-125	1.05	0.56	0.0104	74.0741	96.20	0.0135	-24.3	115.7	91.5	-0.0644	0.2888	-125
-124	1.09	0.59	0.0104	70.9220	96.08	0.0141	-24.0	115.6	91.6	-0.0636	0.2882	-124
-123	1.14	0.62	0.0104	68.0272	95.97	0.0147	-23.7	115.5	91.8	-0.0627	0.2876	-123
-122	1.19	0.64	0.0104	64.9351	95.85	0.0154	-23.4	115.3	91.9	-0.0619	0.2869	-122
-121	1.24	0.68	0.0104	62.1118	95.73	0.0161	-23.2	115.2	92.1	-0.0611	0.2863	-121
-120	1.29	0.71	0.0105	59.5238	95.62	0.0168	-22.9	115.1	92.2	-0.0603	0.2857	-120
-119	1.34	0.74	0.0105	57.1429	95.50	0.0175	-22.6	115.0	92.4	-0.0595	0.2851	-119
-118	1.40	0.77	0.0105	54.6448	95.38	0.0183	-22.3	114.8	92.5	-0.0587	0.2845	-118
-117	1.46	0.81	0.0105	52.6316	95.27	0.0190	-22.1	114.7	92.7	-0.0579	0.2839	-117
-116	1.52	0.85	0.0105	50.2513	95.15	0.0199	-21.8	114.6	92.8	-0.0571	0.2833	-116
-115	1.58	0.89	0.0105	48.3092	95.03	0.0207	-21.5	114.5	93.0	-0.0563	0.2827	-115
-114	1.64	0.93	0.0105	46.2963	94.91	0.0216	-21.2	114.4	93.1	-0.0555	0.2822	-114
-113	1.71	0.97	0.0105	44.4444	94.80	0.0225	-21.0	114.2	93.3	-0.0547	0.2816	-113
-112	1.78	1.01	0.0106	42.7350	94.68	0.0234	-20.7	114.1	93.4	-0.0539	0.2810	-112
-111	1.85	1.05	0.0106	40.9836	94.56	0.0244	-20.4	114.0	93.6	-0.0531	0.2805	-111
-110	1.92	1.10	0.0106	39.3701	94.45	0.0254	-20.1	113.9	93.7	-0.0524	0.2799	-110
-109	2.00	1.15	0.0106	37.8788	94.33	0.0264	-19.9	113.7	93.9	-0.0516	0.2794	-109
-108	2.08	1.20	0.0106	36.3636	94.21	0.0275	-19.6	113.6	94.0	-0.0508	0.2788	-108
-107	2.16	1.25	0.0106	34.9650	94.09	0.0286	-19.3	113.5	94.2	-0.0500	0.2783	-107
-106	2.24	1.30	0.0106	33.6700	93.98	0.0297	-19.0	113.4	94.3	-0.0492	0.2778	-106
-105	2.33	1.36	0.0107	32.3625	93.86	0.0309	-18.8	113.2	94.5	-0.0484	0.2772	-105
-104	2.41	1.42	0.0107	31.1527	93.74	0.0321	-18.5	113.1	94.6	-0.0476	0.2767	-104
-103	2.50	1.47	0.0107	29.9401	93.62	0.0334	-18.2	113.0	94.8	-0.0469	0.2762	-103
-102	2.60	1.54	0.0107	28.8184	93.51	0.0347	-17.9	112.9	94.9	-0.0461	0.2757	-102
-101	2.70	1.60	0.0107	27.7778	93.39	0.0360	-17.6	112.7	95.1	-0.0453	0.2752	-101
-100	2.80	1.66	0.0107	26.7380	93.27	0.0374	-17.4	112.6	95.2	-0.0445	0.2747	-100
-99	2.90	1.73	0.0107	25.7732	93.15	0.0388	-17.1	112.5	95.4	-0.0438	0.2742	-99
-98	3.00	1.80	0.0107	24.8139	93.03	0.0403	-16.8	112.4	95.6	-0.0430	0.2737	-98
-97	3.11	1.87	0.0108	23.9234	92.92	0.0418	-16.5	112.2	95.7	-0.0422	0.2733	-97
-96	3.23	1.95	0.0108	23.0947	92.80	0.0433	-16.2	112.1	95.9	-0.0414	0.2728	-96
-95	3.34	2.03	0.0108	22.2717	92.68	0.0449	-16.0	112.0	96.0	-0.0407	0.2723	-95
-94	3.46	2.11	0.0108	21.4592	92.56	0.0466	-15.7	111.9	96.2	-0.0399	0.2719	-94
-93	3.58	2.19	0.0108	20.7039	92.44	0.0483	-15.4	111.7	96.3	-0.0391	0.2714	-93
-92	3.71	2.27	0.0108	20.0000	92.33	0.0500	-15.1	111.6	96.5	-0.0384	0.2710	-92
-91	3.84	2.36	0.0108	19.3050	92.21	0.0518	-14.8	111.5	96.6	-0.0376	0.2705	-91

Table 1 (continued)
Suva® 407C 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 _c	LIQUID 1/v _f	VAPOR 1/v _g	LIQUID h _f	LATENT h _{fg}	VAPOR h _g	LIQUID s _f	VAPOR s _g	
-90	3.97	2.45	0.0109	18.6220	92.09	0.0537	-14.6	111.3	96.8	-0.0368	0.2701	-90
-89	4.11	2.55	0.0109	17.9856	91.97	0.0556	-14.3	111.2	96.9	-0.0361	0.2696	-89
-88	4.25	2.64	0.0109	17.3913	91.85	0.0575	-14.0	111.1	97.1	-0.0353	0.2692	-88
-87	4.40	2.74	0.0109	16.7785	91.73	0.0596	-13.7	111.0	97.2	-0.0346	0.2688	-87
-86	4.54	2.84	0.0109	16.2338	91.61	0.0616	-13.4	110.8	97.4	-0.0338	0.2683	-86
-85	4.70	2.95	0.0109	15.6740	91.50	0.0638	-13.1	110.7	97.5	-0.0331	0.2679	-85
-84	4.85	3.06	0.0109	15.1745	91.38	0.0659	-12.9	110.6	97.7	-0.0323	0.2675	-84
-83	5.02	3.17	0.0110	14.6628	91.26	0.0682	-12.6	110.4	97.9	-0.0315	0.2671	-83
-82	5.18	3.29	0.0110	14.1844	91.14	0.0705	-12.3	110.3	98.0	-0.0308	0.2667	-82
-81	5.35	3.40	0.0110	13.7174	91.02	0.0729	-12.0	110.2	98.2	-0.0300	0.2663	-81
-80	5.53	3.53	0.0110	13.2802	90.90	0.0753	-11.7	110.0	98.3	-0.0293	0.2659	-80
-79	5.71	3.65	0.0110	12.8535	90.78	0.0778	-11.4	109.9	98.5	-0.0285	0.2655	-79
-78	5.89	3.78	0.0110	12.4378	90.66	0.0804	-11.2	109.8	98.6	-0.0278	0.2651	-78
-77	6.08	3.92	0.0110	12.0337	90.54	0.0831	-10.9	109.7	98.8	-0.0270	0.2647	-77
-76	6.27	4.05	0.0111	11.6550	90.42	0.0858	-10.6	109.5	98.9	-0.0263	0.2643	-76
-75	6.47	4.19	0.0111	11.2994	90.31	0.0885	-10.3	109.4	99.1	-0.0255	0.2639	-75
-74	6.68	4.34	0.0111	10.9409	90.19	0.0914	-10.0	109.3	99.2	-0.0248	0.2636	-74
-73	6.89	4.49	0.0111	10.6045	90.07	0.0943	-9.7	109.1	99.4	-0.0240	0.2632	-73
-72	7.10	4.64	0.0111	10.2775	89.95	0.0973	-9.4	109.0	99.6	-0.0233	0.2628	-72
-71	7.32	4.80	0.0111	9.9602	89.83	0.1004	-9.1	108.9	99.7	-0.0226	0.2625	-71
-70	7.54	4.96	0.0111	9.6525	89.71	0.1036	-8.9	108.7	99.9	-0.0218	0.2621	-70
-69	7.78	5.13	0.0112	9.3633	89.59	0.1068	-8.6	108.6	100.0	-0.0211	0.2618	-69
-68	8.01	5.30	0.0112	9.0827	89.47	0.1101	-8.3	108.5	100.2	-0.0203	0.2614	-68
-67	8.25	5.47	0.0112	8.8106	89.35	0.1135	-8.0	108.3	100.3	-0.0196	0.2611	-67
-66	8.50	5.65	0.0112	8.5470	89.23	0.1170	-7.7	108.2	100.5	-0.0189	0.2607	-66
-65	8.76	5.84	0.0112	8.2919	89.11	0.1206	-7.4	108.0	100.6	-0.0181	0.2604	-65
-64	9.02	6.03	0.0112	8.0515	88.99	0.1242	-7.1	107.9	100.8	-0.0174	0.2600	-64
-63	9.28	6.22	0.0113	7.8125	88.87	0.1280	-6.8	107.8	101.0	-0.0167	0.2597	-63
-62	9.55	6.42	0.0113	7.5873	88.75	0.1318	-6.5	107.6	101.1	-0.0159	0.2594	-62
-61	9.83	6.63	0.0113	7.3692	88.63	0.1357	-6.2	107.5	101.3	-0.0152	0.2591	-61
-60	10.12	6.84	0.0113	7.1531	88.51	0.1398	-5.9	107.4	101.4	-0.0145	0.2587	-60
-59	10.41	7.06	0.0113	6.9493	88.39	0.1439	-5.6	107.2	101.6	-0.0137	0.2584	-59
-58	10.71	7.28	0.0113	6.7522	88.27	0.1481	-5.4	107.1	101.7	-0.0130	0.2581	-58
-57	11.01	7.51	0.0113	6.5617	88.15	0.1524	-5.1	106.9	101.9	-0.0123	0.2578	-57
-56	11.33	7.74	0.0114	6.3776	88.03	0.1568	-4.8	106.8	102.0	-0.0115	0.2575	-56
-55	11.65	7.98	0.0114	6.1996	87.90	0.1613	-4.5	106.7	102.2	-0.0108	0.2572	-55
-54	11.97	8.22	0.0114	6.0277	87.78	0.1659	-4.2	106.5	102.3	-0.0101	0.2569	-54
-53	12.31	8.47	0.0114	5.8617	87.66	0.1706	-3.9	106.4	102.5	-0.0094	0.2566	-53
-52	12.65	8.73	0.0114	5.6980	87.54	0.1755	-3.6	106.2	102.7	-0.0086	0.2563	-52
-51	12.99	8.99	0.0114	5.5432	87.42	0.1804	-3.3	106.1	102.8	-0.0079	0.2560	-51
-50	13.35	9.26	0.0115	5.3937	87.30	0.1854	-3.0	106.0	103.0	-0.0072	0.2557	-50
-49	13.71	9.54	0.0115	5.2466	87.18	0.1906	-2.7	105.8	103.1	-0.0065	0.2554	-49
-48	14.09	9.82	0.0115	5.1073	87.06	0.1958	-2.4	105.7	103.3	-0.0057	0.2551	-48
-47	14.47	10.11	0.0115	4.9702	86.94	0.2012	-2.1	105.5	103.4	-0.0050	0.2549	-47
-46	14.85	10.40	0.0115	4.8379	86.81	0.2067	-1.8	105.4	103.6	-0.0043	0.2546	-46
-45	15.25	10.71	0.0115	4.7103	86.69	0.2123	-1.5	105.2	103.7	-0.0036	0.2543	-45
-44	15.65	11.02	0.0116	4.5872	86.57	0.2180	-1.2	105.1	103.9	-0.0029	0.2540	-44
-43	16.07	11.33	0.0116	4.4663	86.45	0.2239	-0.9	104.9	104.0	-0.0022	0.2538	-43
-42	16.49	11.66	0.0116	4.3497	86.33	0.2299	-0.6	104.8	104.2	-0.0014	0.2535	-42
-41	16.92	11.99	0.0116	4.2373	86.21	0.2360	-0.3	104.7	104.4	-0.0007	0.2532	-41
-40	17.36	12.33	0.0116	4.1288	86.08	0.2422	0.0	104.5	104.5	0.0000	0.2530	-40
-39	17.80	12.67	0.0116	4.0225	85.96	0.2486	0.3	104.4	104.7	0.0007	0.2527	-39
-38	18.26	13.03	0.0117	3.9200	85.84	0.2551	0.6	104.2	104.8	0.0014	0.2525	-38
-37	18.73	13.39	0.0117	3.8212	85.72	0.2617	0.9	104.1	105.0	0.0022	0.2522	-37
-36	19.20	13.76	0.0117	3.7244	85.59	0.2685	1.2	103.9	105.1	0.0029	0.2520	-36
-35	19.69	14.14	0.0117	3.6311	85.47	0.2754	1.5	103.8	105.3	0.0036	0.2517	-35
-34	20.18	14.53	0.0117	3.5411	85.35	0.2824	1.8	103.6	105.4	0.0043	0.2515	-34
-33	20.69	14.92	0.0117	3.4530	85.23	0.2896	2.1	103.5	105.6	0.0050	0.2512	-33
-32	21.20	15.32	0.0118	3.3681	85.10	0.2969	2.6	103.2	105.7	0.0060	0.2510	-32
-31	21.72	15.74	0.0118	3.2852	84.98	0.3044	2.9	103.0	105.9	0.0067	0.2508	-31

Table 1 (continued)
Suva® 407C 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 _c	LIQUID 1/v _f	VAPOR 1/v _g	LIQUID h _f	LATENT h _{fg}	VAPOR h _g	LIQUID s _f	VAPOR s _g	
-30	22.26	16.16	0.0118	3.2051	84.86	0.3120	3.2	102.9	106.0	0.0074	0.2505	-30
-29	22.80	16.59	0.0118	3.1270	84.74	0.3198	3.5	102.7	106.2	0.0081	0.2503	-29
-28	23.35	17.02	0.0118	3.0516	84.61	0.3277	3.8	102.6	106.3	0.0088	0.2501	-28
-27	23.92	17.47	0.0118	2.9780	84.49	0.3358	4.1	102.4	106.5	0.0095	0.2498	-27
-26	24.49	17.93	0.0119	2.9070	84.37	0.3440	4.4	102.3	106.6	0.0102	0.2496	-26
-25	25.08	18.40	0.0119	2.8377	84.24	0.3524	4.7	102.1	106.8	0.0109	0.2494	-25
-24	25.67	18.87	0.0119	2.7701	84.12	0.3610	5.0	102.0	106.9	0.0116	0.2492	-24
-23	26.28	19.36	0.0119	2.7049	84.00	0.3697	5.3	101.8	107.1	0.0123	0.2490	-23
-22	26.90	19.85	0.0119	2.6413	83.87	0.3786	5.6	101.6	107.2	0.0130	0.2487	-22
-21	27.53	20.36	0.0119	2.5800	83.75	0.3876	5.9	101.5	107.4	0.0137	0.2485	-21
-20	28.17	20.87	0.0120	2.5195	83.62	0.3969	6.2	101.3	107.6	0.0144	0.2483	-20
-19	28.83	21.40	0.0120	2.4612	83.50	0.4063	6.5	101.2	107.7	0.0151	0.2481	-19
-18	29.49	21.94	0.0120	2.4050	83.37	0.4158	6.8	101.0	107.9	0.0158	0.2479	-18
-17	30.17	22.48	0.0120	2.3496	83.25	0.4256	7.2	100.8	108.0	0.0165	0.2477	-17
-16	30.86	23.04	0.0120	2.2962	83.13	0.4355	7.3	100.9	108.2	0.0168	0.2475	-16
-15	31.56	23.61	0.0120	2.2442	83.00	0.4456	7.6	100.7	108.3	0.0175	0.2473	-15
-14	32.28	24.19	0.0121	2.1935	82.88	0.4559	7.9	100.5	108.4	0.0183	0.2471	-14
-13	33.00	24.78	0.0121	2.1441	82.75	0.4664	8.2	100.4	108.6	0.0190	0.2469	-13
-12	33.74	25.38	0.0121	2.0960	82.63	0.4771	8.6	100.2	108.7	0.0197	0.2467	-12
-11	34.50	26.00	0.0121	2.0492	82.50	0.4880	8.9	100.0	108.9	0.0204	0.2465	-11
-10	35.26	26.62	0.0121	2.0036	82.38	0.4991	9.2	99.9	109.0	0.0211	0.2463	-10
-9	36.04	27.26	0.0122	1.9596	82.25	0.5103	9.5	99.7	109.2	0.0218	0.2461	-9
-8	36.84	27.91	0.0122	1.9164	82.13	0.5218	9.8	99.5	109.3	0.0225	0.2459	-8
-7	37.64	28.57	0.0122	1.8744	82.00	0.5335	10.1	99.4	109.5	0.0232	0.2457	-7
-6	38.46	29.24	0.0122	1.8335	81.87	0.5454	10.5	99.2	109.6	0.0239	0.2456	-6
-5	39.30	29.93	0.0122	1.7937	81.75	0.5575	10.8	99.0	109.8	0.0246	0.2454	-5
-4	40.14	30.63	0.0123	1.7550	81.62	0.5698	11.1	98.8	109.9	0.0253	0.2452	-4
-3	41.00	31.34	0.0123	1.7173	81.50	0.5823	11.4	98.7	110.1	0.0259	0.2450	-3
-2	41.88	32.06	0.0123	1.6804	81.37	0.5951	11.7	98.5	110.2	0.0266	0.2448	-2
-1	42.77	32.80	0.0123	1.6447	81.24	0.6080	12.1	98.3	110.4	0.0273	0.2447	-1
0	43.67	33.55	0.0123	1.6098	81.12	0.6212	12.4	98.1	110.5	0.0280	0.2445	0
1	44.59	34.31	0.0123	1.5758	80.99	0.6346	12.7	98.0	110.7	0.0287	0.2443	1
2	45.53	35.09	0.0124	1.5425	80.86	0.6483	13.0	97.8	110.8	0.0294	0.2441	2
3	46.48	35.88	0.0124	1.5103	80.74	0.6621	13.3	97.6	111.0	0.0301	0.2440	3
4	47.44	36.69	0.0124	1.4786	80.61	0.6763	13.7	97.4	111.1	0.0308	0.2438	4
5	48.42	37.51	0.0124	1.4480	80.48	0.6906	14.0	97.2	111.2	0.0315	0.2436	5
6	49.42	38.34	0.0124	1.4180	80.36	0.7052	14.3	97.1	111.4	0.0322	0.2435	6
7	50.43	39.19	0.0125	1.3889	80.23	0.7200	14.6	96.9	111.5	0.0329	0.2433	7
8	51.45	40.05	0.0125	1.3604	80.10	0.7351	15.0	96.7	111.7	0.0336	0.2432	8
9	52.49	40.92	0.0125	1.3324	79.97	0.7505	15.3	96.5	111.8	0.0343	0.2430	9
10	53.55	41.82	0.0125	1.3053	79.85	0.7661	15.6	96.3	112.0	0.0350	0.2428	10
11	54.63	42.72	0.0125	1.2789	79.72	0.7819	16.0	96.1	112.1	0.0357	0.2427	11
12	55.72	43.64	0.0126	1.2531	79.59	0.7980	16.2	96.0	112.2	0.0363	0.2425	12
13	56.83	44.58	0.0126	1.2279	79.46	0.8144	16.6	95.8	112.4	0.0369	0.2424	13
14	57.95	45.53	0.0126	1.2032	79.33	0.8311	16.9	95.6	112.5	0.0376	0.2422	14
15	59.09	46.50	0.0126	1.1792	79.20	0.8480	17.2	95.4	112.7	0.0383	0.2421	15
16	60.25	47.49	0.0126	1.1558	79.07	0.8652	17.6	95.3	112.8	0.0390	0.2419	16
17	61.43	48.49	0.0127	1.1329	78.95	0.8827	17.9	95.1	112.9	0.0397	0.2417	17
18	62.62	49.51	0.0127	1.1105	78.82	0.9005	18.2	94.9	113.1	0.0404	0.2416	18
19	63.83	50.54	0.0127	1.0886	78.69	0.9186	18.6	94.7	113.2	0.0411	0.2415	19
20	65.06	51.59	0.0127	1.0674	78.56	0.9369	18.9	94.5	113.4	0.0418	0.2413	20
21	66.31	52.66	0.0128	1.0465	78.43	0.9556	19.2	94.3	113.5	0.0425	0.2412	21
22	67.58	53.74	0.0128	1.0261	78.30	0.9746	19.6	94.1	113.6	0.0432	0.2410	22
23	68.86	54.84	0.0128	1.0062	78.17	0.9938	19.9	93.9	113.8	0.0439	0.2409	23
24	70.16	55.96	0.0128	0.9868	78.04	1.0134	20.2	93.7	113.9	0.0446	0.2407	24
25	71.48	57.10	0.0128	0.9679	77.91	1.0332	20.6	93.5	114.1	0.0453	0.2406	25
26	72.82	58.25	0.0129	0.9493	77.78	1.0534	20.9	93.3	114.2	0.0460	0.2404	26
27	74.18	59.42	0.0129	0.9312	77.65	1.0739	21.3	93.1	114.3	0.0467	0.2403	27
28	75.56	60.61	0.0129	0.9134	77.51	1.0948	21.6	92.9	114.5	0.0474	0.2402	28
29	76.95	61.82	0.0129	0.8961	77.38	1.1159	21.9	92.7	114.6	0.0480	0.2400	29

Table 1 (continued)
Suva® 407C 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	78.37	63.05	0.0129	0.8792	77.25	1.1374	22.3	92.4	114.7	0.0487	0.2399	30
31	79.81	64.29	0.0130	0.8627	77.12	1.1592	22.6	92.2	114.9	0.0494	0.2398	31
32	81.26	65.56	0.0130	0.8465	76.99	1.1814	23.0	92.0	115.0	0.0501	0.2396	32
33	82.74	66.84	0.0130	0.8306	76.86	1.2039	23.3	91.8	115.1	0.0508	0.2395	33
34	84.23	68.15	0.0130	0.8151	76.72	1.2268	23.7	91.6	115.3	0.0515	0.2393	34
35	85.75	69.47	0.0131	0.8000	76.59	1.2500	24.0	91.4	115.4	0.0522	0.2392	35
36	87.29	70.81	0.0131	0.7852	76.46	1.2736	24.4	91.2	115.5	0.0529	0.2391	36
37	88.85	72.17	0.0131	0.7707	76.33	1.2975	24.7	91.0	115.7	0.0536	0.2389	37
38	90.43	73.55	0.0131	0.7565	76.19	1.3218	25.1	90.7	115.8	0.0543	0.2388	38
39	92.03	74.96	0.0131	0.7427	76.06	1.3465	25.4	90.5	115.9	0.0550	0.2387	39
40	93.65	76.38	0.0132	0.7291	75.93	1.3716	25.8	90.3	116.1	0.0557	0.2386	40
41	95.29	77.82	0.0132	0.7158	75.79	1.3970	26.1	90.1	116.2	0.0564	0.2384	41
42	96.95	79.29	0.0132	0.7028	75.66	1.4228	26.5	89.9	116.3	0.0571	0.2383	42
43	98.64	80.77	0.0132	0.6901	75.52	1.4491	26.8	89.6	116.4	0.0577	0.2382	43
44	100.35	82.28	0.0133	0.6776	75.39	1.4757	27.2	89.4	116.6	0.0584	0.2380	44
45	102.08	83.81	0.0133	0.6655	75.26	1.5027	27.5	89.2	116.7	0.0591	0.2379	45
46	103.83	85.36	0.0133	0.6535	75.12	1.5302	27.9	88.9	116.8	0.0598	0.2378	46
47	105.61	86.93	0.0133	0.6418	74.99	1.5581	28.2	88.7	116.9	0.0605	0.2377	47
48	107.40	88.52	0.0134	0.6304	74.85	1.5863	28.6	88.5	117.1	0.0612	0.2375	48
49	109.23	90.14	0.0134	0.6192	74.71	1.6151	28.9	88.2	117.2	0.0619	0.2374	49
50	111.07	91.78	0.0134	0.6082	74.58	1.6442	29.3	88.0	117.3	0.0626	0.2373	50
51	112.94	93.44	0.0134	0.5974	74.44	1.6738	29.7	87.8	117.4	0.0633	0.2372	51
52	114.83	95.12	0.0135	0.5869	74.31	1.7038	30.0	87.5	117.6	0.0640	0.2371	52
53	116.74	96.83	0.0135	0.5766	74.17	1.7343	30.4	87.3	117.7	0.0647	0.2369	53
54	118.68	98.56	0.0135	0.5665	74.03	1.7653	30.7	87.1	117.8	0.0654	0.2368	54
55	120.64	100.31	0.0135	0.5566	73.89	1.7967	31.1	86.8	117.9	0.0661	0.2367	55
56	122.63	102.09	0.0136	0.5469	73.76	1.8286	31.5	86.6	118.0	0.0668	0.2366	56
57	124.64	103.89	0.0136	0.5374	73.62	1.8609	31.8	86.3	118.2	0.0675	0.2364	57
58	126.68	105.72	0.0136	0.5280	73.48	1.8938	32.2	86.1	118.3	0.0682	0.2363	58
59	128.74	107.57	0.0136	0.5189	73.34	1.9271	32.6	85.8	118.4	0.0689	0.2362	59
60	130.82	109.45	0.0137	0.5099	73.20	1.9610	32.9	85.6	118.5	0.0696	0.2361	60
61	132.94	111.35	0.0137	0.5012	73.07	1.9953	33.3	85.3	118.6	0.0703	0.2360	61
62	135.07	113.27	0.0137	0.4926	72.93	2.0302	33.7	85.1	118.7	0.0710	0.2358	62
63	137.23	115.23	0.0137	0.4841	72.79	2.0656	34.0	84.8	118.8	0.0717	0.2357	63
64	139.42	117.20	0.0138	0.4759	72.65	2.1015	34.4	84.5	119.0	0.0724	0.2356	64
65	141.63	119.21	0.0138	0.4677	72.51	2.1380	34.8	84.3	119.1	0.0731	0.2355	65
66	143.87	121.23	0.0138	0.4598	72.37	2.1750	35.2	84.0	119.2	0.0738	0.2354	66
67	146.14	123.29	0.0138	0.4520	72.22	2.2126	35.5	83.8	119.3	0.0745	0.2352	67
68	148.43	125.37	0.0139	0.4443	72.08	2.2507	35.9	83.5	119.4	0.0752	0.2351	68
69	150.75	127.48	0.0139	0.4368	71.94	2.2894	36.3	83.2	119.5	0.0759	0.2350	69
70	153.10	129.61	0.0139	0.4294	71.80	2.3286	36.7	83.0	119.6	0.0766	0.2349	70
71	155.47	131.78	0.0140	0.4222	71.66	2.3685	37.0	82.7	119.7	0.0773	0.2348	71
72	157.87	133.97	0.0140	0.4151	71.51	2.4090	37.4	82.4	119.8	0.0780	0.2346	72
73	160.30	136.18	0.0140	0.4082	71.37	2.4500	37.8	82.1	119.9	0.0787	0.2345	73
74	162.75	138.43	0.0140	0.4013	71.23	2.4917	38.2	81.9	120.0	0.0794	0.2344	74
75	165.24	140.70	0.0141	0.3946	71.08	2.5340	38.6	81.6	120.1	0.0801	0.2343	75
76	167.75	143.01	0.0141	0.3880	70.94	2.5770	39.0	81.3	120.3	0.0808	0.2342	76
77	170.29	145.34	0.0141	0.3816	70.80	2.6206	39.3	81.0	120.4	0.0815	0.2340	77
78	172.86	147.70	0.0142	0.3753	70.65	2.6648	39.7	80.7	120.5	0.0822	0.2339	78
79	175.45	150.09	0.0142	0.3690	70.51	2.7097	40.1	80.4	120.6	0.0829	0.2338	79
80	178.08	152.50	0.0142	0.3629	70.36	2.7553	40.5	80.1	120.7	0.0836	0.2337	80
81	180.73	154.95	0.0142	0.3569	70.21	2.8016	40.9	79.9	120.7	0.0843	0.2336	81
82	183.42	157.43	0.0143	0.3511	70.07	2.8486	41.3	79.6	120.8	0.0850	0.2334	82
83	186.13	159.94	0.0143	0.3453	69.92	2.8962	41.7	79.3	120.9	0.0857	0.2333	83
84	188.87	162.48	0.0143	0.3396	69.77	2.9447	42.1	79.0	121.0	0.0865	0.2332	84
85	191.65	165.04	0.0144	0.3340	69.62	2.9938	42.5	78.7	121.1	0.0872	0.2331	85
86	194.45	167.64	0.0144	0.3285	69.48	3.0437	42.9	78.4	121.2	0.0879	0.2329	86
87	197.28	170.28	0.0144	0.3232	69.33	3.0944	43.3	78.0	121.3	0.0886	0.2328	87
88	200.15	172.94	0.0145	0.3179	69.18	3.1458	43.7	77.7	121.4	0.0893	0.2327	88
89	203.04	175.63	0.0145	0.3127	69.03	3.1980	44.1	77.4	121.5	0.0900	0.2326	89

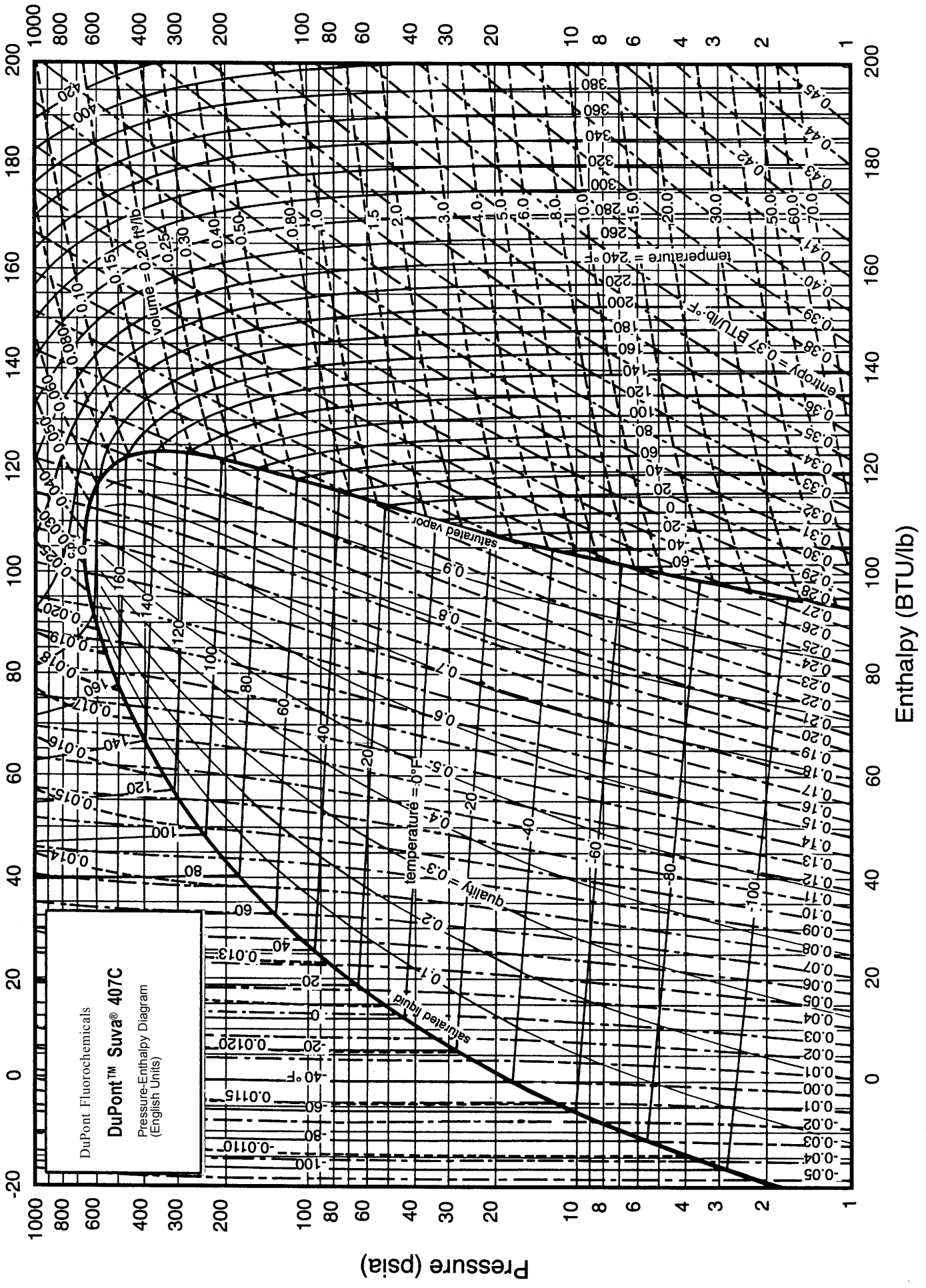
Table 1 (continued)
Suva® 407C Saturation Properties—Temperature Table

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 _c	LIQUID 1/v _f	VAPOR 1/v _g	LIQUID h _f	LATENT h _{fg}	VAPOR h _g	LIQUID s _f	VAPOR s _g	
150	445.27	411.58	0.0172	0.1139	58.23	8.7815	72.3	51.2	123.5	0.1373	0.2219	150
151	450.43	416.85	0.0172	0.1119	58.00	8.9396	72.8	50.6	123.4	0.1381	0.2216	151
152	455.64	422.17	0.0173	0.1099	57.77	9.1015	73.4	50.0	123.3	0.1390	0.2214	152
153	460.89	427.54	0.0174	0.1079	57.54	9.2674	73.9	49.3	123.3	0.1399	0.2211	153
154	466.18	432.97	0.0175	0.1060	57.30	9.4374	74.5	48.7	123.2	0.1408	0.2208	154
155	471.51	438.46	0.0175	0.1040	57.06	9.6118	75.1	48.0	123.1	0.1418	0.2205	155
156	476.88	444.00	0.0176	0.1021	56.81	9.7908	75.7	47.3	123.0	0.1427	0.2201	156
157	482.29	449.60	0.0177	0.1003	56.56	9.9745	76.3	46.6	122.9	0.1436	0.2198	157
158	487.74	455.25	0.0178	0.0984	56.31	10.1633	76.9	45.9	122.8	0.1445	0.2195	158
159	493.24	460.97	0.0178	0.0966	56.05	10.3573	77.5	45.2	122.7	0.1455	0.2191	159
160	498.78	466.74	0.0179	0.0947	55.79	10.5568	78.1	44.5	122.6	0.1464	0.2188	160
161	504.36	472.57	0.0180	0.0929	55.52	10.7622	78.7	43.8	122.5	0.1474	0.2184	161
162	509.97	478.47	0.0181	0.0911	55.24	10.9737	79.4	43.0	122.4	0.1484	0.2181	162
163	515.63	484.43	0.0182	0.0894	54.96	11.1918	80.0	42.2	122.2	0.1494	0.2177	163
164	521.33	490.44	0.0183	0.0876	54.68	11.4167	80.6	41.4	122.1	0.1504	0.2173	164
165	527.07	496.53	0.0184	0.0858	54.38	11.6490	81.3	40.6	121.9	0.1514	0.2169	165
166	532.85	502.67	0.0185	0.0841	54.08	11.8891	82.0	39.8	121.7	0.1524	0.2165	166
167	538.67	508.88	0.0186	0.0824	53.77	12.1376	82.7	38.9	121.6	0.1535	0.2160	167
168	544.53	515.16	0.0187	0.0807	53.45	12.3950	83.3	38.0	121.4	0.1545	0.2156	168
169	550.43	521.51	0.0188	0.0790	53.12	12.6620	84.0	37.1	121.2	0.1556	0.2151	169
170	556.36	527.92	0.0189	0.0773	52.78	12.9394	84.8	36.2	121.0	0.1567	0.2146	170
171	562.33	534.41	0.0191	0.0756	52.43	13.2280	85.5	35.2	120.7	0.1578	0.2141	171
172	568.34	540.97	0.0192	0.0739	52.07	13.5289	86.2	34.2	120.5	0.1590	0.2136	172
173	574.38	547.60	0.0193	0.0722	51.69	13.8431	87.0	33.2	120.2	0.1601	0.2130	173
174	580.45	554.31	0.0195	0.0706	51.29	14.1719	87.8	32.1	119.9	0.1613	0.2124	174
175	586.56	561.10	0.0197	0.0689	50.88	14.5170	88.6	31.0	119.6	0.1625	0.2118	175

Table 2 (continued)
Suva® 407C 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
	(147.76°F)			(157.07°F)			(165.57°F)			(173.24°F)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.1185)	(123.6)	(0.2225)	(0.1001)	(122.9)	(0.2198)	(0.0849)	(121.8)	(0.2166)	(0.0262)	(89.2)	(0.1638)	
150	0.1204	124.3	0.2238	—	—	—	—	—	—	—	—	—	150
160	0.1284	127.6	0.2291	0.1028	124.1	0.2217	—	—	—	—	—	—	160
170	0.1355	130.7	0.2340	0.1108	127.7	0.2275	0.0892	123.9	0.2199	170	—	—	170
180	0.1421	133.7	0.2387	0.1179	131.0	0.2327	0.0974	127.9	0.2262	0.0789	123.8	0.2186	180
190	0.1484	136.6	0.2432	0.1243	134.2	0.2376	0.1043	131.5	0.2318	0.0871	128.2	0.2254	190
200	0.1542	139.4	0.2475	0.1302	137.2	0.2422	0.1105	134.8	0.2369	0.0938	132.0	0.2313	200
210	0.1599	142.2	0.2517	0.1358	140.2	0.2467	0.1161	138.0	0.2417	0.0997	135.5	0.2365	210
220	0.1653	144.9	0.2558	0.1410	143.1	0.2510	0.1214	141.0	0.2462	0.1051	138.9	0.2415	220
230	0.1705	147.7	0.2598	0.1461	145.9	0.2552	0.1264	144.1	0.2506	0.1101	142.1	0.2461	230
240	0.1756	150.4	0.2638	0.1510	148.7	0.2592	0.1311	147.0	0.2549	0.1148	145.2	0.2506	240
250	0.1806	153.1	0.2676	0.1557	151.6	0.2632	0.1357	149.9	0.2590	0.1193	148.2	0.2549	250
260	0.1854	155.8	0.2714	0.1603	154.3	0.2671	0.1401	152.8	0.2630	0.1235	151.2	0.2591	260
270	0.1901	158.5	0.2751	0.1647	157.1	0.2709	0.1444	155.6	0.2669	0.1277	154.1	0.2631	270
280	0.1948	161.2	0.2788	0.1691	159.9	0.2747	0.1485	158.5	0.2708	0.1316	157.0	0.2671	280
290	0.1993	163.9	0.2824	0.1733	162.6	0.2784	0.1525	161.3	0.2746	0.1355	159.9	0.2710	290
300	0.2038	166.6	0.2860	0.1775	165.4	0.2820	0.1565	164.1	0.2783	0.1393	162.8	0.2748	300
310	0.2082	169.3	0.2895	0.1816	168.1	0.2856	0.1603	166.9	0.2820	0.1429	165.7	0.2786	310
320	0.2126	172.1	0.2930	0.1856	170.9	0.2892	0.1641	169.7	0.2856	0.1465	168.5	0.2822	320
330	0.2168	174.8	0.2965	0.1896	173.7	0.2927	0.1678	172.5	0.2892	0.1500	171.4	0.2859	330
340	0.2211	177.5	0.2999	0.1935	176.4	0.2962	0.1715	175.3	0.2927	0.1535	174.2	0.2895	340
350	0.2253	180.2	0.3033	0.1974	179.2	0.2996	0.1751	178.1	0.2962	0.1568	177.1	0.2930	350
360	0.2294	183.0	0.3067	0.2012	182.0	0.3030	0.1786	180.9	0.2997	0.1602	179.9	0.2965	360
370	0.2335	185.7	0.3100	0.2049	184.7	0.3064	0.1821	183.8	0.3031	0.1635	182.8	0.3000	370
380	0.2375	188.5	0.3133	0.2086	187.5	0.3097	0.1855	186.6	0.3064	0.1667	185.6	0.3034	380
390	0.2416	191.2	0.3166	0.2123	190.3	0.3130	0.1890	189.4	0.3098	0.1699	188.5	0.3068	390
400	0.2455	194.0	0.3198	0.2160	193.1	0.3163	0.1923	192.2	0.3131	0.1730	191.3	0.3101	400
410	0.2495	196.8	0.3231	0.2196	195.9	0.3196	0.1957	195.1	0.3164	0.1761	194.2	0.3134	410
420	0.2534	199.6	0.3262	0.2231	198.7	0.3228	0.1990	197.9	0.3196	0.1792	197.1	0.3167	420
430	0.2573	202.4	0.3294	0.2267	201.6	0.3260	0.2022	200.8	0.3229	0.1823	200.0	0.3199	430
440	0.2611	205.2	0.3326	0.2302	204.4	0.3292	0.2055	203.6	0.3261	0.1853	202.8	0.3232	440
450	0.2650	208.0	0.3357	0.2337	207.3	0.3323	0.2087	206.5	0.3292	0.1883	205.7	0.3264	450
460	—	—	—	0.2372	210.1	0.3354	0.2119	209.4	0.3324	0.1912	208.6	0.3295	460
470	—	—	—	—	—	—	0.2150	212.3	0.3355	0.1942	211.5	0.3327	470
480	—	—	—	—	—	—	—	—	—	0.1971	214.4	0.3358	480



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