

# DuPont™ Suva® refrigerants

## Thermodynamic Properties of DuPont™ Suva® MP66

### Refrigerant

(R-401B)



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# Thermodynamic Properties of Suva® MP66 Refrigerant

## Engineering (I/P) Units

New tables of the thermodynamic properties of Suva® MP66 refrigerant [ASHRAE designation: R-401B (61/11/28)], a near azeotropic blend of HCFC-22/HFC-152a/HCFC-124, 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	CHClF <sub>2</sub> /CH <sub>3</sub> CHF <sub>2</sub> /CHClFCF <sub>3</sub> (61/11/28% by weight)	
Molecular Weight	92.84	
Boiling Point at One Atmosphere	-30.41°F (-34.67°C)	
Critical Temperature, T <sub>c</sub>	222.98°F 682.65°R	(106.10°C) (379.25 K)
Critical Pressure, P <sub>c</sub>	679.0 psia	(4681.5 kPa [abs])
Critical Density, D <sub>c</sub>	32.01 lb/ft <sup>3</sup>	(512.7 kg/m <sup>3</sup> )
Critical Volume, V <sub>c</sub>	0.0312 ft <sup>3</sup> /lb	(0.00195 m <sup>3</sup> /kg)

### Units and Factors

t = temperature in °F  
T = temperature in °R = °F + 459.67  
p<sub>f</sub> = pressure of saturated liquid (bubble point) in psia  
p<sub>g</sub> = pressure of saturated vapor (dew point) in psia  
v<sub>f</sub> = volume of saturated liquid in ft<sup>3</sup>/lb  
v<sub>g</sub> = volume of saturated vapor in ft<sup>3</sup>/lb  
V = volume of superheated vapor in ft<sup>3</sup>/lb  
d<sub>f</sub> = 1/v<sub>f</sub> = density of saturated liquid in lb/ft<sup>3</sup>  
d<sub>g</sub> = 1/v<sub>g</sub> = density of saturated vapor in lb/ft<sup>3</sup>  
h<sub>f</sub> = enthalpy of saturated liquid in Btu/lb  
h<sub>fg</sub> = enthalpy of vaporization in Btu/lb  
h<sub>g</sub> = enthalpy of saturated vapor in Btu/lb  
H = enthalpy of superheated vapor in Btu/lb  
s<sub>f</sub> = entropy of saturated liquid in Btu/(lb) (°R)  
s<sub>g</sub> = entropy of saturated vapor in Btu/(lb) (°R)  
S = entropy of superheated vapor in Btu/(lb) (°R)  
C<sub>p</sub> = heat capacity at constant pressure in Btu/(lb) (°F)  
C<sub>v</sub> = heat capacity at constant volume in Btu/(lb) (°F)

The gas constant, R = 10.732 (psia) (ft<sup>3</sup>)/(lb-mole) (°R)  
for Suva® MP66, R = 0.1156 (psia) (ft<sup>3</sup>)/(lb) (°R)

Conversion factor from Work Units to Heat Units:

$$J = 0.185053$$

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

$$\text{One atmosphere} = 14.696 \text{ psia}$$

Reference point for enthalpy and entropy:

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

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

### 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 m<sup>3</sup>/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<sub>i</sub> = mole fraction of component i

x<sub>j</sub> = 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<sub>ij</sub> = 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:  $\kappa_i = \kappa_{0i}$  for  $T_r > 0.7$ )

$$\kappa_{0i} = 0.378893 + 1.4897153\omega_i - 0.17131848\omega_i^2 + 0.0196554\omega_i^3$$

$\kappa_{1i}$  = adjustable parameter for component i

$$T_{ri} = T_i/T_{ci} \text{ for component i}$$

Values for R,  $T_{ci}$ ,  $P_{ci}$ ,  $\omega_i$ ,  $\kappa_{1i}$ ,  $x_i$ , and  $k_{ij}$  are needed to calculate constants a and b.  $R = 0.008314 \text{ kJ/(mole)} (\text{K})$ . The remaining constants for Suva® MP66 are summarized below:

Component	$T_{ci}$	$P_{ci}$	$\omega_i$	$\kappa_{1i}$	$x_i$
HCFC-22 (i = 1)	369.16	4977.0	0.2214	0.0360	0.65492
HFC-152a (i = 2)	386.44	4519.8	0.2752	-0.0400	0.15461
HCFC-124 (i = 3)	395.39	3616.0	0.2859	0.0490	0.19047

The binary interaction parameters,  $k_{ij}$ , for Suva® MP66 are:

$$k_{11} = 0.00000 \quad k_{12} = -0.02652 \quad k_{13} = 0.00052$$

$$k_{21} = -0.02652 \quad k_{22} = 0.0000 \quad k_{23} = -0.01314$$

$$k_{31} = 0.00052 \quad k_{32} = -0.01314 \quad k_{33} = 0.0000$$

### Ideal Gas Heat Capacity Equation (at constant pressure):

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

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

where  $C_p^o$  and  $C_{pi}^o$  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® MP66).

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

$A_1 = 6.164370 \text{ E+00}$	$B_1 = 0.173407 \text{ E-01}$
$A_2 = 2.072000 \text{ E+00}$	$B_2 = 0.572200 \text{ E-01}$
$A_3 = -4.130590 \text{ E+01}$	$B_3 = 0.587312 \text{ E+00}$
$C_1 = 0.557618 \text{ E-04}$	$D_1 = -0.140596 \text{ E-06}$
$C_2 = -0.348000 \text{ E-04}$	$D_2 = 0.810700 \text{ E-08}$
$C_3 = -0.233021 \text{ E-02}$	$D_3 = 0.517788 \text{ E-05}$
$E_1 = 0.120557 \text{ E-09}$	$F_1 = -0.368814 \text{ E-13}$
$E_2 = 0.000000 \text{ E+00}$	$F_2 = 0.000000 \text{ E+00}$
$E_3 = -0.599647 \text{ E-08}$	$F_3 = 0.287937 \text{ E-11}$

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  $0^\circ\text{C}$  for SI units to  $H = 0$  and  $S = 0$  at  $-40^\circ\text{F}$  for I/P units). In the conversion equations below,  $H$  (ref) and  $S$  (ref) are the saturated liquid enthalpy and entropy at  $-40^\circ\text{C}$ . For Suva® MP66:  $H$  (ref) = 153.8 kJ/kg and  $S$  (ref) = 0.8184 kJ/kg · K.

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

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

## 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),  $p_f$ :

$$A = 5.69933 \text{ E+01} \quad C = -6.72303 \text{ E+00}$$

$$B = -3.86429 \text{ E+03} \quad D = 1.10442 \text{ E-05}$$

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

$$A = 7.52389 \text{ E+01} \quad C = -9.59126 \text{ E+00}$$

$$B = -4.60476 \text{ E+03} \quad D = 1.60025 \text{ E-05}$$

### 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),  $p_f$ :

$$A = 5.90146 \text{ E+01} \quad C = -6.72303 \text{ E+00}$$

$$B = -6.95582 \text{ E+03} \quad D = 0.34082 \text{ E-05}$$

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

$$A = 7.89459 \text{ E+01} \quad C = -9.59126 \text{ E+00}$$

$$B = -8.28863 \text{ E+03} \quad D = 0.49387 \text{ E-05}$$

### 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  $\text{kg/m}^3$  in SI units and  $\text{lb/ft}^3$  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:

$$a_0 = 2.289321 \quad a_3 = -1.206543$$

$$a_1 = 2.819138 \quad a_4 = -4.205078$$

$$a_2 = 1.781901 \quad t_0 = 0.5850235$$

**Table 1**  
**Suva® MP66 Saturation Properties—Temperature Table**

TEMP. °F	PRESSURE psia		VOLUME ft <sup>3</sup> /lb		DENSITY lb/ft <sup>3</sup>		ENTHALPY Btu/lb			ENTROPY Btu/(lb)(°R)		TEMP. °F
	Liquid p <sub>f</sub>	Vapor p <sub>g</sub>	Liquid v <sub>f</sub>	Vapor v <sub>g</sub>	Liquid 1/v <sub>f</sub>	Vapor 1/v <sub>g</sub>	Liquid h <sub>f</sub>	Latent h <sub>fg</sub>	Vapor h <sub>g</sub>	Liquid s <sub>f</sub>	Vapor s <sub>g</sub>	
-150	0.19	0.10	0.0102	370.3704	98.26	0.0027	-26.3	112.3	86.0	-0.0723	0.2990	-150
-149	0.20	0.10	0.0102	357.1429	98.17	0.0028	-26.1	112.2	86.1	-0.0716	0.2981	-149
-148	0.21	0.11	0.0102	333.3333	98.09	0.0030	-25.9	112.1	86.2	-0.0709	0.2972	-148
-147	0.22	0.11	0.0102	322.5806	98.00	0.0031	-25.6	112.0	86.3	-0.0702	0.2964	-147
-146	0.23	0.12	0.0102	303.0303	97.91	0.0033	-25.4	111.9	86.5	-0.0695	0.2955	-146
-145	0.24	0.13	0.0102	285.7143	97.82	0.0035	-25.2	111.8	86.6	-0.0688	0.2947	-145
-144	0.26	0.13	0.0102	270.2703	97.74	0.0037	-25.0	111.7	86.7	-0.0681	0.2938	-144
-143	0.27	0.14	0.0102	256.4103	97.65	0.0039	-24.7	111.5	86.8	-0.0674	0.2930	-143
-142	0.28	0.15	0.0103	243.9024	97.56	0.0041	-24.5	111.4	86.9	-0.0666	0.2922	-142
-141	0.30	0.16	0.0103	232.5581	97.47	0.0043	-24.3	111.3	87.0	-0.0659	0.2914	-141
-140	0.31	0.17	0.0103	222.2222	97.38	0.0045	-24.1	111.2	87.2	-0.0652	0.2906	-140
-139	0.33	0.18	0.0103	208.3333	97.29	0.0048	-23.8	111.1	87.3	-0.0645	0.2898	-139
-138	0.34	0.19	0.0103	200.0000	97.21	0.0050	-23.6	111.0	87.4	-0.0638	0.2890	-138
-137	0.36	0.20	0.0103	188.6792	97.12	0.0053	-23.4	110.9	87.5	-0.0631	0.2883	-137
-136	0.38	0.21	0.0103	181.8182	97.03	0.0055	-23.2	110.8	87.6	-0.0624	0.2875	-136
-135	0.40	0.22	0.0103	172.4138	96.94	0.0058	-22.9	110.7	87.8	-0.0617	0.2868	-135
-134	0.42	0.23	0.0103	163.9344	96.85	0.0061	-22.7	110.6	87.9	-0.0611	0.2860	-134
-133	0.44	0.24	0.0103	156.2500	96.76	0.0064	-22.5	110.5	88.0	-0.0604	0.2853	-133
-132	0.46	0.25	0.0103	149.2537	96.67	0.0067	-22.3	110.4	88.1	-0.0597	0.2845	-132
-131	0.48	0.27	0.0104	142.8571	96.58	0.0070	-22.0	110.3	88.2	-0.0590	0.2838	-131
-130	0.50	0.28	0.0104	135.1351	96.49	0.0074	-21.8	110.2	88.4	-0.0583	0.2831	-130
-129	0.52	0.30	0.0104	129.8701	96.40	0.0077	-21.6	110.1	88.5	-0.0576	0.2824	-129
-128	0.55	0.31	0.0104	123.4568	96.31	0.0081	-21.4	109.9	88.6	-0.0569	0.2817	-128
-127	0.57	0.33	0.0104	117.6471	96.22	0.0085	-21.1	109.8	88.7	-0.0562	0.2810	-127
-126	0.60	0.34	0.0104	112.3596	96.13	0.0089	-20.9	109.7	88.8	-0.0555	0.2803	-126
-125	0.63	0.36	0.0104	107.5269	96.04	0.0093	-20.7	109.6	89.0	-0.0548	0.2796	-125
-124	0.65	0.38	0.0104	102.0408	95.95	0.0098	-20.4	109.5	89.1	-0.0542	0.2790	-124
-123	0.68	0.40	0.0104	98.0392	95.86	0.0102	-20.2	109.4	89.2	-0.0535	0.2783	-123
-122	0.71	0.42	0.0104	93.4579	95.77	0.0107	-20.0	109.3	89.3	-0.0528	0.2776	-122
-121	0.75	0.44	0.0105	89.2857	95.68	0.0112	-19.7	109.2	89.4	-0.0521	0.2770	-121
-120	0.78	0.46	0.0105	85.4701	95.59	0.0117	-19.5	109.1	89.6	-0.0514	0.2763	-120
-119	0.81	0.48	0.0105	81.9672	95.50	0.0122	-19.3	109.0	89.7	-0.0508	0.2757	-119
-118	0.85	0.50	0.0105	78.7402	95.40	0.0127	-19.1	108.9	89.8	-0.0501	0.2751	-118
-117	0.88	0.53	0.0105	75.1880	95.31	0.0133	-18.8	108.8	89.9	-0.0494	0.2744	-117
-116	0.92	0.55	0.0105	71.9424	95.22	0.0139	-18.6	108.6	90.1	-0.0487	0.2738	-116
-115	0.96	0.58	0.0105	68.9655	95.13	0.0145	-18.4	108.5	90.2	-0.0481	0.2732	-115
-114	1.00	0.60	0.0105	66.2252	95.04	0.0151	-18.1	108.4	90.3	-0.0474	0.2726	-114
-113	1.04	0.63	0.0105	63.2911	94.94	0.0158	-17.9	108.3	90.4	-0.0467	0.2720	-113
-112	1.09	0.66	0.0105	60.9756	94.85	0.0164	-17.7	108.2	90.6	-0.0460	0.2714	-112
-111	1.13	0.69	0.0106	58.4795	94.76	0.0171	-17.4	108.1	90.7	-0.0454	0.2708	-111
-110	1.18	0.72	0.0106	55.8659	94.67	0.0179	-17.2	108.0	90.8	-0.0447	0.2702	-110
-109	1.22	0.75	0.0106	53.7634	94.58	0.0186	-17.0	107.9	90.9	-0.0440	0.2697	-109
-108	1.27	0.79	0.0106	51.5464	94.48	0.0194	-16.7	107.8	91.1	-0.0434	0.2691	-108
-107	1.33	0.82	0.0106	49.5050	94.39	0.0202	-16.5	107.7	91.2	-0.0427	0.2685	-107
-106	1.38	0.86	0.0106	47.6190	94.30	0.0210	-16.3	107.6	91.3	-0.0420	0.2680	-106
-105	1.43	0.89	0.0106	45.8716	94.20	0.0218	-16.0	107.5	91.4	-0.0414	0.2674	-105
-104	1.49	0.93	0.0106	44.0529	94.11	0.0227	-15.8	107.3	91.6	-0.0407	0.2669	-104
-103	1.55	0.97	0.0106	42.3729	94.02	0.0236	-15.6	107.2	91.7	-0.0401	0.2663	-103
-102	1.61	1.01	0.0106	40.6504	93.92	0.0246	-15.3	107.1	91.8	-0.0394	0.2658	-102
-101	1.67	1.05	0.0107	39.2157	93.83	0.0255	-15.1	107.0	91.9	-0.0387	0.2653	-101
-100	1.73	1.10	0.0107	37.7358	93.73	0.0265	-14.8	106.9	92.1	-0.0381	0.2648	-100
-99	1.80	1.14	0.0107	36.2319	93.64	0.0276	-14.6	106.8	92.2	-0.0374	0.2642	-99
-98	1.87	1.19	0.0107	34.9650	93.55	0.0286	-14.4	106.7	92.3	-0.0368	0.2637	-98
-97	1.94	1.24	0.0107	33.6700	93.45	0.0297	-14.1	106.6	92.4	-0.0361	0.2632	-97
-96	2.01	1.29	0.0107	32.3625	93.36	0.0309	-13.9	106.5	92.6	-0.0354	0.2627	-96
-95	2.08	1.34	0.0107	31.2500	93.26	0.0320	-13.7	106.3	92.7	-0.0348	0.2622	-95
-94	2.16	1.40	0.0107	30.1205	93.17	0.0332	-13.4	106.2	92.8	-0.0341	0.2617	-94
-93	2.24	1.45	0.0107	28.9855	93.07	0.0345	-13.2	106.1	93.0	-0.0335	0.2613	-93
-92	2.32	1.51	0.0108	28.0112	92.98	0.0357	-12.9	106.0	93.1	-0.0328	0.2608	-92
-91	2.41	1.57	0.0108	26.9542	92.88	0.0371	-12.7	105.9	93.2	-0.0322	0.2603	-91

**Table 1** (continued)  
**Suva® MP66 Saturation Properties—Temperature Table**

TEMP. °F	PRESSURE psia		VOLUME ft <sup>3</sup> /lb		DENSITY lb/ft <sup>3</sup>		ENTHALPY Btu/lb			ENTROPY Btu/(lb)(°R)		TEMP. °F
	Liquid p <sub>f</sub>	Vapor p <sub>g</sub>	Liquid v <sub>f</sub>	Vapor v <sub>g</sub>	Liquid 1/v <sub>f</sub>	Vapor 1/v <sub>g</sub>	Liquid h <sub>f</sub>	Latent h <sub>fg</sub>	Vapor h <sub>g</sub>	Liquid s <sub>f</sub>	Vapor s <sub>g</sub>	
-90	2.49	1.63	0.0108	26.0417	92.79	0.0384	-12.5	105.8	93.3	-0.0315	0.2598	-90
-89	2.58	1.70	0.0108	25.1256	92.69	0.0398	-12.2	105.7	93.5	-0.0309	0.2594	-89
-88	2.67	1.76	0.0108	24.2718	92.59	0.0412	-12.0	105.6	93.6	-0.0302	0.2589	-88
-87	2.77	1.83	0.0108	23.4192	92.50	0.0427	-11.7	105.5	93.7	-0.0296	0.2584	-87
-86	2.86	1.90	0.0108	22.6244	92.40	0.0442	-11.5	105.3	93.9	-0.0289	0.2580	-86
-85	2.96	1.97	0.0108	21.8341	92.31	0.0458	-11.2	105.2	94.0	-0.0283	0.2575	-85
-84	3.07	2.05	0.0108	21.0970	92.21	0.0474	-11.0	105.1	94.1	-0.0276	0.2571	-84
-83	3.17	2.12	0.0109	20.3666	92.11	0.0491	-10.8	105.0	94.2	-0.0270	0.2567	-83
-82	3.28	2.20	0.0109	19.6850	92.02	0.0508	-10.5	104.9	94.4	-0.0264	0.2562	-82
-81	3.39	2.28	0.0109	19.0476	91.92	0.0525	-10.3	104.8	94.5	-0.0257	0.2558	-81
-80	3.51	2.37	0.0109	18.4162	91.82	0.0543	-10.0	104.7	94.6	-0.0251	0.2554	-80
-79	3.62	2.45	0.0109	17.7936	91.73	0.0562	-9.8	104.5	94.8	-0.0244	0.2550	-79
-78	3.75	2.54	0.0109	17.2117	91.63	0.0581	-9.5	104.4	94.9	-0.0238	0.2545	-78
-77	3.87	2.63	0.0109	16.6667	91.53	0.0600	-9.3	104.3	95.0	-0.0232	0.2541	-77
-76	4.00	2.73	0.0109	16.1290	91.43	0.0620	-9.1	104.2	95.1	-0.0225	0.2537	-76
-75	4.13	2.83	0.0109	15.6006	91.34	0.0641	-8.8	104.1	95.3	-0.0219	0.2533	-75
-74	4.26	2.93	0.0110	15.1057	91.24	0.0662	-8.6	104.0	95.4	-0.0212	0.2529	-74
-73	4.40	3.03	0.0110	14.6413	91.14	0.0683	-8.3	103.9	95.5	-0.0206	0.2525	-73
-72	4.54	3.13	0.0110	14.1844	91.04	0.0705	-8.1	103.7	95.7	-0.0200	0.2521	-72
-71	4.69	3.24	0.0110	13.7363	90.94	0.0728	-7.8	103.6	95.8	-0.0193	0.2517	-71
-70	4.84	3.35	0.0110	13.2979	90.85	0.0752	-7.6	103.5	95.9	-0.0187	0.2514	-70
-69	4.99	3.47	0.0110	12.8866	90.75	0.0776	-7.3	103.4	96.1	-0.0181	0.2510	-69
-68	5.15	3.59	0.0110	12.5000	90.65	0.0800	-7.1	103.3	96.2	-0.0174	0.2506	-68
-67	5.31	3.71	0.0110	12.1212	90.55	0.0825	-6.8	103.2	96.3	-0.0168	0.2502	-67
-66	5.47	3.83	0.0111	11.7509	90.45	0.0851	-6.6	103.0	96.5	-0.0162	0.2499	-66
-65	5.64	3.96	0.0111	11.3895	90.35	0.0878	-6.3	102.9	96.6	-0.0155	0.2495	-65
-64	5.81	4.09	0.0111	11.0497	90.25	0.0905	-6.1	102.8	96.7	-0.0149	0.2492	-64
-63	5.99	4.23	0.0111	10.7181	90.15	0.0933	-5.8	102.7	96.9	-0.0143	0.2488	-63
-62	6.17	4.37	0.0111	10.4058	90.05	0.0961	-5.6	102.6	97.0	-0.0137	0.2484	-62
-61	6.36	4.51	0.0111	10.1010	89.95	0.0990	-5.3	102.5	97.1	-0.0130	0.2481	-61
-60	6.55	4.66	0.0111	9.8039	89.85	0.1020	-5.1	102.3	97.3	-0.0124	0.2478	-60
-59	6.75	4.81	0.0111	9.5147	89.75	0.1051	-4.8	102.2	97.4	-0.0118	0.2474	-59
-58	6.95	4.96	0.0112	9.2421	89.65	0.1082	-4.6	102.1	97.5	-0.0111	0.2471	-58
-57	7.15	5.12	0.0112	8.9767	89.55	0.1114	-4.3	102.0	97.6	-0.0105	0.2467	-57
-56	7.36	5.28	0.0112	8.7184	89.45	0.1147	-4.1	101.9	97.8	-0.0099	0.2464	-56
-55	7.57	5.45	0.0112	8.4746	89.35	0.1180	-3.8	101.7	97.9	-0.0093	0.2461	-55
-54	7.79	5.62	0.0112	8.2305	89.25	0.1215	-3.6	101.6	98.0	-0.0087	0.2458	-54
-53	8.02	5.79	0.0112	8.0000	89.15	0.1250	-3.3	101.5	98.2	-0.0080	0.2454	-53
-52	8.25	5.97	0.0112	7.7760	89.05	0.1286	-3.1	101.4	98.3	-0.0074	0.2451	-52
-51	8.48	6.15	0.0112	7.5586	88.94	0.1323	-2.8	101.3	98.4	-0.0068	0.2448	-51
-50	8.72	6.34	0.0113	7.3529	88.84	0.1360	-2.6	101.1	98.6	-0.0062	0.2445	-50
-49	8.97	6.54	0.0113	7.1480	88.74	0.1399	-2.3	101.0	98.7	-0.0056	0.2442	-49
-48	9.22	6.73	0.0113	6.9541	88.64	0.1438	-2.1	100.9	98.8	-0.0049	0.2439	-48
-47	9.48	6.94	0.0113	6.7659	88.54	0.1478	-1.8	100.8	99.0	-0.0043	0.2436	-47
-46	9.74	7.14	0.0113	6.5833	88.43	0.1519	-1.5	100.6	99.1	-0.0037	0.2433	-46
-45	10.01	7.35	0.0113	6.4061	88.33	0.1561	-1.3	100.5	99.2	-0.0031	0.2430	-45
-44	10.28	7.57	0.0113	6.2344	88.23	0.1604	-1.0	100.4	99.4	-0.0025	0.2427	-44
-43	10.56	7.79	0.0113	6.0680	88.13	0.1648	-0.8	100.3	99.5	-0.0018	0.2424	-43
-42	10.85	8.02	0.0114	5.9102	88.02	0.1692	-0.5	100.2	99.6	-0.0012	0.2421	-42
-41	11.14	8.25	0.0114	5.7537	87.92	0.1738	-0.3	100.0	99.8	-0.0006	0.2418	-41
-40	11.44	8.49	0.0114	5.6022	87.82	0.1785	0.0	99.9	99.9	0.0000	0.2416	-40
-39	11.74	8.73	0.0114	5.4585	87.71	0.1832	0.3	99.8	100.0	0.0006	0.2413	-39
-38	12.05	8.98	0.0114	5.3163	87.61	0.1881	0.5	99.7	100.2	0.0012	0.2410	-38
-37	12.37	9.24	0.0114	5.1787	87.51	0.1931	0.8	99.5	100.3	0.0018	0.2407	-37
-36	12.69	9.50	0.0114	5.0480	87.40	0.1981	1.0	99.4	100.4	0.0025	0.2405	-36
-35	13.02	9.77	0.0115	4.9188	87.30	0.2033	1.3	99.3	100.6	0.0031	0.2402	-35
-34	13.36	10.04	0.0115	4.7939	87.19	0.2086	1.6	99.1	100.7	0.0037	0.2399	-34
-33	13.71	10.32	0.0115	4.6729	87.09	0.2140	1.8	99.0	100.8	0.0043	0.2397	-33
-32	14.06	10.60	0.0115	4.5558	86.99	0.2195	2.1	98.9	101.0	0.0049	0.2394	-32
-31	14.41	10.89	0.0115	4.4425	86.88	0.2251	2.3	98.8	101.1	0.0055	0.2392	-31

**Table 1** (continued)  
**Suva® MP66 Saturation Properties—Temperature Table**

TEMP. °F	PRESSURE psia		VOLUME ft <sup>3</sup> /lb		DENSITY lb/ft <sup>3</sup>		ENTHALPY Btu/lb			ENTROPY Btu/(lb)(°R)		TEMP. °F
	Liquid p <sub>f</sub>	Vapor p <sub>g</sub>	Liquid v <sub>f</sub>	Vapor v <sub>g</sub>	Liquid 1/v <sub>f</sub>	Vapor 1/v <sub>g</sub>	Liquid h <sub>f</sub>	Latent h <sub>fg</sub>	Vapor h <sub>g</sub>	Liquid s <sub>f</sub>	Vapor s <sub>g</sub>	
-30	14.78	11.19	0.0115	4.3328	86.78	0.2308	2.6	98.6	101.2	0.0061	0.2389	-30
-29	15.15	11.49	0.0115	4.2265	86.67	0.2366	2.9	98.5	101.4	0.0067	0.2387	-29
-28	15.53	11.80	0.0116	4.1220	86.56	0.2426	3.1	98.4	101.5	0.0073	0.2384	-28
-27	15.92	12.12	0.0116	4.0225	86.46	0.2486	3.4	98.2	101.6	0.0079	0.2382	-27
-26	16.32	12.44	0.0116	3.9246	86.35	0.2548	3.7	98.1	101.8	0.0085	0.2379	-26
-25	16.72	12.77	0.0116	3.8300	86.25	0.2611	3.9	98.0	101.9	0.0091	0.2377	-25
-24	17.13	13.11	0.0116	3.7383	86.14	0.2675	4.2	97.8	102.0	0.0098	0.2375	-24
-23	17.55	13.45	0.0116	3.6483	86.04	0.2741	4.4	97.7	102.2	0.0104	0.2372	-23
-22	17.98	13.80	0.0116	3.5625	85.93	0.2807	4.7	97.6	102.3	0.0110	0.2370	-22
-21	18.41	14.16	0.0117	3.4783	85.82	0.2875	5.0	97.4	102.4	0.0116	0.2368	-21
-20	18.85	14.53	0.0117	3.3956	85.72	0.2945	5.2	97.3	102.6	0.0122	0.2365	-20
-19	19.30	14.90	0.0117	3.3167	85.61	0.3015	5.5	97.2	102.7	0.0128	0.2363	-19
-18	19.76	15.28	0.0117	3.2394	85.50	0.3087	5.8	97.0	102.8	0.0134	0.2361	-18
-17	20.23	15.67	0.0117	3.1646	85.40	0.3160	6.0	96.9	103.0	0.0140	0.2359	-17
-16	20.71	16.06	0.0117	3.0912	85.29	0.3235	6.3	96.8	103.1	0.0146	0.2356	-16
-15	21.19	16.47	0.0117	3.0202	85.18	0.3311	6.6	96.6	103.2	0.0152	0.2354	-15
-14	21.69	16.88	0.0118	2.9516	85.07	0.3388	6.8	96.5	103.4	0.0158	0.2352	-14
-13	22.19	17.30	0.0118	2.8843	84.97	0.3467	7.1	96.4	103.5	0.0164	0.2350	-13
-12	22.70	17.73	0.0118	2.8193	84.86	0.3547	7.4	96.2	103.6	0.0170	0.2348	-12
-11	23.23	18.16	0.0118	2.7556	84.75	0.3629	7.7	96.1	103.7	0.0176	0.2346	-11
-10	23.76	18.61	0.0118	2.6940	84.64	0.3712	7.9	96.0	103.9	0.0182	0.2344	-10
-9	24.30	19.06	0.0118	2.6337	84.53	0.3797	8.2	95.8	104.0	0.0188	0.2342	-9
-8	24.85	19.52	0.0118	2.5753	84.42	0.3883	8.5	95.7	104.1	0.0194	0.2340	-8
-7	25.41	19.99	0.0119	2.5189	84.31	0.3970	8.7	95.5	104.3	0.0200	0.2338	-7
-6	25.98	20.47	0.0119	2.4631	84.21	0.4060	9.0	95.4	104.4	0.0206	0.2336	-6
-5	26.56	20.96	0.0119	2.4096	84.10	0.4150	9.3	95.3	104.5	0.0212	0.2334	-5
-4	27.14	21.46	0.0119	2.3568	83.99	0.4243	9.6	95.1	104.7	0.0218	0.2332	-4
-3	27.74	21.96	0.0119	2.3057	83.88	0.4337	9.8	95.0	104.8	0.0224	0.2330	-3
-2	28.35	22.48	0.0119	2.2563	83.77	0.4432	10.1	94.8	104.9	0.0230	0.2328	-2
-1	28.97	23.01	0.0120	2.2080	83.66	0.4529	10.4	94.7	105.1	0.0236	0.2326	-1
0	29.60	23.54	0.0120	2.1608	83.55	0.4628	10.7	94.5	105.2	0.0241	0.2324	0
1	30.24	24.09	0.0120	2.1146	83.44	0.4729	10.9	94.4	105.3	0.0247	0.2322	1
2	30.89	24.64	0.0120	2.0700	83.33	0.4831	11.2	94.2	105.4	0.0253	0.2320	2
3	31.56	25.20	0.0120	2.0263	83.22	0.4935	11.5	94.1	105.6	0.0259	0.2319	3
4	32.23	25.78	0.0120	1.9837	83.10	0.5041	11.8	94.0	105.7	0.0265	0.2317	4
5	32.91	26.36	0.0120	1.9425	82.99	0.5148	12.0	93.8	105.8	0.0271	0.2315	5
6	33.61	26.96	0.0121	1.9022	82.88	0.5257	12.8	93.2	106.0	0.0287	0.2313	6
7	34.31	27.56	0.0121	1.8629	82.77	0.5368	13.0	93.1	106.1	0.0293	0.2312	7
8	35.02	28.17	0.0121	1.8245	82.66	0.5481	13.3	92.9	106.2	0.0298	0.2310	8
9	35.74	28.80	0.0121	1.7873	82.55	0.5595	13.6	92.8	106.4	0.0304	0.2308	9
10	36.48	29.43	0.0121	1.7510	82.44	0.5711	13.8	92.6	106.5	0.0310	0.2307	10
11	37.23	30.08	0.0121	1.7156	82.32	0.5829	14.1	92.5	106.6	0.0316	0.2305	11
12	37.99	30.74	0.0122	1.6807	82.21	0.5950	14.4	92.4	106.7	0.0321	0.2303	12
13	38.76	31.41	0.0122	1.6469	82.10	0.6072	14.7	92.2	106.9	0.0327	0.2302	13
14	39.54	32.09	0.0122	1.6139	81.99	0.6196	14.9	92.1	107.0	0.0333	0.2300	14
15	40.34	32.78	0.0122	1.5818	81.87	0.6322	15.2	91.9	107.1	0.0339	0.2298	15
16	41.15	33.48	0.0122	1.5504	81.76	0.6450	15.5	91.8	107.3	0.0345	0.2297	16
17	41.97	34.19	0.0122	1.5198	81.65	0.6580	15.8	91.6	107.4	0.0350	0.2295	17
18	42.80	34.92	0.0123	1.4899	81.53	0.6712	16.0	91.5	107.5	0.0356	0.2294	18
19	43.64	35.65	0.0123	1.4607	81.42	0.6846	16.3	91.3	107.6	0.0362	0.2292	19
20	44.50	36.40	0.0123	1.4323	81.30	0.6982	16.6	91.2	107.8	0.0368	0.2291	20
21	45.37	37.17	0.0123	1.4045	81.19	0.7120	16.9	91.0	107.9	0.0373	0.2289	21
22	46.26	37.94	0.0123	1.3772	81.08	0.7261	17.2	90.9	108.0	0.0379	0.2287	22
23	47.15	38.73	0.0124	1.3506	80.96	0.7404	17.4	90.7	108.1	0.0385	0.2286	23
24	48.06	39.52	0.0124	1.3247	80.85	0.7549	17.7	90.6	108.3	0.0391	0.2285	24
25	48.99	40.34	0.0124	1.2994	80.73	0.7696	18.0	90.4	108.4	0.0396	0.2283	25
26	49.92	41.16	0.0124	1.2747	80.62	0.7845	18.3	90.2	108.5	0.0402	0.2282	26
27	50.88	42.00	0.0124	1.2505	80.50	0.7997	18.6	90.1	108.7	0.0408	0.2280	27
28	51.84	42.85	0.0124	1.2268	80.39	0.8151	18.7	90.1	108.8	0.0411	0.2279	28
29	52.82	43.71	0.0125	1.2037	80.27	0.8308	19.0	89.9	108.9	0.0417	0.2277	29

**Table 1** (continued)  
**Suva® MP66 Saturation Properties—Temperature Table**

TEMP. °F	PRESSURE psia		VOLUME ft <sup>3</sup> /lb		DENSITY lb/ft <sup>3</sup>		ENTHALPY Btu/lb			ENTROPY Btu/(lb)(°R)		TEMP. °F
	Liquid p <sub>f</sub>	Vapor p <sub>g</sub>	Liquid v <sub>f</sub>	Vapor v <sub>g</sub>	Liquid 1/v <sub>f</sub>	Vapor 1/v <sub>g</sub>	Liquid h <sub>f</sub>	Latent h <sub>fg</sub>	Vapor h <sub>g</sub>	Liquid s <sub>f</sub>	Vapor s <sub>g</sub>	
30	53.81	44.59	0.0125	1.1811	80.15	0.8467	19.3	89.7	109.0	0.0423	0.2276	30
31	54.82	45.48	0.0125	1.1590	80.04	0.8628	19.6	89.6	109.1	0.0428	0.2274	31
32	55.84	46.39	0.0125	1.1374	79.92	0.8792	19.9	89.4	109.3	0.0434	0.2273	32
33	56.88	47.31	0.0125	1.1162	79.81	0.8959	20.1	89.2	109.4	0.0440	0.2272	33
34	57.93	48.24	0.0125	1.0955	79.69	0.9128	20.4	89.1	109.5	0.0446	0.2270	34
35	59.00	49.19	0.0126	1.0754	79.57	0.9299	20.7	88.9	109.6	0.0451	0.2269	35
36	60.08	50.15	0.0126	1.0556	79.45	0.9473	21.0	88.8	109.8	0.0457	0.2268	36
37	61.17	51.13	0.0126	1.0364	79.34	0.9649	21.3	88.6	109.9	0.0463	0.2266	37
38	62.28	52.12	0.0126	1.0174	79.22	0.9829	21.6	88.4	110.0	0.0469	0.2265	38
39	63.41	53.12	0.0126	0.9990	79.10	1.0010	22.1	88.0	110.1	0.0479	0.2264	39
40	64.55	54.13	0.0127	0.9810	78.98	1.0194	22.4	87.9	110.3	0.0485	0.2262	40
41	65.71	55.16	0.0127	0.9634	78.87	1.0380	22.7	87.7	110.4	0.0490	0.2261	41
42	66.88	56.21	0.0127	0.9462	78.75	1.0569	23.0	87.5	110.5	0.0496	0.2260	42
43	68.06	57.27	0.0127	0.9293	78.63	1.0761	23.2	87.4	110.6	0.0502	0.2259	43
44	69.27	58.35	0.0127	0.9128	78.51	1.0955	23.5	87.2	110.7	0.0507	0.2257	44
45	70.49	59.44	0.0128	0.8966	78.39	1.1153	23.8	87.0	110.9	0.0513	0.2256	45
46	71.72	60.54	0.0128	0.8808	78.27	1.1353	24.1	86.9	111.0	0.0519	0.2255	46
47	72.97	61.67	0.0128	0.8654	78.15	1.1556	24.4	86.7	111.1	0.0524	0.2254	47
48	74.24	62.80	0.0128	0.8502	78.03	1.1762	24.7	86.5	111.2	0.0530	0.2252	48
49	75.52	63.96	0.0128	0.8354	77.91	1.1971	25.0	86.3	111.3	0.0536	0.2251	49
50	76.83	65.13	0.0129	0.8208	77.79	1.2183	25.3	86.2	111.5	0.0542	0.2250	50
51	78.14	66.32	0.0129	0.8066	77.67	1.2398	25.6	86.0	111.6	0.0547	0.2249	51
52	79.48	67.52	0.0129	0.7926	77.55	1.2616	25.9	85.8	111.7	0.0553	0.2248	52
53	80.83	68.74	0.0129	0.7790	77.43	1.2837	26.2	85.6	111.8	0.0559	0.2246	53
54	82.20	69.98	0.0129	0.7656	77.31	1.3062	26.5	85.5	111.9	0.0564	0.2245	54
55	83.59	71.23	0.0130	0.7525	77.19	1.3289	26.8	85.3	112.0	0.0570	0.2244	55
56	84.99	72.50	0.0130	0.7396	77.07	1.3520	27.1	85.1	112.2	0.0576	0.2243	56
57	86.42	73.79	0.0130	0.7271	76.95	1.3754	27.4	84.9	112.3	0.0581	0.2242	57
58	87.86	75.09	0.0130	0.7147	76.83	1.3991	27.7	84.7	112.4	0.0587	0.2241	58
59	89.31	76.42	0.0130	0.7027	76.70	1.4231	28.0	84.5	112.5	0.0593	0.2239	59
60	90.79	77.76	0.0131	0.6908	76.58	1.4475	28.3	84.4	112.6	0.0599	0.2238	60
61	92.29	79.12	0.0131	0.6792	76.46	1.4723	28.6	84.2	112.7	0.0604	0.2237	61
62	93.80	80.49	0.0131	0.6678	76.34	1.4974	28.9	84.0	112.8	0.0610	0.2236	62
63	95.33	81.89	0.0131	0.6567	76.21	1.5228	29.2	83.8	113.0	0.0616	0.2235	63
64	96.88	83.30	0.0131	0.6457	76.09	1.5486	29.5	83.6	113.1	0.0621	0.2234	64
65	98.45	84.73	0.0132	0.6350	75.97	1.5747	29.8	83.4	113.2	0.0627	0.2233	65
66	100.04	86.18	0.0132	0.6245	75.84	1.6012	30.1	83.2	113.3	0.0633	0.2232	66
67	101.65	87.65	0.0132	0.6142	75.72	1.6281	30.4	83.0	113.4	0.0639	0.2231	67
68	103.27	89.14	0.0132	0.6041	75.59	1.6553	30.7	82.8	113.5	0.0644	0.2230	68
69	104.92	90.65	0.0133	0.5942	75.47	1.6830	31.0	82.6	113.6	0.0650	0.2228	69
70	106.59	92.17	0.0133	0.5845	75.35	1.7110	31.3	82.4	113.7	0.0656	0.2227	70
71	108.27	93.72	0.0133	0.5749	75.22	1.7393	31.6	82.2	113.8	0.0661	0.2226	71
72	109.98	95.28	0.0133	0.5656	75.10	1.7681	31.9	82.1	114.0	0.0667	0.2225	72
73	111.70	96.87	0.0133	0.5564	74.97	1.7973	32.2	81.8	114.1	0.0673	0.2224	73
74	113.45	98.47	0.0134	0.5474	74.84	1.8269	32.5	81.6	114.2	0.0679	0.2223	74
75	115.22	100.10	0.0134	0.5385	74.72	1.8569	32.8	81.4	114.3	0.0684	0.2222	75
76	117.00	101.75	0.0134	0.5299	74.59	1.8872	33.1	81.2	114.4	0.0690	0.2221	76
77	118.81	103.41	0.0134	0.5213	74.47	1.9181	33.5	81.0	114.5	0.0696	0.2220	77
78	120.64	105.10	0.0135	0.5130	74.34	1.9493	33.8	80.8	114.6	0.0701	0.2219	78
79	122.49	106.81	0.0135	0.5048	74.21	1.9809	34.1	80.6	114.7	0.0707	0.2218	79
80	124.36	108.53	0.0135	0.4968	74.09	2.0130	34.4	80.4	114.8	0.0713	0.2217	80
81	126.25	110.28	0.0135	0.4889	73.96	2.0456	34.7	80.2	114.9	0.0719	0.2216	81
82	128.16	112.05	0.0135	0.4811	73.83	2.0785	35.0	80.0	115.0	0.0724	0.2215	82
83	130.10	113.85	0.0136	0.4735	73.70	2.1120	35.3	79.8	115.1	0.0730	0.2214	83
84	132.05	115.66	0.0136	0.4660	73.58	2.1458	35.7	79.6	115.2	0.0736	0.2213	84
85	134.03	117.50	0.0136	0.4587	73.45	2.1802	36.0	79.3	115.3	0.0742	0.2212	85
86	136.03	119.35	0.0136	0.4515	73.32	2.2150	36.3	79.1	115.4	0.0747	0.2211	86
87	138.05	121.23	0.0137	0.4444	73.19	2.2503	36.6	78.9	115.5	0.0753	0.2210	87
88	140.10	123.14	0.0137	0.4374	73.06	2.2860	36.9	78.7	115.6	0.0759	0.2209	88
89	142.16	125.06	0.0137	0.4306	72.93	2.3223	37.3	78.5	115.7	0.0765	0.2208	89

**Table 1** (continued)  
**Suva® MP66 Saturation Properties—Temperature Table**

TEMP. °F	PRESSURE psia		VOLUME ft <sup>3</sup> /lb		DENSITY lb/ft <sup>3</sup>		ENTHALPY Btu/lb			ENTROPY Btu/(lb)(°R)		TEMP. °F
	Liquid P <sub>f</sub>	Vapor P <sub>g</sub>	Liquid V <sub>f</sub>	Vapor V <sub>g</sub>	Liquid 1/V <sub>f</sub>	Vapor 1/V <sub>g</sub>	Liquid h <sub>f</sub>	Latent h <sub>fg</sub>	Vapor h <sub>g</sub>	Liquid s <sub>f</sub>	Vapor s <sub>g</sub>	
90	144.25	127.01	0.0137	0.4239	72.80	2.3590	37.6	78.2	115.8	0.0770	0.2207	90
91	146.37	128.98	0.0138	0.4173	72.67	2.3963	37.9	78.0	115.9	0.0776	0.2206	91
92	148.50	130.97	0.0138	0.4108	72.54	2.4340	38.2	77.8	116.0	0.0782	0.2205	92
93	150.66	132.99	0.0138	0.4045	72.41	2.4723	38.5	77.6	116.1	0.0788	0.2204	93
94	152.84	135.03	0.0138	0.3982	72.28	2.5111	38.9	77.3	116.2	0.0794	0.2203	94
95	155.05	137.09	0.0139	0.3921	72.15	2.5504	39.2	77.1	116.3	0.0799	0.2202	95
96	157.27	139.18	0.0139	0.3861	72.02	2.5903	39.5	76.9	116.4	0.0805	0.2201	96
97	159.53	141.29	0.0139	0.3801	71.89	2.6306	39.9	76.6	116.5	0.0811	0.2200	97
98	161.80	143.42	0.0139	0.3743	71.76	2.6716	40.2	76.4	116.6	0.0817	0.2199	98
99	164.10	145.58	0.0140	0.3686	71.62	2.7131	40.5	76.2	116.7	0.0822	0.2198	99
100	166.43	147.77	0.0140	0.3630	71.49	2.7552	40.8	75.9	116.8	0.0828	0.2197	100
101	168.78	149.98	0.0140	0.3574	71.36	2.7978	41.2	75.7	116.9	0.0834	0.2195	101
102	171.15	152.21	0.0140	0.3520	71.23	2.8411	41.5	75.4	116.9	0.0840	0.2194	102
103	173.55	154.47	0.0141	0.3466	71.09	2.8849	41.8	75.2	117.0	0.0846	0.2193	103
104	175.97	156.75	0.0141	0.3414	70.96	2.9293	42.2	74.9	117.1	0.0852	0.2192	104
105	178.42	159.06	0.0141	0.3362	70.83	2.9743	42.5	74.7	117.2	0.0857	0.2191	105
106	180.89	161.40	0.0141	0.3311	70.69	3.0200	42.8	74.4	117.3	0.0863	0.2190	106
107	183.39	163.76	0.0142	0.3261	70.56	3.0663	43.2	74.2	117.4	0.0869	0.2189	107
108	185.91	166.15	0.0142	0.3212	70.42	3.1132	43.5	73.9	117.5	0.0875	0.2188	108
109	188.46	168.56	0.0142	0.3164	70.29	3.1607	43.9	73.7	117.5	0.0881	0.2187	109
110	191.03	171.00	0.0143	0.3116	70.15	3.2090	44.2	73.4	117.6	0.0887	0.2186	110
111	193.63	173.46	0.0143	0.3070	70.02	3.2578	44.5	73.2	117.7	0.0892	0.2185	111
112	196.26	175.96	0.0143	0.3024	69.88	3.3074	44.9	72.9	117.8	0.0898	0.2184	112
113	198.91	178.48	0.0143	0.2978	69.74	3.3577	45.2	72.6	117.9	0.0904	0.2183	113
114	201.59	181.02	0.0144	0.2934	69.61	3.4086	45.6	72.4	118.0	0.0910	0.2182	114
115	204.30	183.60	0.0144	0.2890	69.47	3.4603	45.9	72.1	118.0	0.0916	0.2181	115
116	207.03	186.20	0.0144	0.2847	69.33	3.5126	46.3	71.8	118.1	0.0922	0.2180	116
117	209.79	188.83	0.0145	0.2804	69.20	3.5657	46.6	71.6	118.2	0.0928	0.2179	117
118	212.58	191.48	0.0145	0.2763	69.06	3.6196	47.0	71.3	118.3	0.0934	0.2178	118
119	215.39	194.17	0.0145	0.2722	68.92	3.6742	47.3	71.0	118.3	0.0940	0.2177	119
120	218.23	196.88	0.0145	0.2681	68.78	3.7296	47.7	70.7	118.4	0.0946	0.2176	120
121	221.10	199.63	0.0146	0.2642	68.64	3.7857	48.0	70.5	118.5	0.0952	0.2175	121
122	224.00	202.40	0.0146	0.2602	68.50	3.8427	48.4	70.2	118.6	0.0958	0.2174	122
123	226.92	205.20	0.0146	0.2564	68.36	3.9004	48.7	69.9	118.6	0.0963	0.2173	123
124	229.87	208.03	0.0147	0.2526	68.22	3.9590	49.1	69.6	118.7	0.0969	0.2171	124
125	232.85	210.89	0.0147	0.2489	68.08	4.0184	49.4	69.3	118.8	0.0975	0.2170	125
126	235.86	213.77	0.0147	0.2452	67.94	4.0787	49.8	69.0	118.8	0.0981	0.2169	126
127	238.90	216.69	0.0147	0.2416	67.80	4.1398	50.2	68.7	118.9	0.0987	0.2168	127
128	241.97	219.64	0.0148	0.2380	67.66	4.2018	50.5	68.4	119.0	0.0993	0.2167	128
129	245.06	222.62	0.0148	0.2345	67.52	4.2647	50.9	68.1	119.0	0.0999	0.2166	129
130	248.18	225.63	0.0148	0.2310	67.38	4.3285	51.2	67.8	119.1	0.1005	0.2165	130
131	251.34	228.67	0.0149	0.2276	67.23	4.3932	51.6	67.5	119.2	0.1011	0.2164	131
132	254.52	231.74	0.0149	0.2243	67.09	4.4589	52.0	67.2	119.2	0.1018	0.2162	132
133	257.73	234.84	0.0149	0.2210	66.95	4.5255	52.3	66.9	119.3	0.1024	0.2161	133
134	260.97	237.97	0.0150	0.2177	66.81	4.5931	52.7	66.6	119.3	0.1030	0.2160	134
135	264.24	241.14	0.0150	0.2145	66.66	4.6617	53.1	66.3	119.4	0.1036	0.2159	135
136	267.54	244.33	0.0150	0.2114	66.52	4.7313	53.5	66.0	119.4	0.1042	0.2158	136
137	270.87	247.56	0.0151	0.2082	66.37	4.8020	53.8	65.7	119.5	0.1048	0.2157	137
138	274.23	250.82	0.0151	0.2052	66.23	4.8737	54.2	65.3	119.5	0.1054	0.2155	138
139	277.63	254.11	0.0151	0.2022	66.08	4.9464	54.6	65.0	119.6	0.1060	0.2154	139
140	281.05	257.44	0.0152	0.1992	65.93	5.0203	55.0	64.7	119.6	0.1066	0.2153	140
141	284.50	260.79	0.0152	0.1963	65.79	5.0953	55.3	64.3	119.7	0.1072	0.2152	141
142	287.99	264.19	0.0152	0.1934	65.64	5.1714	55.7	64.0	119.7	0.1079	0.2150	142
143	291.50	267.61	0.0153	0.1905	65.49	5.2487	56.1	63.7	119.8	0.1085	0.2149	143
144	295.05	271.07	0.0153	0.1877	65.35	5.3272	56.5	63.3	119.8	0.1091	0.2148	144
145	298.63	274.56	0.0153	0.1850	65.20	5.4068	56.9	63.0	119.9	0.1097	0.2146	145
146	302.24	278.08	0.0154	0.1822	65.05	5.4878	57.3	62.6	119.9	0.1103	0.2145	146
147	305.88	281.64	0.0154	0.1795	64.90	5.5699	57.7	62.3	120.0	0.1110	0.2144	147
148	309.55	285.24	0.0154	0.1769	64.75	5.6534	58.0	61.9	120.0	0.1116	0.2143	148
149	313.25	288.87	0.0155	0.1743	64.60	5.7382	58.4	61.6	120.0	0.1122	0.2141	149

**Table 1** (continued)  
**Suva® MP66 Saturation Properties—Temperature Table**

TEMP. °F	PRESSURE psia		VOLUME ft <sup>3</sup> /lb		DENSITY lb/ft <sup>3</sup>		ENTHALPY Btu/lb			ENTROPY Btu/(lb)°R)		TEMP. °F
	Liquid P <sub>f</sub>	Vapor P <sub>g</sub>	Liquid V <sub>f</sub>	Vapor V <sub>g</sub>	Liquid 1/V <sub>f</sub>	Vapor 1/V <sub>g</sub>	Liquid h <sub>f</sub>	Latent h <sub>fg</sub>	Vapor h <sub>g</sub>	Liquid s <sub>f</sub>	Vapor s <sub>g</sub>	
150	316.99	292.53	0.0155	0.1717	64.45	5.8243	58.8	61.2	120.1	0.1129	0.2140	150
151	320.76	296.23	0.0156	0.1692	64.30	5.9118	59.2	60.9	120.1	0.1135	0.2138	151
152	324.56	299.97	0.0156	0.1666	64.15	6.0007	59.6	60.5	120.1	0.1141	0.2137	152
153	328.40	303.74	0.0156	0.1642	63.99	6.0910	60.0	60.1	120.1	0.1148	0.2136	153
154	332.27	307.54	0.0157	0.1617	63.84	6.1828	60.4	59.7	120.2	0.1154	0.2134	154
155	336.17	311.39	0.0157	0.1593	63.69	6.2761	60.8	59.4	120.2	0.1160	0.2133	155
156	340.10	315.27	0.0157	0.1570	63.53	6.3710	61.2	59.0	120.2	0.1167	0.2131	156
157	344.07	319.18	0.0158	0.1546	63.38	6.4674	61.7	58.6	120.2	0.1173	0.2130	157
158	348.07	323.13	0.0158	0.1523	63.23	6.5654	62.1	58.2	120.3	0.1180	0.2128	158
159	352.11	327.12	0.0159	0.1500	63.07	6.6651	62.5	57.8	120.3	0.1186	0.2127	159
160	356.17	331.15	0.0159	0.1478	62.91	6.7665	62.9	57.4	120.3	0.1193	0.2125	160
161	360.28	335.22	0.0159	0.1456	62.76	6.8697	63.3	57.0	120.3	0.1199	0.2124	161
162	364.41	339.32	0.0160	0.1434	62.60	6.9746	63.7	56.6	120.3	0.1206	0.2122	162
163	368.58	343.46	0.0160	0.1412	62.44	7.0813	64.2	56.2	120.3	0.1212	0.2120	163
164	372.79	347.64	0.0161	0.1391	62.28	7.1899	64.6	55.7	120.3	0.1219	0.2119	164
165	377.03	351.86	0.0161	0.1370	62.12	7.3005	65.0	55.3	120.3	0.1226	0.2117	165
166	381.30	356.12	0.0161	0.1349	61.96	7.4130	65.4	54.9	120.3	0.1232	0.2115	166
167	385.61	360.42	0.0162	0.1328	61.80	7.5275	65.9	54.5	120.3	0.1239	0.2114	167
168	389.96	364.76	0.0162	0.1308	61.64	7.6442	66.3	54.0	120.3	0.1246	0.2112	168
169	394.34	369.13	0.0163	0.1288	61.48	7.7630	66.7	53.6	120.3	0.1252	0.2110	169
170	398.75	373.55	0.0163	0.1268	61.32	7.8840	67.2	53.1	120.3	0.1259	0.2108	170
171	403.20	378.01	0.0164	0.1249	61.15	8.0073	67.6	52.7	120.3	0.1266	0.2106	171
172	407.69	382.51	0.0164	0.1230	60.99	8.1329	68.1	52.2	120.3	0.1273	0.2104	172
173	412.21	387.05	0.0164	0.1211	60.82	8.2610	68.5	51.7	120.3	0.1280	0.2103	173
174	416.77	391.63	0.0165	0.1192	60.66	8.3916	69.0	51.3	120.2	0.1287	0.2101	174
175	421.36	396.26	0.0165	0.1173	60.49	8.5247	69.4	50.8	120.2	0.1293	0.2099	175
176	425.99	400.92	0.0166	0.1155	60.32	8.6606	69.9	50.3	120.2	0.1300	0.2097	176
177	430.65	405.63	0.0166	0.1136	60.15	8.7991	70.4	49.8	120.2	0.1307	0.2095	177
178	435.36	410.39	0.0167	0.1119	59.98	8.9405	70.8	49.3	120.1	0.1315	0.2092	178
179	440.09	415.18	0.0167	0.1101	59.81	9.0849	71.3	48.8	120.1	0.1322	0.2090	179
180	444.87	420.02	0.0168	0.1083	59.64	9.2323	71.8	48.3	120.0	0.1329	0.2088	180
181	449.68	424.90	0.0168	0.1066	59.47	9.3828	72.2	47.8	120.0	0.1336	0.2086	181
182	454.53	429.83	0.0169	0.1049	59.29	9.5367	72.7	47.2	120.0	0.1343	0.2084	182
183	459.41	434.80	0.0169	0.1032	59.12	9.6939	73.2	46.7	119.9	0.1351	0.2081	183
184	464.33	439.82	0.0170	0.1015	58.94	9.8547	73.7	46.1	119.8	0.1358	0.2079	184
185	469.29	444.88	0.0170	0.0998	58.76	10.0191	74.2	45.6	119.8	0.1365	0.2076	185
186	474.29	449.99	0.0171	0.0982	58.58	10.1874	74.7	45.0	119.7	0.1373	0.2074	186
187	479.32	455.14	0.0171	0.0965	58.40	10.3596	75.2	44.4	119.6	0.1380	0.2071	187
188	484.39	460.34	0.0172	0.0949	58.22	10.5360	75.7	43.8	119.6	0.1388	0.2069	188
189	489.50	465.59	0.0172	0.0933	58.04	10.7167	76.2	43.3	119.5	0.1395	0.2066	189
190	494.64	470.88	0.0173	0.0917	57.85	10.9020	76.7	42.6	119.4	0.1403	0.2063	190
191	499.82	476.22	0.0173	0.0902	57.66	11.0920	77.3	42.0	119.3	0.1411	0.2061	191
192	505.04	481.62	0.0174	0.0886	57.48	11.2870	77.8	41.4	119.2	0.1419	0.2058	192
193	510.30	487.06	0.0175	0.0871	57.28	11.4873	78.3	40.8	119.1	0.1427	0.2055	193
194	515.59	492.55	0.0175	0.0855	57.09	11.6930	78.9	40.1	119.0	0.1435	0.2052	194
195	520.92	498.08	0.0176	0.0840	56.90	11.9045	79.4	39.4	118.9	0.1443	0.2049	195
196	526.29	503.68	0.0176	0.0825	56.70	12.1221	80.0	38.7	118.7	0.1451	0.2045	196
197	531.69	509.32	0.0177	0.0810	56.50	12.3462	80.6	38.0	118.6	0.1459	0.2042	197
198	537.14	515.01	0.0178	0.0795	56.30	12.5771	81.1	37.3	118.5	0.1468	0.2039	198
199	542.61	520.75	0.0178	0.0780	56.09	12.8153	81.7	36.6	118.3	0.1476	0.2035	199
200	548.13	526.55	0.0179	0.0766	55.89	13.0612	82.3	35.9	118.2	0.1485	0.2031	200
201	553.68	532.41	0.0180	0.0751	55.68	13.3154	82.9	35.1	118.0	0.1494	0.2028	201
202	559.26	538.31	0.0180	0.0736	55.46	13.5784	83.5	34.3	117.8	0.1503	0.2024	202
203	564.89	544.28	0.0181	0.0722	55.24	13.8509	84.1	33.5	117.6	0.1512	0.2020	203
204	570.54	550.30	0.0182	0.0708	55.02	14.1337	84.8	32.6	117.4	0.1521	0.2015	204
205	576.24	556.37	0.0183	0.0693	54.79	14.4275	85.4	31.8	117.2	0.1530	0.2011	205
206	581.96	562.51	0.0183	0.0679	54.56	14.7333	86.1	30.9	117.0	0.1540	0.2006	206
207	587.72	568.70	0.0184	0.0664	54.32	15.0522	86.8	30.0	116.7	0.1550	0.2002	207

**Table 2**  
**Suva® MP66 Superheated Vapor—Constant Pressure Tables**

V = Volume in ft<sup>3</sup>/lb    H = Enthalpy in Btu/lb    S = Entropy in Btu/(lb) (°R)    (Saturation Properties in parentheses)

TEMP. °F	ABSOLUTE PRESSURE, psia												TEMP. °F	
	1.00 (-102.29°F)			2.00 (-84.62°F)			3.00 (-73.27°F)			4.00 (-64.71°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(41.1709)	(91.8)	(0.2660)	(21.5464)	(94.0)	(0.2574)	(14.7637)	(95.5)	(0.2526)	(11.2931)	(96.6)	(0.2494)		
-100	41.4367	92.1	0.2668	—	—	—	—	—	—	—	—	—	-100	
-90	42.5985	93.4	0.2704	—	—	—	—	—	—	—	—	—	-90	
-80	43.7599	94.7	0.2740	21.8157	94.7	0.2590	—	—	—	—	—	—	-80	
-70	44.9211	96.1	0.2775	22.3989	96.0	0.2626	14.8914	96.0	0.2538	—	—	—	-70	
-60	46.0819	97.5	0.2810	22.9818	97.4	0.2661	15.2817	97.3	0.2573	11.4314	97.3	0.2511	-60	
-50	47.2425	98.9	0.2845	23.5645	98.8	0.2696	15.6717	98.8	0.2608	11.7251	98.7	0.2546	-50	
-40	48.4028	100.3	0.2880	24.1468	100.3	0.2730	16.0614	100.2	0.2643	12.0186	100.1	0.2580	-40	
-30	49.5629	101.8	0.2914	24.7290	101.7	0.2765	16.4509	101.7	0.2677	12.3118	101.6	0.2615	-30	
-20	50.7228	103.2	0.2948	25.3109	103.2	0.2799	16.8402	103.1	0.2711	12.6047	103.1	0.2649	-20	
-10	51.8824	104.8	0.2982	25.8926	104.7	0.2833	17.2293	104.7	0.2745	12.8975	104.6	0.2683	-10	
0	53.0419	106.3	0.3015	26.4742	106.2	0.2866	17.6181	106.2	0.2779	13.1901	106.1	0.2717	0	
10	54.2012	107.8	0.3049	27.0555	107.8	0.2900	18.0068	107.7	0.2812	13.4825	107.7	0.2750	10	
20	55.3604	109.4	0.3082	27.6367	109.4	0.2933	18.3954	109.3	0.2845	13.7747	109.3	0.2783	20	
30	56.5194	111.0	0.3115	28.2177	110.9	0.2966	18.7838	110.9	0.2878	14.0667	110.9	0.2816	30	
40	57.6782	112.6	0.3147	28.7986	112.6	0.2998	19.1720	112.5	0.2911	14.3587	112.5	0.2849	40	
50	58.8369	114.2	0.3180	29.3793	114.2	0.3031	19.5601	114.2	0.2943	14.6504	114.1	0.2881	50	
60	59.9955	115.9	0.3212	29.9600	115.8	0.3063	19.9481	115.8	0.2976	14.9421	115.8	0.2914	60	
70	61.1540	117.6	0.3244	30.5405	117.5	0.3095	20.3359	117.5	0.3008	15.2336	117.4	0.2945	70	
80	62.3124	119.3	0.3275	31.1209	119.2	0.3126	20.7237	119.2	0.3039	15.5251	119.1	0.2977	80	
90	63.4706	121.0	0.3307	31.7012	120.9	0.3158	21.1113	120.9	0.3071	15.8164	120.9	0.3009	90	
100	64.6288	122.7	0.3338	32.2814	122.7	0.3189	21.4989	122.6	0.3102	16.1076	122.6	0.3040	100	
110	65.7869	124.5	0.3369	32.8615	124.4	0.3220	21.8864	124.4	0.3133	16.3988	124.3	0.3071	110	
120	66.9449	126.2	0.3400	33.4415	126.2	0.3251	22.2737	126.2	0.3164	16.6898	126.1	0.3102	120	
130	68.1028	128.0	0.3430	34.0215	128.0	0.3282	22.6610	127.9	0.3194	16.9808	127.9	0.3133	130	
140	69.2606	129.8	0.3461	34.6014	129.8	0.3312	23.0482	129.8	0.3225	17.2717	129.7	0.3163	140	
150	70.4184	131.6	0.3491	35.1811	131.6	0.3342	23.4354	131.6	0.3255	17.5625	131.5	0.3193	150	
160	71.5761	133.5	0.3521	35.7609	133.5	0.3372	23.8225	133.4	0.3285	17.8532	133.4	0.3223	160	
170	72.7337	135.3	0.3551	36.3405	135.3	0.3402	24.2095	135.3	0.3315	18.1439	135.3	0.3253	170	
180	73.8913	137.2	0.3580	36.9201	137.2	0.3432	24.5964	137.2	0.3344	18.4345	137.1	0.3283	180	
190	75.0488	139.1	0.3610	37.4997	139.1	0.3461	24.9833	139.1	0.3374	18.7251	139.0	0.3312	190	
200	76.2063	141.0	0.3639	38.0792	141.0	0.3490	25.3701	141.0	0.3403	19.0156	140.9	0.3341	200	
210	—	—	—	38.6586	142.9	0.3519	25.7569	142.9	0.3432	19.3060	142.9	0.3370	210	
220	—	—	—	39.2380	144.9	0.3548	26.1436	144.8	0.3461	19.5964	144.8	0.3399	220	
230	—	—	—	—	—	—	26.5303	146.8	0.3490	19.8868	146.8	0.3428	230	

TEMP. °F	5.00 (-57.75°F)			6.00 (-51.84°F)			7.00 (-46.68°F)			8.00 (-42.09°F)			TEMP. °F	
	(-57.75°F)			(-51.84°F)			(-46.68°F)			(-42.09°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(9.1743)	(97.5)	(0.2470)	(7.7420)	(98.3)	(0.2451)	(6.7069)	(99.0)	(0.2435)	(5.9227)	(99.6)	(0.2422)		
-50	9.3571	98.7	0.2497	7.7784	98.6	0.2457	—	—	—	—	—	—	-50	
-40	9.5928	100.1	0.2532	7.9755	100.0	0.2492	6.8203	100.0	0.2458	5.9538	99.9	0.2429	-40	
-30	9.8282	101.6	0.2566	8.1724	101.5	0.2527	6.9897	101.5	0.2493	6.1026	101.4	0.2463	-30	
-20	10.0634	103.0	0.2601	8.3691	103.0	0.2561	7.1589	102.9	0.2527	6.2512	102.9	0.2498	-20	
-10	10.2984	104.6	0.2635	8.5656	104.5	0.2595	7.3278	104.5	0.2561	6.3995	104.4	0.2532	-10	
0	10.5332	106.1	0.2668	8.7619	106.0	0.2629	7.4966	106.0	0.2595	6.5476	105.9	0.2566	0	
10	10.7678	107.6	0.2702	8.9580	107.6	0.2662	7.6652	107.6	0.2629	6.6956	107.5	0.2599	10	
20	11.0022	109.2	0.2735	9.1539	109.2	0.2695	7.8336	109.1	0.2662	6.8434	109.1	0.2633	20	
30	11.2365	110.8	0.2768	9.3496	110.8	0.2728	8.0018	110.7	0.2695	6.9910	110.7	0.2666	30	
40	11.4706	112.4	0.2801	9.5452	112.4	0.2761	8.1699	112.4	0.2728	7.1384	112.3	0.2698	40	
50	11.7046	114.1	0.2833	9.7407	114.0	0.2794	8.3379	114.0	0.2760	7.2858	114.0	0.2731	50	
60	11.9385	115.7	0.2865	9.9360	115.7	0.2826	8.5057	115.7	0.2792	7.4329	115.6	0.2763	60	
70	12.1722	117.4	0.2897	10.1313	117.4	0.2858	8.6734	117.3	0.2824	7.5800	117.3	0.2795	70	
80	12.4059	119.1	0.2929	10.3264	119.1	0.2890	8.8410	119.0	0.2856	7.7270	119.0	0.2827	80	
90	12.6394	120.8	0.2961	10.5214	120.8	0.2921	9.0085	120.8	0.2888	7.8738	120.7	0.2859	90	
100	12.8728	122.6	0.2992	10.7163	122.5	0.2952	9.1759	122.5	0.2919	8.0206	122.5	0.2890	100	
110	13.1062	124.3	0.3023	10.9111	124.3	0.2983	9.3432	124.2	0.2950	8.1673	124.2	0.2921	110	
120	13.3394	126.1	0.3054	11.1058	126.1	0.3014	9.5104	126.0	0.2981	8.3138	126.0	0.2952	120	
130	13.5726	127.9	0.3084	11.3005	127.8	0.3045	9.6775	127.8	0.3012	8.4603	127.8	0.2983	130	
140	13.8057	129.7	0.3115	11.4951	129.7	0.3075	9.8446	129.6	0.3042	8.6067	129.6	0.3013	140	
150	14.0387	131.5	0.3145	11.6896	131.5	0.3106	10.0116	131.5	0.3072	8.7531	131.4	0.3043	150	
160	14.2717	133.4	0.3175	11.8840	133.3	0.3136	10.1785	133.3	0.3102	8.8993	133.3	0.3074	160	
170	14.5046	135.2	0.3205	12.0783	135.2	0.3166	10.3453	135.2	0.3132	9.0455	135.1	0.3103	170	
180	14.7374	137.1	0.3235	12.2726	137.1	0.3195	10.5121	137.0	0.3162	9.1917	137.0	0.3133	180	
190	14.9702	139.0	0.3264	12.4669	139.0	0.3225	10.6788	138.9	0.3191	9.3377	138.9	0.3163	190	
200	15.2029	140.9	0.3293	12.6610	140.9	0.3254	10.8455	140.9	0.3221	9.4838	140.8	0.3192	200	
210	15.4355	142.8	0.3322	12.8552	142.8	0.3283	11.0121	142.8	0.3250	9.6297	142.8	0.3221	210	
220	15.6681	144.8	0.3351	13.0492	144.8	0.3312	11.1786	144.7	0.3279	9.7756	144.7	0.3250	220	
230	15.9007	146.8	0.3380	13.2433	146.7	0.								

**Table 2** (continued)  
**Suva® MP66 Superheated Vapor—Constant Pressure Tables**

V = Volume in ft<sup>3</sup>/lb

H = Enthalpy in Btu/lb

S = Entropy in Btu/(lb) (°R)

(Saturation Properties in parentheses)

TEMP. °F	ABSOLUTE PRESSURE, psia													
	9.00			10.00			11.00			12.00			TEMP. °F	
	(-37.94°F)			(-34.14°F)			(-30.63°F)			(-27.37°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(5.3073)	(100.2)	(0.2410)	(4.8110)	(100.7)	(0.2400)	(4.4019)	(101.1)	(0.2391)	(4.0588)	(101.6)	(0.2383)		
-30	5.4126	101.3	0.2437	4.8605	101.3	0.2414	4.4088	101.2	0.2393	—	—	—	-30	
-20	5.5451	102.8	0.2472	4.9802	102.8	0.2449	4.5180	102.7	0.2427	4.1328	102.7	0.2408	-20	
-10	5.6774	104.4	0.2506	5.0997	104.3	0.2483	4.6270	104.3	0.2462	4.2331	104.2	0.2442	-10	
0	5.8095	105.9	0.2540	5.2190	105.9	0.2517	4.7358	105.8	0.2496	4.3331	105.8	0.2476	0	
10	5.9414	107.5	0.2573	5.3381	107.4	0.2550	4.8444	107.4	0.2529	4.4330	107.3	0.2510	10	
20	6.0731	109.0	0.2607	5.4570	109.0	0.2584	4.9528	109.0	0.2563	4.5326	108.9	0.2543	20	
30	6.2047	110.6	0.2640	5.5757	110.6	0.2617	5.0610	110.6	0.2596	4.6321	110.5	0.2577	30	
40	6.3361	112.3	0.2673	5.6943	112.2	0.2650	5.1691	112.2	0.2629	4.7315	112.1	0.2609	40	
50	6.4674	113.9	0.2705	5.8127	113.9	0.2682	5.2771	113.8	0.2661	4.8307	113.8	0.2642	50	
60	6.5986	115.6	0.2738	5.9310	115.5	0.2714	5.3849	115.5	0.2694	4.9297	115.5	0.2674	60	
70	6.7296	117.3	0.2770	6.0492	117.2	0.2747	5.4926	117.2	0.2726	5.0286	117.1	0.2707	70	
80	6.8605	119.0	0.2801	6.1673	118.9	0.2778	5.6001	118.9	0.2758	5.1275	118.8	0.2738	80	
90	6.9913	120.7	0.2833	6.2853	120.6	0.2810	5.7076	120.6	0.2789	5.2262	120.6	0.2770	90	
100	7.1220	122.4	0.2864	6.4031	122.4	0.2841	5.8150	122.3	0.2821	5.3248	122.3	0.2802	100	
110	7.2526	124.2	0.2896	6.5209	124.1	0.2873	5.9222	124.1	0.2852	5.4233	124.1	0.2833	110	
120	7.3831	126.0	0.2926	6.6386	125.9	0.2904	6.0294	125.9	0.2883	5.5217	125.9	0.2864	120	
130	7.5136	127.7	0.2957	6.7562	127.7	0.2934	6.1365	127.7	0.2913	5.6201	127.7	0.2894	130	
140	7.6439	129.6	0.2988	6.8737	129.5	0.2965	6.2435	129.5	0.2944	5.7183	129.5	0.2925	140	
150	7.7742	131.4	0.3018	6.9912	131.4	0.2995	6.3504	131.3	0.2974	5.8165	131.3	0.2955	150	
160	7.9044	133.2	0.3048	7.1085	133.2	0.3025	6.4573	133.2	0.3004	5.9146	133.2	0.2985	160	
170	8.0346	135.1	0.3078	7.2258	135.1	0.3055	6.5641	135.0	0.3034	6.0127	135.0	0.3015	170	
180	8.1647	137.0	0.3108	7.3431	137.0	0.3085	6.6708	136.9	0.3064	6.1107	136.9	0.3045	180	
190	8.2947	138.9	0.3137	7.4603	138.9	0.3114	6.7775	138.8	0.3093	6.2086	138.8	0.3075	190	
200	8.4247	140.8	0.3166	7.5774	140.8	0.3143	6.8841	140.8	0.3123	6.3064	140.7	0.3104	200	
210	8.5546	142.7	0.3195	7.6944	142.7	0.3173	6.9907	142.7	0.3152	6.4042	142.7	0.3133	210	
220	8.6844	144.7	0.3224	7.8115	144.7	0.3201	7.0972	144.6	0.3181	6.5020	144.6	0.3162	220	
230	8.8142	146.7	0.3253	7.9284	146.6	0.3230	7.2037	146.6	0.3210	6.5997	146.6	0.3191	230	
240	8.9440	148.6	0.3282	8.0453	148.6	0.3259	7.3101	148.6	0.3238	6.6974	148.6	0.3219	240	
250	9.0737	150.6	0.3310	8.1622	150.6	0.3287	7.4165	150.6	0.3267	6.7950	150.6	0.3248	250	
260	9.2034	152.7	0.3338	8.2791	152.6	0.3315	7.5228	152.6	0.3295	6.8925	152.6	0.3276	260	
270	9.3330	154.7	0.3366	8.3958	154.7	0.3343	7.6291	154.6	0.3323	6.9901	154.6	0.3304	270	
280	—	—	—	—	—	—	—	—	—	7.0876	156.7	0.3332	280	

TEMP. °F	13.00			14.00			14.696			15.00			TEMP. °F	
	(-24.32°F)			(-21.44°F)			(-19.54°F)			(-18.73°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(3.7667)	(102.0)	(0.2375)	(3.5149)	(102.4)	(0.2369)	(3.3592)	(102.6)	(0.2364)	(3.2955)	(102.7)	(0.2362)		
-20	3.8069	102.6	0.2390	3.5274	102.6	0.2374	—	—	—	—	—	—	-20	
-10	3.8997	104.2	0.2424	3.6140	104.1	0.2408	3.4380	104.1	0.2397	3.3663	104.1	0.2392	-10	
0	3.9924	105.7	0.2458	3.7003	105.7	0.2442	3.5204	105.6	0.2431	3.4471	105.6	0.2427	0	
10	4.0848	107.3	0.2492	3.7864	107.2	0.2476	3.6027	107.2	0.2465	3.5277	107.2	0.2460	10	
20	4.1771	108.9	0.2526	3.8723	108.8	0.2509	3.6847	108.8	0.2498	3.6082	108.8	0.2494	20	
30	4.2692	110.5	0.2559	3.9581	110.4	0.2542	3.7665	110.4	0.2532	3.6884	110.4	0.2527	30	
40	4.3611	112.1	0.2592	4.0437	112.1	0.2575	3.8482	112.0	0.2565	3.7685	112.0	0.2560	40	
50	4.4529	113.7	0.2624	4.1291	113.7	0.2608	3.9298	113.7	0.2597	3.8485	113.7	0.2593	50	
60	4.5446	115.4	0.2657	4.2144	115.4	0.2640	4.0112	115.3	0.2630	3.9283	115.3	0.2625	60	
70	4.6361	117.1	0.2689	4.2996	117.1	0.2673	4.0925	117.0	0.2662	4.0080	117.0	0.2657	70	
80	4.7275	118.8	0.2721	4.3847	118.8	0.2705	4.1736	118.7	0.2694	4.0876	118.7	0.2689	80	
90	4.8188	120.5	0.2753	4.4697	120.5	0.2736	4.2547	120.5	0.2726	4.1671	120.5	0.2721	90	
100	4.9100	122.3	0.2784	4.5545	122.2	0.2768	4.3356	122.2	0.2757	4.2464	122.2	0.2753	100	
110	5.0012	124.0	0.2815	4.6393	124.0	0.2799	4.4165	124.0	0.2788	4.3257	124.0	0.2784	110	
120	5.0922	125.8	0.2846	4.7240	125.8	0.2830	4.4973	125.8	0.2819	4.4048	125.8	0.2815	120	
130	5.1831	127.6	0.2877	4.8086	127.6	0.2861	4.5779	127.6	0.2850	4.4839	127.6	0.2846	130	
140	5.2740	129.4	0.2908	4.8931	129.4	0.2891	4.6585	129.4	0.2881	4.5629	129.4	0.2876	140	
150	5.3647	131.3	0.2938	4.9775	131.2	0.2922	4.7391	131.2	0.2911	4.6419	131.2	0.2907	150	
160	5.4554	133.1	0.2968	5.0618	133.1	0.2952	4.8195	133.1	0.2941	4.7207	133.1	0.2937	160	
170	5.5461	135.0	0.2998	5.1461	135.0	0.2982	4.8999	134.9	0.2971	4.7995	134.9	0.2967	170	
180	5.6367	136.9	0.3028	5.2304	136.8	0.3011	4.9802	136.8	0.3001	4.8782	136.8	0.2996	180	
190	5.7272	138.8	0.3057	5.3145	138.8	0.3041	5.0605	138.7	0.3030	4.9569	138.7	0.3026	190	
200	5.8176	140.7	0.3086	5.3986	140.7	0.3070	5.1407	140.7	0.3060	5.0355	140.6	0.3055	200	
210	5.9080	142.6	0.3116	5.4827	142.6	0.3099	5.2208	142.6	0.3089	5.1140	142.6	0.3084	210	
220	5.9984	144.6	0.3145	5.5667	144.6	0.3128	5.3009	144.5	0.3118	5.1925	144.5	0.3113	220	
230	6.0887	146.6	0.3173	5.6506	146.5	0.3157	5.3809	146.5	0.3147	5.2710	146.5	0.3142	230	
240	6.1789	148.5	0.3202	5.7345	148.5	0.3186	5.4609	148.5	0.3175	5.3494	148.5	0.3171	240	
250	6.2691	150.5	0.3230	5.8184	150.5	0.3214	5.5408	150.5	0.3204	5.4277	150.5	0.3199	250	
260	6.3593	152.6	0.3259	5.9022	152.5	0.3242	5.6207	152.5	0.3232	5.5060	152.5	0.3227	260	
270	6.4494	154.6	0.3287	5.9859	154.6	0.3271	5.7006	154.6	0.3260	5.5843	154.			

**Table 2 (continued)**  
**Suva® MP66 Superheated Vapor—Constant Pressure Tables**

V = Volume in ft<sup>3</sup>/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	
	(-16.16°F)			(-13.71°F)			(-11.37°F)			(-9.13°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(3.1026)	(103.1)	(0.2357)	(2.9316)	(103.4)	(0.2351)	(2.7789)	(103.7)	(0.2347)	(2.6417)	(104.0)	(0.2342)		
-10	3.1496	104.0	0.2378	2.9583	104.0	0.2364	2.7883	103.9	0.2351	—	—	—	-10	
0	3.2256	105.6	0.2412	3.0301	105.5	0.2398	2.8563	105.5	0.2385	2.7008	105.4	0.2373	0	
10	3.3014	107.1	0.2446	3.1017	107.1	0.2432	2.9241	107.0	0.2419	2.7653	107.0	0.2407	10	
20	3.3770	108.7	0.2479	3.1731	108.7	0.2466	2.9918	108.6	0.2453	2.8295	108.6	0.2441	20	
30	3.4525	110.3	0.2513	3.2443	110.3	0.2499	3.0592	110.3	0.2486	2.8936	110.2	0.2474	30	
40	3.5278	112.0	0.2546	3.3153	111.9	0.2532	3.1265	111.9	0.2519	2.9575	111.8	0.2507	40	
50	3.6029	113.6	0.2578	3.3863	113.6	0.2565	3.1936	113.5	0.2552	3.0213	113.5	0.2540	50	
60	3.6779	115.3	0.2611	3.4570	115.3	0.2597	3.2606	115.2	0.2585	3.0849	115.2	0.2573	60	
70	3.7528	117.0	0.2643	3.5277	116.9	0.2630	3.3275	116.9	0.2617	3.1484	116.9	0.2605	70	
80	3.8276	118.7	0.2675	3.5982	118.7	0.2662	3.3943	118.6	0.2649	3.2118	118.6	0.2637	80	
90	3.9023	120.4	0.2707	3.6686	120.4	0.2693	3.4609	120.4	0.2681	3.2751	120.3	0.2669	90	
100	3.9768	122.2	0.2738	3.7389	122.1	0.2725	3.5274	122.1	0.2712	3.3382	122.1	0.2700	100	
110	4.0513	123.9	0.2770	3.8091	123.9	0.2756	3.5939	123.9	0.2744	3.4013	123.8	0.2732	110	
120	4.1256	125.7	0.2801	3.8792	125.7	0.2787	3.6602	125.7	0.2775	3.4643	125.6	0.2763	120	
130	4.1999	127.5	0.2831	3.9493	127.5	0.2818	3.7265	127.5	0.2805	3.5271	127.4	0.2794	130	
140	4.2741	129.3	0.2862	4.0192	129.3	0.2849	3.7926	129.3	0.2836	3.5899	129.2	0.2824	140	
150	4.3482	131.2	0.2892	4.0891	131.1	0.2879	3.8587	131.1	0.2867	3.6526	131.1	0.2855	150	
160	4.4222	133.0	0.2923	4.1589	133.0	0.2909	3.9248	133.0	0.2897	3.7153	132.9	0.2885	160	
170	4.4962	134.9	0.2953	4.2286	134.9	0.2939	3.9907	134.8	0.2927	3.7779	134.8	0.2915	170	
180	4.5701	136.8	0.2982	4.2983	136.8	0.2969	4.0566	136.7	0.2956	3.8404	136.7	0.2945	180	
190	4.6440	138.7	0.3012	4.3678	138.7	0.2999	4.1224	138.6	0.2986	3.9028	138.6	0.2974	190	
200	4.7178	140.6	0.3041	4.4374	140.6	0.3028	4.1882	140.6	0.3015	3.9652	140.5	0.3004	200	
210	4.7915	142.6	0.3070	4.5069	142.5	0.3057	4.2539	142.5	0.3045	4.0275	142.5	0.3033	210	
220	4.8652	144.5	0.3099	4.5763	144.5	0.3086	4.3195	144.5	0.3074	4.0898	144.4	0.3062	220	
230	4.9388	146.5	0.3128	4.6457	146.5	0.3115	4.3851	146.4	0.3102	4.1520	146.4	0.3091	230	
240	5.0124	148.5	0.3157	4.7150	148.4	0.3144	4.4507	148.4	0.3131	4.2142	148.4	0.3119	240	
250	5.0859	150.5	0.3185	4.7843	150.4	0.3172	4.5162	150.4	0.3159	4.2763	150.4	0.3148	250	
260	5.1594	152.5	0.3213	4.8535	152.5	0.3200	4.5817	152.4	0.3188	4.3384	152.4	0.3176	260	
270	5.2328	154.5	0.3242	4.9227	154.5	0.3228	4.6471	154.5	0.3216	4.4005	154.5	0.3204	270	
280	5.3062	156.6	0.3269	4.9919	156.6	0.3256	4.7125	156.5	0.3244	4.4625	156.5	0.3232	280	
290	5.3796	158.6	0.3297	5.0610	158.6	0.3284	4.7778	158.6	0.3272	4.5244	158.6	0.3260	290	
300	—	—	—	—	—	—	—	—	—	4.5864	160.7	0.3287	300	

TEMP. °F	20.00			21.00			22.00			23.00			TEMP. °F	
	(-6.98°F)			(-4.92°F)			(-2.93°F)			(-1.01°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(2.5178)	(104.3)	(0.2338)	(2.4052)	(104.5)	(0.2334)	(2.3025)	(104.8)	(0.2330)	(2.2084)	(105.1)	(0.2326)		
0	2.5608	105.4	0.2362	2.4342	105.3	0.2350	2.3190	105.3	0.2340	2.2139	105.2	0.2330	0	
10	2.6223	106.9	0.2396	2.4929	106.9	0.2384	2.3752	106.9	0.2374	2.2678	106.8	0.2364	10	
20	2.6835	108.5	0.2429	2.5514	108.5	0.2418	2.4312	108.5	0.2408	2.3215	108.4	0.2397	20	
30	2.7445	110.2	0.2463	2.6097	110.1	0.2452	2.4871	110.1	0.2441	2.3751	110.0	0.2431	30	
40	2.8054	111.8	0.2496	2.6678	111.8	0.2485	2.5427	111.7	0.2474	2.4285	111.7	0.2464	40	
50	2.8662	113.5	0.2529	2.7258	113.4	0.2518	2.5982	113.4	0.2507	2.4817	113.3	0.2497	50	
60	2.9268	115.1	0.2561	2.7837	115.1	0.2550	2.6536	115.1	0.2540	2.5348	115.0	0.2530	60	
70	2.9872	116.8	0.2593	2.8414	116.8	0.2583	2.7088	116.8	0.2572	2.5877	116.7	0.2562	70	
80	3.0476	118.5	0.2626	2.8990	118.5	0.2615	2.7639	118.5	0.2604	2.6406	118.4	0.2594	80	
90	3.1078	120.3	0.2657	2.9565	120.2	0.2646	2.8189	120.2	0.2636	2.6933	120.2	0.2626	90	
100	3.1679	122.0	0.2689	3.0138	122.0	0.2678	2.8738	122.0	0.2668	2.7459	121.9	0.2658	100	
110	3.2280	123.8	0.2720	3.0711	123.8	0.2709	2.9285	123.7	0.2699	2.7984	123.7	0.2689	110	
120	3.2879	125.6	0.2751	3.1283	125.5	0.2740	2.9832	125.5	0.2730	2.8508	125.5	0.2720	120	
130	3.3477	127.4	0.2782	3.1854	127.4	0.2771	3.0378	127.3	0.2761	2.9031	127.3	0.2751	130	
140	3.4075	129.2	0.2813	3.2424	129.2	0.2802	3.0923	129.1	0.2792	2.9553	129.1	0.2782	140	
150	3.4672	131.1	0.2843	3.2993	131.0	0.2832	3.1468	131.0	0.2822	3.0075	131.0	0.2812	150	
160	3.5268	132.9	0.2873	3.3562	132.9	0.2863	3.2011	132.8	0.2852	3.0595	132.8	0.2843	160	
170	3.5863	134.8	0.2903	3.4130	134.8	0.2893	3.2554	134.7	0.2882	3.1115	134.7	0.2873	170	
180	3.6458	136.7	0.2933	3.4697	136.6	0.2923	3.3096	136.6	0.2912	3.1635	136.6	0.2902	180	
190	3.7052	138.6	0.2963	3.5263	138.6	0.2952	3.3638	138.5	0.2942	3.2153	138.5	0.2932	190	
200	3.7645	140.5	0.2992	3.5829	140.5	0.2982	3.4179	140.5	0.2971	3.2672	140.4	0.2962	200	
210	3.8238	142.4	0.3022	3.6395	142.4	0.3011	3.4719	142.4	0.3001	3.3189	142.4	0.2991	210	
220	3.8830	144.4	0.3051	3.6960	144.4	0.3040	3.5259	144.4	0.3030	3.3706	144.3	0.3020	220	
230	3.9422	146.4	0.3079	3.7524	146.4	0.3069	3.5798	146.3	0.3058	3.4223	146.3	0.3049	230	
240	4.0014	148.4	0.3108	3.8088	148.3	0.3097	3.6337	148.3	0.3087	3.4739	148.3	0.3077	240	
250	4.0604	150.4	0.3136	3.8651	150.4	0.3126	3.6875	150.3	0.3116	3.5254	150.3	0.3106	250	
260	4.1195	152.4	0.3165	3.9214	152.4	0.3154	3.7413	152.4	0.3144	3.5769	152.3	0.3134	260	
270	4.1785	154.4	0.3193	3.9777	154.4	0.3182	3.7951	154.4	0.3172	3.6284	154.4	0.3162	270	
280	4.2375	156.5	0.3221	4.0339	156.5	0.3210	3.8488	156.4	0.3200	3.6798	156.4	0.3190	280	
290	4.2964	158.6	0.3249	4.0900	158.5	0.3238	3.9025	158.5	0.3228	3.7312	158.5	0.3218	290	
300	4.3553	160.6</td												

**Table 2** (continued)  
**Suva® MP66 Superheated Vapor—Constant Pressure Tables**

V = Volume in ft<sup>3</sup>/lb

H = Enthalpy in Btu/lb

S = Entropy in Btu/(lb) (°R)

(Saturation Properties in parentheses)

TEMP. °F	ABSOLUTE PRESSURE, psia												TEMP. °F	
	24.00 (0.84°F)			25.00 (2.64°F)			26.00 (4.38°F)			27.00 (6.07°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(2.1218)	(105.3)	(0.2323)	(2.0419)	(105.5)	(0.2319)	(1.9680)	(105.8)	(0.2316)	(1.8993)	(106.0)	(0.2313)		
10	2.1693	106.8	0.2354	2.0787	106.7	0.2344	1.9950	106.7	0.2335	1.9176	106.6	0.2327	10	
20	2.2210	108.4	0.2388	2.1284	108.3	0.2378	2.0430	108.3	0.2369	1.9639	108.2	0.2361	20	
30	2.2724	110.0	0.2421	2.1780	109.9	0.2412	2.0908	109.9	0.2403	2.0101	109.8	0.2394	30	
40	2.3237	111.6	0.2454	2.2274	111.6	0.2445	2.1384	111.5	0.2436	2.0561	111.5	0.2428	40	
50	2.3749	113.3	0.2487	2.2766	113.2	0.2478	2.1859	113.2	0.2469	2.1019	113.2	0.2461	50	
60	2.4259	115.0	0.2520	2.3257	114.9	0.2511	2.2332	114.9	0.2502	2.1475	114.8	0.2493	60	
70	2.4767	116.7	0.2552	2.3746	116.6	0.2543	2.2804	116.6	0.2534	2.1931	116.6	0.2526	70	
80	2.5275	118.4	0.2585	2.4235	118.4	0.2575	2.3274	118.3	0.2567	2.2385	118.3	0.2558	80	
90	2.5781	120.1	0.2617	2.4722	120.1	0.2607	2.3743	120.1	0.2598	2.2838	120.0	0.2590	90	
100	2.6286	121.9	0.2648	2.5207	121.8	0.2639	2.4212	121.8	0.2630	2.3290	121.8	0.2622	100	
110	2.6790	123.7	0.2680	2.5692	123.6	0.2670	2.4679	123.6	0.2662	2.3740	123.6	0.2653	110	
120	2.7293	125.4	0.2711	2.6176	125.4	0.2702	2.5145	125.4	0.2693	2.4190	125.3	0.2684	120	
130	2.7796	127.3	0.2742	2.6659	127.2	0.2733	2.5610	127.2	0.2724	2.4639	127.2	0.2715	130	
140	2.8297	129.1	0.2772	2.7141	129.1	0.2763	2.6075	129.0	0.2755	2.5087	129.0	0.2746	140	
150	2.8798	130.9	0.2803	2.7623	130.9	0.2794	2.6538	130.9	0.2785	2.5534	130.8	0.2777	150	
160	2.9297	132.8	0.2833	2.8103	132.8	0.2824	2.7001	132.7	0.2815	2.5980	132.7	0.2807	160	
170	2.9797	134.7	0.2863	2.8583	134.6	0.2854	2.7463	134.6	0.2845	2.6426	134.6	0.2837	170	
180	3.0295	136.6	0.2893	2.9062	136.5	0.2884	2.7925	136.5	0.2875	2.6871	136.5	0.2867	180	
190	3.0793	138.5	0.2923	2.9541	138.4	0.2914	2.8385	138.4	0.2905	2.7315	138.4	0.2897	190	
200	3.1290	140.4	0.2952	3.0019	140.4	0.2943	2.8846	140.3	0.2934	2.7759	140.3	0.2926	200	
210	3.1787	142.3	0.2981	3.0496	142.3	0.2972	2.9305	142.3	0.2964	2.8202	142.3	0.2955	210	
220	3.2283	144.3	0.3010	3.0973	144.3	0.3001	2.9764	144.2	0.2993	2.8645	144.2	0.2984	220	
230	3.2778	146.3	0.3039	3.1449	146.3	0.3030	3.0223	146.2	0.3022	2.9087	146.2	0.3013	230	
240	3.3273	148.3	0.3068	3.1925	148.2	0.3059	3.0681	148.2	0.3050	2.9529	148.2	0.3042	240	
250	3.3768	150.3	0.3096	3.2401	150.3	0.3088	3.1138	150.2	0.3079	2.9970	150.2	0.3071	250	
260	3.4262	152.3	0.3125	3.2876	152.3	0.3116	3.1596	152.3	0.3107	3.0411	152.2	0.3099	260	
270	3.4756	154.3	0.3153	3.3350	154.3	0.3144	3.2052	154.3	0.3135	3.0851	154.3	0.3127	270	
280	3.5249	156.4	0.3181	3.3824	156.4	0.3172	3.2509	156.4	0.3163	3.1291	156.3	0.3155	280	
290	3.5742	158.5	0.3209	3.4298	158.4	0.3200	3.2965	158.4	0.3191	3.1730	158.4	0.3183	290	
300	3.6235	160.6	0.3236	3.4771	160.5	0.3227	3.3420	160.5	0.3219	3.2169	160.5	0.3211	300	
310	3.6727	162.7	0.3264	3.5244	162.6	0.3255	3.3875	162.6	0.3246	3.2608	162.6	0.3238	310	

TEMP. °F	28.00 (7.72°F)			29.00 (9.32°F)			30.00 (10.88°F)			31.00 (12.39°F)			TEMP. °F
	V	H	S	V	H	S	V	H	S	V	H	S	
	(1.8354)	(106.2)	(0.2310)	(1.7756)	(106.4)	(0.2308)	(1.7198)	(106.6)	(0.2305)	(1.6674)	(106.8)	(0.2303)	
10	1.8456	106.6	0.2318	1.7786	106.5	0.2310	—	—	—	—	—	—	10
20	1.8904	108.2	0.2352	1.8220	108.1	0.2344	1.7582	108.1	0.2336	1.6984	108.0	0.2328	20
30	1.9351	109.8	0.2386	1.8653	109.8	0.2378	1.8001	109.7	0.2370	1.7391	109.7	0.2362	30
40	1.9796	111.5	0.2419	1.9083	111.4	0.2411	1.8418	111.4	0.2403	1.7796	111.3	0.2396	40
50	2.0239	113.1	0.2452	1.9512	113.1	0.2444	1.8834	113.0	0.2436	1.8200	113.0	0.2429	50
60	2.0680	114.8	0.2485	1.9940	114.8	0.2477	1.9248	114.7	0.2469	1.8602	114.7	0.2462	60
70	2.1120	116.5	0.2518	2.0366	116.5	0.2510	1.9661	116.4	0.2502	1.9002	116.4	0.2494	70
80	2.1559	118.2	0.2550	2.0790	118.2	0.2542	2.0073	118.2	0.2534	1.9401	118.1	0.2527	80
90	2.1997	120.0	0.2582	2.1214	119.9	0.2574	2.0483	119.9	0.2566	1.9799	119.9	0.2559	90
100	2.2433	121.7	0.2613	2.1636	121.7	0.2606	2.0892	121.7	0.2598	2.0196	121.6	0.2590	100
110	2.2869	123.5	0.2645	2.2057	123.5	0.2637	2.1300	123.4	0.2629	2.0592	123.4	0.2622	110
120	2.3303	125.3	0.2676	2.2478	125.3	0.2668	2.1707	125.2	0.2661	2.0986	125.2	0.2653	120
130	2.3737	127.1	0.2707	2.2897	127.1	0.2699	2.2113	127.1	0.2692	2.1380	127.0	0.2684	130
140	2.4170	129.0	0.2738	2.3316	128.9	0.2730	2.2519	128.9	0.2722	2.1773	128.9	0.2715	140
150	2.4602	130.8	0.2768	2.3733	130.8	0.2761	2.2923	130.7	0.2753	2.2165	130.7	0.2746	150
160	2.5033	132.7	0.2799	2.4150	132.6	0.2791	2.3327	132.6	0.2783	2.2556	132.6	0.2776	160
170	2.5463	134.5	0.2829	2.4566	134.5	0.2821	2.3730	134.5	0.2814	2.2947	134.5	0.2806	170
180	2.5893	136.4	0.2859	2.4982	136.4	0.2851	2.4132	136.4	0.2843	2.3337	136.4	0.2836	180
190	2.6322	138.4	0.2889	2.5397	138.3	0.2881	2.4533	138.3	0.2873	2.3726	138.3	0.2866	190
200	2.6750	140.3	0.2918	2.5811	140.3	0.2910	2.4934	140.2	0.2903	2.4114	140.2	0.2895	200
210	2.7178	142.2	0.2947	2.6225	142.2	0.2940	2.5335	142.2	0.2932	2.4502	142.2	0.2925	210
220	2.7606	144.2	0.2976	2.6638	144.2	0.2969	2.5735	144.1	0.2961	2.4890	144.1	0.2954	220
230	2.8032	146.2	0.3005	2.7051	146.2	0.2998	2.6134	146.1	0.2990	2.5277	146.1	0.2983	230
240	2.8459	148.2	0.3034	2.7463	148.1	0.3026	2.6533	148.1	0.3019	2.5663	148.1	0.3012	240
250	2.8885	150.2	0.3063	2.7874	150.2	0.3055	2.6931	150.1	0.3047	2.6049	150.1	0.3040	250
260	2.9310	152.2	0.3091	2.8285	152.2	0.3083	2.7329	152.2	0.3076	2.6435	152.1	0.3068	260
270	2.9735	154.2	0.3119	2.8696	154.2	0.3111	2.7727	154.2	0.3104	2.6820	154.2	0.3097	270
280	3.0160	156.3	0.3147	2.9107	156.3	0.3139	2.8124	156.3	0.3132	2.7204	156.2	0.3125	280
290	3.0584	158.4	0.3175	2.9517	158.4	0.3167	2.8520	158.3	0.3160	2.7589	158.3	0.3152	290
300	3.1008	160.5	0.3203	2.9926	160.4	0.3195	2.8917	160.4	0.3187	2.7972	160.4	0.3180	300
310	3.1431	162.6	0.3230	3.0335	162.5	0.3222	2.9313	162.5	0.3215	2.8356	162.5	0.3208	310
320	—	—	—	—	—	—	2.9708	164.6	0.3242	2.8739	164.6	0.3235	320

**Table 2 (continued)**  
**Suva® MP66 Superheated Vapor—Constant Pressure Tables**

V = Volume in ft<sup>3</sup>/lb    H = Enthalpy in Btu/lb    S = Entropy in Btu/(lb) (°R)    (Saturation Properties in parentheses)

TEMP. °F	ABSOLUTE PRESSURE, psia												TEMP. °F	
	32.00			33.00			34.00			35.00				
	(13.88°F)			(15.32°F)			(16.73°F)			(18.11°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(1.6181)	(107.0)	(0.2300)	(1.5717)	(107.2)	(0.2298)	(1.5280)	(107.4)	(0.2296)	(1.4866)	(107.5)	(0.2293)		
20	1.6424	108.0	0.2321	1.5898	107.9	0.2314	1.5403	107.9	0.2307	1.4935	107.8	0.2300	20	
30	1.6820	109.6	0.2355	1.6283	109.6	0.2348	1.5777	109.5	0.2341	1.5300	109.5	0.2334	30	
40	1.7213	111.3	0.2388	1.6665	111.2	0.2381	1.6149	111.2	0.2374	1.5663	111.1	0.2367	40	
50	1.7605	112.9	0.2421	1.7046	112.9	0.2414	1.6520	112.9	0.2407	1.6024	112.8	0.2401	50	
60	1.7995	114.6	0.2454	1.7426	114.6	0.2447	1.6890	114.6	0.2440	1.6384	114.5	0.2434	60	
70	1.8384	116.4	0.2487	1.7804	116.3	0.2480	1.7257	116.3	0.2473	1.6742	116.2	0.2466	70	
80	1.8772	118.1	0.2519	1.8180	118.0	0.2512	1.7624	118.0	0.2505	1.7099	118.0	0.2499	80	
90	1.9158	119.8	0.2551	1.8556	119.8	0.2544	1.7989	119.8	0.2537	1.7454	119.7	0.2531	90	
100	1.9543	121.6	0.2583	1.8930	121.6	0.2576	1.8353	121.5	0.2569	1.7809	121.5	0.2563	100	
110	1.9927	123.4	0.2615	1.9303	123.3	0.2608	1.8716	123.3	0.2601	1.8162	123.3	0.2594	110	
120	2.0310	125.2	0.2646	1.9675	125.1	0.2639	1.9078	125.1	0.2632	1.8514	125.1	0.2626	120	
130	2.0693	127.0	0.2677	2.0047	127.0	0.2670	1.9439	126.9	0.2663	1.8866	126.9	0.2657	130	
140	2.1074	128.8	0.2708	2.0417	128.8	0.2701	1.9799	128.8	0.2694	1.9216	128.7	0.2688	140	
150	2.1454	130.7	0.2739	2.0787	130.6	0.2732	2.0158	130.6	0.2725	1.9566	130.6	0.2718	150	
160	2.1834	132.5	0.2769	2.1155	132.5	0.2762	2.0517	132.5	0.2755	1.9914	132.4	0.2749	160	
170	2.2213	134.4	0.2799	2.1523	134.4	0.2792	2.0874	134.4	0.2785	2.0262	134.3	0.2779	170	
180	2.2591	136.3	0.2829	2.1891	136.3	0.2822	2.1231	136.3	0.2815	2.0610	136.2	0.2809	180	
190	2.2969	138.2	0.2859	2.2257	138.2	0.2852	2.1588	138.2	0.2845	2.0956	138.2	0.2839	190	
200	2.3346	140.2	0.2888	2.2623	140.1	0.2881	2.1943	140.1	0.2875	2.1303	140.1	0.2868	200	
210	2.3722	142.1	0.2918	2.2989	142.1	0.2911	2.2299	142.1	0.2904	2.1648	142.0	0.2898	210	
220	2.4098	144.1	0.2947	2.3354	144.1	0.2940	2.2653	144.0	0.2933	2.1993	144.0	0.2927	220	
230	2.4473	146.1	0.2976	2.3718	146.0	0.2969	2.3007	146.0	0.2962	2.2337	146.0	0.2956	230	
240	2.4848	148.1	0.3004	2.4082	148.0	0.2998	2.3361	148.0	0.2991	2.2681	148.0	0.2985	240	
250	2.5222	150.1	0.3033	2.4445	150.1	0.3026	2.3714	150.0	0.3020	2.3024	150.0	0.3013	250	
260	2.5596	152.1	0.3061	2.4808	152.1	0.3055	2.4067	152.1	0.3048	2.3367	152.0	0.3042	260	
270	2.5969	154.2	0.3090	2.5171	154.1	0.3083	2.4419	154.1	0.3076	2.3710	154.1	0.3070	270	
280	2.6342	156.2	0.3118	2.5533	156.2	0.3111	2.4770	156.2	0.3104	2.4052	156.1	0.3098	280	
290	2.6715	158.3	0.3145	2.5894	158.3	0.3139	2.5122	158.2	0.3132	2.4394	158.2	0.3126	290	
300	2.7087	160.4	0.3173	2.6256	160.4	0.3166	2.5473	160.3	0.3160	2.4735	160.3	0.3153	300	
310	2.7459	162.5	0.3201	2.6617	162.5	0.3194	2.5824	162.4	0.3187	2.5076	162.4	0.3181	310	
320	2.7831	164.6	0.3228	2.6977	164.6	0.3221	2.6174	164.6	0.3215	2.5416	164.5	0.3208	320	

TEMP. °F	36.00			37.00			38.00			39.00			TEMP. °F	
	(19.46°F)			(20.78°F)			(22.08°F)			(23.35°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(1.4475)	(107.7)	(0.2291)	(1.4104)	(107.9)	(0.2289)	(1.3751)	(108.0)	(0.2287)	(1.3417)	(108.2)	(0.2285)		
20	1.4494	107.8	0.2293	—	—	—	—	—	—	—	—	—	20	
30	1.4850	109.4	0.2327	1.4424	109.4	0.2321	1.4020	109.3	0.2314	1.3637	109.3	0.2308	30	
40	1.5204	111.1	0.2361	1.4769	111.1	0.2354	1.4357	111.0	0.2348	1.3967	111.0	0.2342	40	
50	1.5556	112.8	0.2394	1.5113	112.7	0.2388	1.4693	112.7	0.2381	1.4294	112.6	0.2375	50	
60	1.5906	114.5	0.2427	1.5455	114.4	0.2421	1.5027	114.4	0.2414	1.4620	114.3	0.2408	60	
70	1.6255	116.2	0.2460	1.5795	116.1	0.2453	1.5359	116.1	0.2447	1.4945	116.1	0.2441	70	
80	1.6603	117.9	0.2492	1.6134	117.9	0.2486	1.5690	117.8	0.2480	1.5268	117.8	0.2474	80	
90	1.6950	119.7	0.2524	1.6472	119.6	0.2518	1.6020	119.6	0.2512	1.5590	119.6	0.2506	90	
100	1.7295	121.4	0.2556	1.6809	121.4	0.2550	1.6348	121.4	0.2544	1.5911	121.3	0.2538	100	
110	1.7639	123.2	0.2588	1.7144	123.2	0.2582	1.6675	123.2	0.2575	1.6231	123.1	0.2569	110	
120	1.7982	125.0	0.2619	1.7479	125.0	0.2613	1.7002	125.0	0.2607	1.6549	124.9	0.2601	120	
130	1.8324	126.9	0.2650	1.7812	126.8	0.2644	1.7327	126.8	0.2638	1.6867	126.8	0.2632	130	
140	1.8666	128.7	0.2681	1.8145	128.7	0.2675	1.7652	128.6	0.2669	1.7183	128.6	0.2663	140	
150	1.9006	130.5	0.2712	1.8477	130.5	0.2706	1.7975	130.5	0.2700	1.7499	130.4	0.2694	150	
160	1.9346	132.4	0.2742	1.8808	132.4	0.2736	1.8298	132.4	0.2730	1.7814	132.3	0.2724	160	
170	1.9685	134.3	0.2773	1.9138	134.3	0.2766	1.8620	134.2	0.2760	1.8129	134.2	0.2754	170	
180	2.0023	136.2	0.2803	1.9467	136.2	0.2796	1.8941	136.1	0.2790	1.8442	136.1	0.2785	180	
190	2.0360	138.1	0.2832	1.9796	138.1	0.2826	1.9262	138.1	0.2820	1.8755	138.0	0.2814	190	
200	2.0697	140.1	0.2862	2.0125	140.0	0.2856	1.9582	140.0	0.2850	1.9067	140.0	0.2844	200	
210	2.1033	142.0	0.2891	2.0452	142.0	0.2885	1.9901	142.0	0.2879	1.9379	141.9	0.2873	210	
220	2.1369	144.0	0.2920	2.0779	144.0	0.2914	2.0220	143.9	0.2908	1.9690	143.9	0.2903	220	
230	2.1704	146.0	0.2949	2.1106	145.9	0.2943	2.0539	145.9	0.2937	2.0001	145.9	0.2932	230	
240	2.2039	148.0	0.2978	2.1432	147.9	0.2972	2.0856	147.9	0.2966	2.0311	147.9	0.2960	240	
250	2.2373	150.0	0.3007	2.1757	150.0	0.3001	2.1174	149.9	0.2995	2.0620	149.9	0.2989	250	
260	2.2707	152.0	0.3035	2.2082	152.0	0.3029	2.1491	152.0	0.3023	2.0929	151.9	0.3017	260	
270	2.3040	154.1	0.3064	2.2407	154.0	0.3057	2.1807	154.0	0.3051	2.1238	154.0	0.3046	270	
280	2.3373	156.1	0.3092	2.2731	156.1	0.3085	2.2123	156.1	0.3080	2.1546	156.1	0.3074	280	
290	2.3706	158.2	0.3119	2.3055	158.2	0.3113	2.2439	158.2	0.3107	2.1854	158.1	0.3102	290	
300	2.4038	160.3	0.3147	2.3379	160.3	0.3141	2.2754	160.2	0.3135	2.2161	160.2	0.3129	300	
310	2.4370	162.4	0.3175	2.3702	162.4	0.3169	2.3069	162.4	0.3163	2.2469	162.3	0.3157	310	
320	2.4701	164.5	0.3202	2.4024	164.5	0.3196	2.3383	164.5	0.3190	2.2775	164.5	0.3184	320	
330														

**Table 2** (continued)  
**Suva® MP66 Superheated Vapor—Constant Pressure Tables**

V = Volume in ft<sup>3</sup>/lb

H = Enthalpy in Btu/lb

S = Entropy in Btu/(lb) (°R)

(Saturation Properties in parentheses)

TEMP. °F	ABSOLUTE PRESSURE, psia												TEMP. °F	
	40.00			41.00			42.00			43.00				
	(24.59°F)			(25.81°F)			(27.00°F)			(28.18°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(1.3098)	(108.3)	(0.2284)	(1.2794)	(108.5)	(0.2282)	(1.2504)	(108.7)	(0.2280)	(1.2227)	(108.8)	(0.2278)		
30	1.3273	109.2	0.2302	1.2927	109.2	0.2296	1.2597	109.1	0.2290	1.2282	109.1	0.2285	30	
40	1.3595	110.9	0.2336	1.3242	110.9	0.2330	1.2906	110.8	0.2324	1.2585	110.8	0.2319	40	
50	1.3916	112.6	0.2369	1.3556	112.6	0.2363	1.3213	112.5	0.2358	1.2885	112.5	0.2352	50	
60	1.4235	114.3	0.2402	1.3867	114.3	0.2397	1.3518	114.2	0.2391	1.3184	114.2	0.2385	60	
70	1.4552	116.0	0.2435	1.4178	116.0	0.2429	1.3822	115.9	0.2424	1.3482	115.9	0.2418	70	
80	1.4868	117.8	0.2468	1.4487	117.7	0.2462	1.4124	117.7	0.2456	1.3778	117.6	0.2451	80	
90	1.5182	119.5	0.2500	1.4794	119.5	0.2494	1.4425	119.4	0.2489	1.4072	119.4	0.2483	90	
100	1.5496	121.3	0.2532	1.5101	121.3	0.2526	1.4725	121.2	0.2521	1.4366	121.2	0.2515	100	
110	1.5808	123.1	0.2564	1.5406	123.1	0.2558	1.5023	123.0	0.2552	1.4658	123.0	0.2547	110	
120	1.6119	124.9	0.2595	1.5710	124.9	0.2589	1.5321	124.8	0.2584	1.4949	124.8	0.2578	120	
130	1.6429	126.7	0.2626	1.6013	126.7	0.2621	1.5617	126.7	0.2615	1.5240	126.6	0.2610	130	
140	1.6739	128.6	0.2657	1.6316	128.5	0.2652	1.5913	128.5	0.2646	1.5529	128.5	0.2641	140	
150	1.7047	130.4	0.2688	1.6617	130.4	0.2682	1.6208	130.4	0.2677	1.5817	130.3	0.2671	150	
160	1.7355	132.3	0.2718	1.6918	132.3	0.2713	1.6502	132.2	0.2707	1.6105	132.2	0.2702	160	
170	1.7662	134.2	0.2749	1.7218	134.2	0.2743	1.6795	134.1	0.2738	1.6392	134.1	0.2732	170	
180	1.7968	136.1	0.2779	1.7517	136.1	0.2773	1.7087	136.0	0.2768	1.6678	136.0	0.2762	180	
190	1.8273	138.0	0.2809	1.7815	138.0	0.2803	1.7379	138.0	0.2798	1.6963	137.9	0.2792	190	
200	1.8578	140.0	0.2838	1.8113	139.9	0.2833	1.7670	139.9	0.2827	1.7248	139.9	0.2822	200	
210	1.8883	141.9	0.2868	1.8410	141.9	0.2862	1.7961	141.9	0.2857	1.7532	141.8	0.2851	210	
220	1.9186	143.9	0.2897	1.8707	143.9	0.2891	1.8251	143.8	0.2886	1.7816	143.8	0.2881	220	
230	1.9489	145.9	0.2926	1.9003	145.8	0.2920	1.8540	145.8	0.2915	1.8099	145.8	0.2910	230	
240	1.9792	147.9	0.2955	1.9299	147.8	0.2949	1.8829	147.8	0.2944	1.8381	147.8	0.2938	240	
250	2.0094	149.9	0.2983	1.9594	149.9	0.2978	1.9117	149.8	0.2972	1.8663	149.8	0.2967	250	
260	2.0396	151.9	0.3012	1.9889	151.9	0.3006	1.9405	151.9	0.3001	1.8945	151.8	0.2996	260	
270	2.0697	154.0	0.3040	2.0183	153.9	0.3035	1.9693	153.9	0.3029	1.9226	153.9	0.3024	270	
280	2.0998	156.0	0.3068	2.0477	156.0	0.3063	1.9980	156.0	0.3057	1.9507	156.0	0.3052	280	
290	2.1298	158.1	0.3096	2.0770	158.1	0.3091	2.0267	158.1	0.3085	1.9787	158.0	0.3080	290	
300	2.1599	160.2	0.3124	2.1063	160.2	0.3118	2.0553	160.2	0.3113	2.0067	160.1	0.3108	300	
310	2.1898	162.3	0.3151	2.1356	162.3	0.3146	2.0839	162.3	0.3141	2.0346	162.2	0.3135	310	
320	2.2198	164.4	0.3179	2.1648	164.4	0.3173	2.1125	164.4	0.3168	2.0626	164.4	0.3163	320	
330	2.2497	166.6	0.3206	2.1940	166.6	0.3201	2.1410	166.5	0.3195	2.0904	166.5	0.3190	330	

TEMP. °F	44.00			45.00			46.00			47.00			TEMP. °F	
	(29.33°F)			(30.46°F)			(31.57°F)			(32.67°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(1.1962)	(108.9)	(0.2277)	(1.1708)	(109.1)	(0.2275)	(1.1465)	(109.2)	(0.2274)	(1.1232)	(109.4)	(0.2272)		
30	1.1982	109.1	0.2279	—	—	—	—	—	—	—	—	—	30	
40	1.2278	110.7	0.2313	1.1986	110.7	0.2308	1.1706	110.6	0.2302	1.1437	110.6	0.2297	40	
50	1.2573	112.4	0.2347	1.2275	112.4	0.2341	1.1989	112.3	0.2336	1.1716	112.3	0.2331	50	
60	1.2866	114.1	0.2380	1.2562	114.1	0.2374	1.2271	114.0	0.2369	1.1992	114.0	0.2364	60	
70	1.3157	115.9	0.2413	1.2847	115.8	0.2407	1.2551	115.8	0.2402	1.2267	115.7	0.2397	70	
80	1.3447	117.6	0.2445	1.3132	117.6	0.2440	1.2830	117.5	0.2435	1.2540	117.5	0.2430	80	
90	1.3736	119.4	0.2478	1.3414	119.3	0.2472	1.3107	119.3	0.2467	1.2812	119.3	0.2462	90	
100	1.4023	121.1	0.2510	1.3696	121.1	0.2504	1.3383	121.1	0.2499	1.3083	121.0	0.2494	100	
110	1.4310	122.9	0.2542	1.3977	122.9	0.2536	1.3658	122.9	0.2531	1.3353	122.8	0.2526	110	
120	1.4595	124.8	0.2573	1.4256	124.7	0.2568	1.3932	124.7	0.2563	1.3621	124.6	0.2558	120	
130	1.4879	126.6	0.2604	1.4534	126.5	0.2599	1.4205	126.5	0.2594	1.3889	126.5	0.2589	130	
140	1.5162	128.4	0.2635	1.4812	128.4	0.2630	1.4476	128.4	0.2625	1.4155	128.3	0.2620	140	
150	1.5444	130.3	0.2666	1.5088	130.3	0.2661	1.4747	130.2	0.2656	1.4421	130.2	0.2651	150	
160	1.5726	132.2	0.2697	1.5364	132.1	0.2692	1.5018	132.1	0.2686	1.4686	132.1	0.2682	160	
170	1.6007	134.1	0.2727	1.5639	134.0	0.2722	1.5287	134.0	0.2717	1.4950	134.0	0.2712	170	
180	1.6287	136.0	0.2757	1.5913	135.9	0.2752	1.5556	135.9	0.2747	1.5213	135.9	0.2742	180	
190	1.6566	137.9	0.2787	1.6187	137.9	0.2782	1.5824	137.8	0.2777	1.5476	137.8	0.2772	190	
200	1.6845	139.8	0.2817	1.6459	139.8	0.2812	1.6091	139.8	0.2807	1.5738	139.8	0.2802	200	
210	1.7123	141.8	0.2846	1.6732	141.8	0.2841	1.6358	141.7	0.2836	1.5999	141.7	0.2831	210	
220	1.7400	143.8	0.2875	1.7003	143.7	0.2870	1.6624	143.7	0.2865	1.6260	143.7	0.2860	220	
230	1.7677	145.8	0.2904	1.7274	145.7	0.2899	1.6889	145.7	0.2894	1.6520	145.7	0.2890	230	
240	1.7954	147.8	0.2933	1.7545	147.7	0.2928	1.7154	147.7	0.2923	1.6780	147.7	0.2918	240	
250	1.8229	149.8	0.2962	1.7815	149.8	0.2957	1.7419	149.7	0.2952	1.7039	149.7	0.2947	250	
260	1.8505	151.8	0.2990	1.8085	151.8	0.2985	1.7683	151.8	0.2980	1.7298	151.8	0.2976	260	
270	1.8780	153.9	0.3019	1.8354	153.9	0.3014	1.7946	153.8	0.3009	1.7556	153.8	0.3004	270	
280	1.9055	155.9	0.3047	1.8623	155.9	0.3042	1.8210	155.9	0.3037	1.7814	155.9	0.3032	280	
290	1.9329	158.0	0.3075	1.8891	158.0	0.3070	1.8472	158.0	0.3065	1.8072	158.0	0.3060	290	
300	1.9603	160.1	0.3103	1.9159	160.1	0.3098	1.8735	160.1	0.3093	1.8329	160.0	0.3088	300	
310	1.9876	162.2	0.3130	1.9427	162.2	0.3125	1.8997	162.2	0.3120	1.8585	162.2	0.3115	310	
320	2.0149	164.												

**Table 2 (continued)**  
**Suva® MP66 Superheated Vapor—Constant Pressure Tables**

V = Volume in ft<sup>3</sup>/lb    H = Enthalpy in Btu/lb    S = Entropy in Btu/(lb) (°R)    (Saturation Properties in parentheses)

TEMP. °F	ABSOLUTE PRESSURE, psia												TEMP. °F	
	48.00			49.00			50.00			55.00				
	(33.74°F)			(34.80°F)			(35.85°F)			(40.84°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
(1.008)	(109.5)	(0.2271)	(1.0793)	(109.6)	(0.2269)	(1.0587)	(109.7)	(0.2268)	(0.9662)	(110.4)	(0.2261)			
40	1.1180	110.5	0.2292	1.0934	110.5	0.2287	1.0697	110.5	0.2282	—	—	—	40	
50	1.1453	112.2	0.2326	1.1202	112.2	0.2321	1.0961	112.2	0.2316	0.9885	111.9	0.2292	50	
60	1.1725	114.0	0.2359	1.1469	113.9	0.2354	1.1223	113.9	0.2349	1.0126	113.7	0.2326	60	
70	1.1995	115.7	0.2392	1.1734	115.7	0.2387	1.1483	115.6	0.2382	1.0366	115.4	0.2359	70	
80	1.2263	117.4	0.2425	1.1997	117.4	0.2420	1.1742	117.4	0.2415	1.0604	117.2	0.2392	80	
90	1.2530	119.2	0.2457	1.2260	119.2	0.2452	1.2000	119.1	0.2447	1.0841	118.9	0.2425	90	
100	1.2796	121.0	0.2489	1.2520	121.0	0.2484	1.2256	120.9	0.2480	1.1077	120.7	0.2457	100	
110	1.3061	122.8	0.2521	1.2780	122.8	0.2516	1.2511	122.7	0.2512	1.1311	122.5	0.2489	110	
120	1.3324	124.6	0.2553	1.3039	124.6	0.2548	1.2765	124.5	0.2543	1.1544	124.4	0.2521	120	
130	1.3586	126.4	0.2584	1.3296	126.4	0.2579	1.3018	126.4	0.2575	1.1776	126.2	0.2552	130	
140	1.3848	128.3	0.2615	1.3553	128.3	0.2610	1.3270	128.2	0.2606	1.2008	128.1	0.2583	140	
150	1.4108	130.2	0.2646	1.3809	130.1	0.2641	1.3521	130.1	0.2637	1.2238	129.9	0.2614	150	
160	1.4368	132.0	0.2677	1.4063	132.0	0.2672	1.3771	132.0	0.2667	1.2467	131.8	0.2645	160	
170	1.4627	133.9	0.2707	1.4317	133.9	0.2702	1.4020	133.9	0.2698	1.2696	133.7	0.2676	170	
180	1.4885	135.9	0.2737	1.4571	135.8	0.2733	1.4269	135.8	0.2728	1.2923	135.6	0.2706	180	
190	1.5143	137.8	0.2767	1.4823	137.8	0.2762	1.4517	137.7	0.2758	1.3150	137.6	0.2736	190	
200	1.5400	139.7	0.2797	1.5075	139.7	0.2792	1.4764	139.7	0.2788	1.3377	139.5	0.2766	200	
210	1.5656	141.7	0.2826	1.5327	141.7	0.2822	1.5011	141.6	0.2817	1.3602	141.5	0.2795	210	
220	1.5912	143.7	0.2856	1.5578	143.6	0.2851	1.5257	143.6	0.2846	1.3828	143.5	0.2825	220	
230	1.6167	145.7	0.2885	1.5828	145.6	0.2880	1.5502	145.6	0.2876	1.4052	145.5	0.2854	230	
240	1.6421	147.7	0.2914	1.6077	147.6	0.2909	1.5747	147.6	0.2904	1.4276	147.5	0.2883	240	
250	1.6675	149.7	0.2942	1.6327	149.7	0.2938	1.5992	149.6	0.2933	1.4500	149.5	0.2912	250	
260	1.6929	151.7	0.2971	1.6575	151.7	0.2966	1.6236	151.7	0.2962	1.4723	151.6	0.2940	260	
270	1.7182	153.8	0.2999	1.6824	153.8	0.2995	1.6479	153.7	0.2990	1.4945	153.6	0.2969	270	
280	1.7435	155.8	0.3027	1.7071	155.8	0.3023	1.6722	155.8	0.3018	1.5168	155.7	0.2997	280	
290	1.7687	157.9	0.3055	1.7319	157.9	0.3051	1.6965	157.9	0.3046	1.5389	157.8	0.3025	290	
300	1.7939	160.0	0.3083	1.7566	160.0	0.3079	1.7207	160.0	0.3074	1.5611	159.9	0.3053	300	
310	1.8191	162.1	0.3111	1.7813	162.1	0.3106	1.7449	162.1	0.3102	1.5832	162.0	0.3080	310	
320	1.8442	164.3	0.3138	1.8059	164.2	0.3134	1.7691	164.2	0.3129	1.6052	164.1	0.3108	320	
330	1.8693	166.4	0.3166	1.8305	166.4	0.3161	1.7932	166.4	0.3156	1.6272	166.3	0.3135	330	
340	1.8944	168.6	0.3193	1.8551	168.5	0.3188	1.8173	168.5	0.3184	1.6492	168.4	0.3162	340	
350	—	—	—	—	—	—	—	—	—	1.6712	170.6	0.3189	350	

TEMP. °F	60.00			65.00			70.00			75.00			TEMP. °F	
	(45.51°F)			(49.89°F)			(54.02°F)			(57.93°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
(0.8885)	(110.9)	(0.2255)	(0.8224)	(111.4)	(0.2250)	(0.7654)	(111.9)	(0.2245)	(0.7156)	(112.4)	(0.2241)			
50	0.8987	111.7	0.2271	0.8226	111.5	0.2250	—	—	—	—	—	—	50	
60	0.9212	113.4	0.2304	0.8437	113.2	0.2284	0.7772	113.0	0.2266	0.7195	112.7	0.2248	60	
70	0.9434	115.2	0.2338	0.8645	115.0	0.2318	0.7969	114.7	0.2299	0.7381	114.5	0.2282	70	
80	0.9656	117.0	0.2371	0.8852	116.7	0.2351	0.8163	116.5	0.2333	0.7565	116.3	0.2315	80	
90	0.9875	118.7	0.2404	0.9058	118.5	0.2384	0.8356	118.3	0.2366	0.7748	118.1	0.2348	90	
100	1.0094	120.5	0.2436	0.9262	120.3	0.2417	0.8548	120.1	0.2398	0.7929	119.9	0.2381	100	
110	1.0311	122.4	0.2468	0.9464	122.2	0.2449	0.8738	122.0	0.2431	0.8108	121.8	0.2414	110	
120	1.0527	124.2	0.2500	0.9666	124.0	0.2481	0.8927	123.8	0.2463	0.8287	123.6	0.2446	120	
130	1.0742	126.0	0.2532	0.9866	125.9	0.2512	0.9115	125.7	0.2495	0.8464	125.5	0.2478	130	
140	1.0956	127.9	0.2563	1.0065	127.7	0.2544	0.9302	127.5	0.2526	0.8640	127.4	0.2509	140	
150	1.1168	129.8	0.2594	1.0263	129.6	0.2575	0.9487	129.4	0.2557	0.8815	129.3	0.2541	150	
160	1.1380	131.7	0.2625	1.0461	131.5	0.2606	0.9672	131.3	0.2588	0.8989	131.2	0.2572	160	
170	1.1592	133.6	0.2655	1.0657	133.4	0.2637	0.9856	133.3	0.2619	0.9162	133.1	0.2602	170	
180	1.1802	135.5	0.2686	1.0853	135.3	0.2667	1.0039	135.2	0.2649	0.9334	135.0	0.2633	180	
190	1.2012	137.4	0.2716	1.1048	137.3	0.2697	1.0222	137.1	0.2680	0.9505	137.0	0.2663	190	
200	1.2221	139.4	0.2746	1.1242	139.2	0.2727	1.0403	139.1	0.2710	0.9676	139.0	0.2693	200	
210	1.2429	141.4	0.2775	1.1436	141.2	0.2757	1.0584	141.1	0.2739	0.9846	140.9	0.2723	210	
220	1.2637	143.3	0.2805	1.1629	143.2	0.2786	1.0765	143.1	0.2769	1.0016	142.9	0.2753	220	
230	1.2844	145.3	0.2834	1.1821	145.2	0.2815	1.0944	145.1	0.2798	1.0185	144.9	0.2782	230	
240	1.3050	147.4	0.2863	1.2013	147.2	0.2845	1.1124	147.1	0.2827	1.0353	147.0	0.2811	240	
250	1.3256	149.4	0.2892	1.2204	149.3	0.2873	1.1302	149.1	0.2856	1.0521	149.0	0.2840	250	
260	1.3462	151.4	0.2920	1.2395	151.3	0.2902	1.1480	151.2	0.2885	1.0688	151.1	0.2869	260	
270	1.3667	153.5	0.2949	1.2585	153.4	0.2931	1.1658	153.3	0.2914	1.0855	153.1	0.2898	270	
280	1.3872	155.6	0.2977	1.2775	155.5	0.2959	1.1835	155.3	0.2942	1.1021	155.2	0.2926	280	
290	1.4076	157.7	0.3005	1.2965	157.5	0.2987	1.2012	157.4	0.2970	1.1187	157.3	0.2954	290	
300	1.4280	159.8	0.3033	1.3154	159.7	0.3015	1.2189	159.5	0.2998	1.1352	159.4	0.2982	300	
310	1.4483	161.9	0.3061	1.3343	161.8	0.3043	1.2365	161.7	0.3026	1.1517	161.6	0.3010	310	
320	1.4687	164.0	0.3088	1.3531	163.9	0.3070	1.2540	163.8	0.3053	1.1682	163.7	0.3038	320	
330	1.4889	166.2	0.3116	1.3719	166.1	0.3097	1.2716	166.0	0.3081	1.1846	165.9	0.3065	330	
340	1.5092	168.3	0.3143	1.3907	168.2	0.3125	1.2891	168.1	0.3108	1.2010	168.0	0.3092	340	
350	1.5294	170.5	0.3170	1										

**Table 2** (continued)  
**Suva® MP66 Superheated Vapor—Constant Pressure Tables**

V = Volume in ft<sup>3</sup>/lb

H = Enthalpy in Btu/lb

S = Entropy in Btu/(lb) (°R)

(Saturation Properties in parentheses)

TEMP. °F	ABSOLUTE PRESSURE, psia												TEMP. °F	
	80.00 (61.64°F)			85.00 (65.19°F)			90.00 (68.57°F)			95.00 (71.82°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(0.6719)	(112.8)	(0.2237)	(0.6331)	(113.2)	(0.2233)	(0.5984)	(113.6)	(0.2229)	(0.5672)	(113.9)	(0.2225)		
70	0.6867	114.3	0.2265	0.6412	114.1	0.2249	0.6007	113.8	0.2234	—	—	—	70	
80	0.7042	116.1	0.2299	0.6579	115.9	0.2283	0.6167	115.7	0.2268	0.5798	115.4	0.2253	80	
90	0.7215	117.9	0.2332	0.6744	117.7	0.2316	0.6325	117.5	0.2301	0.5950	117.3	0.2287	90	
100	0.7387	119.7	0.2365	0.6908	119.5	0.2349	0.6482	119.3	0.2335	0.6100	119.1	0.2321	100	
110	0.7557	121.6	0.2398	0.7070	121.4	0.2382	0.6637	121.2	0.2368	0.6249	121.0	0.2354	110	
120	0.7726	123.4	0.2430	0.7231	123.3	0.2415	0.6790	123.1	0.2400	0.6396	122.9	0.2386	120	
130	0.7894	125.3	0.2462	0.7390	125.1	0.2447	0.6943	124.9	0.2432	0.6542	124.8	0.2419	130	
140	0.8060	127.2	0.2494	0.7549	127.0	0.2479	0.7094	126.8	0.2464	0.6686	126.7	0.2451	140	
150	0.8226	129.1	0.2525	0.7706	128.9	0.2510	0.7243	128.8	0.2496	0.6830	128.6	0.2482	150	
160	0.8390	131.0	0.2556	0.7862	130.8	0.2541	0.7392	130.7	0.2527	0.6972	130.5	0.2514	160	
170	0.8554	132.9	0.2587	0.8017	132.8	0.2572	0.7540	132.6	0.2558	0.7113	132.5	0.2545	170	
180	0.8717	134.9	0.2618	0.8172	134.7	0.2603	0.7687	134.6	0.2589	0.7254	134.4	0.2576	180	
190	0.8879	136.8	0.2648	0.8325	136.7	0.2633	0.7833	136.5	0.2620	0.7393	136.4	0.2606	190	
200	0.9040	138.8	0.2678	0.8478	138.7	0.2664	0.7979	138.5	0.2650	0.7532	138.4	0.2637	200	
210	0.9200	140.8	0.2708	0.8630	140.7	0.2693	0.8124	140.5	0.2680	0.7670	140.4	0.2667	210	
220	0.9360	142.8	0.2738	0.8782	142.7	0.2723	0.8268	142.5	0.2710	0.7808	142.4	0.2697	220	
230	0.9520	144.8	0.2767	0.8933	144.7	0.2753	0.8411	144.5	0.2739	0.7944	144.4	0.2726	230	
240	0.9678	146.8	0.2796	0.9083	146.7	0.2782	0.8554	146.6	0.2768	0.8080	146.4	0.2756	240	
250	0.9836	148.9	0.2825	0.9233	148.8	0.2811	0.8696	148.6	0.2798	0.8216	148.5	0.2785	250	
260	0.9994	150.9	0.2854	0.9382	150.8	0.2840	0.8838	150.7	0.2826	0.8351	150.6	0.2814	260	
270	1.0151	153.0	0.2883	0.9531	152.9	0.2868	0.8979	152.8	0.2855	0.8486	152.7	0.2842	270	
280	1.0308	155.1	0.2911	0.9679	155.0	0.2897	0.9120	154.9	0.2884	0.8620	154.7	0.2871	280	
290	1.0464	157.2	0.2939	0.9827	157.1	0.2925	0.9260	157.0	0.2912	0.8753	156.9	0.2899	290	
300	1.0620	159.3	0.2967	0.9974	159.2	0.2953	0.9400	159.1	0.2940	0.8886	159.0	0.2927	300	
310	1.0776	161.4	0.2995	1.0121	161.3	0.2981	0.9540	161.2	0.2968	0.9019	161.1	0.2955	310	
320	1.0931	163.6	0.3023	1.0268	163.5	0.3009	0.9679	163.4	0.2996	0.9152	163.3	0.2983	320	
330	1.1086	165.7	0.3050	1.0414	165.6	0.3036	0.9818	165.5	0.3023	0.9284	165.4	0.3011	330	
340	1.1240	167.9	0.3078	1.0560	167.8	0.3064	0.9956	167.7	0.3051	0.9415	167.6	0.3038	340	
350	1.1394	170.1	0.3105	1.0706	170.0	0.3091	1.0094	169.9	0.3078	0.9547	169.8	0.3065	350	
360	1.1548	172.3	0.3132	1.0851	172.2	0.3118	1.0232	172.1	0.3105	0.9678	172.0	0.3092	360	
370	1.1701	174.5	0.3158	1.0996	174.4	0.3145	1.0369	174.3	0.3132	0.9808	174.2	0.3119	370	
380	—	—	—	—	—	—	—	—	—	0.9939	176.5	0.3146	380	

TEMP. °F	100.00 (74.94°F)			110.00 (80.84°F)			120.00 (86.35°F)			130.00 (91.51°F)			TEMP. °F
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.5391)	(114.3)	(0.2222)	(0.4901)	(114.9)	(0.2216)	(0.4490)	(115.5)	(0.2210)	(0.4140)	(116.0)	(0.2205)	
80	0.5466	115.2	0.2240	—	116.6	0.2247	0.4537	116.1	0.2223	—	—	—	80
90	0.5612	117.1	0.2274	0.5027	—	—	—	—	—	—	—	—	90
100	0.5757	118.9	0.2307	0.5162	118.5	0.2281	0.4665	118.1	0.2257	0.4242	117.6	0.2235	100
110	0.5900	120.8	0.2340	0.5295	120.4	0.2315	0.4790	120.0	0.2291	0.4361	119.5	0.2269	110
120	0.6041	122.7	0.2373	0.5427	122.3	0.2348	0.4914	121.9	0.2325	0.4478	121.5	0.2302	120
130	0.6181	124.6	0.2406	0.5557	124.2	0.2381	0.5036	123.8	0.2357	0.4594	123.4	0.2336	130
140	0.6320	126.5	0.2438	0.5685	126.1	0.2413	0.5156	125.7	0.2390	0.4707	125.4	0.2369	140
150	0.6457	128.4	0.2469	0.5813	128.1	0.2445	0.5275	127.7	0.2422	0.4820	127.3	0.2401	150
160	0.6593	130.3	0.2501	0.5939	130.0	0.2477	0.5393	129.7	0.2454	0.4931	129.3	0.2433	160
170	0.6729	132.3	0.2532	0.6064	132.0	0.2508	0.5510	131.6	0.2486	0.5041	131.3	0.2465	170
180	0.6863	134.3	0.2563	0.6189	133.9	0.2539	0.5626	133.6	0.2517	0.5150	133.3	0.2496	180
190	0.6997	136.2	0.2594	0.6312	135.9	0.2570	0.5741	135.6	0.2548	0.5257	135.3	0.2528	190
200	0.7130	138.2	0.2624	0.6435	137.9	0.2601	0.5855	137.6	0.2579	0.5364	137.3	0.2558	200
210	0.7262	140.2	0.2654	0.6557	139.9	0.2631	0.5968	139.6	0.2609	0.5471	139.3	0.2589	210
220	0.7393	142.2	0.2684	0.6678	142.0	0.2661	0.6081	141.7	0.2639	0.5576	141.4	0.2619	220
230	0.7524	144.3	0.2714	0.6798	144.0	0.2691	0.6193	143.7	0.2669	0.5681	143.4	0.2649	230
240	0.7654	146.3	0.2743	0.6918	146.1	0.2720	0.6304	145.8	0.2699	0.5784	145.5	0.2679	240
250	0.7784	148.4	0.2772	0.7037	148.1	0.2749	0.6415	147.9	0.2728	0.5888	147.6	0.2709	250
260	0.7913	150.4	0.2801	0.7156	150.2	0.2779	0.6525	149.9	0.2757	0.5991	149.7	0.2738	260
270	0.8041	152.5	0.2830	0.7274	152.3	0.2807	0.6634	152.0	0.2786	0.6093	151.8	0.2767	270
280	0.8169	154.6	0.2859	0.7391	154.4	0.2836	0.6743	154.2	0.2815	0.6194	153.9	0.2796	280
290	0.8297	156.7	0.2887	0.7509	156.5	0.2865	0.6852	156.3	0.2844	0.6296	156.0	0.2824	290
300	0.8424	158.9	0.2915	0.7625	158.6	0.2893	0.6960	158.4	0.2872	0.6396	158.2	0.2853	300
310	0.8551	161.0	0.2943	0.7742	160.8	0.2921	0.7067	160.6	0.2900	0.6497	160.3	0.2881	310
320	0.8677	163.2	0.2971	0.7857	162.9	0.2949	0.7174	162.7	0.2928	0.6596	162.5	0.2909	320
330	0.8803	165.3	0.2999	0.7973	165.1	0.2976	0.7281	164.9	0.2956	0.6696	164.7	0.2937	330
340	0.8929	167.5	0.3026	0.8088	167.3	0.3004	0.7388	167.1	0.2983	0.6795	166.9	0.2964	340
350	0.9054	169.7	0.3053	0.8203	169.5	0.3031	0.7494	169.3	0.3011	0.6894	169.1	0.2992	350
360	0.9179	171.9	0.3081	0.8318	171.7	0.3058	0.7600	171.5	0.3038	0.6992	171.3	0.3019	360
370	0.9304	174.1	0.3107	0.8432	173.9	0.3085	0.7705	173.7	0.3065	0.7090	173.6	0.3046	370
380	0.9428	176.4	0.3134	0.8546	176.2	0.3112	0.7810	176.0	0.3092	0.7188	175.8	0.3073	380
390	—	—	—	0.8659	178.4								

**Table 2 (continued)**  
**Suva® MP66 Superheated Vapor—Constant Pressure Tables**

V = Volume in ft<sup>3</sup>/lb    H = Enthalpy in Btu/lb    S = Entropy in Btu/(lb) (°R)    (Saturation Properties in parentheses)

TEMP. °F	ABSOLUTE PRESSURE, psia												TEMP. °F	
	140.00			150.00			160.00			170.00				
	(96.39°F)			(101.01°F)			(105.40°F)			(109.59°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
(0.3837)	(116.4)	(0.2200)	(0.3574)	(116.9)	(0.2195)	(0.3342)	(117.2)	(0.2191)	(0.3136)	(117.6)	(0.2187)			
100	0.3879	117.1	0.2213	—	—	—	—	—	—	—	—	—	100	
110	0.3993	119.1	0.2247	0.3672	118.6	0.2227	0.3390	118.2	0.2207	0.3140	117.7	0.2188	110	
120	0.4104	121.0	0.2281	0.3779	120.6	0.2261	0.3493	120.2	0.2242	0.3240	119.7	0.2223	120	
130	0.4214	123.0	0.2315	0.3884	122.6	0.2295	0.3594	122.2	0.2276	0.3338	121.7	0.2258	130	
140	0.4322	125.0	0.2348	0.3987	124.6	0.2329	0.3694	124.2	0.2310	0.3434	123.8	0.2292	140	
150	0.4429	127.0	0.2381	0.4089	126.6	0.2362	0.3791	126.2	0.2343	0.3528	125.8	0.2326	150	
160	0.4534	128.9	0.2413	0.4189	128.6	0.2394	0.3887	128.2	0.2376	0.3620	127.8	0.2359	160	
170	0.4638	130.9	0.2445	0.4288	130.6	0.2427	0.3982	130.2	0.2409	0.3711	129.9	0.2392	170	
180	0.4741	133.0	0.2477	0.4386	132.6	0.2458	0.4075	132.3	0.2441	0.3800	131.9	0.2424	180	
190	0.4843	135.0	0.2508	0.4483	134.6	0.2490	0.4167	134.3	0.2473	0.3889	134.0	0.2456	190	
200	0.4943	137.0	0.2539	0.4578	136.7	0.2521	0.4258	136.4	0.2504	0.3976	136.1	0.2487	200	
210	0.5043	139.0	0.2570	0.4673	138.7	0.2552	0.4349	138.4	0.2535	0.4062	138.1	0.2519	210	
220	0.5143	141.1	0.2600	0.4767	140.8	0.2583	0.4438	140.5	0.2566	0.4148	140.2	0.2550	220	
230	0.5241	143.2	0.2631	0.4860	142.9	0.2613	0.4527	142.6	0.2596	0.4232	142.3	0.2580	230	
240	0.5339	145.2	0.2660	0.4953	145.0	0.2643	0.4614	144.7	0.2626	0.4316	144.4	0.2610	240	
250	0.5436	147.3	0.2690	0.5044	147.1	0.2673	0.4702	146.8	0.2656	0.4399	146.5	0.2640	250	
260	0.5533	149.4	0.2719	0.5136	149.2	0.2702	0.4788	148.9	0.2686	0.4481	148.6	0.2670	260	
270	0.5629	151.5	0.2749	0.5226	151.3	0.2731	0.4874	151.0	0.2715	0.4563	150.8	0.2700	270	
280	0.5724	153.7	0.2778	0.5316	153.4	0.2760	0.4959	153.2	0.2744	0.4644	152.9	0.2729	280	
290	0.5819	155.8	0.2806	0.5406	155.6	0.2789	0.5044	155.3	0.2773	0.4725	155.1	0.2758	290	
300	0.5913	158.0	0.2835	0.5495	157.7	0.2818	0.5128	157.5	0.2802	0.4805	157.3	0.2787	300	
310	0.6007	160.1	0.2863	0.5583	159.9	0.2846	0.5212	159.7	0.2830	0.4885	159.4	0.2815	310	
320	0.6101	162.3	0.2891	0.5672	162.1	0.2874	0.5296	161.9	0.2859	0.4964	161.6	0.2844	320	
330	0.6194	164.5	0.2919	0.5759	164.3	0.2902	0.5379	164.1	0.2887	0.5043	163.8	0.2872	330	
340	0.6287	166.7	0.2947	0.5847	166.5	0.2930	0.5461	166.3	0.2914	0.5121	166.1	0.2900	340	
350	0.6379	168.9	0.2974	0.5934	168.7	0.2958	0.5544	168.5	0.2942	0.5199	168.3	0.2927	350	
360	0.6472	171.1	0.3002	0.6020	170.9	0.2985	0.5625	170.7	0.2970	0.5277	170.5	0.2955	360	
370	0.6563	173.4	0.3029	0.6107	173.2	0.3012	0.5707	173.0	0.2997	0.5354	172.8	0.2982	370	
380	0.6655	175.6	0.3056	0.6193	175.4	0.3039	0.5788	175.2	0.3024	0.5431	175.0	0.3009	380	
390	0.6746	177.9	0.3083	0.6278	177.7	0.3066	0.5869	177.5	0.3051	0.5508	177.3	0.3036	390	
400	0.6837	180.2	0.3109	0.6364	180.0	0.3093	0.5950	179.8	0.3078	0.5585	179.6	0.3063	400	
410	—	—	—	0.6449	182.3	0.3119	0.6030	182.1	0.3104	0.5661	181.9	0.3090	410	

TEMP. °F	180.00			190.00			200.00			220.00			TEMP. °F	
	(113.60°F)			(117.44°F)			(121.14°F)			(128.12°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
(0.2951)	(117.9)	(0.2183)	(0.2786)	(118.2)	(0.2179)	(0.2636)	(118.5)	(0.2175)	(0.2376)	(119.0)	(0.2167)			
120	0.3014	119.2	0.2205	0.2810	118.8	0.2188	—	—	—	—	—	—	120	
130	0.3109	121.3	0.2241	0.2903	120.8	0.2223	0.2717	120.4	0.2207	0.2392	119.4	0.2174	130	
140	0.3202	123.3	0.2275	0.2994	122.9	0.2258	0.2805	122.5	0.2242	0.2478	121.5	0.2210	140	
150	0.3293	125.4	0.2309	0.3082	125.0	0.2293	0.2892	124.6	0.2277	0.2561	123.7	0.2246	150	
160	0.3382	127.5	0.2342	0.3168	127.1	0.2326	0.2976	126.7	0.2311	0.2641	125.8	0.2281	160	
170	0.3470	129.5	0.2375	0.3253	129.1	0.2360	0.3058	128.8	0.2344	0.2720	128.0	0.2315	170	
180	0.3556	131.6	0.2408	0.3337	131.2	0.2392	0.3139	130.9	0.2377	0.2796	130.1	0.2348	180	
190	0.3641	133.6	0.2440	0.3419	133.3	0.2425	0.3218	133.0	0.2410	0.2871	132.2	0.2382	190	
200	0.3725	135.7	0.2472	0.3499	135.4	0.2457	0.3296	135.1	0.2442	0.2945	134.4	0.2414	200	
210	0.3807	137.8	0.2503	0.3579	137.5	0.2488	0.3373	137.2	0.2474	0.3017	136.5	0.2446	210	
220	0.3889	139.9	0.2534	0.3658	139.6	0.2519	0.3449	139.3	0.2505	0.3089	138.7	0.2478	220	
230	0.3970	142.0	0.2565	0.3736	141.7	0.2550	0.3524	141.4	0.2536	0.3159	140.8	0.2510	230	
240	0.4050	144.1	0.2595	0.3813	143.8	0.2581	0.3599	143.6	0.2567	0.3228	143.0	0.2541	240	
250	0.4130	146.2	0.2625	0.3889	146.0	0.2611	0.3672	145.7	0.2597	0.3297	145.1	0.2571	250	
260	0.4209	148.4	0.2655	0.3964	148.1	0.2641	0.3745	147.8	0.2627	0.3365	147.3	0.2602	260	
270	0.4287	150.5	0.2685	0.4039	150.3	0.2671	0.3817	150.0	0.2657	0.3432	149.5	0.2632	270	
280	0.4364	152.7	0.2714	0.4114	152.4	0.2700	0.3888	152.2	0.2687	0.3498	151.7	0.2662	280	
290	0.4441	154.8	0.2743	0.4187	154.6	0.2729	0.3959	154.4	0.2716	0.3564	153.9	0.2691	290	
300	0.4518	157.0	0.2772	0.4261	156.8	0.2758	0.4029	156.6	0.2745	0.3629	156.1	0.2720	300	
310	0.4594	159.2	0.2801	0.4333	159.0	0.2787	0.4099	158.8	0.2774	0.3694	158.3	0.2749	310	
320	0.4669	161.4	0.2829	0.4405	161.2	0.2816	0.4168	161.0	0.2803	0.3758	160.5	0.2778	320	
330	0.4744	163.6	0.2857	0.4477	163.4	0.2844	0.4237	163.2	0.2831	0.3821	162.8	0.2806	330	
340	0.4819	165.8	0.2885	0.4549	165.6	0.2872	0.4305	165.4	0.2859	0.3885	165.0	0.2835	340	
350	0.4893	168.1	0.2913	0.4620	167.9	0.2900	0.4373	167.7	0.2887	0.3948	167.3	0.2863	350	
360	0.4967	170.3	0.2941	0.4690	170.1	0.2927	0.4441	169.9	0.2915	0.4010	169.5	0.2891	360	
370	0.5041	172.6	0.2968	0.4761	172.4	0.2955	0.4508	172.2	0.2942	0.4072	171.8	0.2918	370	
380	0.5114	174.9	0.2995	0.4831	174.7	0.2982	0.4575	174.5	0.2969	0.4134	174.1	0.2946	380	
390	0.5187	177.1	0.3022	0.4900	177.0	0.3009	0.4642	176.8	0.2997	0.4195	176.4	0.2973	390	
400	0.5260	179.4	0.3049	0.4970	179.3	0.3036	0.4708	179.1	0.3024	0.4257	178.7	0.3000	400	
410	0.5332	181.7	0.3076	0.5039	181.6	0.3063	0.4774	181.4	0.3050	0.4317	181.0	0.3027		

**Table 2 (continued)**  
**Suva® MP66 Superheated Vapor—Constant Pressure Tables**

V = Volume in ft<sup>3</sup>/lb

H = Enthalpy in Btu/lb

S = Entropy in Btu/(lb) (°R)

(Saturation Properties in parentheses)

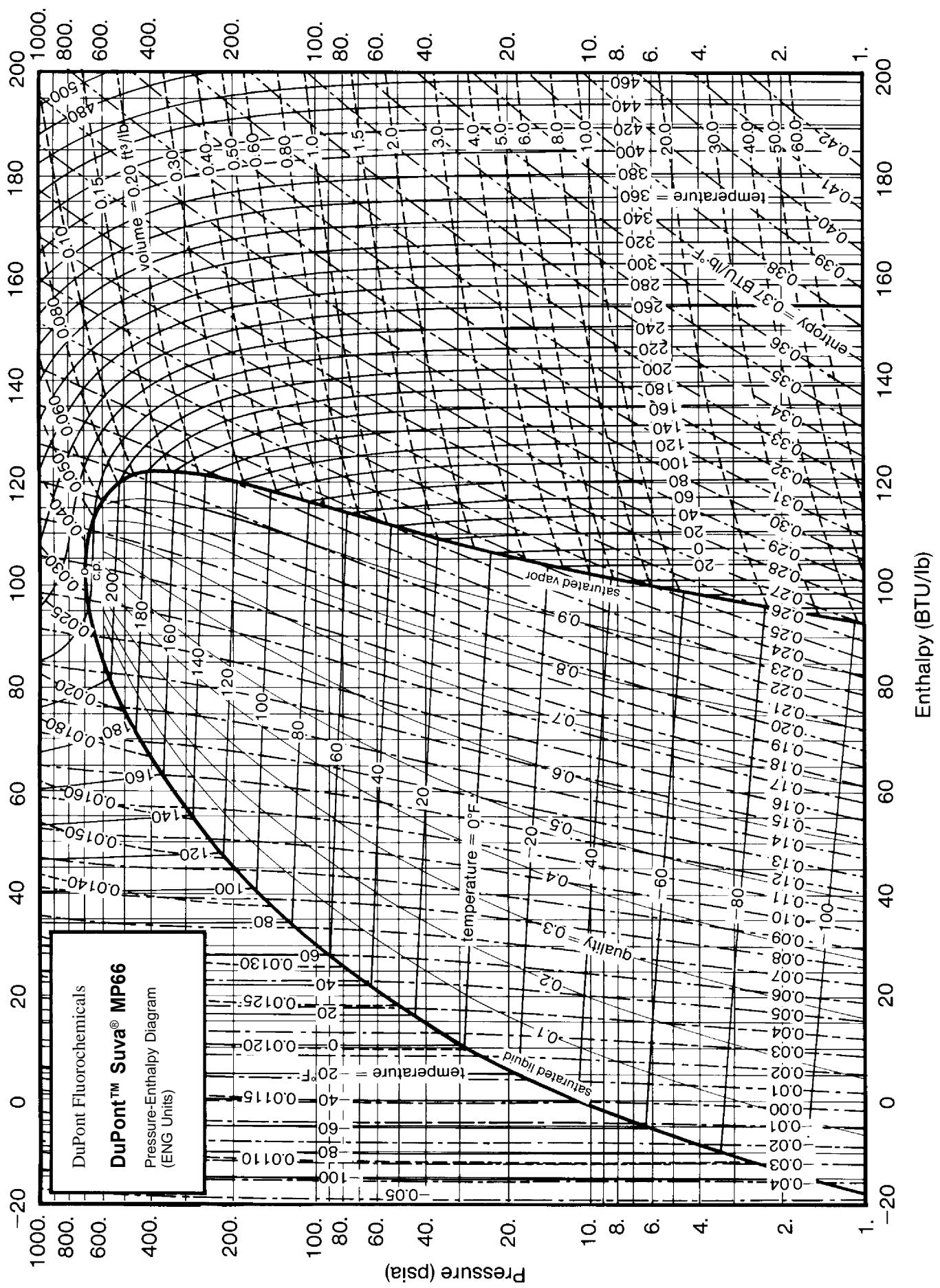
TEMP. °F	ABSOLUTE PRESSURE, psia												TEMP. °F	
	240.00			260.00			280.00			300.00				
	(134.64°F)			(140.76°F)			(146.54°F)			(152.01°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(0.2157)	(119.4)	(0.2159)	(0.1969)	(119.7)	(0.2152)	(0.1808)	(119.9)	(0.2144)	(0.1666)	(120.1)	(0.2137)		
140	0.2201	120.6	0.2179	—	—	—	—	—	—	—	—	—	140	
150	0.2282	122.8	0.2216	0.2043	121.8	0.2187	0.1835	120.8	0.2158	—	—	—	150	
160	0.2360	125.0	0.2252	0.2120	124.1	0.2224	0.1911	123.1	0.2196	0.1727	122.1	0.2169	160	
170	0.2436	127.2	0.2287	0.2193	126.3	0.2260	0.1984	125.4	0.2233	0.1800	124.5	0.2207	170	
180	0.2509	129.3	0.2321	0.2265	128.5	0.2295	0.2053	127.7	0.2269	0.1868	126.8	0.2244	180	
190	0.2581	131.5	0.2355	0.2334	130.7	0.2329	0.2121	129.9	0.2304	0.1935	129.1	0.2280	190	
200	0.2651	133.7	0.2388	0.2401	132.9	0.2363	0.2186	132.2	0.2338	0.1998	131.4	0.2315	200	
210	0.2720	135.8	0.2420	0.2467	135.2	0.2396	0.2250	134.4	0.2372	0.2060	133.7	0.2349	210	
220	0.2787	138.0	0.2453	0.2532	137.4	0.2428	0.2312	136.7	0.2405	0.2120	136.0	0.2383	220	
230	0.2854	140.2	0.2484	0.2595	139.6	0.2461	0.2373	138.9	0.2438	0.2179	138.2	0.2416	230	
240	0.2919	142.4	0.2516	0.2657	141.8	0.2492	0.2432	141.1	0.2470	0.2237	140.5	0.2449	240	
250	0.2984	144.6	0.2547	0.2719	144.0	0.2524	0.2491	143.4	0.2502	0.2293	142.8	0.2481	250	
260	0.3048	146.7	0.2577	0.2779	146.2	0.2555	0.2548	145.6	0.2533	0.2348	145.0	0.2512	260	
270	0.3111	148.9	0.2608	0.2839	148.4	0.2585	0.2605	147.8	0.2564	0.2403	147.3	0.2543	270	
280	0.3173	151.2	0.2638	0.2897	150.6	0.2616	0.2661	150.1	0.2594	0.2456	149.6	0.2574	280	
290	0.3234	153.4	0.2668	0.2956	152.9	0.2646	0.2716	152.3	0.2625	0.2509	151.8	0.2605	290	
300	0.3295	155.6	0.2697	0.3013	155.1	0.2675	0.2771	154.6	0.2655	0.2561	154.1	0.2635	300	
310	0.3356	157.8	0.2726	0.3070	157.3	0.2705	0.2825	156.9	0.2684	0.2612	156.4	0.2665	310	
320	0.3416	160.1	0.2755	0.3126	159.6	0.2734	0.2878	159.1	0.2713	0.2663	158.7	0.2694	320	
330	0.3475	162.3	0.2784	0.3182	161.9	0.2763	0.2931	161.4	0.2742	0.2713	161.0	0.2723	330	
340	0.3534	164.6	0.2812	0.3238	164.1	0.2791	0.2983	163.7	0.2771	0.2763	163.3	0.2752	340	
350	0.3593	166.8	0.2840	0.3293	166.4	0.2819	0.3035	166.0	0.2800	0.2812	165.6	0.2781	350	
360	0.3651	169.1	0.2868	0.3347	168.7	0.2848	0.3087	168.3	0.2828	0.2861	167.9	0.2810	360	
370	0.3709	171.4	0.2896	0.3402	171.0	0.2876	0.3138	170.6	0.2856	0.2910	170.2	0.2838	370	
380	0.3766	173.7	0.2924	0.3455	173.3	0.2903	0.3189	172.9	0.2884	0.2958	172.5	0.2866	380	
390	0.3824	176.0	0.2951	0.3509	175.6	0.2931	0.3239	175.3	0.2912	0.3006	174.9	0.2893	390	
400	0.3880	178.3	0.2978	0.3562	178.0	0.2958	0.3289	177.6	0.2939	0.3053	177.2	0.2921	400	
410	0.3937	180.7	0.3005	0.3615	180.3	0.2985	0.3339	180.0	0.2966	0.3100	179.6	0.2948	410	
420	0.3993	183.0	0.3032	0.3668	182.7	0.3012	0.3388	182.3	0.2993	0.3147	182.0	0.2975	420	
430	0.4049	185.4	0.3059	0.3720	185.0	0.3039	0.3438	184.7	0.3020	0.3193	184.3	0.3002	430	
440	0.4105	187.7	0.3085	0.3772	187.4	0.3065	0.3487	187.1	0.3047	0.3239	186.7	0.3029	440	
450	—	—	—	0.3824	189.8	0.3092	0.3535	189.5	0.3073	0.3285	189.1	0.3056	450	
460	—	—	—	—	—	—	—	—	—	0.3331	191.5	0.3082	460	

TEMP. °F	ABSOLUTE PRESSURE, psia												TEMP. °F	
	320.00			340.00			360.00			380.00				
	(157.21°F)			(162.16°F)			(166.90°F)			(171.44°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(0.1541)	(120.2)	(0.2129)	(0.1430)	(120.3)	(0.2122)	(0.1330)	(120.3)	(0.2114)	(0.1240)	(120.3)	(0.2105)		
160	0.1563	121.0	0.2141	—	—	—	—	—	—	—	—	—	160	
170	0.1636	123.4	0.2181	0.1488	122.4	0.2154	0.1354	121.2	0.2127	—	—	—	170	
180	0.1705	125.9	0.2219	0.1558	124.9	0.2194	0.1425	123.8	0.2169	0.1303	122.7	0.2143	180	
190	0.1770	128.3	0.2256	0.1624	127.3	0.2232	0.1491	126.4	0.2209	0.1371	125.4	0.2185	190	
200	0.1833	130.6	0.2292	0.1686	129.8	0.2269	0.1554	128.9	0.2247	0.1434	127.9	0.2224	200	
210	0.1894	132.9	0.2327	0.1746	132.1	0.2305	0.1613	131.3	0.2283	0.1493	130.5	0.2262	210	
220	0.1952	135.3	0.2361	0.1803	134.5	0.2340	0.1670	133.7	0.2319	0.1549	132.9	0.2299	220	
230	0.2009	137.6	0.2395	0.1859	136.8	0.2374	0.1724	136.1	0.2354	0.1604	135.4	0.2334	230	
240	0.2065	139.8	0.2428	0.1913	139.2	0.2408	0.1777	138.5	0.2388	0.1656	137.8	0.2369	240	
250	0.2119	142.1	0.2460	0.1966	141.5	0.2441	0.1829	140.9	0.2422	0.1706	140.2	0.2403	250	
260	0.2173	144.4	0.2492	0.2018	143.8	0.2473	0.1879	143.2	0.2454	0.1755	142.6	0.2436	260	
270	0.2225	146.7	0.2524	0.2068	146.1	0.2505	0.1928	145.5	0.2487	0.1803	144.9	0.2469	270	
280	0.2276	149.0	0.2555	0.2118	148.4	0.2537	0.1977	147.9	0.2519	0.1850	147.3	0.2501	280	
290	0.2327	151.3	0.2586	0.2167	150.8	0.2568	0.2024	150.2	0.2550	0.1896	149.7	0.2533	290	
300	0.2377	153.6	0.2616	0.2215	153.1	0.2598	0.2070	152.5	0.2581	0.1941	152.0	0.2564	300	
310	0.2426	155.9	0.2646	0.2262	155.4	0.2629	0.2116	154.9	0.2611	0.1985	154.4	0.2595	310	
320	0.2475	158.2	0.2676	0.2308	157.7	0.2658	0.2161	157.2	0.2642	0.2028	156.7	0.2625	320	
330	0.2523	160.5	0.2705	0.2355	160.0	0.2688	0.2205	159.6	0.2671	0.2071	159.1	0.2655	330	
340	0.2570	162.8	0.2735	0.2400	162.4	0.2717	0.2249	161.9	0.2701	0.2113	161.4	0.2685	340	
350	0.2617	165.1	0.2763	0.2445	164.7	0.2746	0.2292	164.3	0.2730	0.2155	163.8	0.2715	350	
360	0.2664	167.5	0.2792	0.2490	167.0	0.2775	0.2335	166.6	0.2759	0.2196	166.2	0.2744	360	
370	0.2710	169.8	0.2820	0.2534	169.4	0.2804	0.2377	169.0	0.2788	0.2237	168.6	0.2772	370	
380	0.2756	172.1	0.2848	0.2577	171.7	0.2832	0.2419	171.3	0.2816	0.2277	170.9	0.2801	380	
390	0.2801	174.5	0.2876	0.2621	174.1	0.2860	0.2460	173.7	0.2844	0.2317	173.3	0.2829	390	
400	0.2846	176.9	0.2904	0.2664	176.5	0.2888	0.2502	176.1	0.2872	0.2357	175.7	0.2857	400	
410	0.2891	179.2	0.2931	0.2706	178.9	0.2915	0.2542	178.5	0.2900	0.2396	178.1	0.2885	410	
420	0.2935	181.6	0.2959	0.2749	181.3	0.2943	0.2583	180.9	0.2927	0.2435	180.5	0.2913	420	
430	0.2979	184.0	0.2986	0.2791	183.7	0.2970	0.2623	183.3	0.2955	0.2473	183.0	0.2940	430	
440	0.3023	186.4	0.3012	0.2										

**Table 2 (continued)**  
**Suva® MP66 Superheated Vapor—Constant Pressure Tables**

V = Volume in ft<sup>3</sup>/lb    H = Enthalpy in Btu/lb    S = Entropy in Btu/(lb) (°R)    (Saturation Properties in parentheses)

TEMP. °F	ABSOLUTE PRESSURE, psia												TEMP. °F	
	400.00			450.00			500.00			550.00				
	(175.80°F)			(186.00°F)			(195.34°F)			(203.95°F)				
	V	H	S	V	H	S	V	H	S	V	H	S		
	(0.1158)	(120.2)	(0.2097)	(0.0982)	(119.7)	(0.2074)	(0.0835)	(118.8)	(0.2047)	(0.0708)	(117.4)	(0.2016)		
180	0.1190	121.4	0.2116	—	—	—	—	—	—	—	—	—	180	
190	0.1260	124.3	0.2160	0.1013	121.1	0.2095	—	—	—	—	—	—	190	
200	0.1324	127.0	0.2201	0.1085	124.2	0.2142	0.0875	120.7	0.2075	—	—	—	200	
210	0.1384	129.6	0.2241	0.1148	127.1	0.2186	0.0948	124.1	0.2128	0.0766	120.3	0.2059	210	
220	0.1440	132.1	0.2278	0.1206	129.9	0.2227	0.1011	127.3	0.2174	0.0841	124.2	0.2116	220	
230	0.1494	134.6	0.2315	0.1260	132.5	0.2266	0.1067	130.2	0.2217	0.0903	127.6	0.2166	230	
240	0.1546	137.1	0.2350	0.1311	135.1	0.2304	0.1119	133.0	0.2258	0.0958	130.7	0.2211	240	
250	0.1595	139.5	0.2385	0.1359	137.7	0.2340	0.1168	135.8	0.2296	0.1008	133.7	0.2253	250	
260	0.1643	141.9	0.2419	0.1406	140.2	0.2376	0.1214	138.4	0.2334	0.1054	136.5	0.2292	260	
270	0.1690	144.3	0.2452	0.1451	142.7	0.2410	0.1257	141.0	0.2370	0.1098	139.2	0.2330	270	
280	0.1736	146.7	0.2484	0.1494	145.2	0.2444	0.1300	143.6	0.2405	0.1139	141.9	0.2367	280	
290	0.1780	149.1	0.2516	0.1536	147.7	0.2477	0.1340	146.1	0.2439	0.1179	144.6	0.2402	290	
300	0.1824	151.5	0.2548	0.1578	150.1	0.2509	0.1380	148.7	0.2472	0.1217	147.2	0.2437	300	
310	0.1867	153.9	0.2579	0.1618	152.5	0.2541	0.1418	151.2	0.2505	0.1255	149.8	0.2471	310	
320	0.1909	156.2	0.2610	0.1657	155.0	0.2572	0.1456	153.7	0.2537	0.1290	152.3	0.2504	320	
330	0.1951	158.6	0.2640	0.1696	157.4	0.2603	0.1492	156.1	0.2569	0.1325	154.9	0.2536	330	
340	0.1991	161.0	0.2670	0.1734	159.8	0.2634	0.1528	158.6	0.2600	0.1360	157.4	0.2568	340	
350	0.2032	163.4	0.2699	0.1771	162.2	0.2664	0.1563	161.1	0.2631	0.1393	159.9	0.2599	350	
360	0.2071	165.8	0.2729	0.1808	164.7	0.2694	0.1598	163.6	0.2661	0.1426	162.4	0.2630	360	
370	0.2111	168.1	0.2758	0.1845	167.1	0.2723	0.1632	166.0	0.2691	0.1458	164.9	0.2660	370	
380	0.2150	170.5	0.2786	0.1880	169.5	0.2752	0.1665	168.5	0.2720	0.1489	167.4	0.2690	380	
390	0.2188	172.9	0.2815	0.1916	172.0	0.2781	0.1698	171.0	0.2750	0.1520	169.9	0.2720	390	
400	0.2226	175.3	0.2843	0.1951	174.4	0.2809	0.1731	173.4	0.2778	0.1551	172.4	0.2749	400	
410	0.2264	177.8	0.2871	0.1985	176.8	0.2838	0.1763	175.9	0.2807	0.1581	175.0	0.2778	410	
420	0.2301	180.2	0.2899	0.2020	179.3	0.2866	0.1795	178.4	0.2835	0.1611	177.5	0.2807	420	
430	0.2338	182.6	0.2926	0.2054	181.7	0.2893	0.1826	180.9	0.2863	0.1640	180.0	0.2835	430	
440	0.2375	185.0	0.2953	0.2087	184.2	0.2921	0.1857	183.3	0.2891	0.1670	182.5	0.2864	440	
450	0.2411	187.5	0.2980	0.2120	186.7	0.2948	0.1888	185.8	0.2919	0.1698	185.0	0.2891	450	
460	0.2447	189.9	0.3007	0.2153	189.1	0.2975	0.1919	188.3	0.2946	0.1727	187.5	0.2919	460	
470	0.2483	192.4	0.3034	0.2186	191.6	0.3002	0.1949	190.8	0.2973	0.1755	190.0	0.2946	470	
480	0.2519	194.9	0.3060	0.2219	194.1	0.3029	0.1979	193.3	0.3000	0.1783	192.6	0.2973	480	
490	—	—	—	0.2251	196.6	0.3055	0.2009	195.9	0.3027	0.1811	195.1	0.3000	490	
500	—	—	—	—	—	—	0.2038	198.4	0.3053	0.1838	197.7	0.3027	500	



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