

DuPont™ Suva®
refrigerants

**Thermodynamic
Properties
of**

**DuPont™
Suva® MP66**

Refrigerant

(R-401B)

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The miracles of science™

Thermodynamic Properties of SUVA® MP66 Refrigerant

SI 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 ₂ /CH ₃ CHF ₂ /CHClFCF ₃ (61/11/28% by weight)	
Molecular Weight	92.84	
Boiling Point at One Atmosphere	-34.67°C	(-30.41°F)
Critical Temperature, T _c	106.10°C	(222.98°F)
	379.25 K	(682.65°R)
Critical Pressure, P _c	4681.5 kPa (abs)	(679.0 psia)
Critical Density, D _c	512.7 kg/m ³	(32.01 lb/ft ³)
Critical Volume, V _c	0.00195 m ³ /kg	(0.0312 ft ³ /lb)

Units and Factors

t	= temperature in °C
T	= temperature in K = °C + 273.15
p _f	= pressure of saturated liquid (bubble point) in kPa (abs)
p _g	= pressure of saturated vapor (dew point) in kPa (abs)
v _f	= volume of saturated liquid in m ³ /kg
v _g	= volume of saturated vapor in m ³ /kg
V	= volume of superheated vapor in m ³ /kg
d _f	= 1/v _f = density of saturated liquid in kg/m ³
d _g	= 1/v _g = density of saturated vapor in kg/m ³
h _f	= enthalpy of saturated liquid in kJ/kg
h _{fg}	= enthalpy of vaporization in kJ/kg
h _g	= enthalpy of saturated vapor in kJ/kg
H	= enthalpy of superheated vapor in kJ/kg
s _f	= entropy of saturated liquid in kJ/(kg) (K)
s _g	= entropy of saturated vapor in kJ/(kg) (K)
S	= entropy of superheated vapor in kJ/(kg) (K)
C _p	= heat capacity at constant pressure in kJ/(kg) (K)
C _v	= heat capacity at constant volume in kJ/(kg) (K)

The gas constant, R = 8.314 J/(mole) (K)
for SUVA® MP66, R = 0.0896 kJ/(kg) (K)
One atmosphere = 101.325 kPa

Reference point for enthalpy and entropy:

$$h_f = 200 \text{ kJ/kg at } 0^\circ\text{C}$$

$$s_f = 1 \text{ kJ/kg} \cdot \text{K at } 0^\circ\text{C}$$

Equations

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

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

1. Equation of State (PRSV)

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

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

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

where

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

x_i = mole fraction of component i

x_j = mole fraction of component j

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

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

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

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

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

(Note: κ_i = κ_{0i} for T_r > 0.7)

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

κ_{1i} = adjustable parameter for component i

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

Values for R , T_{ci} , P_{ci} , ω_i , κ_{1i} , x_i , and k_{ij} are needed to calculate constants a and b . $R = 0.008314$ kJ/(mole) (K). The remaining constants for SUVA[®] MP66 are summarized below:

Component	T_{ci}	P_{ci}	ω_i	κ_{1i}	x_i
HCFC-22 (i = 1)	369.16	4977.00	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:

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

$$k_{21} = -0.02652 \quad k_{22} = 0.00000 \quad k_{23} = -0.01314$$

$$k_{31} = 0.00052 \quad k_{32} = -0.01314 \quad k_{33} = 0.00000$$

Ideal Gas Heat Capacity Equation (at constant pressure):

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

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

where C_p° and C_{pi}° are in J/(mole) (K) and T is in K. x_i is the mole fraction of component i in the mixture (use same values listed in PRSV constants for SUVA[®] MP66).

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

$A_1 = 6.164370$ E+00	$B_1 = 0.173407$ E-01
$A_2 = 2.072000$ E+00	$B_2 = 0.572200$ E-01
$A_3 = -4.130590$ E+01	$B_3 = 0.587312$ E+00
$C_1 = 0.557618$ E-04	$D_1 = -0.140596$ E-06
$C_2 = -0.348000$ E-04	$D_2 = 0.810700$ E-08
$C_3 = -0.233021$ E-02	$D_3 = 0.517788$ E-05
$E_1 = 0.120557$ E-09	$F_1 = -0.368814$ E-13
$E_2 = 0.000000$ E+00	$F_2 = 0.000000$ E+00
$E_3 = -0.599647$ E-08	$F_3 = 0.287937$ 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°C for SI units to $H = 0$ and $S = 0$ at -40°F for I/P units). In the conversion equations below, $H(\text{ref})$ and $S(\text{ref})$ are the saturated liquid enthalpy and entropy at -40°C . For SUVA[®] MP66: $H(\text{ref}) = 153.8$ kJ/kg and $S(\text{ref}) = 0.8184$ kJ/kg \cdot 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/ft ³)	$= D$ (kg/m ³) \cdot 0.062428
V (ft ³ /lb)	$= V$ (m ³ /kg) \cdot 16.018
H (Btu/lb)	$= [H$ (kJ/kg) $- H(\text{ref})] \cdot 0.43021$
S (Btu/lb \cdot $^{\circ}\text{R}$)	$= [S$ (kJ/kg \cdot K) $- S(\text{ref})] \cdot 0.23901$
C_p (Btu/lb \cdot $^{\circ}\text{F}$)	$= C_p$ (kJ/kg \cdot K) \cdot 0.23901
C_v (Btu/lb \cdot $^{\circ}\text{F}$)	$= C_v$ (kJ/kg \cdot 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 kg/m^3 in SI units and lb/ft^3 in I/P units; T and T_c are in K in SI units and $^\circ\text{R}$ in I/P units; $a_0, a_1, a_2, a_3, a_4,$ and t_0 are constants:

$$a_0 = 2.289321$$

$$a_3 = -1.206543$$

$$a_1 = 2.819138$$

$$a_4 = -4.205078$$

$$a_2 = 1.781901$$

$$t_0 = 0.5850235$$

TABLE 1
SUVA® MP66 Saturation Properties—Temperature Table

TEMP. °C	PRESSURE kPa		VOLUME m ³ /kg		DENSITY kg/m ³		ENTHALPY kJ/kg			ENTROPY kJ/(kg)(K)		TEMP. °C
	LIQUID P _f	VAPOR P _g	LIQUID v _f	VAPOR v _g	LIQUID 1/v _f	VAPOR 1/v _g	LIQUID h _f	LATENT h _{fg}	VAPOR h _g	LIQUID s _f	VAPOR s _g	
-100	1.4	0.7	0.0006	21.0526	1571.0	0.048	93.7	260.5	354.3	0.5218	2.0620	-100
-99	1.6	0.8	0.0006	19.1205	1568.5	0.052	94.7	260.1	354.8	0.5271	2.0555	-99
-98	1.7	0.9	0.0006	17.3611	1566.0	0.058	95.6	259.6	355.2	0.5325	2.0492	-98
-97	1.9	1.0	0.0006	15.7978	1563.4	0.063	96.5	259.2	355.7	0.5378	2.0431	-97
-96	2.1	1.1	0.0006	14.3885	1560.9	0.070	97.5	258.7	356.2	0.5431	2.0370	-96
-95	2.3	1.2	0.0006	13.1406	1558.4	0.076	98.4	258.3	356.7	0.5484	2.0310	-95
-94	2.5	1.3	0.0006	11.9904	1555.8	0.083	99.4	257.8	357.2	0.5537	2.0252	-94
-93	2.7	1.5	0.0006	10.9649	1553.2	0.091	100.3	257.4	357.7	0.5589	2.0195	-93
-92	2.9	1.6	0.0006	10.0402	1550.7	0.100	101.2	257.0	358.2	0.5641	2.0138	-92
-91	3.2	1.8	0.0006	9.2081	1548.1	0.109	102.2	256.5	358.7	0.5694	2.0083	-91
-90	3.4	1.9	0.0006	8.4459	1545.5	0.118	103.1	256.1	359.2	0.5746	2.0029	-90
-89	3.7	2.1	0.0006	7.7580	1542.9	0.129	104.1	255.6	359.7	0.5798	1.9976	-89
-88	4.1	2.3	0.0006	7.1378	1540.3	0.140	105.1	255.2	360.2	0.5849	1.9924	-88
-87	4.4	2.5	0.0007	6.5746	1537.7	0.152	106.0	254.7	360.7	0.5901	1.9872	-87
-86	4.8	2.8	0.0007	6.0569	1535.1	0.165	107.0	254.3	361.2	0.5952	1.9822	-86
-85	5.1	3.0	0.0007	5.5897	1532.5	0.179	107.9	253.8	361.7	0.6004	1.9773	-85
-84	5.6	3.3	0.0007	5.1653	1529.8	0.194	108.9	253.4	362.2	0.6055	1.9725	-84
-83	6.0	3.6	0.0007	4.7755	1527.2	0.209	109.9	252.9	362.8	0.6106	1.9677	-83
-82	6.5	3.9	0.0007	4.4209	1524.6	0.226	110.8	252.4	363.3	0.6157	1.9631	-82
-81	7.0	4.2	0.0007	4.0950	1521.9	0.244	111.8	252.0	363.8	0.6207	1.9585	-81
-80	7.5	4.5	0.0007	3.7979	1519.2	0.263	112.8	251.5	364.3	0.6258	1.9540	-80
-79	8.0	4.9	0.0007	3.5261	1516.6	0.284	113.8	251.1	364.8	0.6308	1.9496	-79
-78	8.6	5.3	0.0007	3.2765	1513.9	0.305	114.7	250.6	365.4	0.6358	1.9453	-78
-77	9.3	5.7	0.0007	3.0469	1511.2	0.328	115.7	250.2	365.9	0.6409	1.9410	-77
-76	10.0	6.2	0.0007	2.8361	1508.5	0.353	116.7	249.7	366.4	0.6459	1.9369	-76
-75	10.7	6.7	0.0007	2.6427	1505.8	0.378	117.7	249.3	366.9	0.6509	1.9328	-75
-74	11.4	7.2	0.0007	2.4643	1503.1	0.406	118.7	248.8	367.5	0.6558	1.9288	-74
-73	12.2	7.8	0.0007	2.2999	1500.4	0.435	119.7	248.3	368.0	0.6608	1.9249	-73
-72	13.1	8.4	0.0007	2.1482	1497.7	0.466	120.7	247.9	368.5	0.6657	1.9210	-72
-71	14.0	9.0	0.0007	2.0084	1495.0	0.498	121.7	247.4	369.1	0.6707	1.9172	-71
-70	14.9	9.6	0.0007	1.8790	1492.2	0.532	122.7	246.9	369.6	0.6756	1.9135	-70
-69	15.9	10.3	0.0007	1.7596	1489.5	0.568	123.7	246.5	370.1	0.6805	1.9099	-69
-68	16.9	11.1	0.0007	1.6488	1486.8	0.607	124.7	246.0	370.7	0.6854	1.9063	-68
-67	18.0	11.9	0.0007	1.5463	1484.0	0.647	125.7	245.5	371.2	0.6903	1.9028	-67
-66	19.2	12.7	0.0007	1.4512	1481.2	0.689	126.7	245.1	371.7	0.6952	1.8993	-66
-65	20.4	13.6	0.0007	1.3630	1478.5	0.734	127.7	244.6	372.3	0.7001	1.8959	-65
-64	21.7	14.5	0.0007	1.2811	1475.7	0.781	128.7	244.1	372.8	0.7049	1.8926	-64
-63	23.1	15.5	0.0007	1.2050	1472.9	0.830	129.7	243.7	373.4	0.7098	1.8894	-63
-62	24.5	16.6	0.0007	1.1342	1470.1	0.882	130.7	243.2	373.9	0.7146	1.8862	-62
-61	26.0	17.7	0.0007	1.0683	1467.3	0.936	131.8	242.7	374.5	0.7194	1.8830	-61
-60	27.6	18.8	0.0007	1.0069	1464.5	0.993	132.8	242.2	375.0	0.7242	1.8800	-60
-59	29.2	20.0	0.0007	0.9497	1461.7	1.053	133.8	241.7	375.5	0.7290	1.8769	-59
-58	30.9	21.3	0.0007	0.8963	1458.8	1.116	134.8	241.3	376.1	0.7338	1.8740	-58
-57	32.7	22.7	0.0007	0.8465	1456.0	1.181	135.9	240.8	376.6	0.7386	1.8711	-57
-56	34.6	24.1	0.0007	0.7999	1453.2	1.250	136.9	240.3	377.2	0.7434	1.8682	-56
-55	36.6	25.6	0.0007	0.7564	1450.3	1.322	137.9	239.8	377.7	0.7481	1.8654	-55
-54	38.7	27.1	0.0007	0.7157	1447.4	1.397	139.0	239.3	378.3	0.7529	1.8627	-54
-53	40.8	28.8	0.0007	0.6776	1444.6	1.476	140.0	238.8	378.8	0.7576	1.8600	-53
-52	43.1	30.5	0.0007	0.6418	1441.7	1.558	141.1	238.3	379.4	0.7623	1.8573	-52
-51	45.4	32.3	0.0007	0.6083	1438.8	1.644	142.1	237.8	379.9	0.7671	1.8547	-51
-50	47.9	34.2	0.0007	0.5770	1435.9	1.733	143.2	237.3	380.5	0.7718	1.8522	-50
-49	50.5	36.2	0.0007	0.5475	1433.0	1.827	144.2	236.8	381.1	0.7765	1.8497	-49
-48	53.1	38.3	0.0007	0.5198	1430.1	1.924	145.3	236.3	381.6	0.7812	1.8472	-48
-47	55.9	40.4	0.0007	0.4938	1427.2	2.025	146.3	235.8	382.2	0.7859	1.8448	-47
-46	58.8	42.7	0.0007	0.4694	1424.3	2.131	147.4	235.3	382.7	0.7905	1.8424	-46
-45	61.8	45.1	0.0007	0.4463	1421.3	2.240	148.5	234.8	383.3	0.7952	1.8401	-45
-44	65.0	47.5	0.0007	0.4247	1418.4	2.355	149.5	234.3	383.8	0.7999	1.8378	-44
-43	68.2	50.1	0.0007	0.4043	1415.5	2.474	150.6	233.8	384.4	0.8045	1.8356	-43
-42	71.6	52.8	0.0007	0.3850	1412.5	2.597	151.7	233.3	384.9	0.8092	1.8334	-42
-41	75.2	55.6	0.0007	0.3669	1409.5	2.726	152.8	232.7	385.5	0.8138	1.8312	-41

TABLE 1 (continued)
SUVA® MP66 Saturation Properties—Temperature Table

TEMP. °C	PRESSURE kPa		VOLUME m ³ /kg		DENSITY kg/m ³		ENTHALPY kJ/kg			ENTROPY kJ/(kg)(K)		TEMP. °C
	LIQUID P _f	VAPOR P _g	LIQUID v _f	VAPOR v _g	LIQUID 1/v _f	VAPOR 1/v _g	LIQUID h _f	LATENT h _{fg}	VAPOR h _g	LIQUID s _f	VAPOR s _g	
-40	78.8	58.5	0.0007	0.3498	1406.6	2.859	153.8	232.2	386.0	0.8184	1.8291	-40
-39	82.7	61.6	0.0007	0.3336	1403.6	2.997	154.9	231.7	386.6	0.8230	1.8270	-39
-38	86.6	64.8	0.0007	0.3183	1400.6	3.141	156.0	231.2	387.2	0.8276	1.8250	-38
-37	90.7	68.1	0.0007	0.3039	1397.6	3.290	157.1	230.6	387.7	0.8322	1.8230	-37
-36	95.0	71.5	0.0007	0.2903	1394.6	3.445	158.2	230.1	388.3	0.8368	1.8210	-36
-35	99.4	75.1	0.0007	0.2774	1391.5	3.605	159.3	229.6	388.8	0.8414	1.8191	-35
-34	104.0	78.8	0.0007	0.2652	1388.5	3.771	160.4	229.0	389.4	0.8460	1.8172	-34
-33	108.7	82.7	0.0007	0.2536	1385.5	3.943	161.5	228.5	389.9	0.8506	1.8153	-33
-32	113.6	86.7	0.0007	0.2426	1382.4	4.122	162.6	227.9	390.5	0.8552	1.8135	-32
-31	118.7	90.8	0.0007	0.2322	1379.4	4.306	163.7	227.4	391.1	0.8597	1.8117	-31
-30	123.9	95.2	0.0007	0.2224	1376.3	4.497	164.8	226.8	391.6	0.8643	1.8100	-30
-29	129.4	99.6	0.0007	0.2130	1373.3	4.695	165.9	226.3	392.2	0.8688	1.8082	-29
-28	135.0	104.3	0.0007	0.2041	1370.2	4.899	167.0	225.7	392.7	0.8734	1.8065	-28
-27	140.8	109.1	0.0007	0.1957	1367.1	5.110	168.1	225.1	393.3	0.8779	1.8049	-27
-26	146.8	114.1	0.0007	0.1877	1364.0	5.328	169.2	224.6	393.8	0.8824	1.8032	-26
-25	153.0	119.3	0.0007	0.1801	1360.9	5.554	170.4	224.0	394.4	0.8869	1.8016	-25
-24	159.4	124.6	0.0007	0.1728	1357.8	5.787	171.5	223.4	394.9	0.8914	1.8000	-24
-23	166.0	130.2	0.0007	0.1659	1354.6	6.027	172.6	222.8	395.5	0.8960	1.7985	-23
-22	172.9	135.9	0.0007	0.1593	1351.5	6.276	173.8	222.3	396.0	0.9005	1.7970	-22
-21	179.9	141.8	0.0007	0.1531	1348.4	6.532	174.9	221.7	396.6	0.9050	1.7955	-21
-20	187.2	147.9	0.0007	0.1471	1345.2	6.796	176.0	221.1	397.1	0.9095	1.7940	-20
-19	194.6	154.3	0.0007	0.1415	1342.0	7.069	177.2	220.5	397.7	0.9139	1.7925	-19
-18	202.4	160.8	0.0007	0.1361	1338.9	7.350	178.3	219.9	398.2	0.9184	1.7911	-18
-17	210.3	167.6	0.0007	0.1309	1335.7	7.640	179.5	219.3	398.8	0.9229	1.7897	-17
-16	218.5	174.6	0.0008	0.1260	1332.5	7.939	180.6	218.7	399.3	0.9274	1.7884	-16
-15	226.9	181.8	0.0008	0.1213	1329.3	8.247	181.8	218.1	399.8	0.9318	1.7870	-15
-14	235.6	189.2	0.0008	0.1168	1326.1	8.563	184.0	216.4	400.4	0.9403	1.7857	-14
-13	244.4	196.8	0.0008	0.1125	1322.9	8.889	185.1	215.8	400.9	0.9447	1.7844	-13
-12	253.6	204.7	0.0008	0.1084	1319.6	9.224	186.3	215.2	401.5	0.9490	1.7832	-12
-11	263.0	212.8	0.0008	0.1045	1316.4	9.569	187.4	214.6	402.0	0.9534	1.7819	-11
-10	272.6	221.2	0.0008	0.1008	1313.1	9.924	188.6	214.0	402.6	0.9577	1.7807	-10
-9	282.6	229.8	0.0008	0.0972	1309.9	10.290	189.7	213.4	403.1	0.9621	1.7795	-9
-8	292.8	238.7	0.0008	0.0938	1306.6	10.666	190.9	212.7	403.6	0.9664	1.7783	-8
-7	303.3	247.9	0.0008	0.0905	1303.3	11.053	192.0	212.1	404.2	0.9708	1.7771	-7
-6	314.0	257.3	0.0008	0.0873	1300.1	11.451	193.2	211.5	404.7	0.9751	1.7760	-6
-5	325.1	267.0	0.0008	0.0843	1296.8	11.860	194.4	210.8	405.2	0.9794	1.7748	-5
-4	336.5	277.0	0.0008	0.0814	1293.4	12.280	195.5	210.2	405.7	0.9838	1.7737	-4
-3	348.1	287.2	0.0008	0.0787	1290.1	12.712	196.7	209.5	406.3	0.9881	1.7726	-3
-2	360.1	297.8	0.0008	0.0760	1286.8	13.157	197.6	209.2	406.8	0.9913	1.7715	-2
-1	372.4	308.7	0.0008	0.0735	1283.5	13.614	198.8	208.5	407.3	0.9957	1.7705	-1
0	385.0	319.8	0.0008	0.0710	1280.1	14.084	200.0	207.8	407.8	1.0000	1.7694	0
1	398.0	331.3	0.0008	0.0686	1276.7	14.567	201.2	207.1	408.3	1.0044	1.7684	1
2	411.2	343.1	0.0008	0.0664	1273.4	15.062	202.4	206.5	408.9	1.0087	1.7673	2
3	424.8	355.2	0.0008	0.0642	1270.0	15.571	203.6	205.8	409.4	1.0131	1.7663	3
4	438.8	367.6	0.0008	0.0621	1266.6	16.093	205.3	204.6	409.9	1.0192	1.7654	4
5	453.0	380.3	0.0008	0.0601	1263.2	16.627	206.5	203.9	410.4	1.0235	1.7644	5
6	467.6	393.4	0.0008	0.0582	1259.8	17.175	207.7	203.2	410.9	1.0278	1.7635	6
7	482.6	406.8	0.0008	0.0564	1256.4	17.738	208.9	202.5	411.4	1.0321	1.7625	7
8	497.9	420.5	0.0008	0.0546	1252.9	18.315	210.2	201.8	411.9	1.0364	1.7616	8
9	513.6	434.6	0.0008	0.0529	1249.5	18.908	211.4	201.0	412.4	1.0407	1.7607	9
10	529.7	449.1	0.0008	0.0512	1246.0	19.515	212.6	200.3	412.9	1.0450	1.7598	10
11	546.1	463.9	0.0008	0.0497	1242.5	20.139	213.8	199.6	413.4	1.0493	1.7589	11
12	563.0	479.0	0.0008	0.0481	1239.1	20.778	215.1	198.8	413.9	1.0536	1.7580	12
13	580.2	494.6	0.0008	0.0467	1235.6	21.434	216.3	198.1	414.4	1.0579	1.7571	13
14	597.8	510.5	0.0008	0.0452	1232.1	22.107	217.6	197.3	414.9	1.0622	1.7562	14
15	615.8	526.9	0.0008	0.0439	1228.5	22.797	218.8	196.5	415.3	1.0665	1.7554	15
16	634.2	543.6	0.0008	0.0425	1225.0	23.504	220.1	195.8	415.8	1.0708	1.7545	16
17	653.0	560.7	0.0008	0.0413	1221.5	24.229	221.3	195.0	416.3	1.0750	1.7537	17
18	672.3	578.3	0.0008	0.0400	1217.9	24.972	222.6	194.2	416.8	1.0793	1.7529	18
19	691.9	596.2	0.0008	0.0389	1214.4	25.735	223.9	193.4	417.2	1.0836	1.7520	19

TABLE 1 (continued)
SUVA® MP66 Saturation Properties—Temperature Table

TEMP. °C	PRESSURE kPa		VOLUME m ³ /kg		DENSITY kg/m ³		ENTHALPY kJ/kg			ENTROPY kJ/(kg)(K)		TEMP. °C
	LIQUID P _f	VAPOR P _g	LIQUID v _f	VAPOR v _g	LIQUID 1/v _f	VAPOR 1/v _g	LIQUID h _f	LATENT h _{fg}	VAPOR h _g	LIQUID s _f	VAPOR s _g	
20	712.0	614.6	0.0008	0.0377	1210.8	26.516	225.1	192.6	417.7	1.0879	1.7512	20
21	732.6	633.4	0.0008	0.0366	1207.2	27.317	226.4	191.7	418.2	1.0923	1.7504	21
22	753.5	652.6	0.0008	0.0355	1203.6	28.137	227.7	190.9	418.6	1.0966	1.7496	22
23	775.0	672.3	0.0008	0.0345	1200.0	28.979	229.0	190.1	419.1	1.1009	1.7488	23
24	796.8	692.4	0.0008	0.0335	1196.4	29.841	230.3	189.2	419.5	1.1052	1.7480	24
25	819.2	713.0	0.0008	0.0325	1192.7	30.724	231.6	188.4	420.0	1.1095	1.7472	25
26	842.0	734.0	0.0008	0.0316	1189.1	31.630	232.9	187.5	420.4	1.1138	1.7464	26
27	865.2	755.5	0.0008	0.0307	1185.4	32.558	234.2	186.6	420.8	1.1181	1.7457	27
28	889.0	777.5	0.0008	0.0298	1181.7	33.508	235.5	185.7	421.3	1.1224	1.7449	28
29	913.2	800.0	0.0008	0.0290	1178.0	34.483	236.9	184.8	421.7	1.1268	1.7441	29
30	937.9	822.9	0.0009	0.0282	1174.3	35.481	238.2	183.9	422.1	1.1311	1.7433	30
31	963.1	846.3	0.0009	0.0274	1170.6	36.504	239.5	183.0	422.5	1.1354	1.7425	31
32	988.8	870.3	0.0009	0.0266	1166.9	37.552	240.9	182.1	423.0	1.1398	1.7418	32
33	1015.0	894.7	0.0009	0.0259	1163.2	38.626	242.2	181.1	423.4	1.1441	1.7411	33
34	1041.7	919.7	0.0009	0.0252	1159.4	39.726	243.6	180.2	423.8	1.1485	1.7403	34
35	1069.0	945.2	0.0009	0.0245	1155.6	40.854	244.9	179.2	424.2	1.1528	1.7395	35
36	1096.8	971.2	0.0009	0.0238	1151.8	42.009	246.3	178.2	424.6	1.1572	1.7388	36
37	1125.1	997.8	0.0009	0.0232	1148.0	43.193	247.7	177.2	424.9	1.1615	1.7380	37
38	1153.9	1024.9	0.0009	0.0225	1144.2	44.406	249.1	176.2	425.3	1.1659	1.7372	38
39	1183.3	1052.6	0.0009	0.0219	1140.4	45.649	250.5	175.2	425.7	1.1703	1.7365	39
40	1213.3	1080.8	0.0009	0.0213	1136.5	46.923	251.9	174.2	426.1	1.1747	1.7357	40
41	1243.8	1109.6	0.0009	0.0207	1132.7	48.228	253.3	173.2	426.4	1.1791	1.7349	41
42	1274.8	1138.9	0.0009	0.0202	1128.8	49.567	254.7	172.1	426.8	1.1835	1.7342	42
43	1306.5	1168.9	0.0009	0.0196	1124.9	50.938	256.1	171.0	427.1	1.1879	1.7334	43
44	1338.7	1199.4	0.0009	0.0191	1121.0	52.344	257.5	170.0	427.5	1.1923	1.7326	44
45	1371.5	1230.5	0.0009	0.0186	1117.1	53.784	259.0	168.9	427.8	1.1967	1.7318	45
46	1404.8	1262.3	0.0009	0.0181	1113.1	55.262	260.4	167.7	428.2	1.2012	1.7310	46
47	1438.8	1294.6	0.0009	0.0176	1109.2	56.776	261.9	166.6	428.5	1.2056	1.7303	47
48	1473.4	1327.6	0.0009	0.0171	1105.2	58.329	263.3	165.5	428.8	1.2101	1.7295	48
49	1508.6	1361.2	0.0009	0.0167	1101.2	59.921	264.8	164.3	429.1	1.2145	1.7286	49
50	1544.4	1395.5	0.0009	0.0162	1097.2	61.554	266.3	163.1	429.4	1.2190	1.7278	50
51	1580.8	1430.4	0.0009	0.0158	1093.2	63.228	267.8	161.9	429.7	1.2235	1.7270	51
52	1617.9	1465.9	0.0009	0.0154	1089.1	64.946	269.3	160.7	430.0	1.2280	1.7262	52
53	1655.6	1502.1	0.0009	0.0150	1085.1	66.708	270.8	159.5	430.3	1.2325	1.7253	53
54	1693.9	1539.0	0.0009	0.0146	1081.0	68.517	272.3	158.3	430.5	1.2370	1.7245	54
55	1732.9	1576.6	0.0009	0.0142	1076.9	70.372	273.8	157.0	430.8	1.2416	1.7236	55
56	1772.5	1614.9	0.0009	0.0138	1072.8	72.277	275.3	155.7	431.0	1.2461	1.7228	56
57	1812.8	1653.8	0.0009	0.0135	1068.6	74.232	276.9	154.4	431.3	1.2507	1.7219	57
58	1853.8	1693.5	0.0009	0.0131	1064.5	76.239	278.4	153.1	431.5	1.2553	1.7210	58
59	1895.4	1733.9	0.0009	0.0128	1060.3	78.300	280.0	151.7	431.7	1.2599	1.7201	59
60	1937.8	1775.0	0.0009	0.0124	1056.1	80.418	281.6	150.3	431.9	1.2645	1.7191	60
61	1980.8	1816.8	0.0010	0.0121	1051.8	82.593	283.2	149.0	432.1	1.2692	1.7182	61
62	2024.5	1859.4	0.0010	0.0118	1047.6	84.828	284.8	147.5	432.3	1.2738	1.7172	62
63	2068.9	1902.7	0.0010	0.0115	1043.3	87.125	286.4	146.1	432.5	1.2785	1.7163	63
64	2114.0	1946.8	0.0010	0.0112	1039.0	89.488	288.0	144.6	432.7	1.2832	1.7153	64
65	2159.8	1991.7	0.0010	0.0109	1034.7	91.917	289.7	143.1	432.8	1.2880	1.7142	65
66	2206.4	2037.3	0.0010	0.0106	1030.3	94.416	291.3	141.6	433.0	1.2927	1.7132	66
67	2253.6	2083.8	0.0010	0.0103	1026.0	96.987	293.0	140.1	433.1	1.2975	1.7122	67
68	2301.6	2131.0	0.0010	0.0100	1021.6	99.634	294.7	138.5	433.2	1.3023	1.7111	68
69	2350.4	2179.1	0.0010	0.0098	1017.1	102.360	296.4	136.9	433.3	1.3071	1.7100	69
70	2399.9	2227.9	0.0010	0.0095	1012.7	105.168	298.1	135.3	433.4	1.3120	1.7088	70
71	2450.1	2277.6	0.0010	0.0093	1008.2	108.062	299.8	133.6	433.4	1.3169	1.7077	71
72	2501.1	2328.2	0.0010	0.0090	1003.7	111.046	301.6	131.9	433.5	1.3218	1.7065	72
73	2552.9	2379.6	0.0010	0.0088	999.1	114.124	303.4	130.2	433.5	1.3267	1.7052	73
74	2605.4	2431.9	0.0010	0.0085	994.5	117.300	305.1	128.4	433.5	1.3317	1.7040	74
75	2658.7	2485.0	0.0010	0.0083	989.9	120.579	307.0	126.6	433.5	1.3367	1.7027	75
76	2712.8	2539.0	0.0010	0.0081	985.2	123.968	308.8	124.7	433.5	1.3418	1.7014	76
77	2767.7	2594.0	0.0010	0.0078	980.5	127.470	310.6	122.8	433.5	1.3469	1.7000	77
78	2823.3	2649.8	0.0010	0.0076	975.8	131.093	312.5	120.9	433.4	1.3521	1.6986	78
79	2879.8	2706.6	0.0010	0.0074	971.0	134.844	314.4	118.9	433.3	1.3573	1.6971	79

TABLE 1 (continued)
SUVA® MP66 Saturation Properties—Temperature Table

TEMP. °C	PRESSURE kPa		VOLUME m ³ /kg		DENSITY kg/m ³		ENTHALPY kJ/kg			ENTROPY kJ/(kg)(K)		TEMP. °C
	LIQUID P _f	VAPOR P _g	LIQUID v _f	VAPOR v _g	LIQUID 1/v _f	VAPOR 1/v _g	LIQUID h _f	LATENT h _{fg}	VAPOR h _g	LIQUID S _f	VAPOR S _g	
80	2937.1	2764.3	0.0010	0.0072	966.1	138.729	316.3	116.9	433.2	1.3625	1.6956	80
81	2995.2	2822.9	0.0010	0.0070	961.3	142.757	318.2	114.8	433.1	1.3678	1.6940	81
82	3054.1	2882.5	0.0010	0.0068	956.3	146.936	320.2	112.7	432.9	1.3732	1.6924	82
83	3113.8	2943.1	0.0011	0.0066	951.3	151.278	322.2	110.5	432.7	1.3786	1.6907	83
84	3174.3	3004.7	0.0011	0.0064	946.3	155.792	324.2	108.3	432.5	1.3841	1.6890	84
85	3235.7	3067.3	0.0011	0.0062	941.2	160.491	326.3	105.9	432.2	1.3896	1.6872	85
86	3297.8	3130.9	0.0011	0.0060	936.0	165.388	328.4	103.6	432.0	1.3953	1.6853	86
87	3360.8	3195.6	0.0011	0.0059	930.7	170.499	330.5	101.1	431.6	1.4010	1.6833	87
88	3424.7	3261.3	0.0011	0.0057	925.4	175.842	332.7	98.6	431.3	1.4068	1.6813	88
89	3489.4	3328.1	0.0011	0.0055	920.0	181.436	334.9	95.9	430.9	1.4127	1.6791	89
90	3554.9	3396.0	0.0011	0.0053	914.4	187.304	337.2	93.2	430.4	1.4187	1.6768	90
91	3621.2	3465.0	0.0011	0.0052	908.8	193.473	339.5	90.4	429.9	1.4248	1.6744	91
92	3688.4	3535.1	0.0011	0.0050	903.0	199.973	341.9	87.4	429.3	1.4311	1.6719	92
93	3756.4	3606.4	0.0011	0.0048	897.1	206.842	344.3	84.4	428.7	1.4375	1.6693	93
94	3825.1	3678.9	0.0011	0.0047	891.1	214.124	346.8	81.2	428.0	1.4441	1.6664	94
95	3894.7	3752.6	0.0011	0.0045	884.8	221.871	349.4	77.8	427.3	1.4509	1.6634	95
96	3965.1	3827.6	0.0011	0.0043	878.4	230.150	352.1	74.3	426.4	1.4578	1.6602	96
97	4036.3	3903.9	0.0011	0.0042	871.6	239.043	354.9	70.6	425.4	1.4651	1.6567	97

TABLE 2
SUVA® MP66 Superheated Vapor—Constant Pressure Tables

V = Volume in m³/kg H = Enthalpy in kJ/kg S = Entropy in kJ/(kg)(K) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, kPa													
TEMP. °C	10.0			20.0			30.0			40.0			TEMP. °C
	(-69.48)			(-59.02)			(-52.29)			(-47.19)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(1.8156)	(369.9)	(1.9116)	(0.9510)	(375.5)	(1.8770)	(0.6519)	(379.2)	(1.8581)	(0.4987)	(382.1)	(1.8452)	
-65	1.8560	372.4	1.9237	—	—	—	—	—	—	—	—	—	-65
-60	1.9011	375.2	1.9371	—	—	—	—	—	—	—	—	—	-60
-55	1.9462	378.1	1.9504	0.9693	377.9	1.8877	—	—	—	—	—	—	-55
-50	1.9912	381.0	1.9636	0.9919	380.8	1.9010	0.6588	380.6	1.8641	—	—	—	-50
-45	2.0362	383.9	1.9767	1.0146	383.7	1.9141	0.6740	383.6	1.8773	0.5037	383.4	1.8510	-45
-40	2.0813	386.9	1.9897	1.0372	386.8	1.9272	0.6892	386.6	1.8904	0.5152	386.4	1.8641	-40
-35	2.1263	390.0	2.0027	1.0598	389.8	1.9402	0.7044	389.6	1.9034	0.5266	389.5	1.8772	-35
-30	2.1713	393.1	2.0155	1.0825	392.9	1.9530	0.7195	392.7	1.9163	0.5380	392.6	1.8901	-30
-25	2.2163	396.2	2.0283	1.1051	396.1	1.9658	0.7347	395.9	1.9291	0.5494	395.7	1.9029	-25
-20	2.2613	399.4	2.0410	1.1277	399.2	1.9785	0.7498	399.1	1.9418	0.5608	398.9	1.9156	-20
-15	2.3062	402.6	2.0536	1.1502	402.5	1.9911	0.7649	402.3	1.9544	0.5722	402.1	1.9283	-15
-10	2.3512	405.9	2.0661	1.1728	405.7	2.0037	0.7800	405.6	1.9670	0.5836	405.4	1.9409	-10
-5	2.3961	409.2	2.0785	1.1954	409.0	2.0161	0.7951	408.9	1.9795	0.5950	408.7	1.9533	-5
0	2.4411	412.5	2.0909	1.2179	412.4	2.0285	0.8102	412.2	1.9918	0.6064	412.1	1.9657	0
5	2.4860	415.9	2.1032	1.2405	415.8	2.0408	0.8253	415.6	2.0041	0.6177	415.5	1.9780	5
10	2.5310	419.3	2.1153	1.2630	419.2	2.0530	0.8404	419.1	2.0163	0.6291	418.9	1.9903	10
15	2.5759	422.8	2.1274	1.2856	422.6	2.0651	0.8555	422.5	2.0285	0.6404	422.4	2.0024	15
20	2.6208	426.3	2.1395	1.3081	426.1	2.0771	0.8705	426.0	2.0405	0.6518	425.9	2.0145	20
25	2.6657	429.8	2.1514	1.3306	429.7	2.0891	0.8856	429.6	2.0525	0.6631	429.4	2.0265	25
30	2.7107	433.4	2.1633	1.3532	433.3	2.1010	0.9007	433.1	2.0644	0.6744	433.0	2.0384	30
35	2.7556	437.0	2.1751	1.3757	436.9	2.1128	0.9157	436.7	2.0762	0.6857	436.6	2.0502	35
40	2.8005	440.6	2.1868	1.3982	440.5	2.1245	0.9308	440.4	2.0879	0.6971	440.3	2.0619	40
45	2.8454	444.3	2.1985	1.4207	444.2	2.1362	0.9458	444.1	2.0996	0.7084	444.0	2.0736	45
50	2.8903	448.0	2.2100	1.4432	447.9	2.1477	0.9609	447.8	2.1112	0.7197	447.7	2.0852	50
55	2.9351	451.8	2.2216	1.4657	451.7	2.1593	0.9759	451.5	2.1227	0.7310	451.4	2.0967	55
60	2.9800	455.5	2.2330	1.4882	455.4	2.1707	0.9909	455.3	2.1342	0.7423	455.2	2.1082	60
65	3.0249	459.4	2.2444	1.5107	459.3	2.1821	1.0060	459.2	2.1456	0.7536	459.1	2.1196	65
70	3.0698	463.2	2.2557	1.5332	463.1	2.1934	1.0210	463.0	2.1569	0.7649	462.9	2.1309	70
75	3.1147	467.1	2.2669	1.5557	467.0	2.2046	1.0360	466.9	2.1681	0.7762	466.8	2.1422	75
80	3.1595	471.0	2.2781	1.5782	470.9	2.2158	1.0510	470.8	2.1793	0.7875	470.7	2.1534	80
85	3.2044	475.0	2.2892	1.6006	474.9	2.2269	1.0660	474.8	2.1904	0.7987	474.7	2.1645	85
90	—	—	—	1.6231	478.8	2.2380	1.0811	478.8	2.2015	0.8100	478.7	2.1755	90
95	—	—	—	1.6456	482.9	2.2489	1.0961	482.8	2.2125	0.8213	482.7	2.1865	95
100	—	—	—	—	—	—	1.1111	486.8	2.2234	0.8326	486.7	2.1975	100

TEMP. °C	50.0			60.0			70.0			80.0			TEMP. °C
	(-43.04)			(-39.52)			(-36.44)			(-33.69)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.4051)	(384.4)	(1.8357)	(0.3419)	(386.3)	(1.8281)	(0.2961)	(388.0)	(1.8219)	(0.2615)	(389.6)	(1.8166)	
-40	0.4107	386.2	1.8437	—	—	—	—	—	—	—	—	—	-40
-35	0.4199	389.3	1.8567	0.3488	389.1	1.8399	0.2980	388.9	1.8256	—	—	—	-35
-30	0.4291	392.4	1.8696	0.3565	392.2	1.8529	0.3047	392.0	1.8386	0.2658	391.9	1.8262	-30
-25	0.4383	395.6	1.8825	0.3642	395.4	1.8657	0.3113	395.2	1.8515	0.2716	395.0	1.8391	-25
-20	0.4475	398.8	1.8953	0.3719	398.6	1.8785	0.3179	398.4	1.8643	0.2774	398.3	1.8519	-20
-15	0.4566	402.0	1.9079	0.3795	401.8	1.8912	0.3245	401.7	1.8770	0.2832	401.5	1.8647	-15
-10	0.4658	405.3	1.9205	0.3872	405.1	1.9038	0.3311	405.0	1.8896	0.2890	404.8	1.8773	-10
-5	0.4749	408.6	1.9330	0.3948	408.4	1.9163	0.3377	408.3	1.9022	0.2948	408.1	1.8899	-5
0	0.4840	411.9	1.9454	0.4025	411.8	1.9287	0.3442	411.7	1.9146	0.3005	411.5	1.9023	0
5	0.4932	415.3	1.9577	0.4101	415.2	1.9411	0.3508	415.1	1.9270	0.3063	414.9	1.9147	5
10	0.5023	418.8	1.9700	0.4177	418.6	1.9533	0.3573	418.5	1.9392	0.3121	418.4	1.9269	10
15	0.5114	422.3	1.9821	0.4253	422.1	1.9655	0.3639	422.0	1.9514	0.3178	421.8	1.9391	15
20	0.5205	425.8	1.9942	0.4330	425.6	1.9776	0.3704	425.5	1.9635	0.3236	425.4	1.9512	20
25	0.5296	429.3	2.0062	0.4406	429.2	1.9896	0.3770	429.1	1.9755	0.3293	428.9	1.9633	25
30	0.5387	432.9	2.0181	0.4482	432.8	2.0015	0.3835	432.6	1.9874	0.3350	432.5	1.9752	30
35	0.5477	436.5	2.0299	0.4558	436.4	2.0134	0.3900	436.3	1.9993	0.3408	436.1	1.9871	35
40	0.5568	440.2	2.0417	0.4633	440.0	2.0251	0.3966	439.9	2.0111	0.3465	439.8	1.9989	40
45	0.5659	443.8	2.0534	0.4709	443.7	2.0368	0.4031	443.6	2.0228	0.3522	443.5	2.0106	45
50	0.5750	447.6	2.0650	0.4785	447.5	2.0485	0.4096	447.3	2.0344	0.3579	447.2	2.0222	50
55	0.5840	451.3	2.0765	0.4861	451.2	2.0600	0.4161	451.1	2.0460	0.3636	451.0	2.0338	55
60	0.5931	455.1	2.0880	0.4937	455.0	2.0715	0.4226	454.9	2.0575	0.3693	454.8	2.0453	60
65	0.6022	458.9	2.0994	0.5012	458.8	2.0829	0.4291	458.7	2.0689	0.3750	458.6	2.0567	65
70	0.6112	462.8	2.1107	0.5088	462.7	2.0942	0.4356	462.6	2.0802	0.3807	462.5	2.0681	70
75	0.6203	466.7	2.1220	0.5163	466.6	2.1055	0.4421	466.5	2.0915	0.3864	466.4	2.0793	75
80	0.6293	470.6	2.1332	0.5239	470.5	2.1167	0.4486	470.4	2.1027	0.3921	470.3	2.0905	80
85	0.6384	474.6	2.1443	0.5315	474.5	2.1278	0.4551	474.4	2.1138	0.3978	474.3	2.1017	85
90	0.6474	478.6	2.1554	0.5390	478.5	2.1389	0.4616	478.4	2.1249	0.4035	478.3	2.1128	90
95	0.6565	482.6	2.1664	0.5466	482.5	2.1499	0.4680	482.4	2.1359	0.4092	482.3	2.1238	95
100	0.6655	486.6	2.1773	0.5541	486.6	2.1608	0.4745	486.5	2.1469	0.4148	486.4	2.1347	100
105	0.6745	490.7	2.1882	0.5616	490.6	2.1717	0.4810	490.5	2.1577	0.4205	490.5	2.1456	105
110	0.6836	494.8	2.1990	0.5692	494.8	2.1825	0.4875	494.7	2.1686	0.4262	494.6	2.1564	110
115	—	—	—	0.5767	498.9	2.1933	0.4939	498.8	2.1793	0.4319	498.7	2.1672	115
120	—	—	—	—	—	—	—	—	—	0.4375	502.9	2.1779	120

TABLE 2 (continued)
SUVA® MP66 Superheated Vapor—Constant Pressure Tables

V = Volume in m³/kg H = Enthalpy in kJ/kg S = Entropy in kJ/(kg)(K) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, kPa													
TEMP. °C	90.0			100.0			101.325			110.0			TEMP. °C
	(-31.20)			(-28.92)			(-28.63)			(-26.82)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.2343)	(390.9)	(1.8121)	(0.2123)	(392.2)	(1.8081)	(0.2097)	(392.4)	(1.8076)	(0.1942)	(393.4)	(1.8046)	
-30	0.2355	391.7	1.8152	—	—	—	—	—	—	—	—	—	-30
-25	0.2407	394.9	1.8281	0.2160	394.7	1.8183	0.2131	394.7	1.8170	0.1958	394.5	1.8093	-25
-20	0.2459	398.1	1.8410	0.2207	397.9	1.8311	0.2177	397.9	1.8299	0.2001	397.8	1.8222	-20
-15	0.2511	401.4	1.8537	0.2254	401.2	1.8439	0.2223	401.2	1.8427	0.2043	401.0	1.8349	-15
-10	0.2562	404.7	1.8664	0.2300	404.5	1.8566	0.2270	404.5	1.8553	0.2086	404.3	1.8477	-10
-5	0.2614	408.0	1.8789	0.2347	407.8	1.8691	0.2316	407.8	1.8679	0.2129	407.7	1.8602	-5
0	0.2666	411.4	1.8914	0.2394	411.2	1.8816	0.2362	411.2	1.8804	0.2171	411.1	1.8727	0
5	0.2717	414.8	1.9038	0.2440	414.6	1.8940	0.2408	414.6	1.8928	0.2214	414.5	1.8852	5
10	0.2768	418.2	1.9161	0.2486	418.1	1.9063	0.2453	418.1	1.9051	0.2256	417.9	1.8975	10
15	0.2820	421.7	1.9283	0.2533	421.6	1.9186	0.2499	421.6	1.9173	0.2298	421.4	1.9097	15
20	0.2871	425.2	1.9404	0.2579	425.1	1.9307	0.2545	425.1	1.9295	0.2340	425.0	1.9219	20
25	0.2922	428.8	1.9525	0.2625	428.7	1.9427	0.2590	428.7	1.9415	0.2382	428.5	1.9339	25
30	0.2973	432.4	1.9644	0.2671	432.3	1.9547	0.2636	432.3	1.9535	0.2425	432.1	1.9459	30
35	0.3024	436.0	1.9763	0.2718	435.9	1.9666	0.2681	435.9	1.9654	0.2467	435.8	1.9578	35
40	0.3075	439.7	1.9881	0.2764	439.6	1.9784	0.2727	439.6	1.9772	0.2509	439.5	1.9696	40
45	0.3126	443.4	1.9998	0.2810	443.3	1.9901	0.2772	443.3	1.9889	0.2551	443.2	1.9814	45
50	0.3177	447.1	2.0115	0.2856	447.0	2.0018	0.2818	447.0	2.0006	0.2592	446.9	1.9930	50
55	0.3228	450.9	2.0230	0.2901	450.8	2.0134	0.2863	450.8	2.0122	0.2634	450.7	2.0046	55
60	0.3279	454.7	2.0345	0.2947	454.6	2.0249	0.2908	454.6	2.0237	0.2676	454.5	2.0161	60
65	0.3330	458.5	2.0460	0.2993	458.4	2.0363	0.2954	458.4	2.0351	0.2718	458.3	2.0276	65
70	0.3380	462.4	2.0573	0.3039	462.3	2.0477	0.2999	462.3	2.0465	0.2760	462.2	2.0389	70
75	0.3431	466.3	2.0686	0.3085	466.2	2.0590	0.3044	466.2	2.0578	0.2801	466.1	2.0502	75
80	0.3482	470.2	2.0798	0.3130	470.1	2.0702	0.3089	470.1	2.0690	0.2843	470.0	2.0615	80
85	0.3533	474.2	2.0910	0.3176	474.1	2.0813	0.3134	474.1	2.0801	0.2884	474.0	2.0726	85
90	0.3583	478.2	2.1020	0.3222	478.1	2.0924	0.3179	478.1	2.0912	0.2926	478.0	2.0837	90
95	0.3634	482.2	2.1131	0.3267	482.1	2.1035	0.3224	482.1	2.1023	0.2968	482.0	2.0948	95
100	0.3684	486.3	2.1240	0.3313	486.2	2.1144	0.3269	486.2	2.1132	0.3009	486.1	2.1057	100
105	0.3735	490.4	2.1349	0.3359	490.3	2.1253	0.3314	490.3	2.1241	0.3051	490.2	2.1166	105
110	0.3785	494.5	2.1457	0.3404	494.4	2.1362	0.3359	494.4	2.1350	0.3092	494.3	2.1275	110
115	0.3836	498.6	2.1565	0.3450	498.6	2.1469	0.3404	498.6	2.1457	0.3134	498.5	2.1382	115
120	0.3886	502.8	2.1672	0.3495	502.8	2.1576	0.3449	502.7	2.1564	0.3175	502.7	2.1490	120
125	—	—	—	0.3541	507.0	2.1683	0.3494	507.0	2.1671	0.3216	506.9	2.1596	125

TEMP. °C	120.0			130.0			140.0			150.0			TEMP. °C
	(-24.86)			(-23.03)			(-21.30)			(-19.67)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.1790)	(394.4)	(1.8014)	(0.1661)	(395.5)	(1.7985)	(0.1550)	(396.4)	(1.7959)	(0.1453)	(397.3)	(1.7935)	
-20	0.1829	397.6	1.8139	0.1683	397.4	1.8063	0.1559	397.3	1.7993	—	—	—	-20
-15	0.1868	400.9	1.8268	0.1720	400.7	1.8192	0.1593	400.5	1.8121	0.1482	400.4	1.8055	-15
-10	0.1907	404.2	1.8395	0.1756	404.0	1.8319	0.1627	403.9	1.8249	0.1514	403.7	1.8183	-10
-5	0.1947	407.5	1.8521	0.1793	407.4	1.8446	0.1661	407.2	1.8375	0.1546	407.1	1.8310	-5
0	0.1986	410.9	1.8646	0.1829	410.8	1.8571	0.1694	410.6	1.8501	0.1578	410.5	1.8436	0
5	0.2025	414.3	1.8770	0.1865	414.2	1.8695	0.1728	414.1	1.8626	0.1609	413.9	1.8560	5
10	0.2064	417.8	1.8894	0.1901	417.7	1.8819	0.1762	417.5	1.8749	0.1641	417.4	1.8684	10
15	0.2103	421.3	1.9016	0.1937	421.2	1.8941	0.1795	421.0	1.8872	0.1672	420.9	1.8807	15
20	0.2141	424.8	1.9138	0.1973	424.7	1.9063	0.1829	424.6	1.8994	0.1704	424.4	1.8929	20
25	0.2180	428.4	1.9258	0.2009	428.3	1.9184	0.1862	428.2	1.9115	0.1735	428.0	1.9050	25
30	0.2219	432.0	1.9378	0.2045	431.9	1.9304	0.1896	431.8	1.9235	0.1766	431.6	1.9170	30
35	0.2257	435.7	1.9497	0.2081	435.5	1.9423	0.1929	435.4	1.9354	0.1797	435.3	1.9290	35
40	0.2296	439.3	1.9616	0.2116	439.2	1.9542	0.1962	439.1	1.9473	0.1829	439.0	1.9408	40
45	0.2335	443.0	1.9733	0.2152	442.9	1.9659	0.1995	442.8	1.9590	0.1860	442.7	1.9526	45
50	0.2373	446.8	1.9850	0.2188	446.7	1.9776	0.2029	446.6	1.9707	0.1891	446.4	1.9643	50
55	0.2412	450.6	1.9966	0.2223	450.4	1.9892	0.2062	450.3	1.9823	0.1922	450.2	1.9759	55
60	0.2450	454.4	2.0081	0.2259	454.3	2.0007	0.2095	454.2	1.9939	0.1953	454.0	1.9875	60
65	0.2488	458.2	2.0196	0.2294	458.1	2.0122	0.2128	458.0	2.0053	0.1984	457.9	1.9990	65
70	0.2527	462.1	2.0309	0.2330	462.0	2.0236	0.2161	461.9	2.0167	0.2014	461.8	2.0104	70
75	0.2565	466.0	2.0423	0.2365	465.9	2.0349	0.2194	465.8	2.0281	0.2045	465.7	2.0217	75
80	0.2603	469.9	2.0535	0.2400	469.8	2.0461	0.2227	469.7	2.0393	0.2076	469.6	2.0329	80
85	0.2641	473.9	2.0647	0.2436	473.8	2.0573	0.2260	473.7	2.0505	0.2107	473.6	2.0441	85
90	0.2680	477.9	2.0758	0.2471	477.8	2.0684	0.2292	477.7	2.0616	0.2138	477.6	2.0553	90
95	0.2718	481.9	2.0868	0.2506	481.9	2.0795	0.2325	481.8	2.0727	0.2168	481.7	2.0663	95
100	0.2756	486.0	2.0978	0.2542	485.9	2.0904	0.2358	485.8	2.0836	0.2199	485.7	2.0773	100
105	0.2794	490.1	2.1087	0.2577	490.0	2.1014	0.2391	489.9	2.0946	0.2230	489.8	2.0882	105
110	0.2832	494.2	2.1195	0.2612	494.2	2.1122	0.2424	494.1	2.1054	0.2260	494.0	2.0991	110
115	0.2870	498.4	2.1303	0.2647	498.3	2.1230	0.2456	498.2	2.1162	0.2291	498.1	2.1099	115
120	0.2908	502.6	2.1410	0.2683	502.5	2.1337	0.2489	502.4	2.1269	0.2321	502.3	2.1206	120
125	0.2946	506.8	2.1517	0.2718	506.7	2.1444	0.2522	506.6	2.1376	0.2352	506.6	2.1313	125
130	0.2984	511.1	2.1623	0.2753	511.0	2.1550	0.2554	510.9	2.1482	0.2383	510.8	2.1419	130
135	—	—	—	—	—	—	—	—	—	0.2413	515.1	2.1524	135

TABLE 2 (continued)
SUVA® MP66 Superheated Vapor—Constant Pressure Tables

V = Volume in m³/kg H = Enthalpy in kJ/kg S = Entropy in kJ/(kg)(K) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, kPa													TEMP. °C
TEMP. °C	160.0			170.0			180.0			190.0			
	(-18.12)			(-16.65)			(-15.24)			(-13.89)			
	V	H	S	V	H	S	V	H	S	V	H	S	
(0.1367)	(398.1)	(1.7913)	(0.1291)	(398.9)	(1.7893)	(0.1224)	(399.7)	(1.7873)	(0.1163)	(400.5)	(1.7856)		
-15	0.1386	400.2	1.7993	0.1301	400.0	1.7935	0.1225	399.9	1.7880	—	—	—	-15
-10	0.1416	403.6	1.8122	0.1329	403.4	1.8063	0.1252	403.2	1.8008	0.1183	403.1	1.7956	-10
-5	0.1446	406.9	1.8248	0.1358	406.8	1.8190	0.1279	406.6	1.8135	0.1209	406.4	1.8083	-5
0	0.1476	410.3	1.8374	0.1386	410.2	1.8316	0.1306	410.0	1.8262	0.1234	409.9	1.8209	0
5	0.1505	413.8	1.8499	0.1414	413.6	1.8442	0.1332	413.5	1.8387	0.1259	413.3	1.8335	5
10	0.1535	417.2	1.8623	0.1442	417.1	1.8566	0.1359	417.0	1.8511	0.1285	416.8	1.8459	10
15	0.1565	420.8	1.8746	0.1470	420.6	1.8689	0.1385	420.5	1.8634	0.1310	420.3	1.8583	15
20	0.1594	424.3	1.8868	0.1498	424.2	1.8811	0.1412	424.0	1.8757	0.1335	423.9	1.8705	20
25	0.1624	427.9	1.8989	0.1525	427.8	1.8932	0.1438	427.6	1.8878	0.1360	427.5	1.8827	25
30	0.1653	431.5	1.9110	0.1553	431.4	1.9053	0.1464	431.3	1.8999	0.1385	431.1	1.8948	30
35	0.1682	435.2	1.9229	0.1581	435.0	1.9172	0.1491	434.9	1.9119	0.1410	434.8	1.9068	35
40	0.1712	438.9	1.9348	0.1608	438.7	1.9291	0.1517	438.6	1.9237	0.1435	438.5	1.9187	40
45	0.1741	442.6	1.9466	0.1636	442.5	1.9409	0.1543	442.3	1.9356	0.1460	442.2	1.9305	45
50	0.1770	446.3	1.9583	0.1664	446.2	1.9526	0.1569	446.1	1.9473	0.1484	446.0	1.9422	50
55	0.1799	450.1	1.9699	0.1691	450.0	1.9643	0.1595	449.9	1.9589	0.1509	449.8	1.9539	55
60	0.1828	453.9	1.9815	0.1719	453.8	1.9758	0.1621	453.7	1.9705	0.1534	453.6	1.9654	60
65	0.1857	457.8	1.9930	0.1746	457.7	1.9873	0.1647	457.6	1.9820	0.1558	457.5	1.9770	65
70	0.1886	461.7	2.0044	0.1773	461.6	1.9987	0.1673	461.5	1.9934	0.1583	461.4	1.9884	70
75	0.1915	465.6	2.0157	0.1801	465.5	2.0101	0.1699	465.4	2.0048	0.1608	465.3	1.9997	75
80	0.1944	469.5	2.0270	0.1828	469.4	2.0214	0.1725	469.3	2.0161	0.1632	469.2	2.0110	80
85	0.1973	473.5	2.0382	0.1855	473.4	2.0326	0.1750	473.3	2.0273	0.1657	473.2	2.0222	85
90	0.2002	477.5	2.0493	0.1882	477.4	2.0437	0.1776	477.3	2.0384	0.1681	477.3	2.0334	90
95	0.2031	481.6	2.0604	0.1910	481.5	2.0548	0.1802	481.4	2.0495	0.1705	481.3	2.0445	95
100	0.2060	485.7	2.0714	0.1937	485.6	2.0658	0.1828	485.5	2.0605	0.1730	485.4	2.0555	100
105	0.2089	489.8	2.0823	0.1964	489.7	2.0767	0.1853	489.6	2.0714	0.1754	489.5	2.0664	105
110	0.2117	493.9	2.0931	0.1991	493.8	2.0876	0.1879	493.7	2.0823	0.1779	493.6	2.0773	110
115	0.2146	498.1	2.1039	0.2018	498.0	2.0984	0.1905	497.9	2.0931	0.1803	497.8	2.0881	115
120	0.2175	502.3	2.1147	0.2045	502.2	2.1091	0.1930	502.1	2.1038	0.1827	502.0	2.0989	120
125	0.2203	506.5	2.1254	0.2072	506.4	2.1198	0.1956	506.3	2.1145	0.1852	506.2	2.1095	125
130	0.2232	510.7	2.1360	0.2099	510.7	2.1304	0.1981	510.6	2.1252	0.1876	510.5	2.1202	130
135	0.2261	515.0	2.1465	0.2126	514.9	2.1410	0.2007	514.9	2.1357	0.1900	514.8	2.1308	135
140	—	—	—	—	—	—	—	—	—	0.1924	519.1	2.1413	140

TEMP. °C	200.0			210.0			220.0			230.0			TEMP. °C
	(-12.59)			(-11.35)			(-10.14)			(-8.98)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.1108)	(401.2)	(1.7839)	(0.1058)	(401.8)	(1.7824)	(0.1013)	(402.5)	(1.7809)	(0.0971)	(403.1)	(1.7795)	
-10	0.1121	402.9	1.7906	0.1065	402.7	1.7858	0.1014	402.6	1.7812	—	—	—	-10
-5	0.1145	406.3	1.8033	0.1088	406.1	1.7986	0.1036	406.0	1.7940	0.0988	405.8	1.7897	-5
0	0.1170	409.7	1.8160	0.1111	409.6	1.8113	0.1058	409.4	1.8067	0.1010	409.3	1.8024	0
5	0.1194	413.2	1.8286	0.1134	413.0	1.8238	0.1080	412.9	1.8193	0.1031	412.7	1.8150	5
10	0.1218	416.7	1.8410	0.1157	416.5	1.8363	0.1102	416.4	1.8318	0.1052	416.2	1.8275	10
15	0.1242	420.2	1.8534	0.1180	420.1	1.8487	0.1124	419.9	1.8442	0.1073	419.8	1.8399	15
20	0.1266	423.8	1.8656	0.1203	423.6	1.8610	0.1146	423.5	1.8565	0.1094	423.4	1.8522	20
25	0.1290	427.4	1.8778	0.1226	427.2	1.8731	0.1168	427.1	1.8687	0.1115	427.0	1.8644	25
30	0.1313	431.0	1.8899	0.1249	430.9	1.8852	0.1190	430.7	1.8808	0.1136	430.6	1.8765	30
35	0.1337	434.7	1.9019	0.1271	434.5	1.8973	0.1212	434.4	1.8928	0.1157	434.3	1.8886	35
40	0.1361	438.4	1.9138	0.1294	438.2	1.9092	0.1233	438.1	1.9048	0.1178	438.0	1.9005	40
45	0.1385	442.1	1.9256	0.1317	442.0	1.9210	0.1255	441.9	1.9166	0.1199	441.7	1.9124	45
50	0.1408	445.9	1.9374	0.1339	445.8	1.9328	0.1277	445.6	1.9284	0.1219	445.5	1.9241	50
55	0.1432	449.7	1.9490	0.1362	449.6	1.9444	0.1298	449.4	1.9401	0.1240	449.3	1.9358	55
60	0.1455	453.5	1.9606	0.1384	453.4	1.9560	0.1320	453.3	1.9517	0.1261	453.2	1.9475	60
65	0.1479	457.4	1.9721	0.1407	457.3	1.9676	0.1341	457.1	1.9632	0.1281	457.0	1.9590	65
70	0.1502	461.3	1.9836	0.1429	461.2	1.9790	0.1362	461.1	1.9746	0.1302	460.9	1.9705	70
75	0.1525	465.2	1.9949	0.1451	465.1	1.9904	0.1384	465.0	1.9860	0.1322	464.9	1.9818	75
80	0.1549	469.1	2.0062	0.1474	469.0	2.0017	0.1405	468.9	1.9973	0.1343	468.8	1.9932	80
85	0.1572	473.1	2.0175	0.1496	473.0	2.0129	0.1426	472.9	2.0086	0.1363	472.8	2.0044	85
90	0.1595	477.2	2.0286	0.1518	477.1	2.0241	0.1448	477.0	2.0197	0.1383	476.9	2.0156	90
95	0.1619	481.2	2.0397	0.1540	481.1	2.0352	0.1469	481.0	2.0308	0.1404	480.9	2.0267	95
100	0.1642	485.3	2.0507	0.1562	485.2	2.0462	0.1490	485.1	2.0418	0.1424	485.0	2.0377	100
105	0.1665	489.4	2.0617	0.1584	489.3	2.0571	0.1511	489.2	2.0528	0.1444	489.1	2.0487	105
110	0.1688	493.5	2.0725	0.1607	493.5	2.0680	0.1532	493.4	2.0637	0.1464	493.3	2.0596	110
115	0.1711	497.7	2.0834	0.1629	497.6	2.0788	0.1553	497.6	2.0745	0.1485	497.5	2.0704	115
120	0.1735	501.9	2.0941	0.1651	501.8	2.0896	0.1575	501.8	2.0853	0.1505	501.7	2.0812	120
125	0.1758	506.2	2.1048	0.1673	506.1	2.1003	0.1596	506.0	2.0960	0.1525	505.9	2.0919	125
130	0.1781	510.4	2.1155	0.1695	510.3	2.1109	0.1617	510.3	2.1066	0.1545	510.2	2.1025	130
135	0.1804	514.7	2.1260	0.1717	514.6	2.1215	0.1638	514.6	2.1172	0.1565	514.5	2.1131	135
140	0.1827	519.0	2.1365	0.1739	518.9	2.1320	0.1659	518.9	2.1277	0.1586	518.8	2.1236	140
145	—	—	—	—	—	—	—	—	—	0.1606	523.1	2.1341	145

TABLE 2 (continued)
SUVA® MP66 Superheated Vapor—Constant Pressure Tables

V = Volume in m³/kg H = Enthalpy in kJ/kg S = Entropy in kJ/(kg)(K) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, kPa													
TEMP. °C	240.0			250.0			260.0			270.0			TEMP. °C
	(-7.86)			(-6.77)			(-5.72)			(-4.70)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.0933)	(403.7)	(1.7781)	(0.0898)	(404.3)	(1.7769)	(0.0865)	(404.8)	(1.7757)	(0.0834)	(405.4)	(1.7745)	
-5	0.0945	405.7	1.7855	0.0905	405.5	1.7814	0.0868	405.3	1.7775	—	—	—	-5
0	0.0965	409.1	1.7982	0.0924	408.9	1.7942	0.0887	408.8	1.7903	0.0852	408.6	1.7865	0
5	0.0986	412.6	1.8108	0.0944	412.4	1.8068	0.0906	412.3	1.8029	0.0870	412.1	1.7992	5
10	0.1006	416.1	1.8233	0.0964	415.9	1.8194	0.0925	415.8	1.8155	0.0889	415.7	1.8118	10
15	0.1026	419.6	1.8358	0.0983	419.5	1.8318	0.0944	419.4	1.8279	0.0907	419.2	1.8242	15
20	0.1047	423.2	1.8481	0.1003	423.1	1.8441	0.0962	422.9	1.8403	0.0925	422.8	1.8366	20
25	0.1067	426.8	1.8603	0.1022	426.7	1.8564	0.0981	426.6	1.8526	0.0943	426.4	1.8489	25
30	0.1087	430.5	1.8724	0.1042	430.4	1.8685	0.1000	430.2	1.8647	0.0961	430.1	1.8610	30
35	0.1107	434.2	1.8845	0.1061	434.0	1.8806	0.1018	433.9	1.8768	0.0979	433.8	1.8731	35
40	0.1127	437.9	1.8964	0.1080	437.8	1.8925	0.1037	437.6	1.8888	0.0997	437.5	1.8851	40
45	0.1147	441.6	1.9083	0.1099	441.5	1.9044	0.1056	441.4	1.9006	0.1015	441.3	1.8970	45
50	0.1167	445.4	1.9201	0.1119	445.3	1.9162	0.1074	445.2	1.9124	0.1033	445.1	1.9088	50
55	0.1187	449.2	1.9318	0.1138	449.1	1.9279	0.1092	449.0	1.9242	0.1051	448.9	1.9206	55
60	0.1206	453.1	1.9434	0.1157	452.9	1.9395	0.1111	452.8	1.9358	0.1068	452.7	1.9322	60
65	0.1226	456.9	1.9550	0.1176	456.8	1.9511	0.1129	456.7	1.9474	0.1086	456.6	1.9438	65
70	0.1246	460.8	1.9664	0.1195	460.7	1.9626	0.1147	460.6	1.9589	0.1104	460.5	1.9553	70
75	0.1266	464.8	1.9778	0.1214	464.7	1.9740	0.1166	464.6	1.9703	0.1121	464.5	1.9667	75
80	0.1285	468.7	1.9892	0.1232	468.6	1.9853	0.1184	468.5	1.9816	0.1139	468.4	1.9780	80
85	0.1305	472.7	2.0004	0.1251	472.6	1.9966	0.1202	472.6	1.9929	0.1156	472.5	1.9893	85
90	0.1324	476.8	2.0116	0.1270	476.7	2.0077	0.1220	476.6	2.0040	0.1174	476.5	2.0005	90
95	0.1344	480.8	2.0227	0.1289	480.7	2.0189	0.1238	480.7	2.0152	0.1191	480.6	2.0116	95
100	0.1363	484.9	2.0337	0.1308	484.8	2.0299	0.1256	484.7	2.0262	0.1209	484.7	2.0227	100
105	0.1383	489.1	2.0447	0.1326	489.0	2.0409	0.1274	488.9	2.0372	0.1226	488.8	2.0337	105
110	0.1402	493.2	2.0556	0.1345	493.1	2.0518	0.1292	493.0	2.0481	0.1243	492.9	2.0446	110
115	0.1422	497.4	2.0664	0.1364	497.3	2.0626	0.1310	497.2	2.0590	0.1261	497.1	2.0554	115
120	0.1441	501.6	2.0772	0.1382	501.5	2.0734	0.1328	501.4	2.0698	0.1278	501.3	2.0662	120
125	0.1461	505.8	2.0879	0.1401	505.7	2.0841	0.1346	505.7	2.0805	0.1295	505.6	2.0770	125
130	0.1480	510.1	2.0986	0.1420	510.0	2.0948	0.1364	509.9	2.0911	0.1313	509.9	2.0876	130
135	0.1499	514.4	2.1092	0.1438	514.3	2.1054	0.1382	514.2	2.1017	0.1330	514.2	2.0982	135
140	0.1519	518.7	2.1197	0.1457	518.6	2.1159	0.1400	518.6	2.1123	0.1347	518.5	2.1088	140
145	0.1538	523.1	2.1302	0.1475	523.0	2.1264	0.1418	522.9	2.1228	0.1364	522.8	2.1192	145
150	—	—	—	—	—	—	—	—	—	0.1382	527.2	2.1297	150

TEMP. °C	280.0			290.0			300.0			310.0			TEMP. °C
	(-3.70)			(-2.74)			(-1.80)			(-0.88)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.0806)	(405.9)	(1.7734)	(0.0780)	(406.4)	(1.7724)	(0.0755)	(406.9)	(1.7713)	(0.0732)	(407.4)	(1.7703)	
0	0.0819	408.5	1.7829	0.0789	408.3	1.7793	0.0761	408.1	1.7759	0.0734	408.0	1.7726	0
5	0.0837	412.0	1.7956	0.0806	411.8	1.7921	0.0778	411.7	1.7887	0.0751	411.5	1.7854	5
10	0.0855	415.5	1.8082	0.0824	415.4	1.8047	0.0794	415.2	1.8013	0.0767	415.1	1.7980	10
15	0.0873	419.1	1.8207	0.0841	418.9	1.8172	0.0811	418.8	1.8138	0.0783	418.6	1.8105	15
20	0.0890	422.7	1.8330	0.0858	422.5	1.8296	0.0828	422.4	1.8262	0.0799	422.2	1.8230	20
25	0.0908	426.3	1.8453	0.0875	426.2	1.8419	0.0844	426.0	1.8385	0.0815	425.9	1.8353	25
30	0.0925	430.0	1.8575	0.0892	429.8	1.8541	0.0860	429.7	1.8507	0.0831	429.6	1.8475	30
35	0.0943	433.7	1.8696	0.0909	433.5	1.8662	0.0877	433.4	1.8629	0.0847	433.3	1.8596	35
40	0.0960	437.4	1.8816	0.0925	437.3	1.8782	0.0893	437.1	1.8749	0.0863	437.0	1.8717	40
45	0.0977	441.1	1.8935	0.0942	441.0	1.8901	0.0909	440.9	1.8868	0.0879	440.8	1.8836	45
50	0.0994	444.9	1.9053	0.0959	444.8	1.9019	0.0925	444.7	1.8987	0.0894	444.6	1.8955	50
55	0.1012	448.8	1.9171	0.0975	448.6	1.9137	0.0942	448.5	1.9104	0.0910	448.4	1.9073	55
60	0.1029	452.6	1.9287	0.0992	452.5	1.9254	0.0958	452.4	1.9221	0.0926	452.3	1.9189	60
65	0.1046	456.5	1.9403	0.1009	456.4	1.9370	0.0974	456.3	1.9337	0.0941	456.2	1.9305	65
70	0.1063	460.4	1.9518	0.1025	460.3	1.9485	0.0990	460.2	1.9452	0.0957	460.1	1.9421	70
75	0.1080	464.4	1.9632	0.1041	464.3	1.9599	0.1006	464.2	1.9567	0.0972	464.1	1.9535	75
80	0.1097	468.3	1.9746	0.1058	468.2	1.9712	0.1022	468.1	1.9680	0.0987	468.0	1.9649	80
85	0.1114	472.4	1.9859	0.1074	472.3	1.9825	0.1037	472.2	1.9793	0.1003	472.1	1.9762	85
90	0.1131	476.4	1.9971	0.1091	476.3	1.9937	0.1053	476.2	1.9905	0.1018	476.1	1.9874	90
95	0.1148	480.5	2.0082	0.1107	480.4	2.0049	0.1069	480.3	2.0017	0.1034	480.2	1.9985	95
100	0.1164	484.6	2.0192	0.1123	484.5	2.0159	0.1085	484.4	2.0127	0.1049	484.3	2.0096	100
105	0.1181	488.7	2.0302	0.1140	488.6	2.0269	0.1101	488.5	2.0237	0.1064	488.4	2.0206	105
110	0.1198	492.9	2.0412	0.1156	492.8	2.0379	0.1116	492.7	2.0347	0.1079	492.6	2.0316	110
115	0.1215	497.0	2.0520	0.1172	497.0	2.0487	0.1132	496.9	2.0455	0.1095	496.8	2.0425	115
120	0.1232	501.3	2.0628	0.1188	501.2	2.0595	0.1148	501.1	2.0563	0.1110	501.0	2.0533	120
125	0.1248	505.5	2.0736	0.1204	505.4	2.0703	0.1163	505.3	2.0671	0.1125	505.3	2.0640	125
130	0.1265	509.8	2.0842	0.1220	509.7	2.0809	0.1179	509.6	2.0778	0.1140	509.5	2.0747	130
135	0.1282	514.1	2.0948	0.1237	514.0	2.0916	0.1195	513.9	2.0884	0.1155	513.8	2.0853	135
140	0.1298	518.4	2.1054	0.1253	518.3	2.1021	0.1210	518.3	2.0989	0.1170	518.2	2.0959	140
145	0.1315	522.8	2.1159	0.1269	522.7	2.1126	0.1226	522.6	2.1094	0.1185	522.5	2.1064	145
150	0.1331	527.2	2.1263	0.1285	527.1	2.1230	0.1241	527.0	2.1199	0.1200	526.9	2.1168	150

TABLE 2 (continued)
SUVA® MP66 Superheated Vapor—Constant Pressure Tables

V = Volume in m³/kg H = Enthalpy in kJ/kg S = Entropy in kJ/(kg)(K) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, kPa													TEMP. °C
TEMP. °C	320.0			330.0			340.0			350.0			
	(0.01)			(0.89)			(1.74)			(2.57)			
	V	H	S	V	H	S	V	H	S	V	H	S	
(0.0710)	(407.8)	(1.7694)	(0.0689)	(408.3)	(1.7685)	(0.0670)	(408.7)	(1.7676)	(0.0651)	(409.2)	(1.7668)		
5	0.0726	411.4	1.7822	0.0702	411.2	1.7790	0.0680	411.0	1.7760	0.0659	410.9	1.7730	5
10	0.0741	414.9	1.7948	0.0717	414.8	1.7917	0.0695	414.6	1.7887	0.0673	414.5	1.7857	10
15	0.0757	418.5	1.8074	0.0733	418.3	1.8043	0.0709	418.2	1.8013	0.0688	418.0	1.7983	15
20	0.0773	422.1	1.8198	0.0748	422.0	1.8167	0.0724	421.8	1.8137	0.0702	421.7	1.8108	20
25	0.0788	425.8	1.8321	0.0763	425.6	1.8291	0.0739	425.5	1.8261	0.0717	425.3	1.8232	25
30	0.0804	429.4	1.8444	0.0778	429.3	1.8413	0.0754	429.2	1.8384	0.0731	429.0	1.8355	30
35	0.0819	433.1	1.8565	0.0793	433.0	1.8535	0.0768	432.9	1.8505	0.0745	432.8	1.8477	35
40	0.0835	436.9	1.8686	0.0808	436.8	1.8655	0.0783	436.6	1.8626	0.0759	436.5	1.8597	40
45	0.0850	440.7	1.8805	0.0823	440.5	1.8775	0.0797	440.4	1.8746	0.0773	440.3	1.8717	45
50	0.0865	444.5	1.8924	0.0838	444.3	1.8894	0.0812	444.2	1.8865	0.0787	444.1	1.8836	50
55	0.0880	448.3	1.9042	0.0852	448.2	1.9012	0.0826	448.1	1.8983	0.0801	448.0	1.8954	55
60	0.0895	452.2	1.9159	0.0867	452.1	1.9129	0.0841	451.9	1.9100	0.0815	451.8	1.9072	60
65	0.0911	456.1	1.9275	0.0882	456.0	1.9245	0.0855	455.8	1.9216	0.0829	455.7	1.9188	65
70	0.0926	460.0	1.9390	0.0896	459.9	1.9361	0.0869	459.8	1.9332	0.0843	459.7	1.9304	70
75	0.0941	464.0	1.9505	0.0911	463.8	1.9475	0.0883	463.7	1.9446	0.0857	463.6	1.9418	75
80	0.0956	467.9	1.9618	0.0926	467.8	1.9589	0.0897	467.7	1.9560	0.0871	467.6	1.9532	80
85	0.0971	472.0	1.9731	0.0940	471.9	1.9702	0.0912	471.8	1.9673	0.0885	471.7	1.9646	85
90	0.0985	476.0	1.9844	0.0955	475.9	1.9814	0.0926	475.8	1.9786	0.0898	475.7	1.9758	90
95	0.1000	480.1	1.9955	0.0969	480.0	1.9926	0.0940	479.9	1.9898	0.0912	479.8	1.9870	95
100	0.1015	484.2	2.0066	0.0984	484.1	2.0037	0.0954	484.0	2.0009	0.0926	483.9	1.9981	100
105	0.1030	488.3	2.0176	0.0998	488.2	2.0147	0.0968	488.2	2.0119	0.0939	488.1	2.0091	105
110	0.1045	492.5	2.0286	0.1012	492.4	2.0257	0.0982	492.3	2.0228	0.0953	492.2	2.0201	110
115	0.1060	496.7	2.0395	0.1027	496.6	2.0366	0.0996	496.5	2.0337	0.0966	496.4	2.0310	115
120	0.1074	500.9	2.0503	0.1041	500.8	2.0474	0.1010	500.8	2.0446	0.0980	500.7	2.0418	120
125	0.1089	505.2	2.0610	0.1055	505.1	2.0581	0.1023	505.0	2.0553	0.0993	504.9	2.0526	125
130	0.1104	509.5	2.0717	0.1070	509.4	2.0688	0.1037	509.3	2.0660	0.1007	509.2	2.0633	130
135	0.1118	513.8	2.0823	0.1084	513.7	2.0794	0.1051	513.6	2.0766	0.1020	513.5	2.0739	135
140	0.1133	518.1	2.0929	0.1098	518.0	2.0900	0.1065	518.0	2.0872	0.1034	517.9	2.0845	140
145	0.1148	522.5	2.1034	0.1112	522.4	2.1005	0.1079	522.3	2.0977	0.1047	522.2	2.0950	145
150	0.1162	526.9	2.1139	0.1126	526.8	2.1110	0.1093	526.7	2.1082	0.1061	526.6	2.1055	150
155	0.1177	531.3	2.1242	0.1141	531.2	2.1214	0.1106	531.1	2.1186	0.1074	531.1	2.1159	155

TEMP. °C	360.0			370.0			380.0			390.0			TEMP. °C
	(3.39)			(4.19)			(4.97)			(5.74)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.0634)	(409.6)	(1.7660)	(0.0618)	(410.0)	(1.7652)	(0.0602)	(410.4)	(1.7644)	(0.0587)	(410.8)	(1.7637)	
5	0.0639	410.7	1.7701	0.0620	410.6	1.7673	0.0602	410.4	1.7645	—	—	—	5
10	0.0653	414.3	1.7829	0.0634	414.1	1.7800	0.0616	414.0	1.7773	0.0599	413.8	1.7746	10
15	0.0667	417.9	1.7955	0.0648	417.8	1.7927	0.0629	417.6	1.7899	0.0612	417.5	1.7873	15
20	0.0681	421.5	1.8080	0.0661	421.4	1.8052	0.0643	421.2	1.8025	0.0625	421.1	1.7998	20
25	0.0695	425.2	1.8204	0.0675	425.1	1.8176	0.0656	424.9	1.8149	0.0638	424.8	1.8123	25
30	0.0709	428.9	1.8327	0.0689	428.8	1.8299	0.0669	428.6	1.8272	0.0651	428.5	1.8246	30
35	0.0723	432.6	1.8449	0.0702	432.5	1.8421	0.0683	432.4	1.8394	0.0664	432.2	1.8368	35
40	0.0737	436.4	1.8569	0.0716	436.3	1.8542	0.0696	436.1	1.8516	0.0677	436.0	1.8490	40
45	0.0751	440.2	1.8690	0.0729	440.0	1.8662	0.0709	439.9	1.8636	0.0690	439.8	1.8610	45
50	0.0764	444.0	1.8809	0.0743	443.9	1.8782	0.0722	443.7	1.8755	0.0702	443.6	1.8729	50
55	0.0778	447.8	1.8927	0.0756	447.7	1.8900	0.0735	447.6	1.8874	0.0715	447.5	1.8848	55
60	0.0792	451.7	1.9044	0.0769	451.6	1.9017	0.0748	451.5	1.8991	0.0728	451.4	1.8966	60
65	0.0805	455.6	1.9161	0.0782	455.5	1.9134	0.0761	455.4	1.9108	0.0740	455.3	1.9082	65
70	0.0819	459.6	1.9276	0.0796	459.5	1.9250	0.0774	459.3	1.9224	0.0753	459.2	1.9198	70
75	0.0832	463.5	1.9391	0.0809	463.4	1.9365	0.0787	463.3	1.9339	0.0766	463.2	1.9313	75
80	0.0846	467.5	1.9505	0.0822	467.4	1.9479	0.0799	467.3	1.9453	0.0778	467.2	1.9428	80
85	0.0859	471.6	1.9618	0.0835	471.5	1.9592	0.0812	471.4	1.9566	0.0790	471.3	1.9541	85
90	0.0872	475.6	1.9731	0.0848	475.5	1.9705	0.0825	475.4	1.9679	0.0803	475.3	1.9654	90
95	0.0886	479.7	1.9844	0.0861	479.6	1.9817	0.0838	479.5	1.9791	0.0815	479.4	1.9766	95
100	0.0899	483.8	1.9954	0.0874	483.7	1.9928	0.0850	483.6	1.9902	0.0828	483.6	1.9877	100
105	0.0912	488.0	2.0064	0.0887	487.9	2.0038	0.0863	487.8	2.0013	0.0840	487.7	1.9988	105
110	0.0926	492.2	2.0174	0.0900	492.1	2.0148	0.0875	492.0	2.0122	0.0852	491.9	2.0098	110
115	0.0939	496.4	2.0283	0.0913	496.3	2.0257	0.0888	496.2	2.0232	0.0865	496.1	2.0207	115
120	0.0952	500.6	2.0391	0.0926	500.5	2.0365	0.0901	500.4	2.0340	0.0877	500.3	2.0315	120
125	0.0965	504.8	2.0499	0.0938	504.8	2.0473	0.0913	504.7	2.0448	0.0889	504.6	2.0423	125
130	0.0978	509.1	2.0606	0.0951	509.1	2.0580	0.0926	509.0	2.0555	0.0901	508.9	2.0530	130
135	0.0991	513.5	2.0713	0.0964	513.4	2.0687	0.0938	513.3	2.0661	0.0913	513.2	2.0637	135
140	0.1005	517.8	2.0818	0.0977	517.7	2.0792	0.0950	517.6	2.0767	0.0925	517.6	2.0743	140
145	0.1018	522.2	2.0924	0.0990	522.1	2.0898	0.0963	522.0	2.0873	0.0938	521.9	2.0848	145
150	0.1031	526.6	2.1028	0.1002	526.5	2.1002	0.0975	526.4	2.0977	0.0950	526.4	2.0953	150
155	0.1044	531.0	2.1132	0.1015	530.9	2.1106	0.0988	530.9	2.1081	0.0962	530.8	2.1057	155
160	—	—	—	—	—	—	—	—	—	0.0974	535.2	2.1160	160

TABLE 2 (continued)
SUVA® MP66 Superheated Vapor—Constant Pressure Tables

V = Volume in m³/kg H = Enthalpy in kJ/kg S = Entropy in kJ/(kg)(K) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, kPa													TEMP. °C
TEMP. °C	400.0			425.0			450.0			475.0			
	(6.50)			(8.32)			(10.06)			(11.74)			
	V	H	S	V	H	S	V	H	S	V	H	S	
(0.0573)	(411.2)	(1.7630)	(0.0540)	(412.1)	(1.7613)	(0.0511)	(412.9)	(1.7597)	(0.0485)	(413.8)	(1.7582)		
10	0.0582	413.7	1.7720	0.0545	413.3	1.7656	—	—	—	—	—	—	10
15	0.0595	417.3	1.7846	0.0557	416.9	1.7783	0.0523	416.5	1.7723	0.0493	416.2	1.7666	15
20	0.0608	421.0	1.7972	0.0569	420.6	1.7910	0.0535	420.2	1.7850	0.0504	419.8	1.7793	20
25	0.0621	424.6	1.8097	0.0581	424.3	1.8035	0.0546	423.9	1.7975	0.0515	423.6	1.7919	25
30	0.0634	428.4	1.8220	0.0594	428.0	1.8158	0.0558	427.7	1.8100	0.0526	427.3	1.8043	30
35	0.0646	432.1	1.8343	0.0606	431.8	1.8281	0.0569	431.4	1.8223	0.0537	431.1	1.8167	35
40	0.0659	435.9	1.8464	0.0618	435.5	1.8403	0.0581	435.2	1.8345	0.0548	434.9	1.8289	40
45	0.0671	439.7	1.8585	0.0629	439.4	1.8524	0.0592	439.0	1.8466	0.0559	438.7	1.8411	45
50	0.0684	443.5	1.8704	0.0641	443.2	1.8644	0.0603	442.9	1.8586	0.0569	442.6	1.8531	50
55	0.0696	447.4	1.8823	0.0653	447.1	1.8762	0.0615	446.8	1.8705	0.0580	446.5	1.8651	55
60	0.0709	451.3	1.8941	0.0665	451.0	1.8880	0.0626	450.7	1.8823	0.0591	450.4	1.8769	60
65	0.0721	455.2	1.9057	0.0676	454.9	1.8998	0.0637	454.6	1.8941	0.0601	454.3	1.8887	65
70	0.0733	459.1	1.9173	0.0688	458.9	1.9114	0.0648	458.6	1.9057	0.0612	458.3	1.9003	70
75	0.0746	463.1	1.9289	0.0700	462.9	1.9229	0.0659	462.6	1.9173	0.0622	462.3	1.9119	75
80	0.0758	467.1	1.9403	0.0711	466.9	1.9344	0.0670	466.6	1.9288	0.0633	466.3	1.9234	80
85	0.0770	471.2	1.9517	0.0723	470.9	1.9457	0.0681	470.7	1.9401	0.0643	470.4	1.9348	85
90	0.0782	475.2	1.9629	0.0734	475.0	1.9570	0.0692	474.7	1.9515	0.0654	474.5	1.9462	90
95	0.0794	479.3	1.9741	0.0746	479.1	1.9683	0.0702	478.9	1.9627	0.0664	478.6	1.9574	95
100	0.0806	483.5	1.9853	0.0757	483.2	1.9794	0.0713	483.0	1.9739	0.0674	482.8	1.9686	100
105	0.0818	487.6	1.9963	0.0768	487.4	1.9905	0.0724	487.2	1.9850	0.0684	486.9	1.9797	105
110	0.0830	491.8	2.0073	0.0780	491.6	2.0015	0.0735	491.4	1.9960	0.0695	491.1	1.9907	110
115	0.0842	496.0	2.0183	0.0791	495.8	2.0124	0.0746	495.6	2.0069	0.0705	495.4	2.0017	115
120	0.0854	500.2	2.0291	0.0802	500.0	2.0233	0.0756	499.8	2.0178	0.0715	499.6	2.0126	120
125	0.0866	504.5	2.0399	0.0814	504.3	2.0341	0.0767	504.1	2.0286	0.0725	503.9	2.0234	125
130	0.0878	508.8	2.0506	0.0825	508.6	2.0448	0.0778	508.4	2.0394	0.0735	508.2	2.0342	130
135	0.0890	513.1	2.0613	0.0836	512.9	2.0555	0.0788	512.7	2.0501	0.0746	512.5	2.0449	135
140	0.0902	517.5	2.0719	0.0847	517.3	2.0661	0.0799	517.1	2.0607	0.0756	516.9	2.0555	140
145	0.0914	521.9	2.0824	0.0859	521.7	2.0767	0.0810	521.5	2.0712	0.0766	521.3	2.0661	145
150	0.0925	526.3	2.0929	0.0870	526.1	2.0872	0.0820	525.9	2.0817	0.0776	525.7	2.0766	150
155	0.0937	530.7	2.1033	0.0881	530.5	2.0976	0.0831	530.3	2.0922	0.0786	530.2	2.0870	155
160	0.0949	535.2	2.1137	0.0892	535.0	2.1079	0.0841	534.8	2.1025	0.0796	534.6	2.0974	160
165	—	—	—	—	—	—	0.0852	539.3	2.1128	0.0806	539.1	2.1077	165

TEMP. °C	500.0			525.0			550.0			575.0			TEMP. °C
	(13.34)			(14.89)			(16.38)			(17.82)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.0462)	(414.5)	(1.7568)	(0.0440)	(415.3)	(1.7555)	(0.0421)	(416.0)	(1.7542)	(0.0403)	(416.7)	(1.7530)	
15	0.0465	415.8	1.7611	0.0440	415.4	1.7558	—	—	—	—	—	—	15
20	0.0476	419.5	1.7738	0.0451	419.1	1.7686	0.0428	418.7	1.7635	0.0407	418.3	1.7586	20
25	0.0487	423.2	1.7865	0.0461	422.8	1.7813	0.0438	422.5	1.7763	0.0416	422.1	1.7714	25
30	0.0497	427.0	1.7990	0.0471	426.6	1.7938	0.0448	426.3	1.7888	0.0426	425.9	1.7841	30
35	0.0508	430.8	1.8114	0.0481	430.4	1.8062	0.0457	430.1	1.8013	0.0435	429.7	1.7966	35
40	0.0518	434.6	1.8236	0.0491	434.2	1.8186	0.0467	433.9	1.8137	0.0445	433.6	1.8090	40
45	0.0529	438.4	1.8358	0.0501	438.1	1.8308	0.0476	437.8	1.8259	0.0454	437.4	1.8212	45
50	0.0539	442.3	1.8479	0.0511	442.0	1.8429	0.0486	441.7	1.8380	0.0463	441.3	1.8334	50
55	0.0549	446.2	1.8599	0.0521	445.9	1.8549	0.0495	445.6	1.8501	0.0472	445.3	1.8454	55
60	0.0559	450.1	1.8717	0.0531	449.8	1.8668	0.0505	449.5	1.8620	0.0481	449.2	1.8574	60
65	0.0569	454.1	1.8835	0.0540	453.8	1.8786	0.0514	453.5	1.8738	0.0490	453.2	1.8693	65
70	0.0579	458.0	1.8952	0.0550	457.8	1.8903	0.0523	457.5	1.8856	0.0499	457.2	1.8810	70
75	0.0589	462.1	1.9068	0.0560	461.8	1.9019	0.0533	461.5	1.8972	0.0508	461.2	1.8927	75
80	0.0599	466.1	1.9183	0.0569	465.8	1.9134	0.0542	465.6	1.9088	0.0517	465.3	1.9043	80
85	0.0609	470.2	1.9297	0.0579	469.9	1.9249	0.0551	469.6	1.9202	0.0526	469.4	1.9158	85
90	0.0619	474.2	1.9411	0.0588	474.0	1.9363	0.0560	473.8	1.9316	0.0534	473.5	1.9272	90
95	0.0629	478.4	1.9524	0.0598	478.1	1.9476	0.0569	477.9	1.9429	0.0543	477.6	1.9385	95
100	0.0639	482.5	1.9636	0.0607	482.3	1.9588	0.0578	482.0	1.9542	0.0552	481.8	1.9497	100
105	0.0649	486.7	1.9747	0.0617	486.5	1.9699	0.0587	486.2	1.9653	0.0560	486.0	1.9609	105
110	0.0659	490.9	1.9857	0.0626	490.7	1.9810	0.0596	490.5	1.9764	0.0569	490.2	1.9720	110
115	0.0668	495.1	1.9967	0.0635	494.9	1.9920	0.0605	494.7	1.9874	0.0578	494.5	1.9830	115
120	0.0678	499.4	2.0076	0.0644	499.2	2.0029	0.0614	499.0	1.9983	0.0586	498.8	1.9940	120
125	0.0688	503.7	2.0185	0.0654	503.5	2.0137	0.0623	503.3	2.0092	0.0595	503.1	2.0048	125
130	0.0697	508.0	2.0292	0.0663	507.8	2.0245	0.0632	507.6	2.0200	0.0603	507.4	2.0157	130
135	0.0707	512.3	2.0399	0.0672	512.1	2.0352	0.0641	511.9	2.0307	0.0612	511.7	2.0264	135
140	0.0717	516.7	2.0506	0.0681	516.5	2.0459	0.0649	516.3	2.0414	0.0620	516.1	2.0371	140
145	0.0726	521.1	2.0612	0.0691	520.9	2.0565	0.0658	520.7	2.0520	0.0629	520.5	2.0477	145
150	0.0736	525.5	2.0717	0.0700	525.3	2.0670	0.0667	525.2	2.0625	0.0637	525.0	2.0582	150
155	0.0745	530.0	2.0821	0.0709	529.8	2.0775	0.0676	529.6	2.0730	0.0645	529.4	2.0687	155
160	0.0755	534.5	2.0925	0.0718	534.3	2.0879	0.0684	534.1	2.0834	0.0654	533.9	2.0791	160
165	0.0765	539.0	2.1028	0.0727	538.8	2.0982	0.0693	538.6	2.0937	0.0662	538.4	2.0895	165
170	—	—	—	—	—	—	0.0702	543.1	2.1040	0.0670	543.0	2.0998	170

TABLE 2 (continued)
SUVA® MP66 Superheated Vapor—Constant Pressure Tables

V = Volume in m³/kg H = Enthalpy in kJ/kg S = Entropy in kJ/(kg)(K) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, kPa													
TEMP. °C	600.0			625.0			650.0			675.0			TEMP. °C
	(19.21)			(20.56)			(21.86)			(23.14)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.0386)	(417.3)	(1.7519)	(0.0371)	(418.0)	(1.7508)	(0.0357)	(418.6)	(1.7497)	(0.0344)	(419.1)	(1.7487)	
20	0.0388	417.9	1.7539	—	—	—	—	—	—	—	—	—	20
25	0.0397	421.7	1.7667	0.0379	421.3	1.7622	0.0362	420.9	1.7578	0.0347	420.6	1.7535	25
30	0.0406	425.5	1.7794	0.0388	425.2	1.7749	0.0371	424.8	1.7706	0.0355	424.4	1.7664	30
35	0.0415	429.4	1.7920	0.0397	429.0	1.7875	0.0379	428.7	1.7832	0.0364	428.3	1.7790	35
40	0.0424	433.2	1.8044	0.0405	432.9	1.8000	0.0388	432.5	1.7957	0.0372	432.2	1.7916	40
45	0.0433	437.1	1.8167	0.0414	436.8	1.8123	0.0396	436.4	1.8081	0.0380	436.1	1.8040	45
50	0.0442	441.0	1.8289	0.0423	440.7	1.8246	0.0405	440.4	1.8204	0.0388	440.1	1.8163	50
55	0.0451	445.0	1.8410	0.0431	444.6	1.8367	0.0413	444.3	1.8325	0.0396	444.0	1.8285	55
60	0.0459	448.9	1.8530	0.0439	448.6	1.8487	0.0421	448.3	1.8446	0.0404	448.0	1.8406	60
65	0.0468	452.9	1.8649	0.0448	452.6	1.8606	0.0429	452.3	1.8565	0.0412	452.0	1.8525	65
70	0.0477	456.9	1.8766	0.0456	456.6	1.8724	0.0437	456.4	1.8683	0.0420	456.1	1.8644	70
75	0.0485	461.0	1.8883	0.0464	460.7	1.8841	0.0445	460.4	1.8801	0.0427	460.1	1.8762	75
80	0.0494	465.0	1.8999	0.0473	464.8	1.8958	0.0453	464.5	1.8917	0.0435	464.2	1.8878	80
85	0.0502	469.1	1.9115	0.0481	468.9	1.9073	0.0461	468.6	1.9033	0.0443	468.3	1.8994	85
90	0.0511	473.2	1.9229	0.0489	473.0	1.9187	0.0469	472.7	1.9148	0.0450	472.5	1.9109	90
95	0.0519	477.4	1.9342	0.0497	477.2	1.9301	0.0477	476.9	1.9261	0.0458	476.7	1.9223	95
100	0.0527	481.6	1.9455	0.0505	481.3	1.9414	0.0485	481.1	1.9374	0.0465	480.9	1.9336	100
105	0.0536	485.8	1.9567	0.0513	485.5	1.9526	0.0492	485.3	1.9486	0.0473	485.1	1.9448	105
110	0.0544	490.0	1.9678	0.0521	489.8	1.9637	0.0500	489.5	1.9598	0.0480	489.3	1.9560	110
115	0.0552	494.3	1.9788	0.0529	494.0	1.9748	0.0508	493.8	1.9709	0.0488	493.6	1.9671	115
120	0.0561	498.5	1.9898	0.0537	498.3	1.9857	0.0515	498.1	1.9818	0.0495	497.9	1.9781	120
125	0.0569	502.8	2.0007	0.0545	502.6	1.9966	0.0523	502.4	1.9928	0.0503	502.2	1.9890	125
130	0.0577	507.2	2.0115	0.0553	507.0	2.0075	0.0531	506.8	2.0036	0.0510	506.6	1.9999	130
135	0.0585	511.5	2.0222	0.0561	511.3	2.0182	0.0538	511.1	2.0144	0.0517	510.9	2.0106	135
140	0.0593	515.9	2.0329	0.0569	515.7	2.0289	0.0546	515.5	2.0251	0.0525	515.3	2.0214	140
145	0.0601	520.3	2.0435	0.0576	520.2	2.0396	0.0553	520.0	2.0357	0.0532	519.8	2.0320	145
150	0.0610	524.8	2.0541	0.0584	524.6	2.0501	0.0561	524.4	2.0463	0.0539	524.2	2.0426	150
155	0.0618	529.2	2.0646	0.0592	529.1	2.0606	0.0568	528.9	2.0568	0.0547	528.7	2.0531	155
160	0.0626	533.7	2.0750	0.0600	533.6	2.0711	0.0576	533.4	2.0673	0.0554	533.2	2.0636	160
165	0.0634	538.3	2.0854	0.0608	538.1	2.0814	0.0583	537.9	2.0776	0.0561	537.7	2.0740	165
170	0.0642	542.8	2.0957	0.0615	542.6	2.0918	0.0591	542.5	2.0880	0.0568	542.3	2.0843	170
175	—	—	—	0.0623	547.2	2.1020	0.0598	547.0	2.0982	0.0575	546.9	2.0946	175

TEMP. °C	700.0			725.0			750.0			800.0			TEMP. °C
	(24.37)			(25.57)			(26.74)			(29.00)			
	V	H	S	V	H	S	V	H	S	V	H	S	
	(0.0332)	(419.7)	(1.7477)	(0.0320)	(420.2)	(1.7468)	(0.0309)	(420.7)	(1.7459)	(0.0290)	(421.7)	(1.7441)	
25	0.0333	420.2	1.7494	—	—	—	—	—	—	—	—	—	25
30	0.0341	424.0	1.7622	0.0327	423.7	1.7582	0.0315	423.3	1.7543	0.0292	422.5	1.7467	30
35	0.0349	427.9	1.7750	0.0335	427.6	1.7710	0.0322	427.2	1.7671	0.0299	426.4	1.7597	35
40	0.0357	431.8	1.7876	0.0343	431.5	1.7836	0.0330	431.1	1.7798	0.0306	430.4	1.7724	40
45	0.0365	435.8	1.8000	0.0351	435.4	1.7961	0.0337	435.1	1.7924	0.0313	434.4	1.7851	45
50	0.0373	439.7	1.8124	0.0358	439.4	1.8085	0.0345	439.1	1.8048	0.0320	438.4	1.7976	50
55	0.0380	443.7	1.8246	0.0366	443.4	1.8208	0.0352	443.1	1.8171	0.0327	442.4	1.8099	55
60	0.0388	447.7	1.8367	0.0373	447.4	1.8329	0.0359	447.1	1.8292	0.0334	446.5	1.8221	60
65	0.0396	451.7	1.8487	0.0381	451.4	1.8449	0.0367	451.1	1.8413	0.0341	450.5	1.8343	65
70	0.0403	455.8	1.8606	0.0388	455.5	1.8568	0.0374	455.2	1.8532	0.0348	454.6	1.8463	70
75	0.0411	459.9	1.8723	0.0395	459.6	1.8687	0.0381	459.3	1.8651	0.0355	458.7	1.8581	75
80	0.0418	464.0	1.8840	0.0403	463.7	1.8804	0.0388	463.4	1.8768	0.0362	462.9	1.8699	80
85	0.0426	468.1	1.8956	0.0410	467.8	1.8920	0.0395	467.6	1.8884	0.0368	467.0	1.8816	85
90	0.0433	472.2	1.9071	0.0417	472.0	1.9035	0.0402	471.7	1.9000	0.0375	471.2	1.8932	90
95	0.0440	476.4	1.9186	0.0424	476.2	1.9150	0.0409	475.9	1.9114	0.0381	475.4	1.9047	95
100	0.0448	480.6	1.9299	0.0431	480.4	1.9263	0.0416	480.1	1.9228	0.0388	479.6	1.9161	100
105	0.0455	484.8	1.9411	0.0438	484.6	1.9376	0.0423	484.4	1.9341	0.0394	483.9	1.9274	105
110	0.0462	489.1	1.9523	0.0445	488.9	1.9488	0.0430	488.6	1.9453	0.0401	488.2	1.9387	110
115	0.0469	493.4	1.9634	0.0452	493.1	1.9599	0.0436	492.9	1.9564	0.0407	492.5	1.9498	115
120	0.0477	497.7	1.9744	0.0459	497.5	1.9709	0.0443	497.2	1.9675	0.0414	496.8	1.9609	120
125	0.0484	502.0	1.9854	0.0466	501.8	1.9819	0.0450	501.6	1.9784	0.0420	501.1	1.9719	125
130	0.0491	506.4	1.9962	0.0473	506.1	1.9927	0.0457	505.9	1.9893	0.0426	505.5	1.9828	130
135	0.0498	510.7	2.0070	0.0480	510.5	2.0035	0.0463	510.3	2.0002	0.0433	509.9	1.9937	135
140	0.0505	515.1	2.0178	0.0487	514.9	2.0143	0.0470	514.7	2.0109	0.0439	514.3	2.0044	140
145	0.0512	519.6	2.0284	0.0494	519.4	2.0250	0.0477	519.2	2.0216	0.0445	518.8	2.0152	145
150	0.0519	524.0	2.0390	0.0501	523.8	2.0356	0.0483	523.6	2.0322	0.0452	523.3	2.0258	150
155	0.0526	528.5	2.0496	0.0507	528.3	2.0461	0.0490	528.1	2.0428	0.0458	527.8	2.0364	155
160	0.0533	533.0	2.0600	0.0514	532.8	2.0566	0.0496	532.7	2.0533	0.0464	532.3	2.0469	160
165	0.0540	537.6	2.0704	0.0521	537.4	2.0670	0.0503	537.2	2.0637	0.0470	536.8	2.0573	165
170	0.0547	542.1	2.0808	0.0528	541.9	2.0774	0.0509	541.8	2.0740	0.0476	541.4	2.0677	170
175	0.0554	546.7	2.0911	0.0534	546.5	2.0876	0.0516	546.4	2.0843	0.0482	546.0	2.0780	175
180	—	—	—	0.0541	551.1	2.0979	0.0522	551.0	2.0946	0.0489	550.6	2.0883	180

TABLE 2 (continued)
SUVA® MP66 Superheated Vapor—Constant Pressure Tables

V = Volume in m³/kg H = Enthalpy in kJ/kg S = Entropy in kJ/(kg)(K) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, kPa													TEMP. °C
TEMP. °C	850.0			900.0			950.0			1000.0			
	(31.15)			(33.21)			(35.19)			(37.08)			
	V	H	S	V	H	S	V	H	S	V	H	S	
(0.0273)	(422.6)	(1.7425)	(0.0257)	(423.4)	(1.7409)	(0.0244)	(424.2)	(1.7394)	(0.0231)	(425.0)	(1.7379)		
35	0.0278	425.7	1.7525	0.0260	424.9	1.7456	—	—	—	—	—	—	35
40	0.0285	429.7	1.7654	0.0267	428.9	1.7586	0.0250	428.2	1.7520	0.0235	427.4	1.7456	40
45	0.0292	433.7	1.7781	0.0273	433.0	1.7714	0.0256	432.2	1.7649	0.0241	431.5	1.7587	45
50	0.0299	437.7	1.7907	0.0280	437.0	1.7840	0.0263	436.3	1.7777	0.0247	435.6	1.7715	50
55	0.0306	441.8	1.8031	0.0286	441.1	1.7966	0.0269	440.4	1.7903	0.0253	439.7	1.7842	55
60	0.0312	445.8	1.8154	0.0293	445.2	1.8089	0.0275	444.5	1.8027	0.0259	443.9	1.7967	60
65	0.0319	449.9	1.8276	0.0299	449.3	1.8212	0.0281	448.7	1.8150	0.0265	448.0	1.8091	65
70	0.0325	454.0	1.8396	0.0305	453.4	1.8333	0.0287	452.8	1.8272	0.0271	452.2	1.8214	70
75	0.0332	458.2	1.8516	0.0311	457.6	1.8453	0.0293	457.0	1.8393	0.0276	456.4	1.8335	75
80	0.0338	462.3	1.8634	0.0317	461.7	1.8572	0.0299	461.2	1.8512	0.0282	460.6	1.8455	80
85	0.0345	466.5	1.8751	0.0323	465.9	1.8690	0.0305	465.4	1.8631	0.0288	464.8	1.8574	85
90	0.0351	470.7	1.8868	0.0329	470.1	1.8806	0.0310	469.6	1.8748	0.0293	469.1	1.8692	90
95	0.0357	474.9	1.8983	0.0335	474.4	1.8922	0.0316	473.9	1.8864	0.0299	473.3	1.8808	95
100	0.0363	479.1	1.9098	0.0341	478.6	1.9037	0.0322	478.1	1.8979	0.0304	477.6	1.8924	100
105	0.0369	483.4	1.9211	0.0347	482.9	1.9151	0.0327	482.4	1.9094	0.0309	481.9	1.9039	105
110	0.0376	487.7	1.9324	0.0353	487.2	1.9264	0.0333	486.8	1.9207	0.0315	486.3	1.9152	110
115	0.0382	492.0	1.9436	0.0359	491.6	1.9376	0.0339	491.1	1.9320	0.0320	490.6	1.9265	115
120	0.0388	496.3	1.9547	0.0365	495.9	1.9488	0.0344	495.5	1.9431	0.0325	495.0	1.9377	120
125	0.0394	500.7	1.9657	0.0370	500.3	1.9598	0.0350	499.8	1.9542	0.0331	499.4	1.9488	125
130	0.0400	505.1	1.9767	0.0376	504.7	1.9708	0.0355	504.2	1.9652	0.0336	503.8	1.9599	130
135	0.0406	509.5	1.9875	0.0382	509.1	1.9817	0.0361	508.7	1.9761	0.0341	508.3	1.9708	135
140	0.0412	513.9	1.9983	0.0388	513.5	1.9925	0.0366	513.1	1.9870	0.0346	512.7	1.9817	140
145	0.0418	518.4	2.0091	0.0393	518.0	2.0033	0.0371	517.6	1.9978	0.0352	517.2	1.9925	145
150	0.0424	522.9	2.0197	0.0399	522.5	2.0140	0.0377	522.1	2.0085	0.0357	521.7	2.0032	150
155	0.0430	527.4	2.0303	0.0404	527.0	2.0246	0.0382	526.6	2.0191	0.0362	526.3	2.0139	155
160	0.0435	531.9	2.0408	0.0410	531.6	2.0351	0.0387	531.2	2.0297	0.0367	530.8	2.0245	160
165	0.0441	536.5	2.0513	0.0416	536.1	2.0456	0.0393	535.8	2.0402	0.0372	535.4	2.0350	165
170	0.0447	541.1	2.0617	0.0421	540.7	2.0560	0.0398	540.4	2.0506	0.0377	540.0	2.0454	170
175	0.0453	545.7	2.0720	0.0427	545.3	2.0664	0.0403	545.0	2.0610	0.0382	544.6	2.0558	175
180	0.0459	550.3	2.0823	0.0432	550.0	2.0767	0.0409	549.6	2.0713	0.0387	549.3	2.0662	180
185	0.0465	555.0	2.0925	0.0438	554.6	2.0869	0.0414	554.3	2.0815	0.0392	554.0	2.0764	185
190	—	—	—	—	—	—	0.0419	559.0	2.0917	0.0397	558.7	2.0866	190

ABSOLUTE PRESSURE, kPa													TEMP. °C
TEMP. °C	1100.0			1200.0			1300.0			1400.0			
	(40.67)			(44.02)			(47.16)			(50.13)			
	V	H	S	V	H	S	V	H	S	V	H	S	
(0.0209)	(426.3)	(1.7352)	(0.0191)	(427.5)	(1.7326)	(0.0175)	(428.5)	(1.7301)	(0.0162)	(429.4)	(1.7277)		
45	0.0214	429.9	1.7467	0.0192	428.3	1.7352	—	—	—	—	—	—	45
50	0.0220	434.1	1.7597	0.0198	432.6	1.7486	0.0178	431.0	1.7378	—	—	—	50
55	0.0226	438.3	1.7726	0.0203	436.9	1.7616	0.0184	435.3	1.7511	0.0167	433.8	1.7410	55
60	0.0231	442.5	1.7853	0.0208	441.1	1.7745	0.0189	439.7	1.7643	0.0172	438.2	1.7544	60
65	0.0237	446.7	1.7979	0.0214	445.4	1.7873	0.0194	444.0	1.7772	0.0177	442.6	1.7675	65
70	0.0242	451.0	1.8103	0.0219	449.7	1.7998	0.0199	448.3	1.7899	0.0181	447.0	1.7804	70
75	0.0248	455.2	1.8225	0.0224	454.0	1.8122	0.0203	452.7	1.8024	0.0186	451.4	1.7931	75
80	0.0253	459.4	1.8346	0.0229	458.2	1.8245	0.0208	457.0	1.8148	0.0190	455.8	1.8056	80
85	0.0258	463.7	1.8466	0.0234	462.6	1.8366	0.0213	461.4	1.8271	0.0195	460.2	1.8180	85
90	0.0263	468.0	1.8585	0.0238	466.9	1.8485	0.0217	465.7	1.8392	0.0199	464.6	1.8302	90
95	0.0268	472.3	1.8703	0.0243	471.2	1.8604	0.0222	470.1	1.8511	0.0204	469.0	1.8423	95
100	0.0274	476.6	1.8819	0.0248	475.6	1.8722	0.0226	474.5	1.8630	0.0208	473.4	1.8543	100
105	0.0279	481.0	1.8935	0.0253	479.9	1.8838	0.0231	478.9	1.8747	0.0212	477.9	1.8661	105
110	0.0284	485.3	1.9049	0.0257	484.3	1.8953	0.0235	483.3	1.8863	0.0216	482.3	1.8778	110
115	0.0288	489.7	1.9163	0.0262	488.7	1.9068	0.0240	487.8	1.8978	0.0220	486.8	1.8894	115
120	0.0293	494.1	1.9275	0.0267	493.2	1.9181	0.0244	492.2	1.9092	0.0225	491.3	1.9009	120
125	0.0298	498.5	1.9387	0.0271	497.6	1.9293	0.0248	496.7	1.9205	0.0229	495.8	1.9123	125
130	0.0303	503.0	1.9498	0.0276	502.1	1.9405	0.0252	501.2	1.9318	0.0233	500.3	1.9235	130
135	0.0308	507.4	1.9608	0.0280	506.6	1.9516	0.0257	505.7	1.9429	0.0237	504.9	1.9347	135
140	0.0313	511.9	1.9718	0.0285	511.1	1.9625	0.0261	510.3	1.9539	0.0240	509.4	1.9458	140
145	0.0318	516.4	1.9826	0.0289	515.6	1.9734	0.0265	514.8	1.9649	0.0244	514.0	1.9568	145
150	0.0322	521.0	1.9934	0.0293	520.2	1.9843	0.0269	519.4	1.9758	0.0248	518.6	1.9678	150
155	0.0327	525.5	2.0041	0.0298	524.7	1.9950	0.0273	524.0	1.9865	0.0252	523.2	1.9786	155
160	0.0332	530.1	2.0147	0.0302	529.3	2.0057	0.0277	528.6	1.9973	0.0256	527.8	1.9894	160
165	0.0336	534.7	2.0253	0.0307	534.0	2.0163	0.0281	533.2	2.0079	0.0260	532.5	2.0001	165
170	0.0341	539.3	2.0358	0.0311	538.6	2.0268	0.0285	537.9	2.0185	0.0264	537.2	2.0107	170
175	0.0346	544.0	2.0462	0.0315	543.3	2.0373	0.0289	542.6	2.0290	0.0267	541.9	2.0212	175
180	0.0350	548.6	2.0565	0.0319	547.9	2.0477	0.0293	547.3	2.0394	0.0271	546.6	2.0317	180
185	0.0355	553.3	2.0668	0.0324	552.7	2.0580	0.0297	552.0	2.0498	0.0275	551.3	2.0421	185
190	0.0359	558.0	2.0771	0.0328	557.4	2.0683	0.0301	556.7	2.0601	0.0279	556.1	2.0524	190
195	0.0364	562.8	2.0873	0.0332	562.1	2.0785	0.0305	561.5	2.0703	0.0282	560.9	2.0627	195
200	—	—	—	—	—	—	0.0309	566.3	2.0805	0.0286	565.7	2.0729	200
205	—	—	—	—	—	—	—	—	—	0.0290	570.5	2.0830	205

TABLE 2 (continued)
SUVA® MP66 Superheated Vapor—Constant Pressure Tables

V = Volume in m³/kg H = Enthalpy in kJ/kg S = Entropy in kJ/(kg)(K) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, kPa													TEMP. °C
TEMP. °C	1500.0			1600.0			1700.0			1800.0			
	(52.94)			(55.61)			(58.16)			(60.60)			
	V	H	S	V	H	S	V	H	S	V	H	S	
(0.0150)	(430.2)	(1.7254)	(0.0140)	(430.9)	(1.7231)	(0.0131)	(431.5)	(1.7208)	(0.0122)	(432.1)	(1.7186)		
55	0.0152	432.1	1.7311	—	—	—	—	—	—	—	—	—	55
60	0.0157	436.6	1.7447	0.0144	435.0	1.7353	0.0132	433.3	1.7261	—	—	—	60
65	0.0162	441.1	1.7581	0.0149	439.6	1.7490	0.0137	438.0	1.7400	0.0126	436.3	1.7312	65
70	0.0166	445.6	1.7712	0.0153	444.1	1.7623	0.0141	442.6	1.7536	0.0131	441.0	1.7451	70
75	0.0171	450.0	1.7841	0.0157	448.7	1.7754	0.0145	447.2	1.7670	0.0135	445.7	1.7587	75
80	0.0175	454.5	1.7968	0.0162	453.2	1.7883	0.0150	451.8	1.7801	0.0139	450.4	1.7720	80
85	0.0179	458.9	1.8094	0.0166	457.7	1.8010	0.0154	456.4	1.7929	0.0143	455.1	1.7851	85
90	0.0184	463.4	1.8217	0.0170	462.2	1.8135	0.0158	461.0	1.8056	0.0147	459.7	1.7979	90
95	0.0188	467.9	1.8339	0.0174	466.7	1.8259	0.0161	465.5	1.8181	0.0150	464.3	1.8106	95
100	0.0192	472.3	1.8460	0.0178	471.2	1.8380	0.0165	470.1	1.8304	0.0154	468.9	1.8230	100
105	0.0196	476.8	1.8579	0.0182	475.7	1.8501	0.0169	474.6	1.8425	0.0158	473.5	1.8353	105
110	0.0200	481.3	1.8697	0.0185	480.3	1.8620	0.0173	479.2	1.8546	0.0161	478.1	1.8474	110
115	0.0204	485.8	1.8814	0.0189	484.8	1.8737	0.0176	483.8	1.8664	0.0165	482.8	1.8594	115
120	0.0208	490.3	1.8930	0.0193	489.4	1.8854	0.0180	488.4	1.8782	0.0168	487.4	1.8712	120
125	0.0211	494.9	1.9044	0.0197	493.9	1.8969	0.0183	493.0	1.8898	0.0172	492.0	1.8829	125
130	0.0215	499.4	1.9158	0.0200	498.5	1.9084	0.0187	497.6	1.9013	0.0175	496.6	1.8945	130
135	0.0219	504.0	1.9270	0.0204	503.1	1.9197	0.0190	502.2	1.9127	0.0178	501.3	1.9059	135
140	0.0223	508.6	1.9382	0.0207	507.7	1.9309	0.0194	506.8	1.9239	0.0182	506.0	1.9173	140
145	0.0227	513.2	1.9492	0.0211	512.3	1.9420	0.0197	511.5	1.9351	0.0185	510.6	1.9285	145
150	0.0230	517.8	1.9602	0.0214	517.0	1.9531	0.0200	516.1	1.9462	0.0188	515.3	1.9397	150
155	0.0234	522.4	1.9711	0.0218	521.6	1.9640	0.0204	520.8	1.9572	0.0191	520.0	1.9507	155
160	0.0238	527.1	1.9819	0.0221	526.3	1.9749	0.0207	525.5	1.9681	0.0194	524.7	1.9617	160
165	0.0241	531.7	1.9926	0.0225	531.0	1.9856	0.0210	530.2	1.9790	0.0197	529.5	1.9726	165
170	0.0245	536.4	2.0033	0.0228	535.7	1.9963	0.0214	535.0	1.9897	0.0201	534.2	1.9834	170
175	0.0248	541.2	2.0139	0.0232	540.4	2.0069	0.0217	539.7	2.0004	0.0204	539.0	1.9941	175
180	0.0252	545.9	2.0244	0.0235	545.2	2.0175	0.0220	544.5	2.0109	0.0207	543.8	2.0047	180
185	0.0255	550.6	2.0348	0.0238	550.0	2.0280	0.0223	549.3	2.0215	0.0210	548.6	2.0152	185
190	0.0259	555.4	2.0452	0.0242	554.8	2.0384	0.0226	554.1	2.0319	0.0213	553.4	2.0257	190
195	0.0262	560.2	2.0555	0.0245	559.6	2.0487	0.0230	558.9	2.0423	0.0216	558.3	2.0361	195
200	0.0266	565.0	2.0657	0.0248	564.4	2.0590	0.0233	563.8	2.0526	0.0219	563.1	2.0464	200
205	0.0269	569.9	2.0759	0.0251	569.3	2.0692	0.0236	568.6	2.0628	0.0222	568.0	2.0567	205
210	—	—	—	0.0255	574.1	2.0793	0.0239	573.5	2.0730	0.0225	572.9	2.0669	210
215	—	—	—	—	—	—	—	—	—	0.0228	577.8	2.0770	215

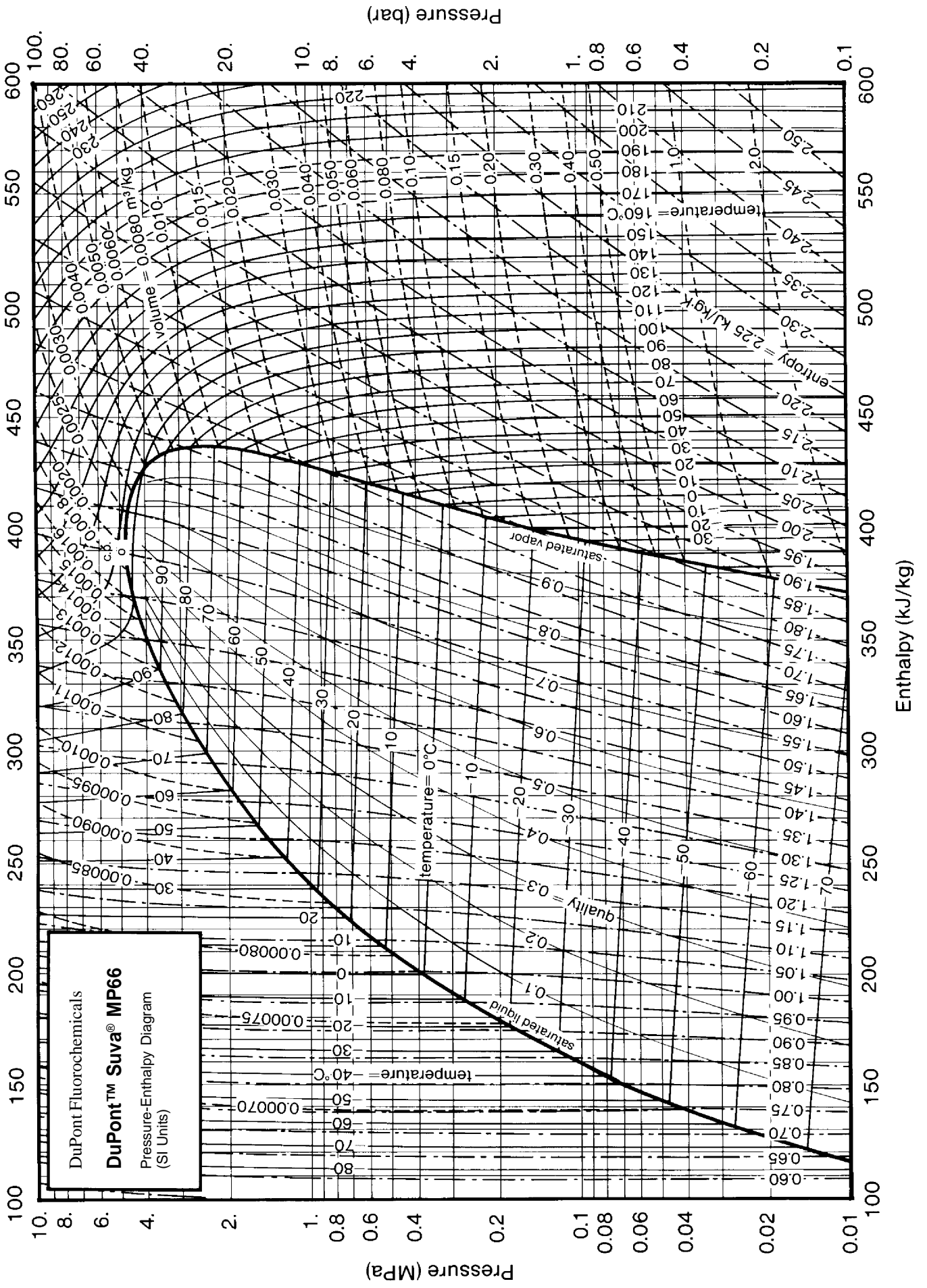
ABSOLUTE PRESSURE, kPa													TEMP. °C
TEMP. °C	1900.0			2000.0			2200.0			2400.0			
	(62.94)			(65.18)			(69.43)			(73.39)			
	V	H	S	V	H	S	V	H	S	V	H	S	
(0.0115)	(432.5)	(1.7163)	(0.0108)	(432.8)	(1.7141)	(0.0097)	(433.3)	(1.7095)	(0.0087)	(433.5)	(1.7048)		
65	0.0117	434.5	1.7224	—	—	—	—	—	—	—	—	—	65
70	0.0121	439.4	1.7367	0.0112	437.7	1.7282	0.0097	433.9	1.7112	—	—	—	70
75	0.0125	444.2	1.7506	0.0117	442.6	1.7425	0.0101	439.2	1.7264	0.0088	435.3	1.7099	75
80	0.0129	449.0	1.7641	0.0121	447.5	1.7563	0.0105	444.3	1.7409	0.0092	440.8	1.7255	80
85	0.0133	453.7	1.7774	0.0124	452.3	1.7699	0.0109	449.3	1.7550	0.0096	446.1	1.7403	85
90	0.0137	458.4	1.7904	0.0128	457.0	1.7831	0.0113	454.2	1.7688	0.0100	451.2	1.7547	90
95	0.0141	463.1	1.8032	0.0132	461.8	1.7961	0.0116	459.1	1.7822	0.0103	456.3	1.7686	95
100	0.0144	467.7	1.8158	0.0135	466.5	1.8088	0.0119	464.0	1.7953	0.0106	461.3	1.7821	100
105	0.0148	472.4	1.8282	0.0139	471.2	1.8214	0.0123	468.8	1.8081	0.0109	466.3	1.7954	105
110	0.0151	477.0	1.8405	0.0142	475.9	1.8337	0.0126	473.6	1.8208	0.0113	471.3	1.8083	110
115	0.0154	481.7	1.8525	0.0145	480.6	1.8459	0.0129	478.4	1.8332	0.0116	476.2	1.8211	115
120	0.0158	486.4	1.8645	0.0148	485.3	1.8580	0.0132	483.2	1.8455	0.0119	481.1	1.8336	120
125	0.0161	491.0	1.8763	0.0152	490.0	1.8699	0.0135	488.0	1.8576	0.0121	485.9	1.8459	125
130	0.0164	495.7	1.8879	0.0155	494.7	1.8816	0.0138	492.8	1.8695	0.0124	490.8	1.8580	130
135	0.0167	500.4	1.8995	0.0158	499.5	1.8932	0.0141	497.6	1.8813	0.0127	495.6	1.8700	135
140	0.0171	505.1	1.9109	0.0161	504.2	1.9047	0.0144	502.4	1.8930	0.0130	500.5	1.8818	140
145	0.0174	509.8	1.9222	0.0164	508.9	1.9161	0.0147	507.2	1.9045	0.0132	505.4	1.8935	145
150	0.0177	514.5	1.9334	0.0167	513.7	1.9274	0.0150	512.0	1.9159	0.0135	510.2	1.9051	150
155	0.0180	519.2	1.9445	0.0170	518.4	1.9385	0.0152	516.8	1.9272	0.0138	515.1	1.9165	155
160	0.0183	524.0	1.9555	0.0173	523.2	1.9496	0.0155	521.6	1.9384	0.0140	520.0	1.9278	160
165	0.0186	528.7	1.9665	0.0176	528.0	1.9606	0.0158	526.4	1.9494	0.0143	524.8	1.9390	165
170	0.0189	533.5	1.9773	0.0179	532.7	1.9715	0.0160	531.2	1.9604	0.0145	529.7	1.9501	170
175	0.0192	538.3	1.9880	0.0181	537.6	1.9823	0.0163	536.1	1.9713	0.0148	534.6	1.9611	175
180	0.0195	543.1	1.9987	0.0184	542.4	1.9930	0.0166	541.0	1.9821	0.0150	539.5	1.9720	180
185	0.0198	547.9	2.0093	0.0187	547.2	2.0036	0.0168	545.8	1.9928	0.0153	544.4	1.9828	185
190	0.0201	552.8	2.0198	0.0190	552.1	2.0141	0.0171	550.7	2.0035	0.0155	549.4	1.9935	190
195	0.0204	557.6	2.0302	0.0193	557.0	2.0246	0.0173	555.6	2.0140	0.0158	554.3	2.0041	195
200	0.0206	562.5	2.0406	0.0195	561.9	2.0350	0.0176	560.6	2.0245	0.0160	559.3	2.0146	200
205	0.0209	567.4	2.0509	0.0198	566.8	2.0453	0.0179	565.5	2.0349	0.0162	564.3	2.0251	205
210	0.0212	572.3	2.0611	0.0201	571.7	2.0556	0.0181	570.5	2.0452	0.0165	569.3	2.0355	210
215	0.0215	577.2	2.0713	0.0203	576.7	2.0658	0.0184	575.5	2.0554	0.0167	574.3	2.0458	215
220	—	—	—	0.0206	581.6	2.0759	0.0186	580.5	2.0656	0.0169	579.3	2.0561	220
225	—	—	—	—	—	—	—	—	—	0.0172	584.3	2.0662	225

TABLE 2 (continued)
SUVA® MP66 Superheated Vapor—Constant Pressure Tables

V = Volume in m³/kg H = Enthalpy in kJ/kg S = Entropy in kJ/(kg)(K) (Saturation Properties in parentheses)

ABSOLUTE PRESSURE, kPa													TEMP. °C
TEMP. °C	2600.0			2800.0			3000.0			3200.0			
	(77.11)			(80.61)			(83.92)			(87.07)			
	V	H	S	V	H	S	V	H	S	V	H	S	
(0.0078)	(433.5)	(1.6998)	(0.0071)	(433.1)	(1.6947)	(0.0064)	(432.5)	(1.6891)	(0.0059)	(431.6)	(1.6832)		
80	0.0081	436.9	1.7095	—	—	—	—	—	—	—	—	—	80
85	0.0085	442.5	1.7254	0.0075	438.6	1.7099	0.0065	434.0	1.6932	—	—	—	85
90	0.0088	448.0	1.7406	0.0078	444.4	1.7262	0.0069	440.5	1.7112	0.0061	435.9	1.6950	90
95	0.0092	453.3	1.7551	0.0082	450.1	1.7416	0.0073	446.5	1.7278	0.0065	442.6	1.7133	95
100	0.0095	458.5	1.7692	0.0085	455.5	1.7564	0.0077	452.3	1.7434	0.0069	448.8	1.7301	100
105	0.0098	463.7	1.7829	0.0088	460.9	1.7706	0.0080	457.9	1.7583	0.0072	454.7	1.7459	105
110	0.0101	468.8	1.7963	0.0091	466.1	1.7844	0.0083	464.4	1.7727	0.0075	460.4	1.7609	110
115	0.0104	473.8	1.8093	0.0094	471.3	1.7979	0.0086	468.7	1.7866	0.0078	466.0	1.7753	115
120	0.0107	478.8	1.8221	0.0097	476.5	1.8110	0.0088	474.0	1.8001	0.0081	471.5	1.7893	120
125	0.0110	483.8	1.8347	0.0100	481.5	1.8239	0.0091	479.2	1.8133	0.0083	476.8	1.8029	125
130	0.0113	488.7	1.8471	0.0102	486.6	1.8365	0.0094	484.4	1.8262	0.0086	482.1	1.8161	130
135	0.0115	493.7	1.8593	0.0105	491.6	1.8489	0.0096	489.6	1.8389	0.0088	487.4	1.8291	135
140	0.0118	498.6	1.8713	0.0107	496.7	1.8611	0.0099	494.7	1.8513	0.0091	492.6	1.8418	140
145	0.0120	503.5	1.8831	0.0110	501.7	1.8731	0.0101	499.7	1.8635	0.0093	497.8	1.8542	145
150	0.0123	508.5	1.8948	0.0112	506.7	1.8850	0.0103	504.8	1.8756	0.0095	502.9	1.8665	150
155	0.0125	513.4	1.9064	0.0115	511.6	1.8967	0.0106	509.9	1.8875	0.0098	508.1	1.8785	155
160	0.0128	518.3	1.9178	0.0117	516.6	1.9083	0.0108	514.9	1.8992	0.0100	513.2	1.8904	160
165	0.0130	523.2	1.9291	0.0119	521.6	1.9198	0.0110	520.0	1.9108	0.0102	518.3	1.9021	165
170	0.0133	528.2	1.9403	0.0122	526.6	1.9311	0.0112	525.0	1.9222	0.0104	523.4	1.9137	170
175	0.0135	533.1	1.9514	0.0124	531.6	1.9423	0.0114	530.1	1.9335	0.0106	528.5	1.9251	175
180	0.0137	538.1	1.9624	0.0126	536.6	1.9534	0.0116	535.1	1.9447	0.0108	533.6	1.9365	180
185	0.0140	543.0	1.9733	0.0128	541.6	1.9643	0.0119	540.2	1.9558	0.0110	538.7	1.9476	185
190	0.0142	548.0	1.9841	0.0131	546.6	1.9752	0.0121	545.2	1.9668	0.0112	543.8	1.9587	190
195	0.0144	553.0	1.9948	0.0133	551.6	1.9860	0.0123	550.3	1.9777	0.0114	548.9	1.9697	195
200	0.0146	558.0	2.0054	0.0135	556.7	1.9967	0.0125	555.3	1.9884	0.0116	554.0	1.9805	200
205	0.0149	563.0	2.0160	0.0137	561.7	2.0073	0.0127	560.4	1.9991	0.0118	559.1	1.9913	205
210	0.0151	568.0	2.0264	0.0139	566.8	2.0178	0.0129	565.5	2.0097	0.0120	564.3	2.0020	210
215	0.0153	573.1	2.0368	0.0141	571.8	2.0283	0.0131	570.6	2.0202	0.0122	569.4	2.0126	215
220	0.0155	578.1	2.0471	0.0143	576.9	2.0387	0.0133	575.7	2.0307	0.0124	574.5	2.0231	220
225	0.0157	583.2	2.0573	0.0145	582.0	2.0489	0.0135	580.9	2.0410	0.0125	579.7	2.0335	225
230	0.0160	588.3	2.0675	0.0147	587.1	2.0592	0.0137	586.0	2.0513	0.0127	584.9	2.0438	230
235	—	—	—	0.0149	592.3	2.0693	0.0138	591.2	2.0615	0.0129	590.1	2.0540	235
240	—	—	—	—	—	—	—	—	—	0.0131	595.3	2.0642	240

ABSOLUTE PRESSURE, kPa													TEMP. °C
TEMP. °C	3400.0			3600.0			3800.0			4000.0			
	(90.06)			(92.91)			(95.63)			(98.23)			
	V	H	S	V	H	S	V	H	S	V	H	S	
(0.0053)	(430.4)	(1.6767)	(0.0049)	(428.8)	(1.6695)	(0.0044)	(426.7)	(1.6614)	(0.0040)	(424.1)	(1.6520)		
95	0.0058	438.0	1.6976	0.0051	432.6	1.6799	—	—	—	—	—	—	95
100	0.0062	444.9	1.7162	0.0055	440.5	1.7012	0.0049	435.2	1.6844	0.0042	428.5	1.6639	100
105	0.0065	451.3	1.7331	0.0059	447.5	1.7198	0.0053	443.2	1.7055	0.0047	438.2	1.6898	105
110	0.0068	457.3	1.7490	0.0062	453.9	1.7368	0.0056	450.3	1.7241	0.0051	446.2	1.7106	110
115	0.0071	463.1	1.7641	0.0065	460.1	1.7527	0.0059	456.8	1.7411	0.0054	453.3	1.7290	115
120	0.0074	468.8	1.7786	0.0068	466.0	1.7679	0.0062	463.0	1.7570	0.0057	459.9	1.7459	120
125	0.0076	474.4	1.7926	0.0070	471.7	1.7824	0.0065	469.0	1.7721	0.0060	466.1	1.7618	125
130	0.0079	479.8	1.8062	0.0073	477.4	1.7964	0.0067	474.8	1.7867	0.0062	472.2	1.7769	130
135	0.0081	485.2	1.8195	0.0075	482.9	1.8100	0.0070	480.5	1.8007	0.0065	478.1	1.7914	135
140	0.0084	490.5	1.8324	0.0078	488.3	1.8233	0.0072	486.1	1.8143	0.0067	483.8	1.8054	140
145	0.0086	495.8	1.8451	0.0080	493.7	1.8363	0.0074	491.6	1.8275	0.0069	489.4	1.8189	145
150	0.0088	501.0	1.8576	0.0082	499.1	1.8490	0.0076	497.1	1.8405	0.0071	495.0	1.8322	150
155	0.0090	506.2	1.8698	0.0084	504.4	1.8614	0.0078	502.5	1.8532	0.0073	500.5	1.8451	155
160	0.0093	511.4	1.8819	0.0086	509.6	1.8736	0.0080	507.8	1.8656	0.0075	506.0	1.8577	160
165	0.0095	516.6	1.8938	0.0088	514.9	1.8857	0.0082	513.1	1.8778	0.0077	511.4	1.8701	165
170	0.0097	521.8	1.9055	0.0090	520.1	1.8976	0.0084	518.4	1.8898	0.0079	516.7	1.8823	170
175	0.0099	526.9	1.9171	0.0092	525.3	1.9093	0.0086	523.7	1.9017	0.0081	522.1	1.8943	175
180	0.0101	532.1	1.9285	0.0094	530.5	1.9208	0.0088	529.0	1.9134	0.0083	527.4	1.9061	180
185	0.0103	537.2	1.9398	0.0096	535.7	1.9322	0.0090	534.2	1.9249	0.0084	532.7	1.9178	185
190	0.0104	542.4	1.9510	0.0098	540.9	1.9435	0.0092	539.5	1.9363	0.0086	538.0	1.9293	190
195	0.0106	547.5	1.9620	0.0099	546.1	1.9547	0.0093	544.7	1.9476	0.0088	543.3	1.9407	195
200	0.0108	552.7	1.9730	0.0101	551.3	1.9657	0.0095	550.0	1.9587	0.0090	548.6	1.9519	200
205	0.0110	557.8	1.9838	0.0103	556.5	1.9766	0.0097	555.2	1.9697	0.0091	553.9	1.9630	205
210	0.0112	563.0	1.9946	0.0105	561.7	1.9875	0.0099	560.4	1.9806	0.0093	559.2	1.9740	210
215	0.0114	568.2	2.0052	0.0107	566.9	1.9982	0.0100	565.7	1.9914	0.0094	564.4	1.9849	215
220	0.0115	573.3	2.0158	0.0108	572.1	2.0088	0.0102	570.9	2.0021	0.0096	569.7	1.9957	220
225	0.0117	578.5	2.0263	0.0110	577.4	2.0194	0.0103	576.2	2.0127	0.0098	575.0	2.0063	225
230	0.0119	583.7	2.0366	0.0112	582.6	2.0298	0.0105	581.5	2.0232	0.0099	580.3	2.0169	230
235	0.0121	589.0	2.0470	0.0113	587.8	2.0402	0.0107	586.7	2.0337	0.0101	585.6	2.0274	235
240	0.0122	594.2	2.0572	0.0115	593.1	2.0505	0.0108	592.0	2.0440	0.0102	590.9	2.0378	240
245	0.0124	599.4	2.0674	0.0117	598.4	2.0607	0.0110	597.3	2.0543	0.0104	596.3	2.0481	245
250	—	—	—	—	—	—	0.0111	602.6	2.0645	0.0105	601.6	2.0584	250



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(3/05) 235707 Printed in U.S.A.
[Replaces: H-47760-1]
Reorder No.: H-47760-2

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