



Suva[®]
refrigerants

**Thermodynamic
Properties
of
Suva[®] 507
Refrigerant**

(R-507)

A solid black horizontal bar is positioned below the text "(R-507)".

Thermodynamic Properties of Suva® 507 Refrigerant

SI Units

Tables of the thermodynamic properties of Suva® 507 are based on values calculated using the NIST REFPROP Database (McLinden, M. O., Klein, S. A., Lemmon, E. W., and Peskin, A. P., NIST Standard Reference Database 23, NIST thermodynamic and transport properties of refrigerants and refrigerant mixtures REFPROP, Version 6.01, Standard Reference Data Program, National Institute of Standards and Technology, 1998).

Table 1
R-507 Saturation Properties—Temperature Table

Temp (°C)	Pressure (kPa)		Density (kg/m ³)		Volume (m ³ /kg)		Enthalpy (kJ/kg)			Entropy (kJ/K-kg)	
	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Latent	Vapor	Liquid	Vapor
-100	3.1	3.1	1471.0	0.215	0.0007	4.659	77.3	225.8	303.1	0.4469	1.7510
-99	3.4	3.4	1469.0	0.233	0.0007	4.284	78.4	225.2	303.6	0.4533	1.7470
-98	3.7	3.7	1466.0	0.254	0.0007	3.944	79.5	224.7	304.2	0.4597	1.7430
-97	4.1	4.1	1463.0	0.275	0.0007	3.635	80.7	224.2	304.8	0.4661	1.7390
-96	4.4	4.4	1460.0	0.298	0.0007	3.354	81.8	223.6	305.4	0.4725	1.7350
-95	4.8	4.8	1458.0	0.323	0.0007	3.098	82.9	223.1	306.0	0.4788	1.7310
-94	5.2	5.2	1455.0	0.349	0.0007	2.865	84.0	222.6	306.6	0.4851	1.7280
-93	5.7	5.7	1452.0	0.377	0.0007	2.652	85.2	222.1	307.2	0.4914	1.7240
-92	6.2	6.2	1449.0	0.407	0.0007	2.457	86.3	221.5	307.8	0.4976	1.7210
-91	6.7	6.7	1447.0	0.439	0.0007	2.279	87.4	221.0	308.4	0.5039	1.7170
-90	7.2	7.2	1444.0	0.473	0.0007	2.116	88.6	220.5	309.0	0.5101	1.7140
-89	7.8	7.8	1441.0	0.509	0.0007	1.966	89.7	219.9	309.6	0.5163	1.7110
-88	8.5	8.4	1438.0	0.547	0.0007	1.829	90.8	219.5	310.3	0.5224	1.7080
-87	9.1	9.1	1436.0	0.587	0.0007	1.703	92.0	218.9	310.9	0.5286	1.7040
-86	9.8	9.8	1433.0	0.630	0.0007	1.587	93.1	218.4	311.5	0.5347	1.7010
-85	10.6	10.6	1430.0	0.675	0.0007	1.481	94.3	217.8	312.1	0.5408	1.6980
-84	11.4	11.4	1427.0	0.723	0.0007	1.382	95.4	217.3	312.7	0.5469	1.6960
-83	12.3	12.3	1424.0	0.774	0.0007	1.292	96.6	216.8	313.3	0.5529	1.6930
-82	13.2	13.2	1422.0	0.828	0.0007	1.208	97.7	216.2	313.9	0.5590	1.6900
-81	14.1	14.1	1419.0	0.884	0.0007	1.131	98.9	215.7	314.5	0.5650	1.6870
-80	15.2	15.2	1416.0	0.944	0.0007	1.059	100.0	215.1	315.1	0.5710	1.6850
-79	16.2	16.2	1413.0	1.007	0.0007	0.993	101.2	214.5	315.7	0.5769	1.6820
-78	17.4	17.4	1410.0	1.073	0.0007	0.932	102.3	214.0	316.3	0.5829	1.6800
-77	18.6	18.6	1407.0	1.143	0.0007	0.875	103.5	213.4	316.9	0.5888	1.6770
-76	19.9	19.9	1405.0	1.216	0.0007	0.822	104.6	213.0	317.6	0.5947	1.6750
-75	21.2	21.2	1402.0	1.293	0.0007	0.773	105.8	212.4	318.2	0.6006	1.6720
-74	22.7	22.7	1399.0	1.374	0.0007	0.728	107.0	211.8	318.8	0.6065	1.6700
-73	24.2	24.2	1396.0	1.459	0.0007	0.685	108.1	211.3	319.4	0.6123	1.6680
-72	25.7	25.7	1393.0	1.548	0.0007	0.646	109.3	210.7	320.0	0.6181	1.6660
-71	27.4	27.4	1390.0	1.642	0.0007	0.609	110.5	210.1	320.6	0.6239	1.6630
-70	29.2	29.2	1387.0	1.740	0.0007	0.575	111.7	209.5	321.2	0.6297	1.6610
-69	31.0	31.0	1384.0	1.842	0.0007	0.543	112.8	209.0	321.8	0.6355	1.6590
-68	32.9	32.9	1381.0	1.950	0.0007	0.513	114.0	208.5	322.5	0.6412	1.6570
-67	35.0	35.0	1379.0	2.062	0.0007	0.485	115.2	207.9	323.1	0.6470	1.6550
-66	37.1	37.1	1376.0	2.179	0.0007	0.459	116.4	207.3	323.7	0.6527	1.6530
-65	39.3	39.3	1373.0	2.302	0.0007	0.434	117.6	206.7	324.3	0.6584	1.6520
-64	41.7	41.7	1370.0	2.430	0.0007	0.412	118.7	206.2	324.9	0.6640	1.6500
-63	44.1	44.1	1367.0	2.563	0.0007	0.390	119.9	205.6	325.5	0.6697	1.6480
-62	46.7	46.7	1364.0	2.703	0.0007	0.370	121.1	205.0	326.1	0.6753	1.6460
-61	49.4	49.4	1361.0	2.848	0.0007	0.351	122.3	204.4	326.7	0.6809	1.6450
-60	52.2	52.2	1358.0	2.999	0.0007	0.333	123.5	203.8	327.3	0.6865	1.6430
-59	55.1	55.1	1355.0	3.157	0.0007	0.317	124.7	203.3	328.0	0.6921	1.6410
-58	58.2	58.2	1352.0	3.321	0.0007	0.301	125.9	202.7	328.6	0.6977	1.6400
-57	61.4	61.4	1349.0	3.492	0.0007	0.286	127.1	202.1	329.2	0.7033	1.6380
-56	64.8	64.8	1346.0	3.670	0.0007	0.273	128.3	201.5	329.8	0.7088	1.6370
-55	68.3	68.2	1343.0	3.855	0.0007	0.259	129.5	200.9	330.4	0.7143	1.6350
-54	71.9	71.9	1340.0	4.047	0.0008	0.247	130.7	200.3	331.0	0.7198	1.6340
-53	75.7	75.7	1337.0	4.246	0.0008	0.236	131.9	199.7	331.6	0.7253	1.6320
-52	79.6	79.6	1334.0	4.453	0.0008	0.225	133.1	199.1	332.2	0.7308	1.6310
-51	83.7	83.7	1331.0	4.669	0.0008	0.214	134.3	198.5	332.8	0.7363	1.6300

Table 1 (continued)
R-507 Saturation Properties—Temperature Table

Temp (°C)	Pressure (kPa)		Density (kg/m ³)		Volume (m ³ /kg)		Enthalpy (kJ/kg)			Entropy (kJ/K-kg)	
	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Latent	Vapor	Liquid	Vapor
-50	88.0	88.0	1328.0	4.892	0.0008	0.204	135.6	197.8	333.4	0.7417	1.6280
-49	92.4	92.4	1325.0	5.123	0.0008	0.195	136.8	197.2	334.0	0.7472	1.6270
-48	97.0	97.0	1322.0	5.363	0.0008	0.187	138.0	196.6	334.6	0.7526	1.6260
-47	101.8	101.8	1319.0	5.612	0.0008	0.178	139.2	196.0	335.2	0.7580	1.6250
-46	106.8	106.8	1315.0	5.870	0.0008	0.170	140.5	195.3	335.8	0.7634	1.6230
-45	112.0	112.0	1312.0	6.137	0.0008	0.163	141.7	194.7	336.4	0.7687	1.6220
-44	117.3	117.3	1309.0	6.413	0.0008	0.156	142.9	194.1	337.0	0.7741	1.6210
-43	122.9	122.9	1306.0	6.699	0.0008	0.149	144.1	193.5	337.6	0.7795	1.6200
-42	128.7	128.6	1303.0	6.995	0.0008	0.143	145.4	192.8	338.2	0.7848	1.6190
-41	134.6	134.6	1300.0	7.301	0.0008	0.137	146.6	192.2	338.8	0.7901	1.6180
-40	140.8	140.8	1297.0	7.618	0.0008	0.131	147.9	191.5	339.4	0.7954	1.6170
-39	147.2	147.2	1293.0	7.945	0.0008	0.126	149.1	190.9	340.0	0.8007	1.6160
-38	153.9	153.8	1290.0	8.283	0.0008	0.121	150.3	190.3	340.6	0.8060	1.6150
-37	160.7	160.7	1287.0	8.633	0.0008	0.116	151.6	189.6	341.2	0.8113	1.6140
-36	167.8	167.8	1284.0	8.994	0.0008	0.111	152.8	189.0	341.8	0.8166	1.6130
-35	175.2	175.1	1281.0	9.366	0.0008	0.107	154.1	188.2	342.3	0.8218	1.6120
-34	182.8	182.7	1277.0	9.751	0.0008	0.103	155.4	187.5	342.9	0.8271	1.6110
-33	190.6	190.5	1274.0	10.150	0.0008	0.099	156.6	186.9	343.5	0.8323	1.6110
-32	198.7	198.6	1271.0	10.560	0.0008	0.095	157.9	186.2	344.1	0.8375	1.6100
-31	207.1	207.0	1268.0	10.980	0.0008	0.091	159.1	185.6	344.7	0.8427	1.6090
-30	215.7	215.6	1264.0	11.420	0.0008	0.088	160.4	184.9	345.3	0.8479	1.6080
-29	224.6	224.5	1261.0	11.870	0.0008	0.084	161.7	184.1	345.8	0.8531	1.6070
-28	233.8	233.7	1258.0	12.330	0.0008	0.081	163.0	183.4	346.4	0.8583	1.6070
-27	243.2	243.1	1254.0	12.810	0.0008	0.078	164.2	182.8	347.0	0.8635	1.6060
-26	253.0	252.9	1251.0	13.300	0.0008	0.075	165.5	182.0	347.5	0.8686	1.6050
-25	263.1	262.9	1248.0	13.800	0.0008	0.072	166.8	181.3	348.1	0.8738	1.6040
-24	273.4	273.3	1244.0	14.330	0.0008	0.070	168.1	180.6	348.7	0.8789	1.6040
-23	284.1	283.9	1241.0	14.860	0.0008	0.067	169.4	179.8	349.2	0.8840	1.6030
-22	295.1	294.9	1237.0	15.420	0.0008	0.065	170.7	179.1	349.8	0.8892	1.6020
-21	306.4	306.2	1234.0	15.990	0.0008	0.063	172.0	178.4	350.4	0.8943	1.6020
-20	318.0	317.8	1231.0	16.570	0.0008	0.060	173.3	177.6	350.9	0.8994	1.6010
-19	330.0	329.8	1227.0	17.180	0.0008	0.058	174.6	176.9	351.5	0.9045	1.6010
-18	342.3	342.1	1224.0	17.800	0.0008	0.056	175.9	176.1	352.0	0.9096	1.6000
-17	354.9	354.7	1220.0	18.430	0.0008	0.054	177.2	175.4	352.6	0.9146	1.5990
-16	367.9	367.7	1217.0	19.090	0.0008	0.052	178.5	174.6	353.1	0.9197	1.5990
-15	381.3	381.0	1213.0	19.770	0.0008	0.051	179.8	173.9	353.7	0.9248	1.5980
-14	395.0	394.8	1209.0	20.460	0.0008	0.049	181.1	173.1	354.2	0.9298	1.5980
-13	409.1	408.9	1206.0	21.170	0.0008	0.047	182.5	172.3	354.8	0.9349	1.5970
-12	423.6	423.3	1202.0	21.910	0.0008	0.046	183.8	171.5	355.3	0.9399	1.5970
-11	438.5	438.2	1199.0	22.660	0.0008	0.044	185.1	170.7	355.8	0.9450	1.5960
-10	453.7	453.4	1195.0	23.440	0.0008	0.043	186.4	170.0	356.4	0.9500	1.5960
-9	469.4	469.0	1191.0	24.230	0.0008	0.041	187.8	169.1	356.9	0.9550	1.5950
-8	485.4	485.1	1188.0	25.050	0.0008	0.040	189.1	168.3	357.4	0.9600	1.5950
-7	501.9	501.5	1184.0	25.890	0.0008	0.039	190.5	167.4	357.9	0.9651	1.5940
-6	518.8	518.4	1180.0	26.760	0.0009	0.037	191.8	166.7	358.5	0.9701	1.5940
-5	536.1	535.7	1176.0	27.650	0.0009	0.036	193.2	165.8	359.0	0.9751	1.5930
-4	553.8	553.4	1173.0	28.560	0.0009	0.035	194.5	165.0	359.5	0.9801	1.5930
-3	572.0	571.6	1169.0	29.490	0.0009	0.034	195.9	164.1	360.0	0.9851	1.5930
-2	590.6	590.2	1165.0	30.460	0.0009	0.033	197.3	163.2	360.5	0.9900	1.5920
-1	609.7	609.2	1161.0	31.440	0.0009	0.032	198.6	162.4	361.0	0.9950	1.5920

Table 1 (continued)
R-507 Saturation Properties—Temperature Table

Temp (°C)	Pressure (kPa)		Density (kg/m ³)		Volume (m ³ /kg)		Enthalpy (kJ/kg)			Entropy (kJ/K-kg)	
	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Latent	Vapor	Liquid	Vapor
0	629.3	628.7	1157.0	32.460	0.0009	0.031	200.0	161.5	361.5	1.0000	1.5910
1	649.3	648.7	1153.0	33.500	0.0009	0.030	201.4	160.6	362.0	1.0050	1.5910
2	669.7	669.1	1150.0	34.570	0.0009	0.029	202.8	159.7	362.5	1.0100	1.5900
3	690.7	690.1	1146.0	35.670	0.0009	0.028	204.1	158.9	363.0	1.0150	1.5900
4	712.1	711.5	1142.0	36.800	0.0009	0.027	205.5	157.9	363.4	1.0200	1.5900
5	734.0	733.4	1138.0	37.950	0.0009	0.026	206.9	157.0	363.9	1.0250	1.5890
6	756.5	755.8	1133.0	39.140	0.0009	0.026	208.3	156.1	364.4	1.0300	1.5890
7	779.4	778.7	1129.0	40.360	0.0009	0.025	209.7	155.2	364.9	1.0350	1.5880
8	802.9	802.2	1125.0	41.620	0.0009	0.024	211.2	154.1	365.3	1.0400	1.5880
9	826.9	826.1	1121.0	42.910	0.0009	0.023	212.6	153.2	365.8	1.0450	1.5880
10	851.4	850.6	1117.0	44.230	0.0009	0.023	214.0	152.2	366.2	1.0500	1.5870
11	876.4	875.6	1113.0	45.580	0.0009	0.022	215.4	151.3	366.7	1.0550	1.5870
12	902.0	901.2	1108.0	46.980	0.0009	0.021	216.9	150.2	367.1	1.0600	1.5860
13	928.2	927.3	1104.0	48.410	0.0009	0.021	218.3	149.2	367.5	1.0640	1.5860
14	954.9	954.0	1100.0	49.880	0.0009	0.020	219.7	148.3	368.0	1.0690	1.5860
15	982.2	981.3	1095.0	51.390	0.0009	0.019	221.2	147.2	368.4	1.0740	1.5850
16	1010.0	1009.0	1091.0	52.940	0.0009	0.019	222.6	146.2	368.8	1.0790	1.5850
17	1039.0	1038.0	1086.0	54.540	0.0009	0.018	224.1	145.1	369.2	1.0840	1.5840
18	1068.0	1067.0	1082.0	56.170	0.0009	0.018	225.6	144.0	369.6	1.0890	1.5840
19	1097.0	1096.0	1077.0	57.850	0.0009	0.017	227.1	142.9	370.0	1.0940	1.5840
20	1127.0	1126.0	1073.0	59.580	0.0009	0.017	228.5	141.9	370.4	1.0990	1.5830
21	1158.0	1157.0	1068.0	61.360	0.0009	0.016	230.0	140.8	370.8	1.1040	1.5830
22	1190.0	1189.0	1063.0	63.190	0.0009	0.016	231.5	139.7	371.2	1.1090	1.5820
23	1222.0	1221.0	1059.0	65.060	0.0009	0.015	233.0	138.5	371.5	1.1140	1.5820
24	1255.0	1254.0	1054.0	66.990	0.0010	0.015	234.5	137.4	371.9	1.1190	1.5810
25	1288.0	1287.0	1049.0	68.980	0.0010	0.015	236.0	136.2	372.2	1.1240	1.5810
26	1322.0	1321.0	1044.0	71.020	0.0010	0.014	237.6	135.0	372.6	1.1290	1.5800
27	1357.0	1356.0	1039.0	73.120	0.0010	0.014	239.1	133.8	372.9	1.1340	1.5800
28	1392.0	1391.0	1034.0	75.280	0.0010	0.013	240.6	132.6	373.2	1.1390	1.5790
29	1429.0	1427.0	1029.0	77.510	0.0010	0.013	242.2	131.3	373.5	1.1440	1.5790
30	1465.0	1464.0	1024.0	79.800	0.0010	0.013	243.7	130.2	373.9	1.1490	1.5780
31	1503.0	1502.0	1018.0	82.160	0.0010	0.012	245.3	128.8	374.1	1.1540	1.5780
32	1541.0	1540.0	1013.0	84.590	0.0010	0.012	246.9	127.5	374.4	1.1590	1.5770
33	1580.0	1579.0	1008.0	87.090	0.0010	0.011	248.5	126.2	374.7	1.1640	1.5770
34	1620.0	1618.0	1002.0	89.670	0.0010	0.011	250.0	125.0	375.0	1.1690	1.5760
35	1660.0	1659.0	996.5	92.340	0.0010	0.011	251.7	123.5	375.2	1.1740	1.5750
36	1702.0	1700.0	990.9	95.090	0.0010	0.011	253.3	122.1	375.4	1.1790	1.5750
37	1744.0	1742.0	985.1	97.920	0.0010	0.010	254.9	120.7	375.6	1.1850	1.5740
38	1786.0	1785.0	979.3	100.900	0.0010	0.010	256.5	119.4	375.9	1.1900	1.5730
39	1830.0	1828.0	973.3	103.900	0.0010	0.010	258.2	117.8	376.0	1.1950	1.5720
40	1874.0	1873.0	967.2	107.000	0.0010	0.009	259.8	116.4	376.2	1.2000	1.5720
41	1919.0	1918.0	961.1	110.200	0.0010	0.009	261.5	114.9	376.4	1.2050	1.5710
42	1965.0	1964.0	954.8	113.600	0.0011	0.009	263.2	113.3	376.5	1.2100	1.5700
43	2012.0	2011.0	948.4	117.100	0.0011	0.009	264.9	111.7	376.6	1.2160	1.5690
44	2060.0	2058.0	941.8	120.700	0.0011	0.008	266.6	110.1	376.7	1.2210	1.5680
45	2109.0	2107.0	935.2	124.400	0.0011	0.008	268.3	108.5	376.8	1.2260	1.5670
46	2158.0	2156.0	928.3	128.300	0.0011	0.008	270.1	106.8	376.9	1.2310	1.5660
47	2208.0	2206.0	921.4	132.300	0.0011	0.008	271.8	105.1	376.9	1.2370	1.5650
48	2259.0	2258.0	914.2	136.500	0.0011	0.007	273.6	103.3	376.9	1.2420	1.5640
49	2312.0	2310.0	906.9	140.900	0.0011	0.007	275.4	101.5	376.9	1.2480	1.5630

Table 1 (continued)
R-507 Saturation Properties—Temperature Table

Temp (°C)	Pressure (kPa)		Density (kg/m ³)		Volume (m ³ /kg)		Enthalpy (kJ/kg)			Entropy (kJ/K-kg)	
	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Latent	Vapor	Liquid	Vapor
50	2365.0	2363.0	899.4	145.400	0.0011	0.007	277.2	99.6	376.8	1.2530	1.5610
51	2419.0	2417.0	891.7	150.200	0.0011	0.007	279.1	97.7	376.8	1.2590	1.5600
52	2474.0	2472.0	883.7	155.100	0.0011	0.006	280.9	95.7	376.6	1.2640	1.5580
53	2529.0	2528.0	875.5	160.400	0.0011	0.006	282.8	93.7	376.5	1.2700	1.5570
54	2586.0	2584.0	867.1	165.800	0.0012	0.006	284.7	91.6	376.3	1.2750	1.5550
55	2644.0	2642.0	858.3	171.600	0.0012	0.006	286.7	89.4	376.1	1.2810	1.5530
56	2703.0	2701.0	849.3	177.700	0.0012	0.006	288.7	87.1	375.8	1.2870	1.5520
57	2763.0	2761.0	839.8	184.100	0.0012	0.005	290.7	84.7	375.4	1.2930	1.5500
58	2824.0	2822.0	830.0	190.900	0.0012	0.005	292.7	82.3	375.0	1.2990	1.5470
59	2887.0	2885.0	819.7	198.200	0.0012	0.005	294.9	79.7	374.6	1.3050	1.5450
60	2950.0	2948.0	808.9	206.000	0.0012	0.005	297.0	77.0	374.0	1.3110	1.5420
61	3015.0	3013.0	797.5	214.400	0.0013	0.005	299.2	74.2	373.4	1.3180	1.5400
62	3080.0	3078.0	785.4	223.400	0.0013	0.004	301.5	71.2	372.7	1.3240	1.5360
63	3147.0	3145.0	772.4	233.400	0.0013	0.004	303.9	67.9	371.8	1.3310	1.5330
64	3215.0	3214.0	758.3	244.300	0.0013	0.004	306.4	64.4	370.8	1.3380	1.5290
65	3285.0	3283.0	743.0	256.500	0.0014	0.004	309.0	60.6	369.6	1.3460	1.5250

Table 2
R-507 Superheated Vapor—Constant Pressure Tables

Temp (°C)	Absolute Pressure (kPa)											
	10 (-85.8°C)			20 (-74.5°C)			30 (-69.5°C)			40 (-64.7°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)
-70	1.6970	322.1	1.754	0.8430	321.6	1.695	-	-	-	-	-	-
-65	1.7400	325.5	1.771	0.8648	325.1	1.711	0.5729	324.7	1.676	-	-	-
-60	1.7830	329.0	1.788	0.8865	328.6	1.728	0.5877	328.2	1.693	0.4382	327.8	1.667
-55	1.8260	332.5	1.804	0.9082	332.1	1.744	0.6023	331.8	1.709	0.4494	331.4	1.684
-50	1.8680	336.1	1.820	0.9298	335.7	1.761	0.6169	335.4	1.725	0.4605	335.1	1.700
-45	1.9110	339.7	1.836	0.9513	339.4	1.777	0.6315	339.1	1.742	0.4715	338.7	1.716
-40	1.9530	343.3	1.852	0.9728	343.0	1.793	0.6460	342.8	1.758	0.4825	342.5	1.733
-35	1.9960	347.0	1.868	0.9943	346.8	1.809	0.6604	346.5	1.774	0.4935	346.2	1.749
-30	2.0380	350.8	1.883	1.0160	350.5	1.824	0.6748	350.3	1.789	0.5044	350.0	1.764
-25	2.0810	354.6	1.899	1.0370	354.4	1.840	0.6892	354.1	1.805	0.5153	353.9	1.780
-20	2.1230	358.5	1.914	1.0580	358.2	1.855	0.7036	358.0	1.820	0.5261	357.8	1.796
-15	2.1650	362.4	1.929	1.0800	362.1	1.870	0.7179	361.9	1.836	0.5370	361.7	1.811
-10	2.2080	366.3	1.945	1.1010	366.1	1.886	0.7322	365.9	1.851	0.5478	365.7	1.826
-5	2.2500	370.3	1.960	1.1220	370.1	1.901	0.7465	369.9	1.866	0.5585	369.7	1.841
0	2.2920	374.3	1.974	1.1440	374.1	1.916	0.7607	374.0	1.881	0.5693	373.8	1.856
5	2.3350	378.4	1.989	1.1650	378.2	1.931	0.7750	378.1	1.896	0.5800	377.9	1.871
10	2.3770	382.5	2.004	1.1860	382.4	1.945	0.7892	382.2	1.911	0.5908	382.1	1.886
15	2.4190	386.7	2.019	1.2070	386.6	1.960	0.8034	386.4	1.925	0.6015	386.3	1.901
20	2.4610	390.9	2.033	1.2290	390.8	1.974	0.8176	390.7	1.940	0.6122	390.5	1.915
25	2.5040	395.2	2.048	1.2500	395.1	1.989	0.8318	394.9	1.955	0.6229	394.8	1.930
30	2.5460	399.5	2.062	1.2710	399.4	2.003	0.8460	399.3	1.969	0.6335	399.1	1.944
35	2.5880	403.9	2.076	1.2920	403.8	2.018	0.8602	403.6	1.983	0.6442	403.5	1.959
40	2.6300	408.3	2.090	1.3130	408.2	2.032	0.8743	408.0	1.997	0.6549	407.9	1.973
45	2.6720	412.7	2.104	1.3340	412.6	2.046	0.8885	412.5	2.012	0.6655	412.4	1.987
50	2.7150	417.2	2.118	1.3560	417.1	2.060	0.9026	417.0	2.026	0.6761	416.9	2.001
55	2.7570	421.8	2.132	1.3770	421.6	2.074	0.9168	421.5	2.040	0.6868	421.4	2.015
60	2.7990	426.3	2.146	1.3980	426.2	2.088	0.9309	426.1	2.053	0.6974	426.0	2.029
65	2.8410	431.0	2.160	1.4190	430.9	2.101	0.9450	430.8	2.067	0.7080	430.7	2.043
70	2.8830	435.7	2.174	1.4400	435.6	2.115	0.9592	435.5	2.081	0.7186	435.4	2.057
75	2.9250	440.3	2.187	1.4610	440.2	2.129	0.9733	440.1	2.095	0.7292	440.0	2.070
80	2.9670	445.1	2.201	1.4820	445.0	2.142	0.9874	444.9	2.108	0.7399	444.8	2.084

Temp (°C)	Absolute Pressure (kPa)											
	50 (-60.8°C)			60 (-57.4°C)			70 (-54.5°C)			80 (-51.9°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)
-60	0.3485	327.4	1.647	0.0007	123.5	0.687	0.0007	123.5	0.687	0.0007	123.5	0.687
-55	0.3576	331.1	1.664	0.2964	330.7	1.647	0.0007	129.5	0.714	0.0007	129.5	0.714
-50	0.3666	334.7	1.680	0.3040	334.4	1.664	0.2593	334.0	1.650	0.2257	333.7	1.637
-45	0.3756	338.4	1.697	0.3116	338.1	1.680	0.2658	337.8	1.666	0.2315	337.5	1.654
-40	0.3845	342.2	1.713	0.3191	341.9	1.697	0.2724	341.6	1.683	0.2373	341.3	1.671
-35	0.3933	346.0	1.729	0.3265	345.7	1.713	0.2788	345.4	1.699	0.2430	345.1	1.687
-30	0.4021	349.8	1.745	0.3339	349.5	1.729	0.2852	349.3	1.715	0.2487	349.0	1.703
-25	0.4109	353.6	1.761	0.3413	353.4	1.745	0.2916	353.2	1.731	0.2543	352.9	1.719
-20	0.4197	357.6	1.776	0.3487	357.3	1.760	0.2980	357.1	1.747	0.2599	356.9	1.735
-15	0.4284	361.5	1.792	0.3560	361.3	1.776	0.3043	361.1	1.762	0.2655	360.9	1.750
-10	0.4371	365.5	1.807	0.3633	365.3	1.791	0.3106	365.1	1.778	0.2711	364.9	1.766
-5	0.4458	369.5	1.822	0.3706	369.3	1.806	0.3169	369.2	1.793	0.2766	369.0	1.781
0	0.4544	373.6	1.837	0.3778	373.4	1.821	0.3231	373.2	1.808	0.2821	373.1	1.796
5	0.4631	377.7	1.852	0.3851	377.6	1.836	0.3294	377.4	1.823	0.2876	377.2	1.811
10	0.4717	381.9	1.867	0.3923	381.7	1.851	0.3356	381.6	1.838	0.2931	381.4	1.826
15	0.4803	386.1	1.882	0.3995	386.0	1.866	0.3418	385.8	1.853	0.2985	385.6	1.841
20	0.4889	390.4	1.896	0.4067	390.2	1.881	0.3480	390.1	1.867	0.3040	389.9	1.856
25	0.4975	394.7	1.911	0.4139	394.5	1.895	0.3542	394.4	1.882	0.3094	394.2	1.870
30	0.5060	399.0	1.925	0.4211	398.9	1.910	0.3603	398.7	1.896	0.3148	398.6	1.885
35	0.5146	403.4	1.940	0.4282	403.2	1.924	0.3665	403.1	1.911	0.3202	403.0	1.899
40	0.5232	407.8	1.954	0.4354	407.7	1.938	0.3727	407.5	1.925	0.3256	407.4	1.914
45	0.5317	412.3	1.968	0.4425	412.1	1.952	0.3788	412.0	1.939	0.3310	411.9	1.928
50	0.5402	416.8	1.982	0.4497	416.7	1.967	0.3849	416.5	1.953	0.3364	416.4	1.942
55	0.5488	421.3	1.996	0.4568	421.2	1.981	0.3911	421.1	1.967	0.3418	421.0	1.956
60	0.5573	425.9	2.010	0.4639	425.8	1.994	0.3972	425.7	1.981	0.3472	425.6	1.970
65	0.5658	430.6	2.024	0.4710	430.5	2.008	0.4033	430.3	1.995	0.3525	430.2	1.984
70	0.5743	435.3	2.038	0.4781	435.2	2.022	0.4094	435.1	2.009	0.3579	435.0	1.998
75	0.5828	439.9	2.051	0.4852	439.9	2.036	0.4155	439.8	2.022	0.3632	439.7	2.011
80	0.5913	444.7	2.065	0.4923	444.6	2.049	0.4216	444.5	2.036	0.3686	444.4	2.025
85	0.5998	449.5	2.078	0.4994	449.4	2.063	0.4277	449.3	2.050	0.3739	449.3	2.038
90	0.6083	454.4	2.092	0.5065	454.3	2.076	0.4338	454.2	2.063	0.3793	454.1	2.052

Table 2 (continued)
R-507 Superheated Vapor—Constant Pressure Tables

Temp (°C)	Absolute Pressure (kPa)											
	90 (–49.5°C)			100 (–47.4°C)			101.325 (–47.1°C)			110 (–45.4°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
–45	0.2049	337.1	1.643	0.1835	336.8	1.633	0.1810	336.8	1.632	0.1660	336.5	1.624
–40	0.2100	341.0	1.660	0.1882	340.7	1.650	0.1857	340.6	1.649	0.1704	340.4	1.641
–35	0.2152	344.8	1.676	0.1929	344.6	1.666	0.1903	344.5	1.665	0.1747	344.3	1.657
–30	0.2203	348.7	1.692	0.1975	348.5	1.683	0.1948	348.4	1.681	0.1789	348.2	1.674
–25	0.2253	352.7	1.708	0.2021	352.4	1.699	0.1994	352.4	1.697	0.1831	352.2	1.690
–20	0.2303	356.6	1.724	0.2067	356.4	1.715	0.2039	356.4	1.713	0.1873	356.2	1.706
–15	0.2353	360.6	1.740	0.2112	360.4	1.730	0.2084	360.4	1.729	0.1914	360.2	1.722
–10	0.2403	364.7	1.755	0.2157	364.5	1.746	0.2128	364.5	1.745	0.1956	364.3	1.737
–5	0.2453	368.8	1.771	0.2202	368.6	1.761	0.2172	368.5	1.760	0.1997	368.4	1.753
0	0.2502	372.9	1.786	0.2246	372.7	1.777	0.2216	372.7	1.775	0.2037	372.5	1.768
5	0.2551	377.0	1.801	0.2291	376.9	1.792	0.2260	376.8	1.790	0.2078	376.7	1.783
10	0.2600	381.2	1.816	0.2335	381.1	1.807	0.2304	381.1	1.805	0.2119	380.9	1.798
15	0.2648	385.5	1.831	0.2379	385.3	1.821	0.2347	385.3	1.820	0.2159	385.2	1.813
20	0.2697	389.8	1.845	0.2423	389.6	1.836	0.2391	389.6	1.835	0.2199	389.5	1.828
25	0.2746	394.1	1.860	0.2467	393.9	1.851	0.2434	393.9	1.850	0.2239	393.8	1.843
30	0.2794	398.4	1.875	0.2511	398.3	1.865	0.2477	398.3	1.864	0.2279	398.2	1.857
35	0.2842	402.9	1.889	0.2554	402.7	1.880	0.2520	402.7	1.879	0.2319	402.6	1.872
40	0.2890	407.3	1.903	0.2598	407.2	1.894	0.2563	407.2	1.893	0.2358	407.1	1.886
45	0.2939	411.8	1.918	0.2641	411.7	1.908	0.2606	411.7	1.907	0.2398	411.5	1.900
50	0.2987	416.3	1.932	0.2685	416.2	1.923	0.2649	416.2	1.921	0.2437	416.1	1.914
55	0.3034	420.9	1.946	0.2728	420.8	1.937	0.2692	420.8	1.935	0.2477	420.7	1.928
60	0.3082	425.5	1.960	0.2771	425.4	1.951	0.2734	425.4	1.949	0.2516	425.3	1.942
65	0.3130	430.1	1.974	0.2814	430.0	1.964	0.2777	430.0	1.963	0.2556	429.9	1.956
70	0.3178	434.9	1.988	0.2857	434.8	1.978	0.2820	434.8	1.977	0.2595	434.7	1.970
75	0.3226	439.6	2.001	0.2900	439.5	1.992	0.2862	439.5	1.991	0.2634	439.4	1.984
80	0.3273	444.3	2.015	0.2943	444.3	2.006	0.2904	444.2	2.004	0.2673	444.2	1.997
85	0.3321	449.2	2.028	0.2986	449.1	2.019	0.2947	449.1	2.018	0.2712	449.0	2.011
90	0.3368	454.0	2.042	0.3029	453.9	2.033	0.2989	453.9	2.031	0.2751	453.8	2.024
95	0.3416	458.9	2.055	0.3072	458.8	2.046	0.3031	458.8	2.045	0.2790	458.7	2.038
100	0.3463	463.8	2.068	0.3115	463.8	2.059	0.3074	463.8	2.058	0.2829	463.7	2.051

Temp (°C)	Absolute Pressure (kPa)											
	120 (–43.5°C)			130 (–41.8°C)			140 (–40.1°C)			150 (–38.6°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
–40	0.1555	340.1	1.633	0.1429	339.7	1.625	0.1321	339.4	1.618	–	–	–
–35	0.1595	344.0	1.649	0.1466	343.7	1.642	0.1356	343.4	1.634	0.1260	343.1	1.628
–30	0.1634	347.9	1.666	0.1503	347.7	1.658	0.1390	347.4	1.651	0.1292	347.1	1.644
–25	0.1673	351.9	1.682	0.1539	351.7	1.674	0.1424	351.4	1.667	0.1324	351.2	1.661
–20	0.1712	355.9	1.698	0.1575	355.7	1.690	0.1458	355.5	1.684	0.1356	355.2	1.677
–15	0.1750	360.0	1.714	0.1611	359.8	1.706	0.1491	359.5	1.699	0.1388	359.3	1.693
–10	0.1788	364.1	1.729	0.1646	363.9	1.722	0.1524	363.6	1.715	0.1419	363.4	1.709
–5	0.1826	368.2	1.745	0.1681	368.0	1.738	0.1557	367.8	1.731	0.1450	367.6	1.724
0	0.1863	372.3	1.760	0.1716	372.1	1.753	0.1590	372.0	1.746	0.1480	371.8	1.740
5	0.1901	376.5	1.775	0.1751	376.3	1.768	0.1622	376.2	1.761	0.1511	376.0	1.755
10	0.1938	380.7	1.790	0.1785	380.6	1.783	0.1654	380.4	1.777	0.1541	380.2	1.770
15	0.1975	385.0	1.805	0.1820	384.9	1.798	0.1686	384.7	1.792	0.1571	384.5	1.785
20	0.2012	389.3	1.820	0.1854	389.2	1.813	0.1718	389.0	1.806	0.1601	388.9	1.800
25	0.2049	393.7	1.835	0.1888	393.5	1.828	0.1750	393.4	1.821	0.1631	393.2	1.815
30	0.2086	398.0	1.849	0.1922	397.9	1.842	0.1782	397.8	1.836	0.1661	397.6	1.830
35	0.2122	402.5	1.864	0.1956	402.3	1.857	0.1814	402.2	1.850	0.1690	402.1	1.844
40	0.2159	406.9	1.878	0.1990	406.8	1.871	0.1845	406.7	1.865	0.1720	406.5	1.859
45	0.2195	411.4	1.893	0.2024	411.3	1.886	0.1877	411.2	1.879	0.1749	411.1	1.873
50	0.2232	416.0	1.907	0.2057	415.9	1.900	0.1908	415.7	1.893	0.1778	415.6	1.887
55	0.2268	420.6	1.921	0.2091	420.4	1.914	0.1939	420.3	1.907	0.1808	420.2	1.901
60	0.2304	425.2	1.935	0.2124	425.1	1.928	0.1970	425.0	1.921	0.1837	424.9	1.915
65	0.2340	429.8	1.949	0.2158	429.7	1.942	0.2002	429.6	1.935	0.1866	429.5	1.929
70	0.2376	434.6	1.963	0.2192	434.5	1.956	0.2033	434.4	1.949	0.1895	434.3	1.943
75	0.2412	439.3	1.976	0.2225	439.2	1.969	0.2064	439.1	1.963	0.1924	439.0	1.957
80	0.2448	444.1	1.990	0.2258	444.0	1.983	0.2095	443.9	1.977	0.1953	443.8	1.971
85	0.2484	448.9	2.003	0.2291	448.8	1.997	0.2126	448.7	1.990	0.1982	448.6	1.984
90	0.2520	453.8	2.017	0.2324	453.7	2.010	0.2156	453.6	2.004	0.2011	453.5	1.998
95	0.2556	458.7	2.030	0.2357	458.6	2.023	0.2187	458.5	2.017	0.2040	458.4	2.011
100	0.2592	463.6	2.044	0.2391	463.5	2.037	0.2218	463.5	2.030	0.2069	463.4	2.024
105	–	–	–	0.2424	468.5	2.050	0.2249	468.4	2.044	0.2097	468.4	2.038

Table 2 (continued)
R-507 Superheated Vapor—Constant Pressure Tables

Temp (°C)	Absolute Pressure (kPa)											
	160 (–37.1°C)			170 (–35.7°C)			180 (–34.4°C)			190 (–33.1°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
–35	0.1176	342.8	1.621	0.1102	342.5	1.615	–	–	–	–	–	–
–30	0.1207	346.8	1.638	0.1132	346.6	1.632	0.1064	346.3	1.626	0.1004	346.0	1.621
–25	0.1237	350.9	1.655	0.1160	350.6	1.649	0.1092	350.4	1.643	0.1031	350.1	1.638
–20	0.1267	355.0	1.671	0.1189	354.7	1.665	0.1119	354.5	1.660	0.1057	354.2	1.654
–15	0.1297	359.1	1.687	0.1217	358.9	1.681	0.1146	358.6	1.676	0.1082	358.4	1.671
–10	0.1326	363.2	1.703	0.1245	363.0	1.697	0.1172	362.8	1.692	0.1108	362.6	1.687
–5	0.1355	367.4	1.718	0.1272	367.2	1.713	0.1199	367.0	1.707	0.1133	366.8	1.702
0	0.1384	371.6	1.734	0.1300	371.4	1.728	0.1225	371.2	1.723	0.1157	371.0	1.718
5	0.1413	375.8	1.749	0.1327	375.6	1.744	0.1250	375.4	1.738	0.1182	375.3	1.733
10	0.1442	380.1	1.765	0.1354	379.9	1.759	0.1276	379.7	1.754	0.1206	379.6	1.749
15	0.1470	384.4	1.780	0.1381	384.2	1.774	0.1302	384.0	1.769	0.1231	383.9	1.764
20	0.1498	388.7	1.794	0.1408	388.6	1.789	0.1327	388.4	1.784	0.1255	388.2	1.779
25	0.1526	393.1	1.809	0.1434	392.9	1.804	0.1352	392.8	1.799	0.1279	392.6	1.794
30	0.1554	397.5	1.824	0.1460	397.4	1.819	0.1377	397.2	1.813	0.1303	397.1	1.809
35	0.1582	401.9	1.839	0.1487	401.8	1.833	0.1402	401.7	1.828	0.1326	401.5	1.823
40	0.1610	406.4	1.853	0.1513	406.3	1.848	0.1427	406.2	1.842	0.1350	406.0	1.838
45	0.1638	410.9	1.867	0.1539	410.8	1.862	0.1452	410.7	1.857	0.1373	410.6	1.852
50	0.1665	415.5	1.882	0.1565	415.4	1.876	0.1476	415.3	1.871	0.1397	415.2	1.866
55	0.1693	420.1	1.896	0.1591	420.0	1.890	0.1501	419.9	1.885	0.1420	419.8	1.880
60	0.1720	424.8	1.910	0.1617	424.6	1.904	0.1526	424.5	1.899	0.1444	424.4	1.895
65	0.1748	429.4	1.924	0.1643	429.3	1.918	0.1550	429.2	1.913	0.1467	429.1	1.909
70	0.1775	434.2	1.938	0.1669	434.1	1.932	0.1575	434.0	1.927	0.1490	433.9	1.923
75	0.1802	438.9	1.951	0.1694	438.8	1.946	0.1599	438.7	1.941	0.1513	438.6	1.936
80	0.1829	443.7	1.965	0.1720	443.6	1.960	0.1623	443.5	1.955	0.1536	443.4	1.950
85	0.1857	448.5	1.979	0.1746	448.5	1.973	0.1647	448.4	1.968	0.1559	448.3	1.964
90	0.1884	453.4	1.992	0.1771	453.3	1.987	0.1672	453.2	1.982	0.1582	453.2	1.977
95	0.1911	458.3	2.005	0.1797	458.3	2.000	0.1696	458.2	1.995	0.1605	458.1	1.991
100	0.1938	463.3	2.019	0.1822	463.2	2.014	0.1720	463.1	2.009	0.1628	463.0	2.004
105	0.1965	468.3	2.032	0.1848	468.2	2.027	0.1744	468.1	2.022	0.1651	468.1	2.017
110	0.1992	473.3	2.045	0.1873	473.2	2.040	0.1768	473.2	2.035	0.1674	473.1	2.030
115	0.2019	478.4	2.059	0.1899	478.3	2.053	0.1792	478.2	2.048	0.1697	478.2	2.044

Temp (°C)	Absolute Pressure (kPa)											
	200 (–31.8°C)			210 (–30.7°C)			220 (–29.5°C)			230 (–28.4°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
–30	0.0950	345.7	1.616	0.0901	345.4	1.611	–	–	–	–	–	–
–25	0.0976	349.8	1.633	0.0926	349.6	1.628	0.0880	349.3	1.623	0.0839	349.0	1.618
–20	0.1000	354.0	1.649	0.0950	353.7	1.644	0.0903	353.5	1.640	0.0861	353.2	1.635
–15	0.1025	358.2	1.666	0.0973	357.9	1.661	0.0926	357.7	1.656	0.0883	357.5	1.652
–10	0.1049	362.4	1.682	0.0996	362.1	1.677	0.0948	361.9	1.672	0.0904	361.7	1.668
–5	0.1073	366.6	1.698	0.1019	366.4	1.693	0.0970	366.2	1.688	0.0926	366.0	1.684
0	0.1097	370.8	1.713	0.1042	370.6	1.709	0.0992	370.4	1.704	0.0947	370.2	1.700
5	0.1120	375.1	1.729	0.1065	374.9	1.724	0.1014	374.7	1.720	0.0968	374.5	1.715
10	0.1144	379.4	1.744	0.1087	379.2	1.739	0.1035	379.0	1.735	0.0988	378.9	1.731
15	0.1167	383.7	1.759	0.1109	383.6	1.755	0.1057	383.4	1.750	0.1009	383.2	1.746
20	0.1190	388.1	1.774	0.1131	387.9	1.770	0.1078	387.8	1.765	0.1029	387.6	1.761
25	0.1213	392.5	1.789	0.1153	392.3	1.785	0.1099	392.2	1.780	0.1049	392.1	1.776
30	0.1235	396.9	1.804	0.1175	396.8	1.799	0.1119	396.7	1.795	0.1069	396.5	1.791
35	0.1258	401.4	1.819	0.1196	401.3	1.814	0.1140	401.1	1.810	0.1089	401.0	1.806
40	0.1281	405.9	1.833	0.1218	405.8	1.829	0.1161	405.7	1.824	0.1109	405.5	1.820
45	0.1303	410.5	1.847	0.1239	410.3	1.843	0.1181	410.2	1.839	0.1128	410.1	1.835
50	0.1325	415.0	1.862	0.1261	414.9	1.857	0.1202	414.8	1.853	0.1148	414.7	1.849
55	0.1348	419.7	1.876	0.1282	419.6	1.872	0.1222	419.4	1.867	0.1168	419.3	1.863
60	0.1370	424.3	1.890	0.1303	424.2	1.886	0.1242	424.1	1.882	0.1187	424.0	1.878
65	0.1392	429.0	1.904	0.1324	428.9	1.900	0.1263	428.8	1.896	0.1206	428.7	1.892
70	0.1414	433.8	1.918	0.1345	433.7	1.914	0.1283	433.6	1.910	0.1226	433.5	1.906
75	0.1436	438.5	1.932	0.1366	438.4	1.927	0.1303	438.3	1.923	0.1245	438.2	1.919
80	0.1458	443.3	1.945	0.1387	443.2	1.941	0.1323	443.2	1.937	0.1264	443.1	1.933
85	0.1480	448.2	1.959	0.1408	448.1	1.955	0.1343	448.0	1.951	0.1284	447.9	1.947
90	0.1502	453.1	1.973	0.1429	453.0	1.968	0.1363	452.9	1.964	0.1303	452.8	1.960
95	0.1524	458.0	1.986	0.1450	457.9	1.982	0.1383	457.8	1.978	0.1322	457.8	1.974
100	0.1546	463.0	1.999	0.1471	462.9	1.995	0.1403	462.8	1.991	0.1341	462.7	1.987
105	0.1567	468.0	2.013	0.1492	467.9	2.009	0.1423	467.8	2.004	0.1360	467.7	2.001
110	0.1589	473.0	2.026	0.1512	472.9	2.022	0.1443	472.9	2.018	0.1379	472.8	2.014
115	0.1611	478.1	2.039	0.1533	478.0	2.035	0.1462	477.9	2.031	0.1398	477.9	2.027
120	0.1632	483.2	2.052	0.1554	483.1	2.048	0.1482	483.1	2.044	0.1417	483.0	2.040

Table 2 (continued)
R-507 Superheated Vapor—Constant Pressure Tables

Temp (°C)	Absolute Pressure (kPa)											
	240 (−27.3°C)			250 (−26.3°C)			260 (−25.3°C)			270 (−24.3°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
−25	0.0801	348.8	1.614	0.0766	348.5	1.610	0.0733	348.2	1.606	–	–	–
−20	0.0822	353.0	1.631	0.0787	352.7	1.627	0.0754	352.5	1.623	0.0723	352.2	1.619
−15	0.0843	357.2	1.648	0.0807	357.0	1.643	0.0773	356.7	1.639	0.0742	356.5	1.636
−10	0.0864	361.5	1.664	0.0827	361.3	1.660	0.0793	361.0	1.656	0.0761	360.8	1.652
−5	0.0885	365.7	1.680	0.0847	365.5	1.676	0.0812	365.3	1.672	0.0780	365.1	1.668
0	0.0905	370.0	1.696	0.0867	369.8	1.692	0.0831	369.6	1.688	0.0798	369.4	1.684
5	0.0925	374.4	1.711	0.0886	374.2	1.708	0.0850	374.0	1.704	0.0816	373.8	1.700
10	0.0945	378.7	1.727	0.0905	378.5	1.723	0.0868	378.3	1.719	0.0834	378.2	1.716
15	0.0965	383.1	1.742	0.0924	382.9	1.738	0.0887	382.7	1.735	0.0852	382.6	1.731
20	0.0984	387.5	1.757	0.0943	387.3	1.754	0.0905	387.2	1.750	0.0870	387.0	1.746
25	0.1003	391.9	1.772	0.0962	391.8	1.769	0.0923	391.6	1.765	0.0887	391.5	1.761
30	0.1023	396.4	1.787	0.0980	396.2	1.783	0.0941	396.1	1.780	0.0905	395.9	1.776
35	0.1042	400.9	1.802	0.0999	400.7	1.798	0.0959	400.6	1.795	0.0922	400.5	1.791
40	0.1061	405.4	1.817	0.1017	405.3	1.813	0.0977	405.1	1.809	0.0939	405.0	1.806
45	0.1080	410.0	1.831	0.1035	409.8	1.827	0.0994	409.7	1.824	0.0956	409.6	1.820
50	0.1099	414.6	1.845	0.1053	414.5	1.842	0.1012	414.3	1.838	0.0973	414.2	1.835
55	0.1118	419.2	1.860	0.1072	419.1	1.856	0.1029	419.0	1.852	0.0990	418.9	1.849
60	0.1136	423.9	1.874	0.1090	423.8	1.870	0.1046	423.7	1.867	0.1006	423.6	1.863
65	0.1155	428.6	1.888	0.1107	428.5	1.884	0.1064	428.4	1.881	0.1023	428.3	1.877
70	0.1174	433.4	1.902	0.1125	433.3	1.898	0.1081	433.2	1.895	0.1040	433.1	1.891
75	0.1192	438.1	1.916	0.1143	438.0	1.912	0.1098	438.0	1.908	0.1056	437.9	1.905
80	0.1210	443.0	1.929	0.1161	442.9	1.926	0.1115	442.8	1.922	0.1073	442.7	1.919
85	0.1229	447.8	1.943	0.1179	447.7	1.939	0.1132	447.7	1.936	0.1089	447.6	1.933
90	0.1247	452.7	1.957	0.1196	452.6	1.953	0.1149	452.6	1.950	0.1106	452.5	1.946
95	0.1266	457.7	1.970	0.1214	457.6	1.967	0.1166	457.5	1.963	0.1122	457.4	1.960
100	0.1284	462.6	1.984	0.1232	462.6	1.980	0.1183	462.5	1.976	0.1139	462.4	1.973
105	0.1302	467.7	1.997	0.1249	467.6	1.993	0.1200	467.5	1.990	0.1155	467.4	1.987
110	0.1320	472.7	2.010	0.1267	472.6	2.007	0.1217	472.6	2.003	0.1171	472.5	2.000
115	0.1339	477.8	2.023	0.1284	477.7	2.020	0.1234	477.7	2.016	0.1188	477.6	2.013
120	0.1357	482.9	2.036	0.1302	482.9	2.033	0.1251	482.8	2.029	0.1204	482.7	2.026
125	0.1375	488.1	2.050	0.1319	488.0	2.046	0.1268	488.0	2.043	0.1220	487.9	2.039

Temp (°C)	Absolute Pressure (kPa)											
	280 (−23.4°C)			290 (−22.4°C)			300 (−21.5°C)			310 (−20.7°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
−20	0.0695	351.9	1.615	0.0668	351.7	1.611	0.0644	351.4	1.608	0.0621	351.1	1.604
−15	0.0713	356.3	1.632	0.0687	356.0	1.628	0.0661	355.8	1.625	0.0638	355.5	1.621
−10	0.0732	360.6	1.648	0.0704	360.3	1.645	0.0679	360.1	1.641	0.0655	359.9	1.638
−5	0.0750	364.9	1.665	0.0722	364.7	1.661	0.0696	364.5	1.658	0.0672	364.3	1.654
0	0.0768	369.2	1.681	0.0739	369.0	1.677	0.0713	368.8	1.674	0.0688	368.6	1.670
5	0.0785	373.6	1.696	0.0757	373.4	1.693	0.0730	373.2	1.690	0.0704	373.0	1.686
10	0.0803	378.0	1.712	0.0773	377.8	1.709	0.0746	377.6	1.705	0.0720	377.5	1.702
15	0.0820	382.4	1.728	0.0790	382.2	1.724	0.0762	382.1	1.721	0.0736	381.9	1.718
20	0.0837	386.8	1.743	0.0807	386.7	1.739	0.0778	386.5	1.736	0.0752	386.4	1.733
25	0.0854	391.3	1.758	0.0823	391.2	1.755	0.0794	391.0	1.751	0.0767	390.8	1.748
30	0.0871	395.8	1.773	0.0839	395.7	1.770	0.0810	395.5	1.766	0.0783	395.4	1.763
35	0.0888	400.3	1.788	0.0856	400.2	1.784	0.0826	400.1	1.781	0.0798	399.9	1.778
40	0.0904	404.9	1.802	0.0872	404.8	1.799	0.0841	404.6	1.796	0.0813	404.5	1.793
45	0.0921	409.5	1.817	0.0888	409.4	1.814	0.0857	409.2	1.811	0.0828	409.1	1.808
50	0.0937	414.1	1.831	0.0903	414.0	1.828	0.0872	413.9	1.825	0.0843	413.7	1.822
55	0.0953	418.8	1.846	0.0919	418.6	1.842	0.0887	418.5	1.839	0.0858	418.4	1.836
60	0.0969	423.5	1.860	0.0935	423.3	1.857	0.0903	423.2	1.854	0.0873	423.1	1.851
65	0.0986	428.2	1.874	0.0951	428.1	1.871	0.0918	428.0	1.868	0.0887	427.9	1.865
70	0.1002	433.0	1.888	0.0966	432.9	1.885	0.0933	432.8	1.882	0.0902	432.7	1.879
75	0.1018	437.8	1.902	0.0982	437.7	1.899	0.0948	437.6	1.896	0.0916	437.5	1.893
80	0.1034	442.6	1.916	0.0997	442.5	1.912	0.0963	442.4	1.909	0.0931	442.3	1.907
85	0.1050	447.5	1.929	0.1012	447.4	1.926	0.0978	447.3	1.923	0.0945	447.2	1.920
90	0.1065	452.4	1.943	0.1028	452.3	1.940	0.0993	452.2	1.937	0.0960	452.1	1.934
95	0.1081	457.3	1.956	0.1043	457.3	1.953	0.1008	457.2	1.950	0.0974	457.1	1.947
100	0.1097	462.3	1.970	0.1058	462.2	1.967	0.1022	462.2	1.964	0.0989	462.1	1.961
105	0.1113	467.3	1.983	0.1074	467.3	1.980	0.1037	467.2	1.977	0.1003	467.1	1.974
110	0.1129	472.4	1.997	0.1089	472.3	1.994	0.1052	472.3	1.991	0.1017	472.2	1.988
115	0.1144	477.5	2.010	0.1104	477.4	2.007	0.1067	477.4	2.004	0.1031	477.3	2.001
120	0.1160	482.6	2.023	0.1119	482.6	2.020	0.1081	482.5	2.017	0.1046	482.4	2.014
125	0.1176	487.8	2.036	0.1134	487.7	2.033	0.1096	487.7	2.030	0.1060	487.6	2.027
130	0.1191	493.0	2.049	0.1150	493.0	2.046	0.1111	492.9	2.043	0.1074	492.8	2.040

Table 2 (continued)
R-507 Superheated Vapor—Constant Pressure Tables

Temp (°C)	Absolute Pressure (kPa)											
	320 (–19.8°C)			330 (–19.0°C)			340 (–18.2°C)			350 (–17.4°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
–15	0.0616	355.3	1.618	0.0595	355.0	1.614	0.0576	354.8	1.611	0.0557	354.5	1.608
–10	0.0632	359.6	1.634	0.0611	359.4	1.631	0.0591	359.2	1.628	0.0573	358.9	1.625
–5	0.0649	364.0	1.651	0.0627	363.8	1.648	0.0607	363.6	1.645	0.0588	363.4	1.642
0	0.0665	368.4	1.667	0.0643	368.2	1.664	0.0622	368.0	1.661	0.0603	367.8	1.658
5	0.0681	372.8	1.683	0.0658	372.7	1.680	0.0637	372.5	1.677	0.0618	372.3	1.674
10	0.0696	377.3	1.699	0.0674	377.1	1.696	0.0652	376.9	1.693	0.0632	376.7	1.690
15	0.0712	381.7	1.715	0.0689	381.6	1.712	0.0667	381.4	1.709	0.0646	381.2	1.706
20	0.0727	386.2	1.730	0.0703	386.0	1.727	0.0681	385.9	1.724	0.0661	385.7	1.721
25	0.0742	390.7	1.745	0.0718	390.5	1.742	0.0696	390.4	1.739	0.0675	390.2	1.737
30	0.0757	395.2	1.760	0.0733	395.1	1.757	0.0710	394.9	1.754	0.0688	394.8	1.752
35	0.0772	399.8	1.775	0.0747	399.6	1.772	0.0724	399.5	1.769	0.0702	399.4	1.767
40	0.0786	404.4	1.790	0.0761	404.2	1.787	0.0738	404.1	1.784	0.0716	404.0	1.781
45	0.0801	409.0	1.805	0.0776	408.9	1.802	0.0752	408.7	1.799	0.0729	408.6	1.796
50	0.0815	413.6	1.819	0.0790	413.5	1.816	0.0765	413.4	1.813	0.0743	413.3	1.811
55	0.0830	418.3	1.833	0.0804	418.2	1.831	0.0779	418.1	1.828	0.0756	418.0	1.825
60	0.0844	423.0	1.848	0.0818	422.9	1.845	0.0793	422.8	1.842	0.0769	422.7	1.839
65	0.0859	427.8	1.862	0.0832	427.7	1.859	0.0806	427.6	1.856	0.0782	427.5	1.854
70	0.0873	432.6	1.876	0.0845	432.5	1.873	0.0820	432.4	1.870	0.0795	432.3	1.868
75	0.0887	437.4	1.890	0.0859	437.3	1.887	0.0833	437.2	1.884	0.0808	437.1	1.882
80	0.0901	442.2	1.904	0.0873	442.1	1.901	0.0846	442.0	1.898	0.0821	441.9	1.896
85	0.0915	447.1	1.917	0.0887	447.0	1.915	0.0860	446.9	1.912	0.0834	446.8	1.909
90	0.0929	452.0	1.931	0.0900	452.0	1.928	0.0873	451.9	1.926	0.0847	451.8	1.923
95	0.0943	457.0	1.945	0.0914	456.9	1.942	0.0886	456.8	1.939	0.0860	456.7	1.937
100	0.0957	462.0	1.958	0.0927	461.9	1.955	0.0899	461.8	1.953	0.0873	461.8	1.950
105	0.0971	467.0	1.972	0.0941	467.0	1.969	0.0912	466.9	1.966	0.0886	466.8	1.964
110	0.0985	472.1	1.985	0.0954	472.0	1.982	0.0926	472.0	1.979	0.0898	471.9	1.977
115	0.0999	477.2	1.998	0.0968	477.1	1.995	0.0939	477.1	1.993	0.0911	477.0	1.990
120	0.1012	482.4	2.011	0.0981	482.3	2.009	0.0952	482.2	2.006	0.0924	482.1	2.003
125	0.1026	487.5	2.024	0.0994	487.5	2.022	0.0965	487.4	2.019	0.0937	487.3	2.016
130	0.1040	492.8	2.037	0.1008	492.7	2.035	0.0978	492.6	2.032	0.0949	492.5	2.029
135	0.1054	498.0	2.050	0.1021	497.9	2.048	0.0991	497.9	2.045	0.0962	497.8	2.042

Temp (°C)	Absolute Pressure (kPa)											
	360 (–16.6°C)			370 (–15.8°C)			380 (–15.1°C)			390 (–14.3°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
–15	0.0540	354.2	1.605	0.0523	354.0	1.602	0.0508	353.7	1.599	–	–	–
–10	0.0555	358.7	1.622	0.0538	358.5	1.619	0.0522	358.2	1.616	0.0507	358.0	1.613
–5	0.0570	363.1	1.639	0.0553	362.9	1.636	0.0537	362.7	1.633	0.0521	362.5	1.630
0	0.0585	367.6	1.655	0.0567	367.4	1.652	0.0551	367.2	1.649	0.0535	367.0	1.647
5	0.0599	372.1	1.671	0.0581	371.9	1.668	0.0565	371.7	1.666	0.0549	371.5	1.663
10	0.0613	376.5	1.687	0.0595	376.4	1.684	0.0578	376.2	1.682	0.0562	376.0	1.679
15	0.0627	381.0	1.703	0.0609	380.9	1.700	0.0592	380.7	1.698	0.0575	380.5	1.695
20	0.0641	385.5	1.718	0.0622	385.4	1.716	0.0605	385.2	1.713	0.0588	385.1	1.711
25	0.0655	390.1	1.734	0.0636	389.9	1.731	0.0618	389.8	1.729	0.0601	389.6	1.726
30	0.0668	394.6	1.749	0.0649	394.5	1.746	0.0631	394.3	1.744	0.0614	394.2	1.741
35	0.0682	399.2	1.764	0.0662	399.1	1.761	0.0644	398.9	1.759	0.0626	398.8	1.756
40	0.0695	403.8	1.779	0.0675	403.7	1.776	0.0656	403.6	1.774	0.0638	403.4	1.771
45	0.0708	408.5	1.794	0.0688	408.3	1.791	0.0669	408.2	1.788	0.0651	408.1	1.786
50	0.0721	413.1	1.808	0.0701	413.0	1.805	0.0681	412.9	1.803	0.0663	412.8	1.801
55	0.0734	417.8	1.823	0.0713	417.7	1.820	0.0694	417.6	1.817	0.0675	417.5	1.815
60	0.0747	422.6	1.837	0.0726	422.5	1.834	0.0706	422.4	1.832	0.0687	422.2	1.829
65	0.0760	427.3	1.851	0.0738	427.2	1.848	0.0718	427.1	1.846	0.0699	427.0	1.844
70	0.0772	432.2	1.865	0.0751	432.1	1.863	0.0730	432.0	1.860	0.0711	431.9	1.858
75	0.0785	437.0	1.879	0.0763	436.9	1.877	0.0742	436.8	1.874	0.0723	436.7	1.872
80	0.0798	441.8	1.893	0.0776	441.8	1.890	0.0754	441.7	1.888	0.0734	441.6	1.886
85	0.0810	446.7	1.907	0.0788	446.7	1.904	0.0766	446.6	1.902	0.0746	446.5	1.899
90	0.0823	451.7	1.920	0.0800	451.6	1.918	0.0778	451.5	1.916	0.0758	451.4	1.913
95	0.0836	456.7	1.934	0.0812	456.6	1.932	0.0790	456.5	1.929	0.0769	456.4	1.927
100	0.0848	461.7	1.948	0.0824	461.6	1.945	0.0802	461.5	1.943	0.0781	461.4	1.940
105	0.0860	466.7	1.961	0.0837	466.6	1.959	0.0814	466.6	1.956	0.0793	466.5	1.954
110	0.0873	471.8	1.974	0.0849	471.7	1.972	0.0826	471.6	1.970	0.0804	471.6	1.967
115	0.0885	476.9	1.988	0.0861	476.8	1.985	0.0838	476.8	1.983	0.0815	476.7	1.980
120	0.0898	482.1	2.001	0.0873	482.0	1.998	0.0849	481.9	1.996	0.0827	481.9	1.994
125	0.0910	487.3	2.014	0.0885	487.2	2.012	0.0861	487.1	2.009	0.0838	487.0	2.007
130	0.0922	492.5	2.027	0.0897	492.4	2.025	0.0873	492.3	2.022	0.0850	492.3	2.020
135	0.0934	497.7	2.040	0.0909	497.7	2.038	0.0884	497.6	2.035	0.0861	497.5	2.033

Table 2 (continued)
R-507 Superheated Vapor—Constant Pressure Tables

Temp (°C)	Absolute Pressure (kPa)											
	400 (-13.6°C)			425 (-11.9°C)			450 (-10.2°C)			475 (-8.6°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)
-10	0.0493	357.7	1.610	0.0460	357.1	1.603	0.0430	356.5	1.597	-	-	-
-5	0.0507	362.2	1.627	0.0473	361.7	1.620	0.0443	361.1	1.614	0.0417	360.5	1.608
0	0.0520	366.8	1.644	0.0486	366.2	1.637	0.0456	365.7	1.631	0.0429	365.1	1.625
5	0.0534	371.3	1.660	0.0499	370.8	1.654	0.0468	370.3	1.648	0.0440	369.7	1.642
10	0.0547	375.8	1.676	0.0511	375.3	1.670	0.0480	374.9	1.664	0.0452	374.4	1.658
15	0.0560	380.3	1.692	0.0524	379.9	1.686	0.0492	379.4	1.680	0.0463	379.0	1.674
20	0.0572	384.9	1.708	0.0536	384.5	1.702	0.0503	384.1	1.696	0.0474	383.6	1.690
25	0.0585	389.5	1.723	0.0548	389.1	1.717	0.0515	388.7	1.712	0.0485	388.3	1.706
30	0.0597	394.0	1.739	0.0559	393.7	1.733	0.0526	393.3	1.727	0.0496	392.9	1.722
35	0.0609	398.7	1.754	0.0571	398.3	1.748	0.0537	398.0	1.742	0.0507	397.6	1.737
40	0.0621	403.3	1.769	0.0583	403.0	1.763	0.0548	402.6	1.757	0.0517	402.3	1.752
45	0.0633	408.0	1.783	0.0594	407.6	1.778	0.0559	407.3	1.772	0.0528	407.0	1.767
50	0.0645	412.7	1.798	0.0605	412.4	1.792	0.0570	412.0	1.787	0.0538	411.7	1.782
55	0.0657	417.4	1.813	0.0617	417.1	1.807	0.0580	416.8	1.801	0.0548	416.5	1.796
60	0.0669	422.1	1.827	0.0628	421.9	1.821	0.0591	421.6	1.816	0.0558	421.3	1.811
65	0.0681	426.9	1.841	0.0639	426.6	1.836	0.0602	426.4	1.830	0.0568	426.1	1.825
70	0.0692	431.8	1.855	0.0650	431.5	1.850	0.0612	431.3	1.845	0.0578	431.0	1.839
75	0.0704	436.6	1.869	0.0661	436.3	1.864	0.0622	436.1	1.859	0.0588	435.8	1.853
80	0.0715	441.5	1.883	0.0672	441.2	1.878	0.0633	441.0	1.872	0.0598	440.8	1.867
85	0.0727	446.4	1.897	0.0682	446.2	1.892	0.0643	445.9	1.886	0.0608	445.7	1.881
90	0.0738	451.3	1.911	0.0693	451.1	1.905	0.0653	450.9	1.900	0.0618	450.7	1.895
95	0.0750	456.3	1.925	0.0704	456.1	1.919	0.0663	455.9	1.914	0.0627	455.7	1.909
100	0.0761	461.3	1.938	0.0715	461.1	1.933	0.0674	460.9	1.927	0.0637	460.7	1.922
105	0.0772	466.4	1.952	0.0725	466.2	1.946	0.0684	466.0	1.941	0.0647	465.8	1.936
110	0.0783	471.5	1.965	0.0736	471.3	1.959	0.0694	471.1	1.954	0.0656	470.9	1.949
115	0.0795	476.6	1.978	0.0747	476.4	1.973	0.0704	476.2	1.968	0.0666	476.1	1.963
120	0.0806	481.8	1.991	0.0757	481.6	1.986	0.0714	481.4	1.981	0.0675	481.2	1.976
125	0.0817	487.0	2.005	0.0768	486.8	1.999	0.0724	486.6	1.994	0.0685	486.4	1.989
130	0.0828	492.2	2.018	0.0778	492.0	2.012	0.0734	491.9	2.007	0.0694	491.7	2.002
135	0.0839	497.5	2.031	0.0789	497.3	2.025	0.0744	497.1	2.020	0.0704	497.0	2.015
140	0.0850	502.8	2.044	0.0799	502.6	2.038	0.0754	502.5	2.033	0.0713	502.3	2.028

Temp (°C)	Absolute Pressure (kPa)											
	500 (-7.1°C)			525 (-5.6°C)			550 (-4.2°C)			575 (-2.8°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K-kg)
-5	0.0392	359.9	1.602	0.0371	359.2	1.596	-	-	-	-	-	-
0	0.0404	364.6	1.619	0.0382	364.0	1.613	0.0362	363.4	1.608	0.0343	362.8	1.602
5	0.0416	369.2	1.636	0.0393	368.7	1.630	0.0372	368.2	1.625	0.0354	367.6	1.620
10	0.0427	373.9	1.653	0.0404	373.4	1.647	0.0383	372.9	1.642	0.0364	372.4	1.637
15	0.0438	378.5	1.669	0.0414	378.1	1.664	0.0393	377.6	1.658	0.0374	377.1	1.654
20	0.0448	383.2	1.685	0.0425	382.8	1.680	0.0403	382.3	1.675	0.0383	381.9	1.670
25	0.0459	387.9	1.701	0.0435	387.5	1.696	0.0413	387.0	1.691	0.0393	386.6	1.686
30	0.0469	392.5	1.716	0.0445	392.2	1.711	0.0422	391.8	1.706	0.0402	391.4	1.702
35	0.0479	397.2	1.732	0.0455	396.9	1.727	0.0432	396.5	1.722	0.0411	396.1	1.717
40	0.0489	401.9	1.747	0.0464	401.6	1.742	0.0441	401.2	1.737	0.0420	400.9	1.733
45	0.0499	406.7	1.762	0.0474	406.3	1.757	0.0451	406.0	1.752	0.0429	405.7	1.748
50	0.0509	411.4	1.777	0.0483	411.1	1.772	0.0460	410.8	1.767	0.0438	410.5	1.763
55	0.0519	416.2	1.791	0.0493	415.9	1.787	0.0469	415.6	1.782	0.0447	415.3	1.778
60	0.0529	421.0	1.806	0.0502	420.7	1.801	0.0478	420.4	1.797	0.0455	420.1	1.792
65	0.0538	425.8	1.820	0.0511	425.6	1.816	0.0486	425.3	1.811	0.0464	425.0	1.807
70	0.0548	430.7	1.835	0.0520	430.5	1.830	0.0495	430.2	1.826	0.0472	429.9	1.821
75	0.0557	435.6	1.849	0.0529	435.3	1.844	0.0504	435.1	1.840	0.0481	434.8	1.835
80	0.0567	440.5	1.863	0.0538	440.3	1.858	0.0513	440.0	1.854	0.0489	439.8	1.849
85	0.0576	445.5	1.877	0.0547	445.2	1.872	0.0521	445.0	1.868	0.0497	444.8	1.863
90	0.0585	450.4	1.890	0.0556	450.2	1.886	0.0530	450.0	1.882	0.0506	449.8	1.877
95	0.0595	455.5	1.904	0.0565	455.3	1.900	0.0538	455.0	1.895	0.0514	454.8	1.891
100	0.0604	460.5	1.918	0.0574	460.3	1.913	0.0547	460.1	1.909	0.0522	459.9	1.905
105	0.0613	465.6	1.931	0.0583	465.4	1.927	0.0555	465.2	1.923	0.0530	465.0	1.918
110	0.0622	470.7	1.945	0.0591	470.5	1.940	0.0564	470.3	1.936	0.0538	470.1	1.932
115	0.0631	475.9	1.958	0.0600	475.7	1.954	0.0572	475.5	1.949	0.0546	475.3	1.945
120	0.0640	481.1	1.971	0.0609	480.9	1.967	0.0580	480.7	1.963	0.0554	480.5	1.959
125	0.0649	486.3	1.985	0.0618	486.1	1.980	0.0589	485.9	1.976	0.0562	485.7	1.972
130	0.0658	491.5	1.998	0.0626	491.4	1.993	0.0597	491.2	1.989	0.0570	491.0	1.985
135	0.0667	496.8	2.011	0.0635	496.6	2.006	0.0605	496.5	2.002	0.0578	496.3	1.998
140	0.0676	502.1	2.024	0.0643	502.0	2.019	0.0613	501.8	2.015	0.0586	501.7	2.011
145	0.0685	507.5	2.037	0.0652	507.3	2.032	0.0621	507.2	2.028	0.0594	507.0	2.024

Table 2 (continued)
R-507 Superheated Vapor—Constant Pressure Tables

Temp (°C)	Absolute Pressure (kPa)											
	600 (−1.5°C)			625 (−0.2°C)			650 (1.1°C)			675 (2.3°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K−kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K−kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K−kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K−kg)
0	0.0326	362.2	1.597	0.0310	361.6	1.592	—	—	—	—	—	—
5	0.0336	367.1	1.615	0.0320	366.5	1.610	0.0306	365.9	1.605	0.0292	365.3	1.600
10	0.0346	371.9	1.632	0.0330	371.3	1.627	0.0315	370.8	1.622	0.0301	370.3	1.618
15	0.0356	376.7	1.649	0.0340	376.2	1.644	0.0324	375.7	1.639	0.0310	375.2	1.635
20	0.0365	381.4	1.665	0.0349	381.0	1.661	0.0333	380.5	1.656	0.0319	380.1	1.652
25	0.0375	386.2	1.681	0.0358	385.8	1.677	0.0342	385.3	1.672	0.0328	384.9	1.668
30	0.0384	391.0	1.697	0.0366	390.6	1.693	0.0351	390.2	1.688	0.0336	389.8	1.684
35	0.0392	395.8	1.713	0.0375	395.4	1.708	0.0359	395.0	1.704	0.0344	394.6	1.700
40	0.0401	400.5	1.728	0.0384	400.2	1.724	0.0367	399.8	1.720	0.0352	399.5	1.716
45	0.0410	405.3	1.743	0.0392	405.0	1.739	0.0375	404.7	1.735	0.0360	404.3	1.731
50	0.0418	410.2	1.758	0.0400	409.8	1.754	0.0383	409.5	1.750	0.0368	409.2	1.746
55	0.0427	415.0	1.773	0.0408	414.7	1.769	0.0391	414.4	1.765	0.0375	414.1	1.761
60	0.0435	419.9	1.788	0.0416	419.6	1.784	0.0399	419.3	1.780	0.0383	419.0	1.776
65	0.0443	424.7	1.803	0.0424	424.5	1.798	0.0407	424.2	1.795	0.0390	423.9	1.791
70	0.0451	429.7	1.817	0.0432	429.4	1.813	0.0414	429.2	1.809	0.0398	428.9	1.806
75	0.0460	434.6	1.831	0.0440	434.3	1.827	0.0422	434.1	1.823	0.0405	433.8	1.820
80	0.0468	439.5	1.845	0.0448	439.3	1.841	0.0429	439.1	1.838	0.0412	438.8	1.834
85	0.0476	444.5	1.859	0.0455	444.3	1.855	0.0437	444.1	1.852	0.0420	443.8	1.848
90	0.0483	449.6	1.873	0.0463	449.3	1.869	0.0444	449.1	1.866	0.0427	448.9	1.862
95	0.0491	454.6	1.887	0.0471	454.4	1.883	0.0452	454.2	1.880	0.0434	453.9	1.876
100	0.0499	459.7	1.901	0.0478	459.5	1.897	0.0459	459.3	1.893	0.0441	459.0	1.890
105	0.0507	464.8	1.914	0.0486	464.6	1.911	0.0466	464.4	1.907	0.0448	464.2	1.903
110	0.0515	469.9	1.928	0.0493	469.7	1.924	0.0473	469.5	1.920	0.0455	469.3	1.917
115	0.0522	475.1	1.941	0.0501	474.9	1.938	0.0481	474.7	1.934	0.0462	474.5	1.930
120	0.0530	480.3	1.955	0.0508	480.1	1.951	0.0488	480.0	1.947	0.0469	479.8	1.944
125	0.0538	485.6	1.968	0.0515	485.4	1.964	0.0495	485.2	1.961	0.0476	485.0	1.957
130	0.0545	490.8	1.981	0.0523	490.7	1.977	0.0502	490.5	1.974	0.0483	490.3	1.970
135	0.0553	496.1	1.994	0.0530	496.0	1.990	0.0509	495.8	1.987	0.0489	495.6	1.983
140	0.0561	501.5	2.007	0.0537	501.3	2.003	0.0516	501.2	2.000	0.0496	501.0	1.996
145	0.0568	506.9	2.020	0.0545	506.7	2.016	0.0523	506.6	2.013	0.0503	506.4	2.009
150	0.0576	512.3	2.033	0.0552	512.1	2.029	0.0530	512.0	2.026	0.0510	511.8	2.022

Temp (°C)	Absolute Pressure (kPa)											
	700 (3.5°C)			725 (4.6°C)			750 (5.7°C)			775 (6.8°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K−kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K−kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K−kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K−kg)
5	0.0279	364.7	1.595	0.0267	364.1	1.591	—	—	—	—	—	—
10	0.0288	369.7	1.613	0.0276	369.2	1.609	0.0265	368.6	1.604	0.0255	368.0	1.600
15	0.0297	374.7	1.631	0.0285	374.2	1.626	0.0274	373.6	1.622	0.0263	373.1	1.618
20	0.0306	379.6	1.647	0.0293	379.1	1.643	0.0282	378.6	1.639	0.0271	378.1	1.635
25	0.0314	384.5	1.664	0.0302	384.0	1.660	0.0290	383.6	1.656	0.0279	383.1	1.652
30	0.0322	389.4	1.680	0.0310	388.9	1.676	0.0298	388.5	1.672	0.0287	388.1	1.669
35	0.0330	394.2	1.696	0.0317	393.8	1.692	0.0305	393.4	1.688	0.0294	393.0	1.685
40	0.0338	399.1	1.712	0.0325	398.7	1.708	0.0313	398.4	1.704	0.0301	398.0	1.701
45	0.0346	404.0	1.727	0.0332	403.6	1.724	0.0320	403.3	1.720	0.0308	402.9	1.716
50	0.0353	408.9	1.743	0.0340	408.5	1.739	0.0327	408.2	1.735	0.0315	407.9	1.732
55	0.0361	413.8	1.758	0.0347	413.5	1.754	0.0334	413.1	1.750	0.0322	412.8	1.747
60	0.0368	418.7	1.772	0.0354	418.4	1.769	0.0341	418.1	1.765	0.0329	417.8	1.762
65	0.0375	423.6	1.787	0.0361	423.3	1.784	0.0348	423.0	1.780	0.0336	422.8	1.777
70	0.0382	428.6	1.802	0.0368	428.3	1.799	0.0355	428.0	1.795	0.0342	427.8	1.792
75	0.0390	433.6	1.816	0.0375	433.3	1.813	0.0362	433.0	1.809	0.0349	432.8	1.806
80	0.0397	438.6	1.830	0.0382	438.3	1.827	0.0368	438.1	1.824	0.0356	437.8	1.820
85	0.0404	443.6	1.845	0.0389	443.3	1.841	0.0375	443.1	1.838	0.0362	442.9	1.835
90	0.0411	448.6	1.859	0.0396	448.4	1.855	0.0381	448.2	1.852	0.0368	448.0	1.849
95	0.0418	453.7	1.872	0.0402	453.5	1.869	0.0388	453.3	1.866	0.0375	453.1	1.863
100	0.0424	458.8	1.886	0.0409	458.6	1.883	0.0394	458.4	1.880	0.0381	458.2	1.876
105	0.0431	464.0	1.900	0.0415	463.8	1.897	0.0401	463.6	1.893	0.0387	463.4	1.890
110	0.0438	469.2	1.914	0.0422	469.0	1.910	0.0407	468.8	1.907	0.0393	468.6	1.904
115	0.0445	474.4	1.927	0.0429	474.2	1.924	0.0414	474.0	1.920	0.0399	473.8	1.917
120	0.0451	479.6	1.940	0.0435	479.4	1.937	0.0420	479.2	1.934	0.0406	479.0	1.931
125	0.0458	484.9	1.954	0.0442	484.7	1.950	0.0426	484.5	1.947	0.0412	484.3	1.944
130	0.0465	490.2	1.967	0.0448	490.0	1.964	0.0432	489.8	1.961	0.0418	489.6	1.957
135	0.0471	495.5	1.980	0.0454	495.3	1.977	0.0439	495.1	1.974	0.0424	495.0	1.971
140	0.0478	500.8	1.993	0.0461	500.7	1.990	0.0445	500.5	1.987	0.0430	500.4	1.984
145	0.0484	506.2	2.006	0.0467	506.1	2.003	0.0451	505.9	2.000	0.0436	505.8	1.997
150	0.0491	511.7	2.019	0.0473	511.5	2.016	0.0457	511.4	2.013	0.0442	511.2	2.010
155	0.0497	517.1	2.032	0.0480	517.0	2.029	0.0463	516.8	2.026	0.0448	516.7	2.023

Table 2 (continued)
R-507 Superheated Vapor—Constant Pressure Tables

Temp (°C)	Absolute Pressure (kPa)											
	800 (7.9°C)			850 (10.0°C)			900 (12.0°C)			950 (13.9°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
10	0.0245	367.4	1.596	0.0226	366.2	1.587	–	–	–	–	–	–
15	0.0253	372.6	1.614	0.0234	371.5	1.606	0.0218	370.3	1.598	0.0203	369.2	1.590
20	0.0261	377.6	1.631	0.0242	376.6	1.623	0.0226	375.6	1.616	0.0211	374.5	1.609
25	0.0269	382.7	1.648	0.0250	381.7	1.641	0.0233	380.8	1.633	0.0218	379.8	1.626
30	0.0276	387.7	1.665	0.0257	386.8	1.658	0.0240	385.9	1.650	0.0225	385.0	1.644
35	0.0283	392.6	1.681	0.0264	391.8	1.674	0.0247	391.0	1.667	0.0231	390.1	1.661
40	0.0291	397.6	1.697	0.0271	396.8	1.690	0.0253	396.1	1.683	0.0238	395.3	1.677
45	0.0298	402.6	1.713	0.0278	401.8	1.706	0.0260	401.1	1.699	0.0244	400.4	1.693
50	0.0304	407.5	1.728	0.0284	406.9	1.722	0.0266	406.2	1.715	0.0250	405.5	1.709
55	0.0311	412.5	1.744	0.0291	411.9	1.737	0.0273	411.2	1.731	0.0256	410.5	1.725
60	0.0318	417.5	1.759	0.0297	416.9	1.752	0.0279	416.3	1.746	0.0262	415.6	1.740
65	0.0324	422.5	1.773	0.0303	421.9	1.767	0.0285	421.3	1.761	0.0268	420.7	1.755
70	0.0331	427.5	1.788	0.0309	427.0	1.782	0.0290	426.4	1.776	0.0273	425.8	1.770
75	0.0337	432.5	1.803	0.0316	432.0	1.796	0.0296	431.4	1.791	0.0279	430.9	1.785
80	0.0344	437.6	1.817	0.0322	437.0	1.811	0.0302	436.5	1.805	0.0285	436.0	1.799
85	0.0350	442.6	1.831	0.0328	442.1	1.825	0.0308	441.7	1.819	0.0290	441.2	1.814
90	0.0356	447.7	1.845	0.0333	447.3	1.839	0.0313	446.8	1.834	0.0296	446.3	1.828
95	0.0362	452.8	1.859	0.0339	452.4	1.854	0.0319	451.9	1.848	0.0301	451.5	1.842
100	0.0368	458.0	1.873	0.0345	457.6	1.867	0.0325	457.1	1.862	0.0306	456.7	1.856
105	0.0374	463.2	1.887	0.0351	462.7	1.881	0.0330	462.3	1.876	0.0311	461.9	1.870
110	0.0380	468.4	1.901	0.0357	468.0	1.895	0.0336	467.6	1.889	0.0317	467.1	1.884
115	0.0386	473.6	1.914	0.0362	473.2	1.909	0.0341	472.8	1.903	0.0322	472.4	1.898
120	0.0392	478.8	1.928	0.0368	478.5	1.922	0.0346	478.1	1.917	0.0327	477.7	1.911
125	0.0398	484.1	1.941	0.0374	483.8	1.935	0.0352	483.4	1.930	0.0332	483.0	1.925
130	0.0404	489.5	1.954	0.0379	489.1	1.949	0.0357	488.8	1.943	0.0337	488.4	1.938
135	0.0410	494.8	1.968	0.0385	494.5	1.962	0.0362	494.1	1.957	0.0342	493.8	1.951
140	0.0416	500.2	1.981	0.0390	499.9	1.975	0.0368	499.5	1.970	0.0347	499.2	1.965
145	0.0422	505.6	1.994	0.0396	505.3	1.988	0.0373	505.0	1.983	0.0352	504.6	1.978
150	0.0427	511.0	2.007	0.0401	510.7	2.001	0.0378	510.4	1.996	0.0357	510.1	1.991
155	0.0433	516.5	2.020	0.0407	516.2	2.014	0.0383	515.9	2.009	0.0362	515.6	2.004
160	0.0439	522.0	2.032	0.0412	521.7	2.027	0.0388	521.4	2.022	0.0367	521.2	2.016

Temp (°C)	Absolute Pressure (kPa)											
	1000 (15.7°C)			1100 (19.1°C)			1200 (22.4°C)			1300 (25.4°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
20	0.0197	373.4	1.601	0.0173	371.1	1.587	–	–	–	–	–	–
25	0.0204	378.8	1.619	0.0180	376.6	1.606	0.0160	374.4	1.592	–	–	–
30	0.0211	384.1	1.637	0.0187	382.1	1.624	0.0167	380.0	1.611	0.0149	377.8	1.599
35	0.0217	389.3	1.654	0.0193	387.5	1.642	0.0173	385.6	1.630	0.0155	383.6	1.618
40	0.0224	394.5	1.671	0.0199	392.8	1.659	0.0179	391.1	1.647	0.0161	389.2	1.636
45	0.0230	399.6	1.687	0.0205	398.1	1.675	0.0184	396.5	1.664	0.0166	394.8	1.653
50	0.0236	404.8	1.703	0.0211	403.3	1.692	0.0190	401.8	1.681	0.0172	400.2	1.670
55	0.0242	409.9	1.719	0.0216	408.5	1.708	0.0195	407.1	1.697	0.0177	405.6	1.687
60	0.0247	415.0	1.734	0.0221	413.7	1.723	0.0200	412.4	1.713	0.0182	411.0	1.703
65	0.0253	420.1	1.750	0.0227	418.9	1.739	0.0205	417.6	1.729	0.0186	416.3	1.719
70	0.0258	425.3	1.765	0.0232	424.1	1.754	0.0210	422.9	1.744	0.0191	421.7	1.735
75	0.0264	430.4	1.779	0.0237	429.3	1.769	0.0214	428.1	1.759	0.0195	427.0	1.750
80	0.0269	435.5	1.794	0.0242	434.5	1.784	0.0219	433.4	1.774	0.0200	432.3	1.765
85	0.0274	440.7	1.809	0.0247	439.7	1.799	0.0224	438.6	1.789	0.0204	437.6	1.780
90	0.0279	445.8	1.823	0.0252	444.9	1.813	0.0228	443.9	1.804	0.0209	442.9	1.795
95	0.0285	451.0	1.837	0.0256	450.1	1.827	0.0233	449.2	1.818	0.0213	448.2	1.810
100	0.0290	456.2	1.851	0.0261	455.4	1.841	0.0237	454.5	1.832	0.0217	453.6	1.824
105	0.0295	461.5	1.865	0.0266	460.6	1.856	0.0242	459.8	1.847	0.0221	458.9	1.838
110	0.0300	466.7	1.879	0.0270	465.9	1.869	0.0246	465.1	1.861	0.0225	464.3	1.852
115	0.0305	472.0	1.893	0.0275	471.2	1.883	0.0250	470.4	1.874	0.0229	469.6	1.866
120	0.0310	477.3	1.906	0.0279	476.6	1.897	0.0254	475.8	1.888	0.0233	475.0	1.880
125	0.0314	482.7	1.920	0.0284	481.9	1.910	0.0259	481.2	1.902	0.0237	480.5	1.894
130	0.0319	488.0	1.933	0.0288	487.3	1.924	0.0263	486.6	1.915	0.0241	485.9	1.907
135	0.0324	493.4	1.946	0.0293	492.8	1.937	0.0267	492.1	1.929	0.0245	491.4	1.921
140	0.0329	498.9	1.960	0.0297	498.2	1.951	0.0271	497.5	1.942	0.0249	496.9	1.934
145	0.0334	504.3	1.973	0.0302	503.7	1.964	0.0275	503.0	1.955	0.0252	502.4	1.947
150	0.0338	509.8	1.986	0.0306	509.2	1.977	0.0279	508.5	1.968	0.0256	507.9	1.961
155	0.0343	515.3	1.999	0.0310	514.7	1.990	0.0283	514.1	1.981	0.0260	513.5	1.974
160	0.0348	520.9	2.012	0.0315	520.3	2.003	0.0287	519.7	1.994	0.0264	519.1	1.987
165	0.0353	526.4	2.024	0.0319	525.9	2.015	0.0291	525.3	2.007	0.0267	524.7	2.000
170	0.0357	532.0	2.037	0.0323	531.5	2.028	0.0295	530.9	2.020	0.0271	530.3	2.012

Table 2 (continued)
R-507 Superheated Vapor—Constant Pressure Tables

Temp (°C)	Absolute Pressure (kPa)											
	1400 (28.3°C)			1500 (31.0°C)			1600 (33.5°C)			1700 (36.0°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
30	0.0134	375.5	1.586	–	–	–	–	–	–	–	–	–
35	0.0140	381.5	1.606	0.0127	379.2	1.594	0.0115	376.8	1.583	–	–	–
40	0.0146	387.3	1.625	0.0133	385.3	1.614	0.0121	383.1	1.603	0.0110	380.8	1.592
45	0.0151	393.0	1.643	0.0138	391.2	1.633	0.0126	389.2	1.622	0.0115	387.2	1.612
50	0.0156	398.6	1.660	0.0143	396.9	1.651	0.0131	395.2	1.641	0.0120	393.3	1.631
55	0.0161	404.1	1.677	0.0148	402.6	1.668	0.0136	400.9	1.659	0.0125	399.3	1.649
60	0.0166	409.6	1.694	0.0152	408.1	1.685	0.0140	406.6	1.676	0.0129	405.1	1.667
65	0.0170	415.0	1.710	0.0157	413.7	1.701	0.0144	412.3	1.693	0.0134	410.8	1.684
70	0.0175	420.4	1.726	0.0161	419.2	1.717	0.0149	417.8	1.709	0.0138	416.5	1.701
75	0.0179	425.8	1.741	0.0165	424.6	1.733	0.0153	423.4	1.725	0.0142	422.1	1.717
80	0.0183	431.2	1.757	0.0169	430.0	1.749	0.0157	428.9	1.741	0.0145	427.7	1.733
85	0.0188	436.5	1.772	0.0173	435.5	1.764	0.0160	434.4	1.756	0.0149	433.2	1.749
90	0.0192	441.9	1.787	0.0177	440.9	1.779	0.0164	439.8	1.771	0.0153	438.8	1.764
95	0.0196	447.3	1.801	0.0181	446.3	1.794	0.0168	445.3	1.786	0.0156	444.3	1.779
100	0.0200	452.6	1.816	0.0185	451.7	1.808	0.0171	450.8	1.801	0.0160	449.8	1.794
105	0.0203	458.0	1.830	0.0188	457.1	1.823	0.0175	456.2	1.815	0.0163	455.3	1.809
110	0.0207	463.4	1.844	0.0192	462.6	1.837	0.0178	461.7	1.830	0.0167	460.8	1.823
115	0.0211	468.8	1.858	0.0196	468.0	1.851	0.0182	467.2	1.844	0.0170	466.3	1.837
120	0.0215	474.3	1.872	0.0199	473.5	1.865	0.0185	472.7	1.858	0.0173	471.9	1.852
125	0.0219	479.7	1.886	0.0203	478.9	1.879	0.0189	478.2	1.872	0.0176	477.4	1.866
130	0.0222	485.2	1.900	0.0206	484.4	1.893	0.0192	483.7	1.886	0.0179	482.9	1.879
135	0.0226	490.7	1.913	0.0210	489.9	1.906	0.0195	489.2	1.899	0.0183	488.5	1.893
140	0.0230	496.2	1.927	0.0213	495.5	1.920	0.0198	494.8	1.913	0.0186	494.1	1.907
145	0.0233	501.7	1.940	0.0216	501.0	1.933	0.0202	500.4	1.926	0.0189	499.7	1.920
150	0.0237	507.3	1.953	0.0220	506.6	1.946	0.0205	506.0	1.940	0.0192	505.3	1.934
155	0.0240	512.9	1.966	0.0223	512.2	1.959	0.0208	511.6	1.953	0.0195	511.0	1.947
160	0.0244	518.5	1.979	0.0226	517.9	1.973	0.0211	517.3	1.966	0.0198	516.7	1.960
165	0.0247	524.1	1.992	0.0230	523.5	1.986	0.0214	522.9	1.979	0.0201	522.4	1.973
170	0.0251	529.8	2.005	0.0233	529.2	1.998	0.0217	528.6	1.992	0.0204	528.1	1.986
175	0.0254	535.5	2.018	0.0236	534.9	2.011	0.0221	534.4	2.005	0.0207	533.8	1.999
180	0.0258	541.2	2.031	0.0239	540.7	2.024	0.0224	540.1	2.018	0.0210	539.6	2.012

Temp (°C)	Absolute Pressure (kPa)											
	1800 (38.3°C)			1900 (40.6°C)			2000 (42.8°C)			2100 (44.9°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
40	0.0100	378.2	1.580	–	–	–	–	–	–	–	–	–
45	0.0106	384.9	1.602	0.0097	382.6	1.591	0.0089	379.9	1.580	0.0081	377.0	1.568
50	0.0111	391.3	1.622	0.0102	389.2	1.612	0.0094	387.0	1.602	0.0087	384.6	1.592
55	0.0115	397.5	1.640	0.0107	395.6	1.631	0.0099	393.6	1.622	0.0092	391.6	1.613
60	0.0120	403.5	1.659	0.0111	401.8	1.650	0.0103	400.0	1.642	0.0096	398.2	1.633
65	0.0124	409.3	1.676	0.0115	407.8	1.668	0.0107	406.2	1.660	0.0100	404.5	1.652
70	0.0128	415.1	1.693	0.0119	413.7	1.685	0.0111	412.2	1.678	0.0104	410.7	1.670
75	0.0132	420.8	1.710	0.0123	419.5	1.702	0.0115	418.1	1.695	0.0108	416.7	1.687
80	0.0136	426.5	1.726	0.0127	425.2	1.718	0.0119	424.0	1.711	0.0111	422.7	1.704
85	0.0139	432.1	1.741	0.0130	430.9	1.734	0.0122	429.7	1.728	0.0115	428.5	1.721
90	0.0143	437.7	1.757	0.0134	436.6	1.750	0.0125	435.5	1.743	0.0118	434.3	1.737
95	0.0146	443.3	1.772	0.0137	442.2	1.766	0.0129	441.2	1.759	0.0121	440.1	1.753
100	0.0149	448.8	1.787	0.0140	447.8	1.781	0.0132	446.8	1.774	0.0124	445.8	1.768
105	0.0153	454.4	1.802	0.0143	453.4	1.796	0.0135	452.5	1.789	0.0127	451.5	1.783
110	0.0156	459.9	1.817	0.0146	459.0	1.810	0.0138	458.1	1.804	0.0130	457.2	1.798
115	0.0159	465.5	1.831	0.0149	464.6	1.825	0.0141	463.8	1.819	0.0133	462.9	1.813
120	0.0162	471.0	1.845	0.0153	470.2	1.839	0.0144	469.4	1.833	0.0136	468.6	1.828
125	0.0165	476.6	1.859	0.0155	475.8	1.853	0.0147	475.0	1.847	0.0139	474.2	1.842
130	0.0168	482.2	1.873	0.0158	481.4	1.867	0.0149	480.7	1.862	0.0141	479.9	1.856
135	0.0171	487.8	1.887	0.0161	487.1	1.881	0.0152	486.3	1.876	0.0144	485.6	1.870
140	0.0174	493.4	1.901	0.0164	492.7	1.895	0.0155	492.0	1.889	0.0147	491.3	1.884
145	0.0177	499.0	1.914	0.0167	498.4	1.908	0.0158	497.7	1.903	0.0149	497.0	1.898
150	0.0180	504.7	1.928	0.0170	504.0	1.922	0.0160	503.4	1.917	0.0152	502.7	1.911
155	0.0183	510.4	1.941	0.0173	509.7	1.935	0.0163	509.1	1.930	0.0154	508.4	1.925
160	0.0186	516.0	1.954	0.0175	515.4	1.949	0.0166	514.8	1.943	0.0157	514.2	1.938
165	0.0189	521.8	1.967	0.0178	521.2	1.962	0.0168	520.6	1.956	0.0160	520.0	1.951
170	0.0192	527.5	1.980	0.0181	526.9	1.975	0.0171	526.3	1.970	0.0162	525.8	1.964
175	0.0194	533.3	1.993	0.0183	532.7	1.988	0.0173	532.1	1.983	0.0165	531.6	1.978
180	0.0197	539.0	2.006	0.0186	538.5	2.001	0.0176	538.0	1.995	0.0167	537.4	1.990
185	0.0200	544.9	2.019	0.0189	544.3	2.013	0.0179	543.8	2.008	0.0169	543.3	2.003
190	0.0203	550.7	2.032	0.0191	550.2	2.026	0.0181	549.7	2.021	0.0172	549.1	2.016

Table 2 (continued)
R-507 Superheated Vapor—Constant Pressure Tables

Temp (°C)	Absolute Pressure (kPa)											
	2200 (46.9°C)			2400 (50.7°C)			2600 (54.3°C)			2800 (57.6°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
50	0.0080	381.9	1.581	–	–	–	–	–	–	–	–	–
55	0.0085	389.3	1.603	0.0072	384.2	1.583	0.0061	377.7	1.559	–	–	–
60	0.0089	396.2	1.624	0.0077	391.9	1.606	0.0067	386.8	1.587	0.0056	380.5	1.564
65	0.0094	402.8	1.644	0.0082	399.0	1.627	0.0071	394.7	1.610	0.0062	389.8	1.592
70	0.0097	409.1	1.662	0.0086	405.7	1.647	0.0076	402.0	1.632	0.0067	397.9	1.616
75	0.0101	415.3	1.680	0.0089	412.2	1.666	0.0079	408.9	1.652	0.0070	405.3	1.637
80	0.0105	421.3	1.698	0.0093	418.5	1.684	0.0083	415.5	1.671	0.0074	412.3	1.657
85	0.0108	427.3	1.714	0.0096	424.7	1.701	0.0086	422.0	1.689	0.0077	419.1	1.676
90	0.0111	433.2	1.731	0.0099	430.8	1.718	0.0089	428.2	1.706	0.0080	425.6	1.694
95	0.0114	439.0	1.747	0.0102	436.7	1.735	0.0092	434.4	1.723	0.0083	431.9	1.711
100	0.0117	444.8	1.762	0.0105	442.7	1.751	0.0095	440.5	1.739	0.0086	438.2	1.728
105	0.0120	450.5	1.777	0.0108	448.5	1.766	0.0098	446.5	1.755	0.0089	444.3	1.745
110	0.0123	456.3	1.793	0.0111	454.4	1.782	0.0100	452.4	1.771	0.0091	450.4	1.761
115	0.0126	462.0	1.807	0.0113	460.2	1.797	0.0103	458.3	1.786	0.0094	456.4	1.776
120	0.0129	467.7	1.822	0.0116	466.0	1.811	0.0105	464.2	1.801	0.0096	462.4	1.792
125	0.0131	473.4	1.836	0.0119	471.8	1.826	0.0108	470.1	1.816	0.0099	468.4	1.807
130	0.0134	479.1	1.851	0.0121	477.6	1.840	0.0110	476.0	1.831	0.0101	474.3	1.822
135	0.0137	484.8	1.865	0.0124	483.3	1.855	0.0113	481.8	1.845	0.0103	480.2	1.836
140	0.0139	490.6	1.879	0.0126	489.1	1.869	0.0115	487.6	1.859	0.0105	486.1	1.851
145	0.0142	496.3	1.893	0.0128	494.9	1.883	0.0117	493.5	1.873	0.0107	492.1	1.865
150	0.0144	502.0	1.906	0.0131	500.7	1.897	0.0119	499.3	1.887	0.0110	498.0	1.879
155	0.0147	507.8	1.920	0.0133	506.5	1.910	0.0122	505.2	1.901	0.0112	503.9	1.893
160	0.0149	513.6	1.933	0.0135	512.3	1.924	0.0124	511.1	1.915	0.0114	509.8	1.906
165	0.0152	519.4	1.946	0.0138	518.2	1.937	0.0126	516.9	1.928	0.0116	515.7	1.920
170	0.0154	525.2	1.960	0.0140	524.0	1.950	0.0128	522.8	1.942	0.0118	521.6	1.933
175	0.0156	531.0	1.973	0.0142	529.9	1.963	0.0130	528.7	1.955	0.0120	527.6	1.947
180	0.0159	536.9	1.986	0.0144	535.8	1.977	0.0132	534.6	1.968	0.0122	533.5	1.960
185	0.0161	542.7	1.999	0.0147	541.7	1.990	0.0134	540.6	1.981	0.0124	539.5	1.973
190	0.0163	548.6	2.011	0.0149	547.6	2.002	0.0136	546.5	1.994	0.0126	545.5	1.986
195	0.0166	554.5	2.024	0.0151	553.5	2.015	0.0138	552.5	2.007	0.0128	551.5	1.999
200	0.0168	560.5	2.037	0.0153	559.5	2.028	0.0140	558.5	2.020	0.0129	557.5	2.012

Temp (°C)	Absolute Pressure (kPa)											
	3000 (60.8°C)			3200 (63.8°C)			3400 (66.6°C)			3600 (69.7°C)		
	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)	Volume (m ³ /kg)	Enthalpy (kJ/kg)	Entropy (kJ/K–kg)
65	0.0053	383.7	1.570	0.0044	375.1	1.542	–	–	–	–	–	–
70	0.0058	393.1	1.598	0.0050	387.4	1.578	0.0043	379.8	1.553	–	–	–
75	0.0063	401.3	1.622	0.0055	396.8	1.605	0.0048	391.4	1.587	0.0042	384.8	1.565
80	0.0066	408.8	1.643	0.0059	405.0	1.629	0.0053	400.7	1.614	0.0047	395.8	1.597
85	0.0070	416.0	1.663	0.0063	412.6	1.650	0.0056	409.0	1.637	0.0051	405.0	1.623
90	0.0073	422.8	1.682	0.0066	419.8	1.670	0.0060	416.6	1.658	0.0054	413.2	1.645
95	0.0076	429.4	1.700	0.0069	426.7	1.689	0.0063	423.8	1.678	0.0057	420.8	1.666
100	0.0078	435.8	1.718	0.0072	433.3	1.707	0.0065	430.7	1.696	0.0060	428.0	1.686
105	0.0081	442.1	1.734	0.0074	439.8	1.724	0.0068	437.4	1.714	0.0063	434.9	1.704
110	0.0083	448.3	1.751	0.0077	446.2	1.741	0.0070	444.0	1.731	0.0065	441.7	1.722
115	0.0086	454.5	1.767	0.0079	452.5	1.757	0.0073	450.4	1.748	0.0067	448.3	1.739
120	0.0088	460.6	1.782	0.0081	458.7	1.773	0.0075	456.8	1.764	0.0070	454.8	1.756
125	0.0090	466.6	1.798	0.0083	464.9	1.789	0.0077	463.0	1.780	0.0072	461.2	1.772
130	0.0093	472.7	1.813	0.0086	471.0	1.804	0.0079	469.2	1.796	0.0074	467.5	1.787
135	0.0095	478.7	1.827	0.0088	477.0	1.819	0.0081	475.4	1.811	0.0076	473.7	1.803
140	0.0097	484.6	1.842	0.0090	483.1	1.834	0.0083	481.5	1.826	0.0078	480.0	1.818
145	0.0099	490.6	1.856	0.0092	489.1	1.848	0.0085	487.6	1.840	0.0080	486.1	1.833
150	0.0101	496.6	1.870	0.0094	495.2	1.863	0.0087	493.7	1.855	0.0081	492.3	1.848
155	0.0103	502.5	1.884	0.0096	501.2	1.877	0.0089	499.8	1.869	0.0083	498.4	1.862
160	0.0105	508.5	1.898	0.0097	507.2	1.891	0.0091	505.9	1.883	0.0085	504.6	1.876
165	0.0107	514.5	1.912	0.0099	513.2	1.904	0.0093	511.9	1.897	0.0087	510.7	1.890
170	0.0109	520.4	1.926	0.0101	519.2	1.918	0.0094	518.0	1.911	0.0088	516.8	1.904
175	0.0111	526.4	1.939	0.0103	525.2	1.932	0.0096	524.1	1.925	0.0090	522.9	1.918
180	0.0113	532.4	1.952	0.0105	531.3	1.945	0.0098	530.1	1.938	0.0092	529.0	1.931
185	0.0115	538.4	1.965	0.0107	537.3	1.958	0.0100	536.2	1.951	0.0093	535.1	1.945
190	0.0116	544.4	1.979	0.0108	543.4	1.971	0.0101	542.3	1.965	0.0095	541.3	1.958
195	0.0118	550.5	1.992	0.0110	549.5	1.984	0.0103	548.4	1.978	0.0096	547.4	1.971
200	0.0120	556.5	2.004	0.0112	555.5	1.997	0.0105	554.5	1.991	0.0098	553.5	1.984
205	0.0122	562.6	2.017	0.0113	561.6	2.010	0.0106	560.7	2.004	0.0100	559.7	1.997
210	0.0124	568.7	2.030	0.0115	567.8	2.023	0.0108	566.8	2.016	0.0101	565.9	2.010
215	0.0125	574.8	2.042	0.0117	573.9	2.036	0.0109	573.0	2.029	0.0103	572.1	2.023

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