

T(°C)	p (kPa)	vf (m3/kg)	vg (m3/kg)	uf(KJ/kg)	ug(KJ/kg)	hf(KJ/kg)	hg(KJ/kg)	sf(KJ/kg)	sg(KJ/kg)
-150	0.002225	0.0005876	5320	37.02	324.1	37.02	336	0.1407	2.552
-148	0.003274	0.0005894	3675	39.15	324.8	39.15	336.9	0.1579	2.522
-146	0.004757	0.0005912	2570	41.28	325.5	41.28	337.7	0.1748	2.493
-144	0.006828	0.0005931	1818	43.41	326.2	43.41	338.6	0.1914	2.465
-142	0.009687	0.0005949	1301	45.54	326.9	45.54	339.5	0.2078	2.438
-140	0.01359	0.0005968	941.6	47.67	327.6	47.67	340.4	0.2239	2.412
-138	0.01887	0.0005986	688.5	49.8	328.2	49.8	341.2	0.2397	2.387
-136	0.02593	0.0006005	508.4	51.93	328.9	51.93	342.1	0.2554	2.363
-134	0.03528	0.0006024	379.1	54.05	329.6	54.05	343	0.2707	2.34
-132	0.04755	0.0006043	285.3	56.17	330.3	56.17	343.9	0.2859	2.318
-130	0.06352	0.0006062	216.6	58.3	331.1	58.3	344.8	0.3008	2.297
-128	0.0841	0.0006081	165.9	60.42	331.8	60.42	345.7	0.3155	2.276
-126	0.1104	0.00061	128	62.54	332.5	62.54	346.6	0.33	2.256
-124	0.1438	0.0006119	99.64	64.66	333.2	64.66	347.5	0.3443	2.237
-122	0.1859	0.0006139	78.12	66.77	333.9	66.77	348.5	0.3585	2.218
-120	0.2384	0.0006159	61.7	68.89	334.7	68.89	349.4	0.3724	2.2
-118	0.3037	0.0006178	49.07	71.01	335.4	71.01	350.3	0.3861	2.183
-116	0.3841	0.0006198	39.29	73.13	336.1	73.13	351.2	0.3997	2.166
-114	0.4827	0.0006218	31.66	75.24	336.9	75.24	352.2	0.413	2.15
-112	0.6026	0.0006239	25.67	77.36	337.6	77.36	353.1	0.4262	2.135
-110	0.7477	0.0006259	20.94	79.47	338.4	79.47	354	0.4393	2.12
-108	0.9223	0.000628	17.18	81.59	339.1	81.59	355	0.4522	2.106
-106	1.131	0.00063	14.18	83.7	339.9	83.71	355.9	0.4649	2.092
-104	1.38	0.0006321	11.76	85.82	340.7	85.82	356.9	0.4775	2.078
-102	1.674	0.0006342	9.806	87.94	341.4	87.94	357.8	0.4899	2.065
-100	2.02	0.0006364	8.217	90.05	342.2	90.06	358.8	0.5022	2.053
-98	2.426	0.0006385	6.918	92.17	343	92.17	359.8	0.5144	2.041
-96	2.9	0.0006407	5.851	94.29	343.8	94.29	360.7	0.5264	2.029
-94	3.451	0.0006428	4.971	96.41	344.5	96.41	361.7	0.5383	2.018
-92	4.088	0.000645	4.241	98.53	345.3	98.53	362.7	0.5501	2.007
-90	4.822	0.0006473	3.634	100.7	346.1	100.7	363.6	0.5617	1.997
-88	5.665	0.0006495	3.126	102.8	346.9	102.8	364.6	0.5733	1.987
-86	6.628	0.0006518	2.699	104.9	347.7	104.9	365.6	0.5847	1.977
-84	7.724	0.000654	2.339	107	348.5	107	366.6	0.596	1.967
-82	8.969	0.0006563	2.034	109.2	349.3	109.2	367.5	0.6072	1.958
-80	10.38	0.0006587	1.775	111.3	350.1	111.3	368.5	0.6182	1.949
-78	11.96	0.000661	1.555	113.4	350.9	113.4	369.5	0.6292	1.941
-76	13.75	0.0006634	1.366	115.5	351.7	115.6	370.5	0.6401	1.933
-74	15.75	0.0006658	1.203	117.7	352.5	117.7	371.5	0.6509	1.925
-72	17.98	0.0006682	1.063	119.8	353.3	119.8	372.5	0.6616	1.917
-70	20.47	0.0006706	0.9425	122	354.1	122	373.4	0.6721	1.91
-68	23.23	0.0006731	0.8377	124.1	355	124.1	374.4	0.6826	1.902
-66	26.29	0.0006756	0.7465	126.2	355.8	126.3	375.4	0.693	1.895
-64	29.67	0.0006781	0.667	128.4	356.6	128.4	376.4	0.7034	1.889
-62	33.4	0.0006807	0.5974	130.5	357.4	130.6	377.4	0.7136	1.882
-60	37.5	0.0006833	0.5364	132.7	358.2	132.7	378.3	0.7238	1.876
-58	41.99	0.0006859	0.4827	134.9	359	134.9	379.3	0.7338	1.87
-56	46.92	0.0006886	0.4354	137	359.9	137.1	380.3	0.7439	1.864
-54	52.29	0.0006912	0.3936	139.2	360.7	139.2	381.3	0.7538	1.858

T(°C)	p (kPa)	vf (m3/kg)	vg (m3/kg)	uf(KJ/kg)	ug(KJ/kg)	hf(KJ/kg)	hg(KJ/kg)	sf(KJ/kg)	sg(KJ/kg)
-52	58.15	0.0006939	0.3566	141.4	361.5	141.4	382.2	0.7636	1.852
-50	64.52	0.0006967	0.3236	143.5	362.3	143.6	383.2	0.7734	1.847
-48	71.44	0.0006995	0.2943	145.7	363.1	145.8	384.1	0.7831	1.842
-46	78.94	0.0007023	0.2682	147.9	363.9	147.9	385.1	0.7928	1.837
-44	87.04	0.0007051	0.2448	150.1	364.7	150.1	386	0.8024	1.832
-42	95.8	0.000708	0.2239	152.3	365.5	152.3	387	0.8119	1.827
-40	105.2	0.000711	0.2051	154.5	366.3	154.5	387.9	0.8213	1.822
-38	115.4	0.0007139	0.1882	156.7	367.1	156.7	388.9	0.8307	1.818
-36	126.3	0.0007169	0.1729	158.9	367.9	159	389.8	0.8401	1.813
-34	138	0.00072	0.1592	161.1	368.7	161.2	390.7	0.8494	1.809
-32	150.5	0.0007231	0.1467	163.3	369.5	163.4	391.6	0.8586	1.805
-30	163.9	0.0007263	0.1354	165.5	370.3	165.6	392.5	0.8678	1.801
-28	178.2	0.0007295	0.1252	167.7	371.1	167.9	393.4	0.8769	1.797
-26	193.5	0.0007327	0.1159	170	371.9	170.1	394.3	0.886	1.793
-24	209.7	0.000736	0.1074	172.2	372.7	172.4	395.2	0.895	1.789
-22	227	0.0007393	0.09969	174.5	373.4	174.6	396.1	0.904	1.786
-20	245.4	0.0007427	0.09263	176.7	374.2	176.9	396.9	0.9129	1.782
-18	264.8	0.0007462	0.08617	179	375	179.2	397.8	0.9218	1.779
-16	285.5	0.0007497	0.08025	181.2	375.7	181.4	398.6	0.9306	1.775
-14	307.4	0.0007533	0.07481	183.5	376.5	183.7	399.5	0.9394	1.772
-12	330.5	0.0007569	0.06982	185.8	377.2	186	400.3	0.9482	1.769
-10	354.9	0.0007607	0.06523	188.1	377.9	188.3	401.1	0.9569	1.765
-8	380.6	0.0007644	0.061	190.4	378.7	190.6	401.9	0.9656	1.762
-6	407.8	0.0007683	0.0571	192.7	379.4	193	402.7	0.9742	1.759
-4	436.4	0.0007722	0.0535	195	380.1	195.3	403.5	0.9829	1.756
-2	466.5	0.0007762	0.05017	197.3	380.8	197.6	404.2	0.9914	1.753
0	498.1	0.0007803	0.04708	199.6	381.5	200	405	1	1.75
2	531.4	0.0007844	0.04422	201.9	382.2	202.4	405.7	1.009	1.748
4	566.2	0.0007887	0.04157	204.3	382.9	204.7	406.4	1.017	1.745
6	602.8	0.000793	0.03911	206.6	383.6	207.1	407.2	1.025	1.742
8	641.1	0.0007974	0.03682	209	384.2	209.5	407.8	1.034	1.739
10	681.2	0.000802	0.03468	211.4	384.9	211.9	408.5	1.042	1.737
12	723.1	0.0008066	0.0327	213.8	385.5	214.3	409.2	1.051	1.734
14	766.9	0.0008113	0.03084	216.2	386.2	216.8	409.8	1.059	1.731
16	812.7	0.0008162	0.02911	218.6	386.8	219.2	410.5	1.067	1.729
18	860.5	0.0008211	0.02749	221	387.4	221.7	411.1	1.076	1.726
20	910.3	0.0008262	0.02598	223.4	388	224.2	411.7	1.084	1.724
22	962.3	0.0008315	0.02456	225.8	388.6	226.6	412.2	1.092	1.721
24	1016	0.0008368	0.02323	228.3	389.2	229.1	412.8	1.101	1.719
26	1073	0.0008423	0.02198	230.8	389.7	231.7	413.3	1.109	1.716
28	1131	0.000848	0.02081	233.2	390.3	234.2	413.8	1.117	1.714
30	1192	0.0008538	0.01971	235.7	390.8	236.8	414.3	1.126	1.711
32	1256	0.0008598	0.01868	238.2	391.3	239.3	414.7	1.134	1.709
34	1321	0.000866	0.0177	240.8	391.8	241.9	415.2	1.142	1.706
36	1390	0.0008723	0.01678	243.3	392.2	244.5	415.6	1.15	1.704
38	1461	0.0008789	0.01592	245.9	392.7	247.2	415.9	1.159	1.701
40	1534	0.0008857	0.0151	248.4	393.1	249.8	416.3	1.167	1.699
42	1610	0.0008927	0.01433	251	393.5	252.5	416.6	1.175	1.696
44	1689	0.0009	0.0136	253.6	393.9	255.2	416.9	1.184	1.693

T(°C)	p (kPa)	vf (m3/kg)	vg (m3/kg)	uf(KJ/kg)	ug(KJ/kg)	hf(KJ/kg)	hg(KJ/kg)	sf(KJ/kg)	sg(KJ/kg)
46	1771	0.0009076	0.0129	256.3	394.3	257.9	417.1	1.192	1.691
48	1856	0.0009154	0.01225	258.9	394.6	260.6	417.3	1.2	1.688
50	1943	0.0009236	0.01163	261.6	394.9	263.4	417.5	1.209	1.685
52	2034	0.0009321	0.01104	264.3	395.2	266.2	417.6	1.217	1.683
54	2128	0.000941	0.01048	267.1	395.4	269.1	417.7	1.225	1.68
56	2225	0.0009503	0.009945	269.8	395.6	271.9	417.7	1.234	1.677
58	2325	0.00096	0.009438	272.6	395.7	274.8	417.7	1.242	1.674
60	2428	0.0009703	0.008955	275.4	395.9	277.8	417.6	1.251	1.671
62	2535	0.000981	0.008495	278.3	395.9	280.8	417.5	1.26	1.667
64	2645	0.0009924	0.008055	281.2	395.9	283.8	417.3	1.268	1.664
66	2759	0.001005	0.007634	284.1	395.9	286.9	417	1.277	1.661
68	2876	0.001017	0.007231	287.1	395.8	290	416.6	1.286	1.657
70	2998	0.001031	0.006845	290.1	395.6	293.2	416.1	1.295	1.653
72	3123	0.001046	0.006474	293.2	395.4	296.5	415.6	1.304	1.649
74	3252	0.001062	0.006117	296.4	395	299.9	414.9	1.313	1.645
76	3385	0.001079	0.005772	299.6	394.6	303.3	414.1	1.323	1.64
78	3522	0.001098	0.005438	303	394	306.8	413.2	1.333	1.635
80	3663	0.001119	0.005114	306.4	393.3	310.5	412	1.343	1.63
82	3809	0.001143	0.004798	310	392.4	314.3	410.7	1.353	1.624
84	3960	0.00117	0.004488	313.7	391.3	318.3	409.1	1.364	1.618
86	4115	0.001201	0.004181	317.6	390	322.5	407.2	1.375	1.611
88	4276	0.001237	0.003874	321.7	388.3	327	404.8	1.387	1.602