

TABLE 3. THERMODYNAMIC PROPERTIES OF WATER AT SATURATION*

FAHR. TEMP. (°F)	ABSOLUTE PRESSURE $P_a \times 10^{-3}$		SPECIFIC VOLUME, CU FT PER LB		ENTHALPY, BTU PER LB			ENTROPY, BTU PER (LB) (°F)			FAHR. TEMP. (°F)	
	Lb/Sq. In.	In. Hg	Sat. Solid $v_f \times 10^{-4}$	Evap. $v_{fg} \times 10^{-4}$	Sat. Vapor $v_g \times 10^{-4}$	Sat. Solid h_f	Evap. h_{fg}	Sat. Vapor h_g	Sat. Solid s_f	Evap. s_{fg}	Sat. Vapor s_g	
-180	0.00040	0.01008	0.01722	36070	36070	-220.05	1212.43	990.38	-0.4807	4.0456	3.5649	-180
-150	0.00040	0.01040	0.01723	30080	30080	-220.44	1213.02	992.58	-0.4854	3.9812	3.4988	-150
-120	0.00040	0.01072	0.01723	23080	23080	-220.82	1213.61	994.80	-0.4901	3.9188	3.4387	-120
-90	0.00040	0.01104	0.01723	16080	16080	-217.17	1214.17	997.00	-0.4948	3.8563	3.3836	-90
-60	0.00040	0.01136	0.01724	9080	9080	-213.49	1214.70	999.21	-0.4995	3.7938	3.3285	-60
-30	0.00040	0.01168	0.01724	2308	2308	-213.80	1215.22	1001.42	-0.5042	3.7312	3.2734	-30
0	0.00040	0.01200	0.01725	1400	1400	-212.05	1215.75	1003.63	-0.5089	3.6687	3.2183	0
30	0.00040	0.01232	0.01725	862.2	862.2	-210.34	1216.28	1005.84	-0.5136	3.6061	3.1632	30
60	0.00040	0.01264	0.01726	538.6	538.6	-208.58	1216.81	1008.05	-0.5183	3.5435	3.1081	60
90	0.00040	0.01296	0.01726	341.1	341.1	-206.79	1217.34	1010.26	-0.5230	3.4809	3.0530	90
120	0.00040	0.01328	0.01727	218.9	218.9	-204.98	1217.87	1012.47	-0.5277	3.4183	2.9979	120
150	0.00040	0.01360	0.01728	142.2	142.2	-203.14	1218.40	1014.68	-0.5324	3.3557	2.9428	150
180	0.00040	0.01392	0.01728	93.52	93.52	-201.28	1218.93	1016.89	-0.5371	3.2931	2.8877	180
210	0.00040	0.01424	0.01729	62.23	62.23	-199.40	1219.46	1019.10	-0.5418	3.2305	2.8326	210
240	0.00040	0.01456	0.01729	41.86	41.86	-197.49	1219.99	1021.31	-0.5465	3.1679	2.7775	240
270	0.00040	0.01488	0.01730	28.46	28.46	-195.56	1220.52	1023.52	-0.5512	3.1053	2.7224	270
300	0.00040	0.01520	0.01730	19.55	19.55	-193.60	1221.05	1025.73	-0.5559	3.0427	2.6673	300
330	0.00040	0.01552	0.01731	13.56	13.56	-191.62	1221.58	1027.94	-0.5606	2.9801	2.6122	330
360	0.00040	0.01584	0.01731	9.501	9.501	-189.63	1222.11	1030.15	-0.5653	2.9175	2.5571	360
390	0.00040	0.01616	0.01732	6.715	6.715	-187.58	1222.64	1032.36	-0.5700	2.8549	2.5020	390
420	0.00040	0.01648	0.01733	4.788	4.788	-185.52	1223.17	1034.58	-0.5747	2.7923	2.4469	420
450	0.00040	0.01680	0.01734	3.443	3.443	-183.44	1223.70	1036.79	-0.5794	2.7297	2.3918	450
480	0.00040	0.01712	0.01734	2.466	2.466	-181.34	1224.23	1039.00	-0.5841	2.6671	2.3367	480
510	0.00040	0.01744	0.01735	1.941	1.941	-179.24	1224.76	1041.21	-0.5888	2.6045	2.2816	510
540	0.00040	0.01776	0.01735	1.416	1.416	-177.13	1225.29	1043.42	-0.5935	2.5419	2.2265	540
570	0.00040	0.01808	0.01736	1.091	1.091	-175.03	1225.82	1045.63	-0.5982	2.4793	2.1714	570
600	0.00040	0.01840	0.01737	0.8391	0.8391	-172.92	1226.35	1047.84	-0.6029	2.4167	2.1163	600
630	0.00040	0.01872	0.01737	0.6355	0.6355	-170.81	1226.88	1050.05	-0.6076	2.3541	2.0612	630
660	0.00040	0.01904	0.01738	0.4782	0.4782	-168.70	1227.41	1052.26	-0.6123	2.2915	2.0061	660
690	0.00040	0.01936	0.01738	0.3596	0.3596	-166.58	1227.94	1054.47	-0.6170	2.2289	1.9510	690
720	0.00040	0.01968	0.01739	0.2729	0.2729	-164.46	1228.47	1056.68	-0.6217	2.1663	1.8959	720
750	0.00040	0.02000	0.01740	0.2091	0.2091	-162.34	1229.00	1058.89	-0.6264	2.1037	1.8408	750
780	0.00040	0.02032	0.01741	0.1638	0.1638	-160.22	1229.53	1061.10	-0.6311	2.0411	1.7857	780
810	0.00040	0.02064	0.01741	0.1273	0.1273	-158.10	1230.06	1063.31	-0.6358	1.9785	1.7306	810
840	0.00040	0.02096	0.01742	0.0999	0.0999	-155.98	1230.59	1065.52	-0.6405	1.9159	1.6755	840
870	0.00040	0.02128	0.01742	0.0775	0.0775	-153.86	1231.12	1067.73	-0.6452	1.8533	1.6204	870
900	0.00040	0.02160	0.01743	0.0591	0.0591	-151.74	1231.65	1069.94	-0.6499	1.7907	1.5653	900
930	0.00040	0.02192	0.01743	0.0441	0.0441	-149.62	1232.18	1072.15	-0.6546	1.7281	1.5102	930
960	0.00040	0.02224	0.01744	0.0326	0.0326	-147.50	1232.71	1074.36	-0.6593	1.6655	1.4551	960
990	0.00040	0.02256	0.01744	0.0238	0.0238	-145.38	1233.24	1076.57	-0.6640	1.6029	1.4000	990
1020	0.00040	0.02288	0.01745	0.0174	0.0174	-143.26	1233.77	1078.78	-0.6687	1.5403	1.3449	1020
1050	0.00040	0.02320	0.01745	0.0129	0.0129	-141.14	1234.30	1080.99	-0.6734	1.4777	1.2898	1050
1080	0.00040	0.02352	0.01746	0.0099	0.0099	-139.02	1234.83	1083.20	-0.6781	1.4151	1.2347	1080
1110	0.00040	0.02384	0.01746	0.0075	0.0075	-136.90	1235.36	1085.41	-0.6828	1.3525	1.1796	1110
1140	0.00040	0.02416	0.01747	0.0056	0.0056	-134.78	1235.89	1087.62	-0.6875	1.2899	1.1245	1140
1170	0.00040	0.02448	0.01747	0.0041	0.0041	-132.66	1236.42	1089.83	-0.6922	1.2273	1.0694	1170
1200	0.00040	0.02480	0.01748	0.0030	0.0030	-130.54	1236.95	1092.04	-0.6969	1.1647	1.0143	1200
1230	0.00040	0.02512	0.01748	0.0021	0.0021	-128.42	1237.48	1094.25	-0.7016	1.1021	0.9592	1230
1260	0.00040	0.02544	0.01749	0.0015	0.0015	-126.30	1238.01	1096.46	-0.7063	1.0395	0.9041	1260
1290	0.00040	0.02576	0.01749	0.0010	0.0010	-124.18	1238.54	1098.67	-0.7110	0.9769	0.8490	1290
1320	0.00040	0.02608	0.01750	0.0007	0.0007	-122.06	1239.07	1100.88	-0.7157	0.9143	0.7939	1320
1350	0.00040	0.02640	0.01750	0.0005	0.0005	-120.00	1239.60	1103.09	-0.7204	0.8517	0.7388	1350
1380	0.00040	0.02672	0.01751	0.0003	0.0003	-117.92	1240.13	1105.30	-0.7251	0.7891	0.6837	1380
1410	0.00040	0.02704	0.01751	0.0002	0.0002	-115.84	1240.66	1107.51	-0.7298	0.7265	0.6286	1410
1440	0.00040	0.02736	0.01752	0.0001	0.0001	-113.76	1241.19	1109.72	-0.7345	0.6639	0.5735	1440
1470	0.00040	0.02768	0.01752	0.0001	0.0001	-111.68	1241.72	1111.93	-0.7392	0.6013	0.5184	1470
1500	0.00040	0.02800	0.01753	0.0001	0.0001	-109.60	1242.25	1114.14	-0.7439	0.5387	0.4633	1500
1530	0.00040	0.02832	0.01753	0.0001	0.0001	-107.52	1242.78	1116.35	-0.7486	0.4761	0.4082	1530
1560	0.00040	0.02864	0.01754	0.0001	0.0001	-105.44	1243.31	1118.56	-0.7533	0.4135	0.3531	1560
1590	0.00040	0.02896	0.01754	0.0001	0.0001	-103.36	1243.84	1120.77	-0.7580	0.3509	0.2980	1590
1620	0.00040	0.02928	0.01755	0.0001	0.0001	-101.28	1244.37	1122.98	-0.7627	0.2883	0.2429	1620
1650	0.00040	0.02960	0.01755	0.0001	0.0001	-99.20	1244.90	1125.19	-0.7674	0.2257	0.1878	1650
1680	0.00040	0.02992	0.01756	0.0001	0.0001	-97.12	1245.43	1127.40	-0.7721	0.1631	0.1327	1680
1710	0.00040	0.03024	0.01756	0.0001	0.0001	-95.04	1245.96	1129.61	-0.7768	0.1005	0.0776	1710
1740	0.00040	0.03056	0.01757	0.0001	0.0001	-92.96	1246.49	1131.82	-0.7815	0.0379	0.0225	1740
1770	0.00040	0.03088	0.01757	0.0001	0.0001	-90.88	1247.02	1134.03	-0.7862	0.0000	0.0000	1770
1800	0.00040	0.03120	0.01758	0.0001	0.0001	-88.80	1247.55	1136.24	-0.7909	0.0000	0.0000	1800
1830	0.00040	0.03152	0.01758	0.0001	0.0001	-86.72	1248.08	1138.45	-0.7956	0.0000	0.0000	1830
1860	0.00040	0.03184	0.01759	0.0001	0.0001	-84.64	1248.61	1140.66	-0.8003	0.0000	0.0000	1860
1890	0.00040	0.03216	0.01759	0.0001	0.0001	-82.56	1249.14	1142.87	-0.8050	0.0000	0.0000	1890
1920	0.00040	0.03248	0.01760	0.0001	0.0001	-80.48	1249.67	1145.08	-0.8097	0.0000	0.0000	1920
1950	0.00040	0.03280	0.01760	0.0001	0.0001	-78.40	1250.20	1147.29	-0.8144	0.0000	0.0000	1950
1980	0.00040	0.03312	0.01761	0.0001	0.0001	-76.32	1250.73	1149.50	-0.8191	0.0000	0.0000	1980
2010	0.00040	0.03344	0.01761	0.0001	0.0001	-74.24	1251.26	1151.71	-0.8238	0.0000	0.0000	2010
2040	0.00040	0.03376	0.01762	0.0001	0.0001	-72.16	1251.79	1153.92	-0.8285	0.0000	0.0000	2040
2070	0.00040	0.03408	0.01762	0.0001	0.0001	-70.08	1252.32	1156.13	-0.8332	0.0000	0.0000	2070
2100	0.00040	0.03440	0.01763	0.0001	0.0001	-68.00	1252.85	1158.34	-0.8379	0.0000	0.0000	2100
2130	0.00040	0.03472	0.01763	0.0001	0.0001	-65.92	1253.38	1160.55	-0.8426	0.0000	0.0000	2130
2160	0.00040	0.03504	0.01764	0.0001	0.0001	-63.84	1253.91	1162.76	-0.8473	0.0000	0.0000	2160
2190	0.00040	0.03536	0.01764	0.0001	0.0001	-61.76	1254.44	1164.97	-0.8520	0.0000	0.0000	2190
2220	0.00040	0.03568	0.01765									