

TABLE 6. PROPERTIES OF SATURATED WATER VAPOR WITH AIR AT LOW TEMPERATURES* (PART I, CONTINUED)

Temp. °F	PRESSURE OF SATURATED VAPOR X 10 ⁴		WEIGHT OF SATURATED VAPOR				VOLUME IN CU FT BAROMETER, 29.92 IN. Hg.		ENTHALPY PER LB		
	In. of Hg.	Lb per Sq In.	per Cu Ft		per lb of Dry Air		of 1 lb of Dry Air	of 1 lb of Dry Air + Vapor to Saturate it	Dry Air °F Datum	Vapor 32°F Datum	Dry Air with Vapor to Saturate it
			Pounds X 10 ⁴	Grains	Pounds X 10 ⁴	Grains					
-60	101.4	49.808	0.20983	0.1470	2.088	1.4756	10.07	10.07	-14.48	1032.2	-14.48
-59	108.8	53.443	0.22469	0.1572	2.252	1.5834	10.09	10.09	-14.23	1032.7	-13.97
-58	116.3	57.127	0.23955	0.1672	2.418	1.6926	10.12	10.12	-13.99	1033.1	-13.72
-57	124.8	61.802	0.25444	0.1773	2.595	1.8105	10.14	10.14	-13.75	1033.6	-13.47
-56	133.4	66.526	0.27344	0.1914	2.773	1.9411	10.17	10.17	-13.50	1034.0	-13.23
-55	143.0	70.242	0.29239	0.2047	2.973	2.0811	10.19	10.19	-13.26	1034.5	-12.99
-54	153.5	75.154	0.31207	0.2184	3.181	2.2257	10.22	10.22	-13.02	1034.9	-12.74
-53	163.5	80.311	0.33267	0.2329	3.399	2.3793	10.24	10.24	-12.78	1035.4	-12.49
-52	174.9	85.911	0.35499	0.2485	3.639	2.5412	10.27	10.27	-12.53	1035.8	-12.25
-51	187.0	91.854	0.37862	0.2650	3.888	2.7122	10.29	10.29	-12.29	1036.3	-12.01
-50	199.9	98.191	0.40376	0.2828	4.156	2.9002	10.32	10.32	-12.05	1036.7	-11.76
-49	213.0	104.63	0.42917	0.3004	4.428	3.0966	10.34	10.34	-11.81	1037.2	-11.52
-48	227.9	111.94	0.45486	0.3187	4.738	3.3106	10.37	10.37	-11.57	1037.6	-11.27
-47	243.1	119.41	0.48084	0.3374	5.054	3.5378	10.40	10.40	-11.32	1038.1	-11.02
-46	259.5	127.47	0.51003	0.3563	5.395	3.7765	10.42	10.42	-11.08	1038.5	-10.78
-45	276.7	135.92	0.55213	0.3865	5.753	4.0271	10.45	10.45	-10.84	1039.0	-10.54
-44	295.0	144.90	0.59722	0.4171	6.133	4.2931	10.47	10.47	-10.60	1039.4	-10.28
-43	314.7	154.58	0.64493	0.4475	6.543	4.5757	10.50	10.50	-10.35	1039.9	-10.04
-42	335.3	164.70	0.69426	0.4850	6.971	4.8757	10.52	10.52	-10.11	1040.3	-9.795
-41	357.6	175.65	0.70672	0.4947	7.435	5.2045	10.55	10.55	-9.872	1040.8	-9.547
-40	380.3	186.80	0.7408	0.5249	7.907	5.5549	10.57	10.57	-9.629	1041.2	-9.300
-39	403.5	199.18	0.7776	0.5583	8.431	5.9317	10.60	10.60	-9.388	1041.6	-9.053
-38	428.1	211.81	0.8163	0.5922	8.965	6.3275	10.62	10.62	-9.146	1042.0	-8.805
-37	458.2	225.30	0.8589	0.6292	9.500	6.7436	10.65	10.65	-8.903	1042.4	-8.557
-36	488.4	239.36	0.9058	0.6677	10.16	7.1712	10.67	10.67	-8.663	1043.0	-8.309
-35	519.5	255.18	1.0122	0.7085	10.89	7.6000	10.69	10.69	-8.422	1043.5	-8.060
-34	552.4	271.34	1.0738	0.7517	11.49	8.0400	10.72	10.72	-8.180	1043.9	-7.812
-33	586.5	288.09	1.1374	0.7962	12.20	8.4900	10.75	10.75	-7.939	1044.4	-7.562
-32	623.7	306.36	1.2037	0.8447	12.77	8.9500	10.77	10.77	-7.698	1044.8	-7.313
-31	661.8	325.08	1.2774	0.8942	13.76	9.4200	10.80	10.80	-7.457	1045.3	-7.064
-30	701.0	344.33	1.3499	0.9449	14.58	1.0206	10.82	10.82	-7.216	1045.7	-6.814
-29	742.2	364.57	1.4260	0.9982	15.43	1.0801	10.85	10.85	-6.975	1046.2	-6.562
-28	781.2	385.14	1.5160	1.0516	16.45	1.1516	10.87	10.87	-6.735	1046.6	-6.310
-27	841.0	408.20	1.6083	1.1258	17.49	1.2285	10.90	10.90	-6.493	1047.1	-6.057
-26	862.1	438.20	1.7021	1.1914	18.55	1.2985	10.92	10.92	-6.251	1047.5	-5.805

*Compiled by W. M. Sawdon, vapor pressures converted from International Critical Tables.

TABLE 6. PROPERTIES OF SATURATED WATER VAPOR WITH AIR AT LOW TEMPERATURES* (PART I, CONCLUDED)

Temp. °F	PRESSURE OF SATURATED VAPOR X 10 ⁴		WEIGHT OF SATURATED VAPOR				VOLUME IN CU FT BAROMETER, 29.92 IN. Hg.		ENTHALPY PER LB		
	In. of Hg.	Lb per Sq In.	per Cu Ft		per lb of Dry Air		of 1 lb of Dry Air	of 1 lb of Dry Air + Vapor to Saturate it	Dry Air °F Datum	Vapor 32°F Datum	Dry Air with Vapor to Saturate it
			Pounds X 10 ⁴	Grains	Pounds X 10 ⁴	Grains					
-25	946.4	464.87	1.8016	0.12611	19.68	1.3776	10.95	10.95	-6.011	1048.0	-5.805
-24	1083.	522.64	1.9049	0.13334	20.86	1.4602	10.97	10.97	-5.770	1048.4	-5.551
-23	1198.	585.09	2.0162	0.14113	22.13	1.5491	11.00	11.00	-5.529	1048.9	-5.297
-22	1129.	655.51	2.1287	0.14901	23.42	1.6394	11.02	11.02	-5.288	1049.3	-5.042
-21	1162.	734.84	2.2484	0.15739	24.79	1.7353	11.05	11.05	-5.047	1049.8	-4.787
-20	1262.0	819.89	2.3750	0.16625	26.25	1.8375	11.07	11.07	-4.807	1050.2	-4.531
-19	1337.	896.73	2.5105	0.17569	27.81	1.9467	11.10	11.10	-4.566	1050.7	-4.274
-18	1416.	996.54	2.6527	0.18569	29.45	2.0615	11.13	11.13	-4.325	1051.1	-4.018
-17	1490.	1104.8	2.7963	0.19574	31.16	2.1784	11.15	11.15	-4.085	1051.6	-3.763
-16	1564.	1229.0	2.9542	0.20679	32.90	2.3065	11.18	11.18	-3.844	1052.0	-3.497
-15	1675.0	1372.76	3.1168	0.21818	34.84	2.4388	11.20	11.21	-3.604	1052.5	-3.237
-14	1772.	1500.41	3.2899	0.23029	36.86	2.5802	11.23	11.23	-3.363	1052.9	-2.975
-13	1874.	1636.51	3.4714	0.24300	38.98	2.7286	11.25	11.26	-3.123	1053.4	-2.712
-12	1980.	1782.08	3.6566	0.25617	41.19	2.8833	11.28	11.29	-2.883	1053.8	-2.449
-11	2093.	1938.1	3.8569	0.27019	43.54	3.0478	11.30	11.31	-2.642	1054.3	-2.183
-10	2210.	2085.6	4.0666	0.28468	45.98	3.2186	11.33	11.34	-2.402	1054.7	-1.917
-9	2335.	2235.0	4.2871	0.30009	48.50	3.4005	11.35	11.36	-2.162	1055.2	-1.650
-8	2463.	2390.8	4.5120	0.31584	51.25	3.5875	11.38	11.39	-1.921	1055.6	-1.380
-7	2592.	2552.0	4.7534	0.33214	54.26	3.7875	11.40	11.41	-1.681	1056.1	-1.131
-6	2745.	2745.0	5.0066	0.35046	57.12	3.9984	11.43	11.44	-1.441	1056.5	-0.8375
-5	2898.0	2988.0	5.2738	0.36917	60.30	4.2210	11.45	11.46	-1.201	1057.0	-0.5636
-4	3055.	3200.6	5.5473	0.38831	63.57	4.4469	11.48	11.49	-0.9604	1057.4	-0.2882
-3	3222.	3435.6	5.8379	0.40865	67.05	4.6935	11.50	11.51	-0.7203	1057.9	-0.01098
-2	3397.	3686.6	6.1414	0.42990	70.69	4.9483	11.53	11.54	-0.4802	1058.3	+0.2679
-1	3580.	3958.5	6.4583	0.45208	74.50	5.2150	11.55	11.57	-0.2401	1058.8	+0.5487
0	3773.0	4283.3	6.7914	0.47500	78.52	5.5000	11.58	11.59	0	1059.2	+0.8317

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