

TABLE 1. MIXTURES OF AIR AND SATURATED WATER VAPOR^a

TABLE I. MIXTURES OF AIR AND SATURATED WATER VAPOR											
TEMP., °F.	bPRESSURE OF SATURATED VAPOR		WEIGHT OF SATURATED VAPOR				VOLUME IN CU. FT.		HEAT CONTENT IN B.T.U. OF 1 LB. OF DRY AIR ABOVE 0° F.	LATENT HEAT OF VAPOR, B.T.U.	cHEAT CONTENT IN B.T.U. OF 1 LB. OF DRY AIR WITH VAPOR TO SATU- RATE IT
	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			
			Pounds	Grains	Pounds	Grains					
0	0.0375	0.0184	0.0000674	0.472	0.000781	5.47	11.58	11.59	0.0	0.964	0.964
2	.0417	.0204	.0000746	.522	.000869	6.08	11.63	11.65	0.482	1.071	1.553
4	.0462	.0227	.0000823	.576	.000963	6.74	11.68	11.70	0.964	1.186	2.150
6	.0512	.0252	.0000909	.636	.001067	7.47	11.73	11.75	1.446	1.313	2.759
8	.0567	.0279	.0001001	.701	.001183	8.28	11.78	11.80	1.928	1.455	3.383
10	.0628	.0308	.0001103	.772	.001309	9.16	11.83	11.86	2.411	1.608	4.019
12	.0694	.0341	.000121	.850	.001447	10.13	11.88	11.91	2.893	1.776	4.669
14	.0766	.0376	.000134	.935	.001599	11.19	11.94	11.97	3.375	1.961	5.336
16	.0846	.0415	.000147	1.028	.001764	12.35	11.99	12.02	3.858	2.162	6.020
18	.0932	.0458	.000161	1.128	.001946	13.62	12.04	12.08	4.340	2.383	6.723
20	.1027	.0504	.000177	1.237	.002144	15.01	12.09	12.13	4.823	2.623	7.446
22	.1130	.0555	.000194	1.356	.002360	16.52	12.14	12.19	5.305	2.885	8.190
24	.1242	.0610	.000212	1.485	.002596	18.17	12.19	12.24	5.787	3.170	8.957
26	.1365	.0670	.000232	1.625	.002854	19.98	12.24	12.30	6.270	3.482	9.752
28	.1499	.0736	.000254	1.776	.003134	21.94	12.29	12.35	6.752	3.821	10.573
30	.1646	.0809	.000278	1.943	.003444	24.11	12.34	12.41	7.234	4.195	11.429
32	.1806	.0887	.000303	2.124	.003782	26.47	12.39	12.47	7.716	4.608	12.318
34	.1957	.0961	.000327	2.292	.003938	27.57	12.41	12.49	7.96	4.22	12.60
35	.2036	.1000	.000340	2.380	.004100	28.70	12.44	12.52	8.20	4.40	12.80
36	.2119	.1041	.000353	2.471	.004268	29.88	12.47	12.55	8.44	4.57	13.02
37	.2204	.1083	.000367	2.566	.004442	31.09	12.49	12.58	8.68	4.76	13.44
38	.2292	.1126	.000381	2.663	.004622	32.35	12.52	12.61	8.93	4.95	13.87
39	.2384	.1171	.000395	2.764	.004809	33.66	12.54	12.64	9.17	5.14	14.31
40	.2478	.1217	.000410	2.868	.005002	35.01	12.57	12.67	9.41	5.35	14.76
41	.2576	.1266	.000425	2.976	.005202	36.41	12.59	12.70	9.65	5.56	15.21
42	.2678	.1315	.000441	3.087	.005410	37.87	12.62	12.73	9.89	5.78	15.67
43	.2783	.1367	.000457	3.201	.005625	39.38	12.64	12.76	10.14	6.01	16.14
44	.2891	.1420	.000474	3.319	.005848	40.93	12.67	12.79	10.38	6.24	16.62
45					.006078	42.55	12.69	12.82	10.62	6.48	17.10

^aReprinted by permission from *Properties of Steam and Ammonia*, by the late G. A. Goodenough.^bBelow 32°F the pressure of saturated vapor in contact with ice is given.^cValues in this column do not include the heat of the liquid. Below 32°F the heat of sublimation of ice is included.TABLE 1. MIXTURES OF AIR AND SATURATED WATER VAPOR^a (CONTINUED)

TEMP., °F.	PRESSURE OF SATURATED VAPOR		WEIGHT OF SATURATED VAPOR				VOLUME IN CU. FT.		HEAT CONTENT IN B.T.U. OF 1 LB. OF DRY AIR ABOVE 0°F.	LATENT HEAT OF VAPOR, B.T.U.	HEAT CONTENT IN B.T.U. OF 1 LB. OF DRY AIR WITH VAPOR TO SATU- RATE IT
	In. of Hg.	Lb. per Sq. In.	per Cu. Ft.		per lb. of Dry Air		of 1 lb. of Dry Air + Vapor to saturate it				
			Pounds	Grains	Pounds	Grains					
45	0.3003	0.1475	0.000492	3.442	0.00632	44.21	12.72	12.85	10.86	6.73	17.59
46	.3120	.1532	.000510	3.568	.00656	45.94	12.74	12.88	11.10	6.99	18.09
47	.3240	.1591	.000528	3.698	.00682	47.73	12.77	12.91	11.34	7.26	18.60
48	.3364	.1652	.000547	3.832	.00708	49.58	12.79	12.94	11.58	7.54	19.12
49	.3492	.1715	.000567	3.970	.00736	51.49	12.82	12.97	11.83	7.83	19.65
50	.3624	.1780	.000588	4.113	.00764	53.47	12.84	13.00	12.07	8.12	20.19
51	.3761	.1848	.000609	4.260	.00793	55.52	12.87	13.03	12.31	8.43	20.74
52	.3903	.1917	.000630	4.411	.00823	57.64	12.89	13.07	12.55	8.75	21.30
53	.4049	.1989	.000653	4.568	.00855	59.83	12.92	13.10	12.79	9.08	21.87
54	.4200	.2063	.000676	4.729	.00887	62.09	12.95	13.13	13.03	9.41	22.45
55	.4356	.2140	.000699	4.895	.00920	64.43	12.97	13.16	13.28	9.76	23.04
56	.4517	.2219	.000724	5.066	.00955	66.85	13.00	13.20	13.52	10.13	23.64
57	.4684	.2300	.000749	5.242	.00991	69.35	13.02	13.23	13.76	10.50	24.25
58	.4855	.2384	.000775	5.424	.01028	71.93	13.05	13.26	14.00	10.89	24.88
59	.5032	.2471	.000802	5.611	.01066	74.60	13.07	13.30	14.24	11.28	25.52
60	.5214	.2561	.000829	5.804	.01105	77.3	13.10	13.33	14.48	11.69	26.18
61	.5403	.2654	.000858	6.003	.01146	80.2	13.12	13.36	14.72	12.12	26.84
62	.5597	.2749	.000887	6.208	.01188	83.2	13.15	13.40	14.97	12.56	27.52
63	.5798	.2848	.000917	6.418	.01231	86.2	13.17	13.43	15.21	13.01	28.22
64	.6005	.2949	.000948	6.633	.01276	89.3	13.20	13.47	15.45	13.48	28.93
65	.6218	.3054	.000979	6.855	.01323	92.6	13.22	13.50	15.69	13.96	29.65
66	.6438	.3162	.01012	7.084	.01370	95.9	13.25	13.54	15.93	14.46	30.39
67	.6664	.3273	.01046	7.320	.01420	99.4	13.27	13.58	16.18	14.97	31.15
68	.6898	.3388	.01080	7.563	.01471	103.0	13.30	13.61	16.42	15.50	31.92
69	.7139	.3506	.01116	7.813	.01524	106.6	13.32	13.65	16.66	16.05	32.71
70	.7386	.3628	.01153	8.069	.01578	110.5	13.35	13.69	16.90	16.61	33.51
71	.7642	.3754	.01190	8.332	.01634	114.4	13.38	13.73	17.14	17.19	34.33
72	.7906	.3883	.01229	8.603	.01692	118.4	13.40	13.76	17.38	17.79	35.17
73	.8177	.4016	.01269	8.882	.01751	122.6	13.43	13.80	17.63	18.41	36.03
74	.8456	.4153	.01310	9.168	.01813	126.9	13.45	13.84	17.87	19.05	36.91

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