

TABLE 6. THERMODYNAMIC PROPERTIES OF MOIST AIR^a, 29.921 IN. HG (CONTINUED)

TEMP DEG F	SATURATION HUMIDITY RATIO W _s WEIGHT OF WATER PER LB OF DRY AIR		VOLUME CU FT PER LB DRY AIR			ENTHALPY BTU PER LB DRY AIR			SPECIFIC ENTHALPY OF LIQUID WATER BTU PER LB h _w	SATURATION PRESSURE p _s		TEMP DEG F
	Pounds	Grains	Dry Air v _a	v _{as} (v _s - v _a)	Saturated Mixture v _s	Dry Air h _a	h _{as} (h _s - h _a)	Saturated Mixture h _s		In. of Hg	Lb per Sq in.	
140	0.1521	1064.7	15.10	3.69	18.79	33.61	170.69	204.30	107.9	5.8779	2.887	140
141	.1570	1099.0	15.13	3.81	18.94	33.85	172.28	210.11	108.9	6.0306	2.962	141
142	.1622	1135.4	15.15	3.95	19.10	34.09	182.17	216.26	109.9	6.1874	3.039	142
143	.1675	1172.5	15.18	4.08	19.26	34.33	188.20	222.53	110.9	6.3482	3.118	143
144	.1730	1211.0	15.20	4.23	19.43	34.57	194.45	229.02	111.9	6.5111	3.198	144
145	0.1787	1250.9	15.23	4.37	19.60	34.81	200.95	235.76	112.9	6.6781	3.280	145
146	.1846	1292.2	15.25	4.53	19.78	35.05	207.66	242.71	113.9	6.8471	3.363	146
147	.1908	1335.5	15.28	4.68	19.96	35.29	214.73	250.02	114.9	7.0222	3.449	147
148	.1971	1379.7	15.30	4.85	20.15	35.53	221.90	257.43	115.9	7.1993	3.536	148
149	.2037	1425.9	15.33	5.02	20.35	35.77	229.43	265.20	116.9	7.3805	3.625	149
150	0.2105	1473.5	15.35	5.20	20.55	36.02	237.17	273.19	117.9	7.5658	3.716	150
151	.2176	1523.2	15.38	5.38	20.76	36.26	245.28	281.54	118.9	7.7551	3.809	151
152	.2250	1575.0	15.40	5.57	20.97	36.50	253.71	290.21	119.9	7.9485	3.904	152
153	.2327	1628.9	15.43	5.77	21.20	36.74	262.51	299.25	120.9	8.1460	4.001	153
154	.2407	1684.9	15.45	5.98	21.43	36.98	271.63	308.61	121.9	8.3476	4.100	154
155	0.2490	1743.0	15.48	6.19	21.67	37.22	281.12	318.34	122.9	8.5532	4.201	155
156	.2577	1803.9	15.50	6.43	21.93	37.46	291.05	328.51	123.9	8.7650	4.305	156
157	.2667	1866.9	15.53	6.66	22.19	37.70	301.24	339.04	124.9	8.9788	4.410	157
158	.2761	1932.7	15.56	6.90	22.46	37.94	312.08	350.02	125.9	9.1986	4.518	158
159	.2858	2000.6	15.58	7.16	22.74	38.18	323.18	361.36	126.9	9.4206	4.627	159
160	0.2961	2072.7	15.61	7.42	23.03	38.43	334.95	373.38	127.9	9.6486	4.739	160
161	.3067	2146.9	15.63	7.70	23.33	38.67	347.09	385.76	128.9	9.8807	4.853	161
162	.3179	2225.3	15.66	7.99	23.65	38.91	359.89	398.80	129.9	10.119	4.970	162
163	.3295	2306.5	15.68	8.30	23.98	39.15	373.19	412.34	130.9	10.361	5.089	163
164	.3416	2391.2	15.71	8.62	24.33	39.39	387.03	426.42	131.9	10.608	5.210	164
165	0.3544	2480.8	15.73	8.96	24.69	39.63	401.71	441.34	132.9	10.860	5.334	165
166	.3677	2573.9	15.76	9.31	25.07	39.87	416.94	456.81	133.9	11.117	5.460	166
167	.3817	2671.9	15.78	9.68	25.46	40.11	433.00	473.11	134.9	11.379	5.589	167
168	.3964	2774.8	15.81	10.07	25.88	40.35	449.83	490.18	135.9	11.646	5.720	168
169	.4118	2882.6	15.83	10.48	26.31	40.59	467.52	508.11	136.9	11.919	5.854	169
170	0.4280	2996.0	15.86	10.91	26.77	40.83	486.08	526.91	137.9	12.196	5.990	170
171	.4451	3115.7	15.88	11.36	27.24	41.07	505.72	546.79	138.9	12.480	6.130	171
172	.4631	3241.7	15.91	11.83	27.74	41.32	526.36	567.68	139.9	12.770	6.272	172
173	.4821	3374.7	15.93	12.35	28.28	41.56	548.20	589.76	140.9	13.065	6.417	173
174	.5022	3515.4	15.96	12.88	28.84	41.80	571.25	613.05	141.9	13.366	6.565	174

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^aCompiled by W. M. Sawdon and extended by John A. Goff.TABLE 6. THERMODYNAMIC PROPERTIES OF MOIST AIR^a, 29.921 IN. HG (CONCLUDED)

TEMP DEG F	SATURATION HUMIDITY RATIO W _s WEIGHT OF WATER PER LB OF DRY AIR		VOLUME CU FT PER LB DRY AIR			ENTHALPY BTU PER LB DRY AIR			SPECIFIC ENTHALPY OF LIQUID WATER BTU PER LB h _w	SATURATION PRESSURE p _s		TEMP DEG F
	Pounds	Grains	Dry Air v _a	v _{as} (v _s - v _a)	Saturated Mixture v _s	Dry Air h _a	h _{as} (h _s - h _a)	Saturated Mixture h _s		In. of Hg	Lb per Sq in.	
175	0.5235	3664.5	15.98	13.45	29.43	42.04	595.74	637.78	142.9	13.674	6.718	175
176	.5459	3821.3	16.01	14.04	30.05	42.28	621.45	663.73	143.9	13.985	6.869	176
177	.5697	3987.9	16.03	14.68	30.71	42.52	648.83	691.35	144.9	14.303	7.025	177
178	.5949	4164.3	16.06	15.35	31.41	42.76	677.77	720.53	145.9	14.627	7.184	178
179	.6215	4350.5	16.08	16.07	32.15	43.00	708.39	751.39	146.9	14.954	7.345	179
180	0.6501	4550.7	16.11	16.83	32.94	43.24	741.24	784.48	147.9	15.290	7.510	180
181	.6805	4763.5	16.13	17.65	33.78	43.49	776.25	819.74	148.9	15.632	7.678	181
182	.7131	4991.7	16.16	18.52	34.68	43.73	813.72	857.45	149.9	15.981	7.849	182
183	.7481	5236.7	16.18	19.47	35.65	43.97	854.03	898.00	150.9	16.337	8.024	183
184	.7854	5497.8	16.21	20.46	36.67	44.21	896.93	941.14	151.9	16.697	8.201	184
185	0.8258	5780.6	16.23	21.55	37.78	44.45	943.48	987.93	152.9	17.066	8.382	185
186	.8693	6085.1	16.26	22.72	38.98	44.69	993.52	1038.21	153.9	17.440	8.566	186
187	.9162	6413.4	16.28	23.99	40.27	44.93	1047.58	1092.51	154.9	17.821	8.753	187
188	.9673	6771.1	16.31	25.36	41.67	45.18	1108.40	1151.58	155.9	18.210	8.944	188
189	1.0227	7158.9	16.34	26.70	43.04	45.42	1170.62	1216.04	157.0	18.605	9.138	189
190	1.083	7581.0	16.36	28.49	44.85	45.66	1239.71	1285.37	158.0	19.008	9.336	190
191	1.150	8050.0	16.39	30.29	46.68	45.90	1316.98	1362.88	159.0	19.419	9.538	191
192	1.224	8568.0	16.41	32.29	48.70	46.14	1402.21	1448.35	160.0	19.839	9.744	192
193	1.306	9142.0	16.44	34.49	50.93	46.38	1498.81	1543.19	161.0	20.266	9.954	193
194	1.397	9779.0	16.46	36.95	53.42	46.62	1601.66	1648.28	162.0	20.702	10.168	194
195	1.499	10493.0	16.49	39.71	56.20	46.86	1719.35	1766.21	163.0	21.144	10.385	195
196	1.613	11291.0	16.51	42.80	59.31	47.10	1850.76	1897.88	164.0	21.592	10.605	196
197	1.742	12194.0	16.54	46.31	62.85	47.34	1999.64	2046.98	165.0	22.048	10.829	197
198	1.890	13230.0	16.56	50.32	66.88	47.59	2170.29	2217.88	166.0	22.512	11.057	198
199	2.061	14427.0	16.59	54.95	71.64	47.83	2367.68	2415.51	167.0	22.984	11.289	199
200	2.261	15827.0	16.61	60.38	76.99	48.07	2598.34	2646.41	168.0	23.465	11.525	200

^aCompiled by W. M. Sawdon and extended by John A. Goff.

CHAPTER 1. THERMODYNAMICS OF AIR AND WATER MIXTURE