

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

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 SOLID WATER BTU per LB h _w	SATURATION PRESSURE p _s X 10 ³		TEMP DEG F	
	Pounds X 10 ³	Grains	Dry Air v _a	v _{as} (v _s -v _a)	Saturated Mixture v _g	Dry Air h _a	h _{as} (h _s -h _a)		Saturated Mixture h _g	In. of Hg		Lb per Sq In.
-60	2.108	0.14756	10.07	0.00	10.07	-14.48	0.02	-14.46	101.4	49.808	-60	
-59	2.262	0.15834	10.09	0.00	10.09	-14.23	.02	-14.21	108.8	53.443	-59	
-58	2.418	0.16926	10.12	0.00	10.12	-13.99	.02	-13.97	116.3	57.127	-58	
-57	2.595	0.18165	10.14	0.00	10.14	-13.75	.03	-13.72	124.8	61.302	-57	
-56	2.773	0.19411	10.17	0.00	10.17	-13.50	.03	-13.47	133.4	65.526	-56	
-55	2.973	0.20811	10.19	0.00	10.19	-13.26	0.03	-13.23	143.0	70.242	-55	
-54	3.181	0.22267	10.22	0.00	10.22	-13.02	.03	-12.99	153.0	75.154	-54	
-53	3.399	0.23793	10.24	0.00	10.24	-12.78	.04	-12.74	163.5	80.311	-53	
-52	3.636	0.25462	10.27	0.00	10.27	-12.53	.04	-12.49	174.9	85.911	-52	
-51	3.888	0.27216	10.29	0.00	10.29	-12.29	.04	-12.25	187.0	91.954	-51	
-50	4.156	0.29092	10.32	0.00	10.32	-12.05	0.04	-12.01	199.9	98.191	-50	
-49	4.428	0.30966	10.34	0.00	10.34	-11.81	.05	-11.76	213.0	104.63	-49	
-48	4.738	0.33166	10.37	0.00	10.37	-11.57	.05	-11.52	227.9	111.94	-48	
-47	5.054	0.35378	10.40	0.00	10.40	-11.32	.05	-11.27	243.1	119.41	-47	
-46	5.395	0.37765	10.42	0.00	10.42	-11.08	.06	-11.02	259.5	127.47	-46	
-45	5.753	0.40271	10.45	0.00	10.45	-10.84	0.06	-10.78	276.7	135.92	-45	
-44	6.133	0.42931	10.47	0.00	10.47	-10.60	.06	-10.54	295.0	144.90	-44	
-43	6.543	0.45801	10.50	0.00	10.50	-10.35	.07	-10.28	314.7	154.58	-43	
-42	6.971	0.48797	10.52	0.00	10.52	-10.11	.07	-10.04	335.3	164.70	-42	
-41	7.435	0.52045	10.55	0.00	10.55	-9.872	.07	-9.795	357.6	175.65	-41	
-40	7.907	0.55349	10.57	0.00	10.57	-9.629	0.08	-9.547	380.3	186.80	-40	
-39	8.431	0.59017	10.60	0.00	10.60	-9.388	.08	-9.300	405.5	199.18	-39	
-38	8.965	0.62755	10.62	0.00	10.62	-9.146	.08	-9.053	431.2	211.81	-38	
-37	9.548	0.66536	10.65	0.00	10.65	-8.905	.10	-8.805	459.2	225.56	-37	
-36	10.16	0.71120	10.67	0.00	10.67	-8.663	.10	-8.567	488.4	239.90	-36	
-35	10.80	0.75600	10.69	0.00	10.69	-8.422	0.11	-8.309	519.5	255.18	-35	
-34	11.49	0.80430	10.72	0.00	10.72	-8.180	.12	-8.060	552.4	271.34	-34	
-33	12.20	0.85400	10.75	0.00	10.75	-7.939	.12	-7.812	586.5	288.09	-33	
-32	12.97	0.90790	10.77	0.00	10.77	-7.698	.13	-7.562	623.7	306.36	-32	
-31	13.76	0.96320	10.80	0.00	10.80	-7.457	.14	-7.313	661.8	325.08	-31	
-30	14.58	1.0206	10.82	0.00	10.82	-7.216	0.15	-7.064	701.0	344.33	-30	
-29	15.43	1.0801	10.85	0.00	10.85	-6.975	.15	-6.814	742.2	364.57	-29	
-28	16.45	1.1515	10.87	0.00	10.87	-6.734	.16	-6.562	784.6	386.64	-28	
-27	17.49	1.2243	10.90	0.00	10.90	-6.493	.17	-6.310	829.1	410.10	-27	
-26	18.55	1.2985	10.92	0.00	10.92	-6.251	.19	-6.067	875.0	436.20	-26	

^aCompiled by W. M. Sawdon and extended by John A. Goff.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 SOLID WATER BTU PER LB h _w	SATURATION PRESSURE p _s X 10 ³		TEMP DEG F			
	Pounds X 10 ³	Grains	Dry Air v _a	v _{as} (v _s -v _a)	Saturated Mixture v _g	Dry Air h _a		h _{as} (h _s -h _a)	Saturated Mixture h _g		In. of Hg		Lb per Sq In.
-25	19.68	1.3776	10.95	0.00	10.95	-6.011	0.205	-5.805	946.4	464.87	-25		
-24	20.86	1.4602	10.97	0.00	10.97	-5.770	.219	-5.551	1003.0	492.67	-24		
-23	22.13	1.5491	11.00	0.00	11.00	-5.529	.232	-5.297	1064.0	522.84	-23		
-22	23.42	1.6394	11.02	0.00	11.02	-5.288	.246	-5.042	1126.0	553.09	-22		
-21	24.79	1.7353	11.05	0.00	11.05	-5.047	.260	-4.787	1192.0	585.51	-21		
-20	26.25	1.8375	11.07	0.00	11.07	-4.807	0.276	-4.531	1262.0	619.89	-20		
-19	27.81	1.9467	11.10	0.00	11.10	-4.566	.292	-4.274	1337.0	656.73	-19		
-18	29.45	2.0615	11.13	0.00	11.13	-4.325	.310	-4.015	1416.0	695.54	-18		
-17	31.12	2.1784	11.15	0.00	11.15	-4.085	.327	-3.758	1496.0	734.84	-17		
-16	32.95	2.3065	11.18	0.00	11.18	-3.844	.347	-3.497	1584.0	778.06	-16		
-15	34.84	2.4388	11.20	0.01	11.21	-3.604	0.367	-3.237	1675.0	822.76	-15		
-14	36.88	2.5822	11.23	0.01	11.24	-3.363	.388	-2.975	1772.0	870.41	-14		
-13	38.98	2.7282	11.25	0.01	11.26	-3.123	.411	-2.712	1874.0	920.51	-13		
-12	41.19	2.8833	11.28	0.01	11.29	-2.883	.434	-2.449	1980.0	972.68	-12		
-11	43.54	3.0478	11.30	0.01	11.31	-2.642	.459	-2.183	2093.0	1028.1	-11		
-10	45.98	3.2186	11.33	0.01	11.34	-2.402	0.485	-1.917	2210.0	1085.6	-10		
-9	48.58	3.4006	11.36	0.01	11.36	-2.162	.513	-1.649	2336.0	1147.0	-9		
-8	51.25	3.5875	11.38	0.01	11.39	-1.921	.541	-1.380	2468.0	1209.8	-8		
-7	52.06	3.6442	11.40	0.01	11.41	-1.681	.570	-1.111	2602.0	1279.0	-7		
-6	57.12	3.9984	11.43	0.01	11.44	-1.441	.603	-0.838	2745.0	1348.3	-6		
-5	60.30	4.2210	11.45	0.01	11.46	-1.201	0.637	-0.564	2898.0	1423.5	-5		
-4	63.57	4.4499	11.48	0.01	11.49	-0.960	.672	-0.288	3055.0	1500.6	-4		
-3	67.05	4.6935	11.50	0.01	11.51	-0.720	.708	+0.011	3222.0	1582.6	-3		
-2	70.69	4.9483	11.53	0.01	11.54	-0.480	.748	+0.268	3397.0	1668.6	-2		
-1	74.50	5.2160	11.55	0.01	11.57	-0.240	.788	+0.549	3580.0	1758.5	-1		
0	78.52	5.5000	11.58	0.01	11.59	0	0.832	+0.832	3773.0	1853.3	0		

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