

## GENERAL GAS PROPERTIES

			Normal Boiling Point (1 atm)		Gas Phase Properties @ 32°F & @1 atm			Liquid Phase Properties @ B P & @ 1 atm		Triple Point		Critical Point		
			Temp.	Latent heat of Vaporization	Specific Gravity	Specific Heat (Cp)	Density	Specific Gravity	Specific Heat (Cp)	Temp.	Pressure	Temp.	Pressure	Density
Substance	Chemical Symbol	Mol. Weight	° F	BTU/lb	Air = 1	BTU/lb °F	lb/cu. ft	Water = 1	BTU/lb °F	°F	psia	°F	psia	lb/cu ft
Air	--	28.98	-317.8	88.2	1	0.241	0.08018	0.873	0.4454	-352.1	--	-221.1	547	21.9
Oxygen	O <sub>2</sub>	32	-297.3	91.7	1.113	0.2197	0.089212	1.14	0.4058	-361.8	0.02147	-181.43	731.4	27.22
Nitrogen	N <sub>2</sub>	28.01	-320.4	85.6	0.9737	0.249	0.07807	0.808	0.4877	-346	1.81	-232.4	493	19.6
Argon	Ar	39.95	-302.6	69.8	1.39	0.125	0.11135	1.4	0.2575	-308.8	9.99	-188.1	711.5	33.44
Carbon Dioxide	CO <sub>2</sub>	44.01	-109.3 <sup>a</sup>	245.5 <sup>b</sup>	1.524	0.199	0.12341	1.18 <sup>c</sup>	--	-69.9	75.1	87.9	1070.6	29.2
Hydrogen	H <sub>2</sub>	2.02	-423	191.7	0.06998	3.425	0.005611	0.071	2.309	-434.6	1.045	-399.93	190.8	1.88
Carbon Monoxide	CO	28.01	-312.7	92.79	0.9736	0.2478	0.07806	0.79	--	-337.1	2.2	-220.4	507.5	18.79
Water	H <sub>2</sub> O	18.02	212	970.6	--	0.8784 <sup>d</sup>	0.0368 <sup>d</sup>	0.95855	1.007	32	0.088	705.182	3200.5	20.1
Methane	CH <sub>4</sub>	16.04	-258.68	219.22	0.559	0.593	0.0448	0.425	0.8314	-296.5	1.69	-115.78	673.1	10.09
Ammonia	NH <sub>3</sub>	17.03	-28	589.3	0.6003	0.52	0.04813	0.6819	--	-107.9	0.88	271.4	1657	14.7
Helium	He	4	-452.06	8.72	0.139	1.25	0.01114	0.124	1.086	NONE	NONE	-450.31	33	4.347
Neon	Ne	20.18	-410.9	37.08	0.701	0.25	0.05621	1.207	0.4483	-415.4	6.29	-379.8	384.9	30.15
Krypton	Kr	83.8	-244	46.2	2.887	0.06	0.2315	2.41	0.1273	-251.3	10.6	-82.8	798	56.7
Xenon	Xe	131.3	-162.6	41.4	4.55	0.038	0.365	3.06	0.08121	-169.2	11.84	61.9	847	68.67
Ozone	O <sub>3</sub>	47.99	-168.3	6530	1.656	9.41	--	1.352	--	-314.5	1.65	10.13	808.1	33.71
Hydrogen Sulfide	H <sub>2</sub> S	34.08	-76.4	235.6	1.198	0.245	0.09608	0.9136	--	--	--	212.9	1306.5	21.6
Sulfur Dioxide	SO <sub>2</sub>	64.06	14	167.5	2.279	0.149	0.18272	1.46	--	-103.9	0.2429	315.4	1143	32.6
Ethane	C <sub>2</sub> H <sub>6</sub>	30.07	-127.53	210.41	1.056	0.386	0.08469	0.546	--	-297.9	14.7	86.96	708.35	12.67
Ethylene	C <sub>2</sub> H <sub>4</sub>	28.05	-154.8	208	0.978	0.399	0.07868	0.567	--	-272.5	1.0146	49.82	745	14.2
Acetylene	C <sub>2</sub> H <sub>2</sub>	26.04	-118.4 <sup>a</sup>	264 <sup>c</sup>	0.906	0.383	0.07314	0.613	--	-116	17.7	96.8	907	14.4
Propane	C <sub>3</sub> H <sub>8</sub>	44.1	-43.67	183.05	1.573	0.388	0.1261	0.58	--	--	--	206.01	616.3	13.5
Propylene	C <sub>3</sub> H <sub>6</sub>	42.08	-53.9	188.18	1.481	0.355	0.11249	0.61	--	--	--	197.2	670	14.5
Methanol	CH <sub>3</sub> OH	32.04	148.2	473	--	0.3274	49.44 <sup>d</sup>	0.795	0.6055	-143.4	--	464.1	1154.2	16.981

<sup>a</sup> Sublimation point    <sup>b</sup> Sublimation Enthalpy    <sup>c</sup> Triple point    <sup>d</sup> Boiling point