

SAFETY & TECHNICAL

GAS PROPERTIES

Product	Formula	State	THERMOPHYSICAL PROPERTIES							HAZARDOUS PROPERTIES			
			Molecular Weight	Vapor Pressure at 70° F (psig)	Specific Gravity at 70° F (1atm)	Critical Temp. (° F)	Critical Pressure (psia)	Specific Volume (cf/lb)	Heat Capacity (Btu/lb. Mole ° F)	Ignition Temp., (° F)	Flammable Limits in Air (Vol.%)	Threshold Limit Value (ppm)	Physiological Properties
Acetylene	C ₂ H ₂	Dissolved Gas	26.04	635	0.905	97.3	905.3	14.7	10.6	581	2.5-81	SA	
Air		Compressed Gas	28.97	*	1.00	-221.1	546.8	13.3					Oxidant
Ammonia	NH ₃	Liquefied Gas	17.03	114	0.60	270.4	1639	22.6	8.6	1204	15-28	25	Corrosive and Toxic
Argon	Ar	Compressed Gas	39.95	*	1.38	-188.1	710	9.7	4.97			SA	Inert
Arsine	AsH ₃	Liquefied Gas	77.95	205	2.69	211.8	957	5.0			4-64	0.05	Poison
n-Butane	C ₄ H ₁₀	Liquefied Gas	58.12	16	2.08	305.6	550.8	6.4		788	1.8-8.4	800	Narcotic
Carbon Dioxide	CO ₂	Liquefied Gas	44.01	838	1.52	87.8	1071	8.74	8.97			5,000	Inert
Carbon Monoxide	CO	Compressed Gas	28.01	*	0.97	-220.4	507.4	13.8	6.96	1204	12.5-74	50	Toxic
Chlorine	Cl ₂	Liquefied Gas	70.91	85.3	2.47	291.2	1118.7	5.4	8.2			1	Oxidant and Toxic
Deuterium	D ₂	Compressed Gas	4.03	*	0.139	-390.7	241	96.0	6.97	1058	4.9-75	SA	
Diborane	B ₂ H ₆	Compress Gas	27.67	*	0.95	62.1	581			100	0.8-98	0.05	Highly Toxic
Ethane	C ₂ H ₆	Liquefied Gas	30.07	543	1.047	90.1	708	12.8	12.6	986	3-12.4	SA	
Ethyl Chloride	C ₂ H ₅ Cl	Liquefied Gas	64.52			368.96	764.4				3.8-15.4	1000	
Ethylene	C ₂ H ₄	Compressed Gas	28.05	*	0.974	49.8	742	13.8	10.4	1009	3.1-32	SA	
Helium	He	Compressed Gas	4.003	*	0.138	-450.3	33.2	96.7	4.98			SA	Inert
Hydrogen	H ₂	Compressed Gas	2.02	*	0.0696	-399.96	190.8	192	6.89	1085	4-75	SA	
Hydrogen Chloride	HCl	Liquefied Gas	36.46	613	1.27	124.6	1200	10.6	6.9			5	Corrosive and Toxic
Hydrogen Sulfide	H ₂ S	Liquefied Gas	34.08	252	1.189	212.7	1308	11.2	8.2	500	4.3-45	10	Irritant and Toxic
Isobutane	C ₄ H ₁₀	Liquefied Gas	58.12	30.8	2.0	275	592.2	6.5		864	1.8-8.4	SA	Anaesthetic
Krypton	Kr	Compressed Gas	83.8	*	2.898	-82.8	798	4.6	5.0			SA	Inert
Methane	CH ₄	Compressed Gas	16.04	*	0.555	-115.8	673	23.7		1000	5-15	SA	
Methyl Chloride	CH ₃ Cl	Liquefied Gas	50.49	58.7	1.74	289.6	968	7.6	9.97	1170	10.7-17.4	50	Toxic
Neon	Ne	Compressed Gas	20.18	*	0.696	-379.8	384.9	19.2	4.97			SA	Inert
Nitrogen	N ₂	Compressed Gas	28.01	*	0.967	-232.4	492.9	13.8	6.97			SA	Inert
Nitrous Oxide	N ₂ O	Liquefied Gas	44.01	745	1.53	97.6	1054	8.7	9.2			25	Oxidant
Oxygen	O ₂	Compressed Gas	32.0	*	1.105	-181.1	736.9	12.1	7.03				Oxidant
Phosphine	PH ₃	Liquefied Gas	34.0	592.7	1.184	124.3	948	11.4		122	Treat as Pyrophoric	0.3	Poison
Propane	C ₃ H ₈	Liquefied Gas	44.1	109	1.55	206.2	617.4	8.5	17.4	874	2.1-9.5	SA	
Silane	SiH ₄	Compressed Gas	32.12	*	1.11	24.8	702.7	12.0			Pyrophoric	0.5	
Sulfur Dioxide	SO ₂	Liquefied Gas	64.06	34.4	2.26	315	1143	5.9	9.6			2	Irritant and Toxic
Sulfur Hexafluoride	SF ₆	Liquefied Gas	146.05	310	5.11	114	545	2.5				1000	Inert
Xenon	Xe	Compressed Gas	131.3	*	4.56	61.9	852.6	2.9	5.02			SA	Inert

* Above critical temperature @ 21.1 °C. SA Simple asphyxiant