

Common Name	Chemical Formula	Materials of Construction																	
		Metals							Plastics					Elastomers					
		Brass	Carbon Steel	Stainless Steel	Aluminum	Zinc	Copper	Monel	Kel-F	Teflon	Tefzel	Kynar	PVC	Polycarbonate	Kalrez	Viton	Buna-N	Neoprene	Polyurethane
Acetylene	C <sub>2</sub> H <sub>2</sub>	C	S	S	S	U	U	S	S	S	S	I	I	S	U	U	U	U	
Air	-	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	
Ammonia	NH <sub>3</sub>	U	S	S	S	U	U	S	S	S	U	I	I	C	U	C	S	I	
Argon	Ar	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	
Arsine	AsH <sub>3</sub>	S	C	S	C	I	S	S	S	S	S	S	I	S	S	S	S	U	
Boron Trichloride	BCl <sub>3</sub>	U	S	S	U	I	S	S	S	S	S	S	I	C	S	U	U	I	
Boron Trifluoride	BF <sub>3</sub>	S	S	S	C	I	S	S	S	S	S	S	I	C	S	U	U	I	
1,3-Butadiene	C <sub>4</sub> H <sub>6</sub>	S	S	S	C	S	S	S	S	S	S	S	U	I	S	U	U	U	
Butane	C <sub>4</sub> H <sub>10</sub>	S	S	S	C	S	S	S	S	S	S	S	U	S	S	S	S	S	
1-Butene	C <sub>4</sub> H <sub>8</sub>	S	S	S	C	S	S	S	S	S	S	S	U	S	S	S	U	S	
Carbon Dioxide	CO <sub>2</sub>	S	S	S	S	S	S	S	S	S	S	S	U	S	S	U	U	S	
Carbon Monoxide	CO	S	C	S	C	S	S	S	S	S	S	S	S	S	S	S	U	S	
Chlorine	Cl <sub>2</sub>	U	S	S	U	U	U	S	S	S	S	U	U	S	S	U	U	U	
Deuterium	D <sub>2</sub>	S	C	S	C	S	S	S	C	S	S	S	I	S	S	S	S	S	
Diborane	B <sub>2</sub> H <sub>6</sub>	S	C	S	C	I	S	S	S	S	S	S	I	S	I	I	I	I	
Dichlorosilane	H <sub>2</sub> SiCl <sub>2</sub>	S	S	S	U	I	S	S	S	S	I	I	I	S	S	S	I	I	
Disilane	Si <sub>2</sub> H <sub>6</sub>	S	C	S	C	I	S	S	S	S	S	S	U	I	S	I	S	I	
Ethane	C <sub>2</sub> H <sub>6</sub>	S	S	S	C	S	S	S	S	S	S	S	I	S	S	S	U	S	
Ethylene	C <sub>2</sub> H <sub>4</sub>	S	S	S	C	S	S	S	S	S	I	I	I	S	S	S	S	I	
Halocarbon 14	CF <sub>4</sub>	S	S	S	C	I	S	S	I	S	I	I	I	I	S	S	S	I	
Halocarbon 22	CHClF <sub>2</sub>	S	S	S	C	I	S	S	S	C	S	S	U	U	C	U	U	U	
Halocarbon 23	CHF <sub>3</sub>	S	S	S	C	I	S	S	S	S	I	S	I	I	I	S	I	I	
Halocarbon 116	C <sub>2</sub> F <sub>6</sub>	S	S	S	C	S	S	S	S	S	S	S	U	U	C	S	S	S	
Halocarbon 134A	CH <sub>2</sub> FCF <sub>3</sub>	S	S	S	C	I	S	S	I	I	I	I	I	I	I	U	U	I	
Halocarbon 218	C <sub>3</sub> F <sub>8</sub>	S	S	S	C	I	S	S	S	S	I	I	I	I	S	S	S	I	
Helium	He	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	
Hydrogen	H <sub>2</sub>	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	
Hydrogen Bromide	HBr	U	S	S	U	U	U	S	I	S	I	S	I	I	I	U	U	I	
Hydrogen Chloride	HCl	U	S	S	U	U	U	S	S	S	S	S	U	S	U	U	U	U	
Hydrogen Sulfide	H <sub>2</sub> S	U	C	S	C	I	I	S	S	S	S	U	S	S	U	U	U	S	

**Note:**  
 This chart has been prepared for use with dry (anhydrous) gases at normal operating temperature of 70 °F (21 °C). Information may vary if different operating conditions exist. Systems and equipment used in oxidizer gas service (e.g., Oxygen or Nitrous Oxide) must be cleaned for oxygen service.