

## Key To Material Compatibility

- 1 - Satisfactory for use with the intended gas
- 2 - Unsatisfactory for use with the intended gas
- 3 - Insufficient data available to determine compatibility with the intended gas
- 4 - Satisfactory with brass having a low copper content
- 5 - Satisfactory with acetylene, however, cylinder gas is dissolved in a solvent (generally acetone) which may be incompatible with these elastomers
- 6 - Satisfactory with brass, except where acetylene or acetylides are present
- 7 - Generally unsatisfactory, except where specific use conditions have proven acceptable
- 8 - Satisfactory below 3000 psig (206.9 bar) where gas velocities do not exceed 30 ft./sec.
- 9 - Compatibility depends on condition of use

\* For reference only

COMPATIBILITY GUIDE		MATERIALS OF CONSTRUCTION										
		METALS					PLASTICS		ELASTOMERS			
Common Name	Chemical Formula	Brass	Stainless Steel	Aluminum	Zinc	Copper	PCTFE	Teflon®	Viton®	Buna-N	Neoprene	Polyurethane
Acetylene	C <sub>2</sub> H <sub>2</sub>	4	1	3	2	2	1	1	5	5	5	
Air	-	1	1	1	1	1	1	1	1	1	1	1
Allene	C <sub>3</sub> H <sub>4</sub>	1	1	1	3	2	1	1	1	1	1	3
Ammonia	NH <sub>3</sub>	2	1	1	2	2	1	1	2	1	1	2
Argon	Ar	1	1	1	1	1	1	1	1	1	1	1
Arsine	AsH <sub>3</sub>	1	1	7	3	1	1	1	1	1	1	2
Boron Trichloride	BCl <sub>3</sub>	2	1	2	3	1	1	1	3	3	3	3
Boron Trifluoride	BF <sub>3</sub>	1	1	1	3	1	1	1	3	3	3	3
1,3-Butadiene	C <sub>4</sub> H <sub>6</sub>	1	1	1	1	1	1	1	1	2	1	2
Butane	C <sub>4</sub> H <sub>10</sub>	1	1	1	1	1	1	1	1	1	1	1
1-Butene	C <sub>4</sub> H <sub>8</sub>	1	1	1	1	1	1	1	1	1	1	1
cis-2-Butene	C <sub>4</sub> H <sub>8</sub>	1	1	1	1	1	1	1	1	1	1	1
trans-2-Butene	C <sub>4</sub> H <sub>8</sub>	1	1	1	1	1	1	1	1	1	1	1
Carbon Dioxide	CO <sub>2</sub>	1	1	1	1	1	1	1	1	1	1	2
Carbon Monoxide	CO	1	1	1	1	1	1	1	3	1	1	1
Carbonyl Sulfide	COS	1	1	1	3	1	1	1	1	3	3	3
Chlorine	Cl <sub>2</sub>	2	1	2	2	2	1	1	1	2	2	2
Deuterium	D <sub>2</sub>	1	1	1	1	1	1	1	1	1	1	1
Diborane	B <sub>2</sub> H <sub>6</sub>	1	1	2	3	1	1	1	3	3	3	3
Dichlorosilane	H <sub>2</sub> SiCl <sub>2</sub>	3	1	3	3	3	1	1	3	3	3	3
Dimethyl Ether	C <sub>2</sub> H <sub>6</sub> O	1	1	1	1	1	1	1	1	1	1	3
Ethane	C <sub>2</sub> H <sub>6</sub>	1	1	1	1	1	1	1	1	1	1	1
Ethyl Acetylene	C <sub>4</sub> H <sub>6</sub>	3	1	1	3	2	1	1	1	3	1	3
Ethyl Chloride	C <sub>2</sub> H <sub>5</sub> Cl	1	1	2	3	1	1	1	1	1	1	2
Ethylene	C <sub>2</sub> H <sub>4</sub>	1	1	1	1	1	1	1	1	1	1	3
Ethylene Oxide*	C <sub>2</sub> H <sub>4</sub> O	6	1	7	3	2	1	1	2	2	2	2
Ethylene Oxide/Carbon Dioxide Mixtures*	R <sub>3</sub>	1	3	3	2	1	1	2	2	2	2	
Ethylene Oxide/Halocarbon Mixtures*	R <sub>3</sub>	1	3	3	2	1	1	2	2	2	2	
Ethylene Oxide/HCFC-124	R <sub>3</sub>	1	3	3	2	1	1	2	2	2	2	
Halocarbon 11	CCl <sub>3</sub> F	1	1	7	3	1	1	1	1	1	2	2
Halocarbon 12	CCl <sub>2</sub> F <sub>2</sub>	1	1	7	3	1	1	1	1	1	1	1
Halocarbon 13	CClF <sub>3</sub>	1	1	7	3	1	1	1	1	1	1	1
Halocarbon 13B1	CBF <sub>3</sub>	1	1	7	3	1	1	1	1	1	1	1
Halocarbon 14	CF <sub>4</sub>	1	1	7	3	1	1	1	1	1	1	1