

CHEMICAL COMPATIBILITY CHART

Hose Material Code:

PV = Vinyl, PU = Polyurethane, PY= Low Density Polyethylene

HPY = High Density Polyethylene, N = Flexible Nylon II

UN = Unplasticized Nylon II, PP = Polypropylene

Compatibility Code:

G = Good. Little or no swelling, tensile, or surface change
 L = Marginal. Noticeable effects but not necessarily indicating lack of serviceability. Further testing recommended in specific application.

P = Poor or unsatisfactory. Not recommended without extensive testing.

NT = Not tested or not rated.

Ratings based on immersion tests at 73° F and should not be extrapolated to higher temperatures without appropriate caution.

Chemical	PV	PU	PY	HPY	N	UN	PP
ACIDS & BASES:							
Acetic, 50%	G	P	P	G	L	L	G
Boric	G	G	G	G	G	G	G
Carbolic (Phenol)	P	P	G	G	P	P	G
Fatty	G	G	P	G	G	G	G
Formic, 90%	G	P	G	G	P	P	G
Hydrochloric, 10%	G	G	G	G	L	L	G
Hydrochloric, 25%	G	L	G	G	P	P	G
Hydrocyanic, 50%	G	L	G	G	NT	NT	G
Hydrofluoric, 50%	L	P	G	G	P	P	G
Maleic	G	P	G	G	G	G	G
Nitric, 10%	G	P	G	G	L	L	G
Nitric, 30%	G	P	G	G	P	P	L
Oleic	L	G	L	G	G	G	G
Phosphoric, 25%	G	L	G	G	G	G	G
Sulfuric, 30%	G	L	G	G	L	L	G
Sulfuric, 70%	L	P	P	G	P	P	G
Sulfuric, 98%	P	P	P	L	P	P	G
Sulfurous, 30%	G	P	G	G	L	L	G
Tannic	G	P	G	G	G	G	G
Ammonium Hydroxide, 25%	P	G	L	G	G	G	G
Potassium Hydroxide, 25%	L	G	G	G	G	G	G
Sodium Hydroxide, 50%	G	G	G	G	G	G	G
SOLVENTS:							
Acetone	P	P	G	G	G	G	L
Benzene	P	L	P	L	G	G	P
Carbon Tetrachloride	P	L	L	L	L	L	P
Chloroform	P	P	P	P	L	L	P
Cyclohexanone	P	P	P	G	G	G	L
Dimethylformamide	P	P	L	G	NT	NT	G
Dioxane	NT	NT	P	G	G	G	L
Ethyl acetate	P	L	G	G	G	G	L
Ethyl Alcohol**	L	G	G	G	L	G	G
Ethyl ether	L	L	G	G	G	G	L
Ethylene glycol	G	G	G	G	G	G	G
Formaldehyde	G	G	G	G	G	G	G
Freon - 12	L	L	G	G	G	G	L
Methyl alcohol	L	G	G	G	L	G	G
Methylene chloride	P	P	L	L	G	G	L
Methyl ethyl ketone	P	P	G	G	G	G	L
Napthas***	P	G	P	G	G	G	L
Toluene	P	G	P	L	G	G	L
Trichlorethylene	P	P	P	G	L	L	P
Turpentine	G	G	P	G	G	G	L
Xylene	P	G	P	L	G	G	L
HYDRAULIC FLUIDS:							
Diester base grease	NT	G	P	NT	G	G	L
Petroleum base grease	G	G	L	NT	G	G	L
Phosphate ester	L	P	P	NT	G	G	G
Polyol ester	P	NT	P	NT	G	G	G
Water-glycol	G	G	G	NT	G	G	G
SAE motor oils	G	G	G	G	G	G	G
Machine oil	G	G	L	G	G	G	L
MIL-L7808 H	G	G	L	G	G	G	G
Brake fluid	NT	NT	NT	NT	NT	NT	NT

Chemical	PV	PU	PY	HPY	N	UN	PP
FUELS:							
Butane **	G	G	L	G	G	G	L
Diesel Fuel	L	G	L	G	G	G	L
Gasoline (Regular)	L	G	P	G	G	G	L
Kerosene	L	G	P	G	G	G	G
Methane (natural gas)**	G	G	L	G	G	G	G
Propane**	G	G	L	G	G	G	L
OTHER:							
Acetylene	NT	G	G	G	G	G	G
Ammonia Gas	P	G	G	G	G	G	G
Ammonium Salts	G	G	G	G	G	G	G
Amyl acetate	P	P	L	G	G	G	P
Aniline	P	P	L	G	L	L	G
Animal Oils	G	G	P	G	G	G	G
Bleach, 7%	G	P	G	G	L	L	L
Bromine	L	G	P	P	P	P	P
Butandiol	G	G	G	G	G	G	G
Calcium Salts incl chloride	G	G	G	G	G	G	G
Chlorine Gas, Dry	G	G	P	P	P	P	P
Dibutyl Phthalate	NT	P	L	G	G	G	L
Glucose	G	G	G	G	G	G	G
Glycerine	G	G	G	G	G	G	G
Hydrogen Peroxide, 10%	G	G	G	G	G	G	G
Hydrogen Peroxide, 25%	L	G	G	G	P	P	G
Hydrogen Sulfide	G	P	G	G	L	L	G
Isoocyanates	NT	G	G	G	G	G	NT
Lead Salts****	G	G	G	G	G	G	G
Magnesium Salts	G	G	G	G	G	G	G
Mercury	G	G	G	G	G	G	G
Milk**	G	G	G	G	G	G	G
Mineral Oil	G	G	L	G	G	G	L
Nitrous Oxide**	G	G	L	NT	G	G	G
Oxygen**	G	G	G	G	G	G	G
Ozone, ambient	G	G	L	G	G	G	L
Paint(oil base)	L	G	L	G	G	G	G
Polyglycols	G	G	G	G	G	G	G
Potassium salts	G	G	G	G	G	G	G
Pydraul	P	P	P	NT	G	G	NT
Pyridine	P	L	G	G	L	L	G
Salt Water	G	G	G	G	G	G	G
Silver Nitrate	G	G	G	G	G	G	G
Skydrol	P	P	P	NT	G	G	NT
Soap solution (conc)	G	G	L	G	G	G	G
Sodium salts	G	G	G	G	G	G	G
Sodium thiosulphate	G	G	G	G	G	G	G
Styrene	P	G	P	P	G	G	NT
Trisodium phosphate	G	G	NT	G	G	G	G
Ucon oil	G	G	G	G	G	G	NT
Urea	G	G	G	G	G	G	G
Vegetable oils**	G	G	G	G	G	G	G
Water at 73°F	G	G	G	G	G	G	G
Water at 140°F	L	G	G	G	G	G	G
Water at 170°F	P	L	NT	P	L	G	G
Whiskey, wine	NT	G	G	G	G	G	G
Zinc chloride	G	G	G	G	G	G	G

*This chart is intended as a guide to chemical compatibility. Final selection also depends upon pressure, fluid and ambient temperatures and other variables that affect tubing service. Therefore, no guarantee is expressed or implied.

**These ratings do not necessarily imply compliance with specialized codes such as NSF, FDA, AGA or UL.

***Napthas include heptane, hexane, mineral spirits, rubber solvent and Stoddard solvent

****Metallic salts exclude some halogenated metals, especially hypochlorites.