

# Chemical Resistance Guides

Many new materials have been developed to handle the wide range of modern chemicals being used in industry today. Many of these materials are now being used in the construction of Tigerflex™ hose.

The Chemical Resistance Guides which appears on the following pages have been prepared to assist the user in the selection of the correct hose for the application.

These recommendations are based on laboratory and test reports which are, to the best of our knowledge, complete and accurate. However, the degree of chemical resistance of any given material depends upon many variables, including such factors as length of exposure, temperature, pressure, fluid velocity, and chemical concentration.

Therefore, no guarantee is expressed or implied by our publication of these Chemical Resistance Guides. If an element of doubt exists, we advise that a sample of the specific hose selected be obtained and tested under actual conditions.

Furthermore, listings in these Chemical Resistance Guides do not imply conformance to any U. S. Department of Agriculture (USDA), Food and Drug Administration (FDA) or any other federal, provincial or state laws which may be applicable when handling food products. For information on the conformance of any specific hose product with FDA, USDA, or 3-A Sanitary Standards, please refer to the notes accompanying the information and specifications for each hose featured in this catalog.

## Warning

The Chemical Resistance Guides shown on the following pages are intended for general guidance only. The information contained therein is based upon tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. No warranty is expressed or implied, as specific application

parameters, such as temperature, pressure and chemical concentrations vary widely. Furthermore, use of these hoses for handling multiple chemical products, either singly or as a mixture, may introduce uncontrollable factors relating to chemical resistance.

**Before using any hose, the user is responsible for determining the suitability of the hose for the intended application. Therefore, the user assumes all risk and responsibility for determining the suitability of any hose for handling any chemical or chemicals.**

# PVC and Polyurethane Chemical Resistance Guide

Key: E – Excellent      G – Good      L – Limited      U – Unsatisfactory

Material Handled	Hose Materials of Construction and Temperatures			
	PVC		Thermoplastic Polyurethane	
	68°F	104°F	68°F	104°F
Acetaldehyde	U	U	U	U
Acetaldehyde 40 Pct.	—	—	—	—
Acetate Solvents-Crude	U	U	L	U
Acetate Solvents-Pure	U	U	L	U
Acetic Acid 0-10 Pct.	G	L	U	U
Acetic Acid 10-20 Pct.	G	L	U	U
Acetic Acid 20-30 Pct.	G	L	U	U
Acetic Acid 30-60 Pct.	G	L	U	U
Acetic Acid 80 Pct.	L	L	U	U
Acetic Acid Vapors	G	G	U	U
Acetic Acid-Glacial	L	U	U	U
Acetic Anhydride	U	U	U	U
Acetone	U	U	L	U
Acetylene	E	E	E	E
Acrylonitrile	E	G	—	—
Adipic Acid	G	L	U	U
Alcohol (See Type)	—	—	—	—
Allyl Alcohol 96 Pct.	U	U	U	U
Allyl Chloride	L	L	U	U
Alum	E	E	E	E
Aluminum Acetate	G	L	—	—
Aluminum Chloride	E	E	L	L
Aluminum Fluoride	E	E	E	E
Aluminum Hydroxide	E	L	G	L
Aluminum Nitrate	E	E	E	E
Aluminum Oxalate	—	—	—	—
Aluminum Oxychloride	E	E	—	—
Aluminum Sulfate	E	E	E	E
Ammonia – Aqueous	L	U	L	U
Ammonia – Dry Gas	L	U	L	U
Ammonia-Liquid	U	U	L	U
Ammoniated Latex	E	L	—	—
Ammonium Bicarbonate	—	—	—	—
Ammonium Carbonate	E	E	E	E
Ammonium Chloride	E	E	G	L
Ammonium Fluoride 25 Pct.	U	U	L	U
Ammonium Hydrosulphide	—	—	—	—
Ammonium Hydroxide 28 Pct.	G	G	L	U
Ammonium Metaphosphate	E	E	G	G
Ammonium Nitrate	E	E	G	G
Ammonium Persulfate	E	E	G	G
Ammonium Phosphate (Ammoniacal)	—	—	—	—
Ammonium Phosphate-Neutral	E	E	G	G
Ammonium Sulfate	E	E	E	E
Ammonium Sulfide	E	E	E	E
Ammonium Thiocyanate	E	E	G	G
Amyl Acetate	U	U	U	U
Amyl Alcohol	L	U	U	U
Amyl Chloride	L	U	—	—
Aniline	L	U	U	U
Aniline Chlorohydrate	U	U	U	U
Aniline Hydrochloride	U	U	U	U
Aniline Sulphate	—	—	—	—
Animal Oils	E	G	—	—
Anthraquinone	E	E	—	—
Anthraquinonesulfonic Acid	E	E	U	U
Antimony Pentacalcide	—	—	—	—
Antimony Trichloride	E	E	E	E
Apple (Sauce or Juice)	E	E	—	—
Aqua Regia	L	U	U	U
Aromatic Hydrocarbons	U	U	—	—
Arsenic Acid 80 Pct.	E	G	U	U
Arylsulfonic Acid	L	U	U	U
Asphalt	U	U	E	E
ASTM Fuel #1 Oil	G	L	E	E
ASTM Fuel #3 Oil	L	U	E	E
ASTM Fuel A	G	L	E	E
ASTM Fuel B	U	U	G	L
ASTM Fuel C	U	U	G	L
Baby Food	E	E	—	—
Barium Carbonate	E	E	E	E
Barium Chloride	E	E	E	E
Barium Hydroxide	E	E	G	L
Barium Sulfate	E	E	E	E
Barium Sulfide	E	E	E	E

Material Handled	Hose Materials of Construction and Temperatures			
	PVC		Thermoplastic Polyurethane	
	68°F	104°F	68°F	104°F
Barley	E	U	—	—
Beer	E	E	—	—
Beet-Sugar Liquor	E	E	—	—
Benzaldehyde	U	U	U	U
Benzene	U	U	L	U
Benzene-Sulfonic Acid 10 Pct.	E	E	U	U
Benzoic Acid	G	L	U	U
Benzol	U	U	L	U
Benzyl Alcohol	—	—	—	—
Berries	E	E	—	—
Bismuth Carbonate	E	E	E	E
Black Liquor (Paper industry)	E	E	—	—
Bleach-12.5 Pct. Active CL	G	L	L	U
Borax	E	G	E	E
Bordeaux Mixture	E	E	—	—
Boric Acid	E	E	U	U
Boron Trifluoride	E	E	E	E
Brine	E	E	G	U
Bromic Acid	E	L	U	U
Bromine-Liquid	U	U	U	U
Bromine-Water	U	U	U	U
Brussel Sprouts	E	E	—	—
Butadiene	L	U	—	—
Butane	E	E	E	E
Butanediol	—	—	—	—
Butanol-Primary	U	U	L	U
Butanol-Secondary	U	U	L	U
Butter	G	L	—	—
Butyl Acetate	U	U	L	U
Butyl Alcohol	E	L	L	U
Butyl Cellosolve	U	U	—	—
Butyl Phenol	L	U	—	—
Butylene	E	G	E	E
Butynediol (Erythritol)	U	U	U	U
Butyraldehyde	—	—	—	—
Butyric Acid 20 Pct.	L	U	L	U
Calcium Bisulfite	E	E	E	E
Calcium Carbonate	E	E	E	E
Calcium Chlorate	E	E	G	L
Calcium Chloride	E	E	L	U
Calcium Hydroxide	E	E	G	L
Calcium Hypochlorite	E	E	U	U
Calcium Nitrate	E	E	E	E
Calcium Phosphate	—	—	—	—
Calcium Sulfate	E	E	E	E
Camphor Oil	—	—	—	—
Cane Sugar Liquors	E	E	—	—
Carbon Bisulfide	U	U	—	—
Carbon Dioxide (Aqueous Solution)	E	E	E	E
Carbon Dioxide Gas (Wet)	U	E	E	E
Carbon Disulphide	U	U	—	—
Carbon Monoxide	E	E	E	E
Carbon Tetrachloride	U	U	L	U
Carbonic Acid	E	E	U	U
Carrots	E	E	—	—
Casein	E	E	E	E
Castor Oil	E	G	E	E
Catsup	E	G	—	—
Caustic Potash	E	E	L	U
Caustic Soda	L	L	L	U
Cellosolve	L	U	G	L
Cheese	E	G	—	—
Cherries	E	E	—	—
Chloracetic Acid	E	U	U	U
Chloral Hydrate	E	E	G	L
Chloric Acid 20 Pct.	E	E	U	U
Chlorinated Hydrocarbons	U	U	—	—
Chlorine Gas (Dry)	E	E	U	U
Chlorine Gas (Moist)	L	U	U	U
Chlorine Water 2 Pct.	L	U	L	U
Chlorine Water Saturated	—	—	—	—
Chlorobenzene	U	U	U	U
Chloroform	U	U	U	U
Chlorsulfonic Acid	L	U	U	U
Chocolate	G	L	—	—
Chrome Alum	E	E	E	E

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Material Handled	Hose Materials of Construction and Temperatures			
	PVC		Thermoplastic Polyurethane	
	68°F	104°F	68°F	104°F
Chromic Acid 10 Pct.	G	L	U	U
Chromic Acid 25 Pct.	G	L	U	U
Chromic Acid 30 Pct.	L	U	U	U
Chromic Acid 40 Pct.	L	U	U	U
Chromic Acid 50 Pct.	L	U	U	U
Chromic Acid Plating Solution	—	—	U	U
Cider	—	—	—	—
Citric Acid	E	E	U	U
Coal Tar	U	U	U	U
Coconut Oil	L	U	E	E
Cola Drinks	E	E	—	—
Copper Chloride	E	G	E	E
Copper Cyanide	E	E	—	—
Copper Fluoride 2 Pct.	E	E	E	E
Copper Nitrate	E	G	E	E
Copper Sulfate	E	G	E	E
Core Oils	E	E	E	E
Corn Oils	E	G	—	—
Cottonseed Oil	G	L	E	E
Creosote	U	U	—	—
Cresol	U	U	L	U
Cresylic Acid 50 Pct.	U	U	U	U
Crude Oil-Sour	E	E	E	E
Crude Oil-Sweet	E	E	E	E
Cyclohexane	L	U	—	—
Cyclohexanol	U	U	L	U
Cyclohexanone	U	U	U	U
Deminerlized Water	E	E	G	U
Detergents, Synthetic	E	G	—	—
Developers, Photographic	E	E	—	—
Dextrin	E	E	E	E
Dextrose	E	G	E	E
Di-acetone Alcohol	—	—	—	—
Di-isodecyl Phthalate	U	U	—	—
Diazo Salts	E	E	—	—
Dibutyl Phthalate	U	U	—	—
Dichlorobenzene	U	U	—	—
Diesel Oils	L	U	—	—
Diethyl Ether	—	—	—	—
Diethyl Ether	L	U	—	—
Diethylene Glycol	E	E	—	—
Diglycolic Acid	E	G	—	—
Dimethylamine	U	U	U	U
Diocetyl Phthalate	U	U	—	—
Diethylphthalate	U	U	E	E
Disodium Phosphate	E	E	G	L
Distilled Water	E	E	G	U
Eggs (yolks or white)	E	E	—	—
Emulsifiers	E	E	—	—
Emulsions, Photographic	E	E	—	—
Ethers	U	U	G	L
Ethyl Acetate	U	U	L	U
Ethyl Acrylate	U	U	—	—
Ethyl Alcohol	G	L	—	—
Ethyl Alcohol 0-50 Pct.	G	L	G	L
Ethyl Alcohol 50-98 Pct.	L	U	L	U
Ethyl Butyrate	—	—	—	—
Ethyl Chloride	U	U	U	U
Ethyl Ether	U	U	G	L
Ethyl Formate	—	—	—	—
Ethylene Bromide	E	U	U	U
Ethylene Dichloride	U	U	U	U
Ethylene Glycol	E	E	G	L
Ethylene Oxide	U	U	U	U
Fatty Acids	E	G	G	L
Ferric Chloride	E	E	G	L
Ferric Nitrate	E	E	E	E
Ferric Sulfate	E	E	E	E
Ferrous Ammonium Citrate	—	—	—	—
Ferrous Chloride	E	E	E	E
Ferrous Sulfate	E	E	E	E
Figs	E	E	—	—
Fish Solubles	E	E	E	G
Fixing Solution Photographic	E	G	—	—
Flour	E	U	—	—
Fluorine Gas-Dry	U	U	U	U

Material Handled	Hose Materials of Construction and Temperatures			
	PVC		Thermoplastic Polyurethane	
	68°F	104°F	68°F	104°F
Fluorine Gas-Wet	U	U	U	U
Fluoroboric Acid	E	E	E	E
Fluorosilicic Acid	E	E	U	U
Fluorosilicic Acid 40 Pct.	—	—	—	—
Fluorosilicic Acid Concentrate	—	—	—	—
Food Products, such as Milk, Buttermilk, Molasses, Salad Oils, Fruit	E	E	—	—
Formic Acid	E	L	U	U
Formaldehyde 40 Pct. Aqueous	U	U	—	—
Formic Acid 10 Pct.	E	G	U	U
Formic Acid 100 Pct.	U	U	U	U
Formic Acid 25 Pct.	E	G	—	—
Formic Acid 3 Pct.	E	G	U	U
Formic Acid 50 Pct.	L	U	U	U
Freon-12	E	G	E	E
Fructose	E	E	E	E
Fruit Pulps and Juices	E	E	E	E
Fuel Oil	G	L	E	E
Furfural	U	U	U	U
Furfuryl Alcohol	E	L	—	—
Gallic Acid	E	E	—	—
Gas-Coke Oven	G	G	G	G
Gas-Manufactured	U	U	—	—
Gas-Natural (Dry)	E	E	E	E
Gas-Natural (Wet)	E	E	E	E
Gasoline	U	U	—	—
Gasoline – Refined	L	U	E	G
Gasoline – Sour	L	U	E	G
Gelatine	E	E	E	E
Gin	E	G	—	—
Ginger Ale	E	E	—	—
Glucose	E	E	E	E
Glycerine (Glycerol)	E	E	E	E
Glycol	E	E	G	G
Glycolic Acid 30 Pct.	E	E	U	U
Grade Sugar	—	—	—	—
Grape Juice	E	E	—	—
Grapefruit Juice	E	E	—	—
Grease	E	L	—	—
Green Liquor (Paper industry)	E	E	—	—
Heptachlor	E	L	—	—
Heptane	L	U	E	—
Hexadecanol	—	—	—	—
Hexane	L	U	—	—
Hexanol, Tertiary	L	U	G	—
Honey	E	E	—	—
Hydrochloric Acid 10 Pct.	E	E	U	U
Hydrochloric Acid 48 Pct.	E	L	U	U
Hydrocyanic Acid 10 Pct.	—	—	—	—
Hydrofluoric Acid 10 Pct.	G	L	U	U
Hydrofluoric Acid 4 Pct.	G	G	U	U
Hydrofluoric Acid 48 Pct.	G	U	U	U
Hydrofluoric Acid 60 Pct.	G	U	U	U
Hydrofluoroboric Acid	E	E	—	—
Hydrofluorosilicic Acid	G	L	U	U
Hydrogen	E	G	E	E
Hydrogen Bromide (Dry)	—	—	—	—
Hydrogen Chloride (Dry) (Liquid)	—	—	E	E
Hydrogen Cyanide	E	E	U	U
Hydrogen Peroxide 3 – 12 Pct.	E	G	—	—
Hydrogen Peroxide 30 Pct.	E	G	G	L
Hydrogen Peroxide 50 Pct.	E	L	L	U
Hydrogen Peroxide 90 Pct.	U	U	U	U
Hydrogen Phosphide	E	L	—	—
Hydrogen Sulfide – Aqueous Solution	E	E	—	—
Hydrogen Sulfide – Dry	E	E	—	—
Hydrombromic Acid 20 Pct.	E	G	U	U
Hydroquinone	E	E	E	E
Hydroxylamine Sulfate	E	E	—	—
Hypochlorous Acid	E	E	L	U
Inks	—	—	—	—
Iodine (In Alcohol)	U	U	U	U
Iso-octane	G	L	—	—
Isopropyl Acetate	U	U	—	—
Isopropyl Alcohol	E	G	—	—
Jelly	E	E	—	—

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Material Handled	Hose Materials of Construction and Temperatures			
	PVC		Thermoplastic Polyurethane	
	68°F	104°F	68°F	104°F
Jet Fuels JP 3,4,5	U	U	G	L
Kerosene	U	U	E	G
Ketones	U	U	—	—
Kraft Liquor (Paper industry)	E	E	—	—
Lacquer Thinners	L	U	G	—
Lactic Acid 28 Pct.	E	E	U	U
Lard (marginal)	G	L	—	—
Lard Oil	E	G	E	G
Lauric Acid	E	E	L	U
Lauryl Chloride	E	E	E	G
Lauryl Sulfate	E	E	—	—
Lead Acetate	E	E	E	E
Lead Arsenate	—	—	—	—
Lead Nitrate	—	—	—	—
Lead Tetra-ethyl	—	—	—	—
Lemon Juice	E	G	—	—
Lime Sulfur	E	E	—	—
Linoleic Acid	E	E	L	U
Linseed Oil	E	E	E	E
Liquors (Chemical)	E	G	—	—
Lubricating Oils	U	U	E	E
Magnesium Carbonate	E	E	E	E
Magnesium Chloride	E	E	G	L
Magnesium Hydroxide	E	E	G	L
Magnesium Nitrate	E	E	E	E
Magnesium Sulfate	E	E	E	E
Maleic Acid 25 Pct. Aqueous	E	E	L	U
Maleic Acid 50 Pct.	—	—	—	—
Maleic Acid Concentrated	—	—	—	—
Malic Acid	E	E	L	U
Manganese Suphate	—	—	—	—
Mayonnaise	E	E	—	—
Mercuric Chloride	G	G	G	L
Mercuric Cyanide	G	G	—	—
Mercurous Nitrate	G	G	G	G
Mercury	G	G	—	—
Metallic Soaps	—	—	—	—
Methyl Acetate	U	U	—	—
Methyl Alcohol	L	U	L	U
Methyl Bromide	U	U	—	—
Methyl Chloride	U	U	U	U
Methyl Ethyl Ketone	U	U	L	U
Methyl Isobutyl Ketone	U	U	—	—
Methyl Sulfate	E	G	E	G
Methyl Sulfuric Acid	E	E	U	U
Methylated Spirit	—	—	—	—
Methylene Chloride	U	U	U	U
Milk	E	E	—	—
Mineral Oils	E	G	E	E
Mineral Spirits	—	—	—	—
Molasses	E	E	E	E
Monochlorobenzene	U	U	—	—
Naphtha	U	U	E	E
Naphthalene	L	U	—	—
Nickel Acetate	E	E	E	E
Nickel Chloride	E	E	E	E
Nickel Nitrate	E	E	E	E
Nickel Sulphate	E	E	E	E
Nicotine	E	E	E	E
Nicotine Acid	E	G	L	U
Nitric Acid (Anhydrous)	U	U	U	U
Nitric Acid 10 Pct.	E	G	U	U
Nitric Acid 25 Pct.	G	L	U	U
Nitric Acid 35 Pct.	G	L	U	U
Nitric Acid 40 Pct.	G	L	U	U
Nitric Acid 50 Pct.	—	—	—	—
Nitric Acid 60 Pct.	G	U	U	U
Nitric Acid 68 Pct.	L	U	U	U
Nitric Acid 70 Pct.	U	U	—	—
Nitrobenzene	U	U	U	U
Nitrous Oxide	E	E	E	E
Oats	E	U	—	—
Octyl Alcohol	—	—	—	—
Oils and Fats	E	G	E	E
Oils, Petroleum	E	G	E	E
Oleic Acid	G	L	U	U

Material Handled	Hose Materials of Construction and Temperatures			
	PVC		Thermoplastic Polyurethane	
	68°F	104°F	68°F	104°F
Oleum	U	U	U	U
Olives	E	E	—	—
Orange Juice	E	E	—	—
Oxalic Acid	E	E	U	U
Oxygen	E	E	E	E
Ozone	L	U	—	—
Palmitic Acid 10 Pct.	E	G	U	U
Palmitic Acid 70 Pct.	L	U	U	U
Paraffin	E	G	—	—
Peaches	E	E	—	—
Peanut Butter	E	G	—	—
Peas	E	E	—	—
Pentachlorophenol in Oil	G	L	—	—
Pentane	G	U	—	—
Peracetic Acid 40 Pct.	U	U	U	U
Perchloric Acid 10 Pct.	G	L	U	U
Perchloric Acid 70 Pct.	L	U	U	U
Perchloroethylene	U	U	—	—
Petrol	U	U	—	—
Petroleum Ether	L	L	—	—
Phenol	U	U	U	U
Phenylhydrazine	U	U	—	—
Phenylhydrazine Hydrochloride	L	U	—	—
Phosgene (Gas)	E	G	—	—
Phosgene (Liquid)	U	U	—	—
Phosphoric Acid — 0-25 Pct.	E	E	U	U
Phosphoric Acid — 25-50 Pct.	E	E	U	U
Phosphoric Acid — 50-90 Pct.	E	E	U	U
Phosphorus (Yellow)	G	L	—	—
Phosphorus Pentoxide	U	U	—	—
Phosphorus Trichloride	U	U	—	—
Photographic Chemicals	E	E	E	G
Photographic Developers	—	—	—	—
Photographic Emulsions	—	—	—	—
Photographic Fixers	—	—	—	—
Picric Acid	U	U	U	U
Pineapple Juice	E	E	—	—
Pitch	G	L	—	—
Plating Solutions	—	—	—	—
Brass	E	E	E	E
Cadmium	E	E	E	E
Chromium	G	G	G	G
Copper	E	E	E	E
Gold	E	E	E	E
Iridium	E	E	E	E
Lead	E	E	E	E
Nickel	E	E	E	E
Rhodium	E	E	E	E
Silver	E	E	E	E
Tin	E	E	E	E
Zinc	E	G	E	E
Potassium Acid Sulfate	E	E	E	E
Potassium Antimonate	E	E	E	E
Potassium Bicarbonate	E	E	E	E
Potassium Bichromate	E	E	E	E
Potassium Bisulfite	E	E	E	E
Potassium Bisulphate	—	—	—	—
Potassium Borate 1 Pct.	E	E	E	E
Potassium Bromate 10 Pct.	E	E	E	E
Potassium Bromide	E	E	E	E
Potassium Carbonate	E	E	E	E
Potassium Chlorate	E	E	G	G
Potassium Chloride	E	E	E	G
Potassium Chromate 40 Pct.	E	E	G	G
Potassium Cuprocyanide	E	E	—	—
Potassium Cyanide	E	E	E	E
Potassium Dichromate 40 Pct.	E	E	G	G
Potassium Ferricyanide	E	E	E	E
Potassium Fluoride	E	E	E	G
Potassium Hydroxide 10 Pct.	E	E	L	U
Potassium Hydroxide 20 Pct.	E	E	U	U
Potassium Hydroxide 35 Pct.	E	E	U	U
Potassium Hydroxide Conc.	—	—	—	—
Potassium Hypochlorite	G	L	U	U
Potassium Nitrate	E	E	E	E
Potassium Perborate	E	E	E	E

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	68°F	104°F	68°F	104°F
Potassium Perchlorite	E	E	G	L
Potassium Permanganate 10 Pct.	G	G	G	L
Potassium Persulfate	E	E	E	E
Potassium Phosphate	—	—	—	—
Potassium Sulfate	E	E	E	E
Potassium Sulfide	E	E	E	E
Potassium Thiosulfate	E	E	E	E
Potatoes	E	E	—	—
Propane	E	E	E	E
Propargyl Alcohol	E	E	—	—
Propyl Alcohol	E	L	G	L
Propylene Dichloride	U	U	U	U
Propylene Glycol	U	U	U	U
Prune Juice	E	E	—	—
Raisins	E	E	—	—
Ritchfield "A" Weed Killer	E	L	—	—
Salicylic Acid	—	—	—	—
Salt Water	E	E	G	U
Selenic Acid	E	G	U	U
Shortening	G	L	—	—
Silicic Acid	E	E	U	U
Silicone Fluids	—	—	—	—
Silver Cyanide	E	E	E	E
Silver Nitrate	E	E	E	E
Silver Plating Solutions	E	G	E	E
Soap Solution	E	E	G	U
Soda	E	E	—	—
Sodium Acetate	E	E	E	E
Sodium Acid Sulfate	E	E	E	E
Sodium Aluminate	—	—	—	—
Sodium Antimonate	E	E	E	E
Sodium Arsenite	E	E	E	E
Sodium Benzoate	E	G	E	E
Sodium Bicarbonate	E	E	E	E
Sodium Bisulfate	E	E	E	E
Sodium Bisulfite	E	E	E	E
Sodium Bromide	E	E	E	E
Sodium Carbonate (Soda Ash)	E	E	E	E
Sodium Chlorate	G	L	G	G
Sodium Chloride	E	E	E	G
Sodium Cyanide	E	E	E	E
Sodium Dichromate	E	G	E	G
Sodium Ferricyanide	E	E	E	E
Sodium Ferrocyanide	E	E	E	E
Sodium Fluoride	E	E	E	G
Sodium Hydroxide 10 Pct.	L	L	L	U
Sodium Hydroxide 35 Pct.	U	U	U	U
Sodium Hydroxide 50 Pct.	U	U	—	—
Sodium Hydroxide Saturated	E	E	U	U
Sodium Hypochlorite	E	E	U	U
Sodium Nitrate	E	E	E	E
Sodium Nitrite	E	E	E	E
Sodium Phosphate-Acid	G	G	U	U
Sodium Silicate	E	E	E	E
Sodium Sulfate	E	E	E	E
Sodium Sulfide	E	E	E	E
Sodium Sulfite	E	E	E	E
Sodium Thiosulfate (Hypo)	E	E	—	G
Soya Beans	E	U	—	—
Soya Oil	E	G	—	—
Soybean Oil	E	E	—	—
Spinach	E	E	—	—
Squash	E	E	—	—
Stannic Chloride	E	E	E	G
Stannous Chloride	E	G	E	G
Starch	—	—	—	—
Stearic Acid	E	G	L	U
Stoddard Solvent	L	U	G	G
Styrene	U	U	—	—
Sucrose	—	—	—	—
Sugar (All Forms)	E	E	—	—
Sulfur	G	G	—	—
Sulfuric Acid 0-10 Pct.	E	G	L	U
Sulfuric Acid 10-40 Pct.	E	G	U	U
Sulfuric Acid 50-60 Pct.	E	G	U	U
Sulfuric Acid 70 Pct.	E	G	U	U

Material Handled	Hose Materials of Construction and Temperatures			
	PVC		Thermoplastic Polyurethane	
	68°F	104°F	68°F	104°F
Sulfuric Acid 95 Pct.	U	U	U	U
Sulfuric Acid 95 Pct. to Fuming	L	L	U	U
Sulfurous Acid	G	L	U	U
Sulphur Dioxide Gas-Dry	E	E	—	—
Sulphur Dioxide Gas-Wet	U	U	—	—
Sulphur Dioxide-Liquid	L	U	—	—
Sulphur Trioxide	E	G	—	—
Sulphurous Acid 10 Pct.	—	—	—	—
Sulphurous Acid 30 Pct.	—	—	—	—
Tall Oil	U	U	—	—
Tallow	—	—	—	—
Tannic Acid	E	E	L	U
Tanning Extracts	—	—	—	—
Tanning Liquors	E	E	—	—
Tartaric Acid	E	G	L	U
Tea (Brewed)	E	E	—	—
Tetraethyl Lead	G	L	G	G
Tetrahydrofurane	U	U	U	U
Tetrahydroaphthalene	—	—	—	—
Thionyl Chloride	U	U	U	U
Tin Chloride	E	E	E	E
Titanium Tertachloride	E	U	L	U
Titanium Trichloride	—	—	—	—
Toluol or Toluene	U	U	L	U
Tomato Juice	E	E	—	—
Tomato Puree & Paste	E	E	—	—
Tomatoes	E	E	—	—
Transformer Oil	—	—	—	—
Tributyl Phosphate	U	U	—	—
Trichlorobenzene	—	—	—	—
Trichloroethylene	U	U	L	U
Tricresyl Phosphate	U	U	U	U
Triethanolamine	L	U	—	—
Triethylamine	G	L	—	—
Trimethyl Propane	L	U	—	—
Trisodium Phosphate	E	E	E	E
Turpentine	L	U	E	G
Urea	E	G	E	E
Urine	E	E	E	E
Vanilla Extract	—	—	—	—
Varnish	U	U	E	G
Vegetable Oils	E	L	—	—
Vinegar	G	G	G	L
Vinyl Acetate	U	U	U	U
Vinyl Chloride	U	U	—	—
Vodka	E	G	—	—
Water-Acid Mine Water	E	E	G	U
Water-Distilled	E	E	G	U
Water-Fresh	E	E	G	U
Water-Salt	E	E	G	U
Wetting Agents	—	—	—	—
Whey	—	—	—	—
Whiskey	E	G	—	—
White Gasoline	E	E	E	G
White Liquor (Paper industry)	E	E	—	—
Wines	E	G	—	—
Xylene or Xylol	U	U	G	L
Yeast	E	U	—	—
Yogurt	E	G	—	—
Zinc Chloride	E	E	E	E
Zinc Chromate	E	E	E	E
Zinc Cyanide	E	E	E	E
Zinc Nitrate	E	E	E	E
Zinc Sulfate	E	E	E	E
Mixtures of Acids:				
Nitric 15 Pct., Hydrofluoric 4 Pct.	E	G	U	U
Sodium Dichromate 13 Pct., Nitric Acid 16 Pct., Water 71 Pct.	E	G	U	U

Because we continually examine ways to improve our products, we reserve the right to alter specifications or discontinue products without prior notice.



# EPDM Chemical Resistance Guide

Key: G – Good      L – Limited      U – Unsatisfactory

Material Handled	68°F	104°F	Material Handled	68°F	104°F	Material Handled	68°F	104°F
Acetic Acid	G	G	Development Sol.	L	L	Monochloro Benzene	U	U
Acetone	G	G	Dextrin	G	G	Nitric Acid - 5%	L	L
Aluminum Acetate	G	G	Dichlorethylene	U	U	- 50%	L	L
Aluminum Chloride	G	G	Dichloro Benzene	U	U	- 70%	U	U
Aluminum Hydroxide	G	G	Diethyl Ether	G	G	- 95%	U	U
Aluminum Sulfate	G	G	Emulsifier	G	G	Oleic Acid	L	L
Ammonia (Gas)	G	G	Ether	G	G	Ozone	G	G
Ammonia (Liquid)	G	G	Ethyl Acetate	L	L	Paraffin	U	U
Ammonium Acetate (Conc.)	G	G	Ethyl Alcohol - 6%	G	G	Perchloroethylene	U	U
Ammonium Chloride	G	G	- 100%	G	G	Phenol	L	L
Ammonium Hydroxide	G	G	Ethylene Chloride	L	L	Phosphoric Acid - 30%	G	G
Ammonium Nitrate	G	G	Ethylene Glycol	G	G	Photosensitive Emulsion	G	G
Aniline	L	L	Fluorine	U	U	Potassium Bichromate	U	U
Aniline Sulfate	U	U	Glycerol	G	G	Potassium Bromide	G	G
Barium Chloride	G	G	Grape Sugar	G	G	Potassium Chloride	G	G
Barium Hydroxide	G	G	Hormamide- 40%	G	G	Potassium Cyanide	G	G
Beer	G	G	Hydrochloric Acid - 10%	G	L	Potassium Fluoride	G	G
Benzen Alcohol	L	L	- 20%	G	L	Potassium Hydroxide - 10%	G	G
Benzene	U	U	Concentrate	G	L	(Conc.)	G	G
Bromine	U	U	Hydrogen	G	G	Potassium Permanganate	U	U
Butyl Alcohol	L	L	Hydrogen Chloride (Anhydrous)	G	L	Potassium Phosphate	G	G
Calcium Carbonate	G	G	Hydrogen Peroxide - 3%	U	U	Propylene Glycol	G	G
Calcium Chloride (Conc.)	G	G	- 30%	U	U	Sake (Alcohol)	G	G
Calcium Hyprocholate (Conc.)	L		(Above 80%)	U	U	Salt Water	G	G
Carbon Monoxide	G	G	Hydrogen Sulfide	G	G	Sauce	G	G
Carbon Tetrachloride	L	L	Iodine	U	U	Sodium Bicarbonate	G	G
Carbonic Acid	G	G	Iron Chloride	G	G	Sodium Chloride	G	G
Carbonic Acid Gas	G	G	Iron Sulfate	G	G	Sodium Hydroxide - 10%	G	G
Cetyl Alcohol	L	L	Isopropyl Alcohol	G	G	(Conc.)	G	G
Chlorine - 10% Gas	L	L	Magnesium Carbonate	G	G	Sodium Hypochlorite - 15%	G	G
- 100% Gas	L	L	Magnesium Chloride	G	G	Soy Sauce	G	G
(Solution)	L	L	Magnesium Hydroxide	G	G	Stearic acid	L	L
Chloroform	U	U	Magnesium Sulfate	G	G	Sulfur Dioxide	U	U
Chromate (Plating Solution)	L	L	Methanol - 20%	G	G	Sulfuric Acid	L	L
Citric Acid	G	G	Methyl Alcohol- 6%	G	G	Sulfurous Acid - 30%	L	L
Copper Chloride	G	G	- 100%	G	G	Tetrahydrofuron	L	L
Copper Nitrate	G	G	Methyl Ethel Ketone	G	G	Toluene	U	U
Copper Sulfate	G	G	Methylene Chloride	L	L	Transformer Oil	U	U
Creosote Oil	U	U	Mineral Oil	U	U	Water	G	G
						Zinc Chloride	G	G

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# SBR Chemical Resistance Guide

Key: G — Good      L — Limited      U — Unsatisfactory

Material Handled	68°F	Material Handled	68°F	Material Handled	68°F
1,1-dichloroethylene	U	Chromate (25%)	U	Methyl Ethyl Ketone (MEK)	U
1,2-dichloroethane	U	Citric Acid	G	Mineral Oil	U
Acetic Acid (10%)	L	Copper Chloride	G	Monochlorobenzene	U
Acetone	L	Copper Nitrate	G	Nitric Acid (5%)	U
Aluminum Acetate	L	Copper Sulfate	L	Nitric Acid (50%)	U
Aluminum Chloride	G	Creosote Oil	U	Nitric Acid (70%)	U
Aluminum Hydroxide	G	Dextrin	G	Nitric Acid (95%)	U
Aluminum Sulfide	L	Dichlorobenzene	U	Nitrous Acid (10%)	L
Ammonia (Gas)	G	Dichloromethane	U	Oleic Acid	U
Ammonia (Liquid)	G	Diethyl Ether	U	Oxalic Acid	L
Ammonium Acetate (Conc.)	G	Emulsifier	G	Ozone	U
Ammonium Bicarbonate	G	Ether	L	Paraffin	U
Ammonium Chloride	G	Ethyl Acetate	U	Perchloroethylene	U
Ammonium Hydroxide	U	Ethyl Alcohol (100%)	G	Phenol	U
Ammonium Nitrate	G	Ethyl Alcohol (6%)	G	Phosphoric Acid (30%)	U
Aniline	U	Ethylene Glycol	G	Potassium Bichromate	U
Aniline Sulfate	U	Fluorine	U	Potassium Bromide	G
Barium Chloride	G	Formaldehyde (40%)	L	Potassium Chloride	G
Barium Hydroxide	G	Glycerol	G	Potassium Cyanide	G
Beer	L	Grape Sugar	G	Potassium Fluoride	G
Benzene	U	Hydrochloric Acid (10%)	L	Potassium Hydroxide (10%)	L
Benzyl Alcohol	U	Hydrochloric Acid (20%)	L	Potassium Hydroxide (Conc.)	L
Bromine	U	Hydrochloric Acid (Conc.)	L	Potassium Permanganate	U
Butyl Alcohol	G	Hydrogen	L	Potassium Sulfate	G
Calcium Carbonate	G	Hydrogen Chloride (Anhydride)	L	Propylene Glycol	L
Calcium Chloride (Conc.)	G	Hydrogen Peroxide (3%)	U	Sake	G
Calcium Chloride (in 20% Mesh)	G	Hydrogen Peroxide (30%)	U	Salt Water	G
Calcium Hypochlorite (15% Cl <sub>2</sub> )	U	Hydrogen Peroxide (80% or more)	U	Sodium Bicarbonate	G
Calcium Hypochlorite (Conc.)	U	Hydrogen Sulfide	U	Sodium Chloride	G
Carbon Dioxide	U	Iodine	U	Sodium Hydroxide (10%)	G
Carbon Monoxide	L	Iron Chloride	G	Sodium Hydroxide (Conc.)	G
Carbon Tetrachloride	U	Iron Sulfate	G	Soy Sauce	G
Carbonic Acid	L	Isopropyl Alcohol	L	Stearic Acid	L
Carbonic Acid Gas	G	Magnesium Carbonate	G	Sulfuric Acid (10%)	U
Cetyl Alcohol	L	Magnesium Chloride	G	Tetrahydrofuran	U
Chlorine (10% Gas)	U	Magnesium Hydroxide	L	Toluene	U
Chlorine (100% Gas)	U	Magnesium Sulfate	L	Transformer Oil	U
Chlorine (Solution)	U	Methyl Alcohol (100%)	G	Water	G
Chloroform	U	Methyl Alcohol (6%)	G	Zinc chloride	G

