

Chemical Compatibility Reference Chart

The ratings in this chart are based on the results of laboratory tests. They reflect the relative capabilities of various Teflon, silicone, PVC and rubber hose formulations to withstand specific chemicals. **NOTE:** The ratings in the chart DO NOT reflect the extent to which extraction may occur or the extent to which fluids may undergo any physical changes in properties or composition as a result of coming into contact with the hose. Saint-Gobain Performance Plastics makes no representation or warranty with respect to the susceptibility of any fluid to become contaminated or undergo changes in properties or composition as a result of possible extraction of hose ingredients by the fluid to be transmitted. Certain corrosives that would be destructive to hose with prolonged exposure can be satisfactorily handled for short periods of time if flushed with water after use. All ratings are based on room temperature (73°F [23°C]). Chemical resistance will be adversely affected by elevated temperatures.

IMPORTANT: It is the user's responsibility to ensure the suitability and safety of Saint-Gobain Performance Plastics' hose for all intended uses, including establishing the compatibility of any fluid with the hose through which it is to be transmitted. Laboratory, field or clinical tests must be conducted in accordance with applicable requirements in order to determine the safety and effectiveness for use of hose in any particular application.

E = EXCELLENT G = GOOD F = FAIR X = NOT RECOMMENDED

CHEMICAL	TEFLON®	SILICONE	PVC	RUBBER	BRH
Acetaldehyde	E	F	X	X	E
Acetamide, 67% in w	E	E	X	F	G
Acetate Solvents	E	X	X	X	G
Acetic Acid, 10% in w	E	E	E	E	E
Acetic Acid, 50-60% in w	E	E	G	-	-
Acetic Acid, Glacial, 100%	E	X	X	-	G
Acetic Anhydride	E	E	X	F	G
Acetone	E	F	X	X	G
Acetonitrile	E	X	X	X	E
Acetyl Bromide	E	X	X	X	-
Acetyl Chloride	E	X	X	X	X
Acetylene Gas	E	E	E	F	E
Acrylonitrile	E	X	X	X	X
Adipic Acid, 100% in alc	E	X	X	E	X
Air	E	E	E	E	E
Alcohols General	E	G	X	G	G
Aliphatic Hydrocarbons	E	X	X	F	X
Alkyl Alcohol	E	X	X	G	E
Alum, 5% in w	E	E	E	E	E
Aluminum Chloride, 53% in w	E	E	E	E	E
Aluminum Hydroxide, 2% in w	E	E	E	E	E
Aluminum Sulfate, 50% in w	E	E	E	E	E
Aluminum Salts	E	E	E	E	E
Amines	E	X	X	X	-
Ammonia Gas	E	X	E	E	E
Ammonia, Anhydrous Liquid	E	X	G	G	E
Ammonium Acetate, 45% in w	E	E	E	E	E
Ammonium Hydroxide, 5-10% in w	E	X	E	G	E
Ammonium Hydroxide, 30% in w	E	X	E	F	-

CHEMICAL	TEFLON®	SILICONE	PVC	RUBBER	BRH
Ammonium Persulfate, 30% in w	E	E	E	E	E
Ammonium Salts	E	E	E	E	E
Ammonium Sulfate, 30% in w	E	E	E	E	E
Amyl Acetate	E	X	X	X	G
Amyl Alcohol	E	X	X	F	F
Amyl Chloride	E	X	X	X	X
Aniline	E	X	X	X	G
Aniline Hydrochloride	E	X	X	X	F
Antimony Salts	E	E	E	E	-
Aqua Regia	G	X	X	X	X
Aromatic Hydrocarbons	E	X	X	X	X
Arsenic Acid, 20% in w	E	F	E	G	E
Arsenic Salts	E	E	E	G	-
ASTM Reference No. 1 Oil	E	E	X	E	X
ASTM Reference No. 2 Oil	E	G	X	E	X
ASTM Reference No. 3 Oil	E	X	X	G	X
Barium Carbonate, 1% in w	E	E	E	E	E
Barium Hydroxide, 5% in w	E	E	E	E	E
Benzaldehyde	E	F	X	X	G
Benzene	E	X	X	X	X
Benzenesulfonic Acid	E	X	X	X	X
Benzoic Acid	E	X	X	F	F
Benzyl Alcohol	E	E	X	X	G
Bleach Liquor, 22% in w	E	X	E	F	E
Borax, 6% in w	E	E	E	E	E
Boric Acid, 4% in w	E	E	E	E	E
Bromine, Anhydrous Liquid	X	X	X	X	-
Butadiene	E	E	E	F	F
Butane	E	E	E	G	X

CHEMICAL	TEFLON®	SILICONE	PVC	RUBBER	BRH
Butyl Acetate	E	X	X	X	F
Butyl Alcohol	E	X	X	G	G
Butyric Acid	E	X	X	X	G
Calcium Carbonate, 25% in dilute acids	E	E	E	E	E
Calcium Chloride, 30% in w	E	E	E	G	E
Calcium Hydroxide, 10% in glycerol	E	E	E	E	E
Calcium Hypochlorite, 20% in w	E	X	E	F	E
Calcium Nitrate, 55% in w	E	E	E	E	E
Calcium Salts	E	E	E	E	E
Calcium Sulfate, 0.2% in w	E	E	E	E	E
Carbon Dioxide, Wet/Dry	E	E	E	E	G
Carbon Disulfide	E	X	X	X	-
Carbon Monoxide	E	E	E	E	E
Carbon Tetrachloride	E	X	X	X	X
Carbonic Acid	E	E	E	G	E
Castor Oil	E	E	F	E	G
Cellosolve	E	X	X	X	G
Cellosolve Acetate	E	X	X	X	G
Chlorine, Dry Gas	E	X	E	G	X
Chlorine, Wet Gas	E	X	E	F	X
Chloroacetic Acid, 20% in w	E	E	E	X	G
Chlorobenzene, Mono, Di, Tri	E	X	X	X	X
Chloroform	E	X	X	X	X
Chlorosulfonic Acid	E	X	X	X	X
Chromic Acid, 10-20% in w	E	X	E	X	E
Chromic Acid, 50% in w	E	X	E	X	E
Citric Acid, 10-20% in w	E	E	E	E	E
Cottonseed Oil	E	E	F	E	G
Cresol (m, o, or p)	E	G	F	X	X

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CHEMICAL	TEFLON®	SILICONE	PVC	RUBBER	BRH
Cresylic Acid	E	X	X	X	X
Cupric Chloride, 40% in w	E	E	E	E	E
Cupric Nitrate, 70% in w	E	E	E	E	E
Cupric Sulfate, 13% in w	E	E	E	E	E
Cyclohexane	E	X	X	F	X
Cyclohexanone	E	X	X	X	X
Detergent Solutions	E	E	E	E	E
Diacetone Alcohol	E				
Dibutyl Phthalate	E	E	F	F	F
Diethylamine	E	X	E	G	G
Diethylene Glycol	E	E	E	E	E
Dimethylformamide	E	E	X	F	G
Dimethylsulfoxide	E	F	X	X	X
Diethyl Phthalate	E	E	F	X	G
Dioxane	E	X	X	X	G
Ether	E	X	X	X	X
Ethyl Acetate	E	X	X	X	G
Ethyl Alcohol (Ethanol)	E	F	X	F	E
Ethyl Benzoate	E	X	X	X	X
Ethyl Chloride	E	X	X	F	E
Ethyl Ether	E	X	X	X	X
Ethylene Bromide	E	E	X	X	X
Ethylene Chlorohydrin	E	G	X	X	G
Ethylene Dichloride	E	X	X	X	F
Ethylene Glycol	E	E	E	E	E
Ethylene Oxide	E	E	E	X	X
Fatty Acids	E	G	X	F	X
Ferric Chloride, 43% in w	E	E	E	E	E
Ferric Nitrate, 60% in w	E	E	E	E	E
Ferric Sulfate, 5% in w	E	E	E	E	E
Ferrous Chloride, 40% in w	E	E	E	E	F
Ferrous Sulfate, 5% in w	E	E	E	E	E
Fluoboric Acid, 48% in w	E	X	E	E	G
Fluorine Gas	G	X	X	X	X
Fluosilicic Acid, 25% in w	G	F	E	E	E
Formaldehyde, 37% in w	E	F	X	F	G
Formic Acid, 25% in w	E	E	E	E	E
Formic Acid, 40-50% in w	E	E	G	G	G
Formic Acid, 98% in w	E	E	G	F	G
Freon 11	F	E	E	G	X
Freon 12	F	E	E	E	X

CHEMICAL	TEFLON®	SILICONE	PVC	RUBBER	BRH
Freon 22	F	E	E	F	X
Furfural	E	X	X	X	E
Gallic Acid, 17% in acetone	E	X	X	F	E
Gelatin	E	E	E	E	E
Glucose, 50% in w	E	E	E	E	E
Glycerin	E	E	E	E	E
Glycolic Acid, 70% in w	E	E	G	F	-
Heptane	E	X	X	F	X
Hexane	E	X	X	F	X
Hydrazine	E	X	X	F	E
Hydrobromic Acid, 20-50% in w	E	X	E	F	E
Hydrobromic Acid, 100% in w	E	X	E	X	E
Hydrochloric Acid, 10% in w	E	E	E	E	E
Hydrochloric Acid, 37% in w	E	X	E	F	G
Hydrocyanic Acid	E	E	E	G	E
Hydrofluoric Acid, 10% in w	E	X	E	G	E
Hydrofluoric Acid, 25% in w	E	X	E	G	G
Hydrofluoric Acid, 40-48% in w	E	X	E	X	G
Hydrogen Gas	E	E	E	E	E
Hydrogen Peroxide, 3% in w	E	E	E	G	G
Hydrogen Peroxide, 10% in w	E	E	E	F	G
Hydrogen Peroxide, 30% in w	E	E	E	G	G
Hydrogen Peroxide, 90% in w	E	F	F	X	X
Hydrogen Sulfide	E	E	E	E	E
Hydroquinone, 7% in w	E	G	E	F	X
Hypochlorous Acid, 25% in w	E	E	E	X	G
Iodine, 50 ppm in w	E	E	E	G	G
Isobutyl Alcohol	E	X	X	F	E
Isooctane	E	X	X	G	X
Isopropyl Acetate	E	X	X	X	E
Isopropyl Alcohol	E	X	X	G	E
Isopropyl Ether	E	X	X	G	X
Ketones	E	X	X	X	G
Lacquer Solvents	E	X	X	X	X
Lactic Acid, 3-10% in w	E	E	E	E	E
Lactic Acid, 85% in w	E	X	X	G	E
Lead Acetate, 35% in w	E	E	E	G	E
Lead Salts	E	E	E	G	E
Lemon Oil	E	X	X	E	-
Limone-D	E	X	X	X	X
Linoleic Acid	E	G	X	X	X

CHEMICAL	TEFLON®	SILICONE	PVC	RUBBER	BRH
Linseed Oil	E	E	F	F	G
Lubricating Oils, Petroleum	E	G	X	G	X
Magnesium Carbonate, 1% in w	E	E	E	E	E
Magnesium Chloride, 35% in w	E	E	E	E	E
Magnesium Hydroxide, 10% in dilute acids	E	E	E	E	E
Magnesium Nitrate, 50% in w	E	E	E	E	E
Magnesium Sulfate, 25% in w	E	E	E	E	E
Maleic Acid, 30% in w	E	G	X	X	X
Malic Acid, 36% in w	E	E	E	E	X
Manganese Salts	E	E	E	E	-
Mercuric Chloride, 6% in w	E	E	E	E	E
Mercuric Cyanide, 8% in w	E	E	E	E	E
Mercury	E	E	E	E	E
Mercury Salts	E	E	E	E	E
Methane Gas	E	E	E	E	X
Methyl Acetate	E	X	X	X	E
Methyl Alcohol (Methanol)	E	G	X	F	E
Methyl Bromide	E	X	X	X	X
Methyl Chloride	E	X	X	X	X
Methyl Ethyl Ketone	E	X	X	X	E
Methyl Isobutyl Ketone	E	X	X	X	X
Methylene Chloride	E	X	X	X	X
Methyl Methacrylate	E	X	X	X	X
Mineral Oil	E	X	G	E	X
Mineral Spirits	E	X	X	X	X
Monoethanolamine	E	X	X	X	G
Naphtha	E	X	X	X	X
Naphthalene	E	X	X	X	X
Natural Gas	E	E	E	G	X
Nickel Chloride, 40% in w	E	E	E	E	E
Nickel Nitrate, 75% in w	E	E	E	E	E
Nickel Salts	E	E	E	E	E
Nickel Sulfate, 25% in w	E	E	E	E	E
Nitric Acid, 10% in w	E	F	E	G	E
Nitric Acid, 35% in w	E	X	E	X	X
Nitric Acid, 68-71% in w	G	X	X	X	X
Nitrobenzene	E	X	X	X	G
Nitromethane	E	X	X	X	G
Nitrous Acid, 10% in w	E	G	E	X	-
Nitrous Oxide	E	E	E	E	E
Oils, Animal	E	E	F	-	-

Chemical Compatibility Reference Chart *continued*

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CHEMICAL	TEFLON®	SILICONE	PVC	RUBBER	BRH
Oils, Essential	E	X	X	-	-
Oils, Hydrocarbon	E	G	X	-	-
Oils, Vegetable	E	E	F	-	-
Oleic Acid	E	G	X	F	X
Oleum, 25% in w	E	G	E	-	-
Ortho Dichlorobenzene	E	X	X	X	X
Oxalic Acid, 12% in w	E	E	G	G	E
Oxygen	E	E	E	G	E
Ozone, 300pphm	E	E	E	X	G
Palmitic Acid, 100% in ether	E	G	X	G	G
Paraffins	E	X	X	X	E
Perchloric Acid, 67% in w	E	X	G	X	G
Perchloroethylene	E	X	X	X	X
Phenol, 5-10% in w	E	E	E	X	E
Phenol, 91% in w	E	G	F	X	E
Phosphoric Acid, <10% in w	E	F	E	E	G
Phosphoric Acid, 25% in w	E	X	E	X	G
Phosphoric Acid, 85% in w	E	X	E	X	G
Phosphorous Trichloride Acid	E	X	E	X	E
Photographic Solutions	E	G	E	G	G
Phthalic Acid, 9% in alc	E	G	F	F	-
Phthalic Anhydride, 9% in alc	E	E	X	F	-
Picric Acid, 1% in w	E	X	E	X	G
Plating Solutions	E	X	E	E	E
Potassium Carbonate, 55% in w	E	E	E	E	E
Potassium Cyanide, 33% in w	E	E	E	E	E
Potassium Dichromate, 5% in w	E	E	E	E	E
Potassium Hydroxide, <10% in w	E	E	E	E	E
Potassium Iodide, 56% in w	E	E	E	E	G
Potassium Permanganate, 6% in w	E	E	E	G	G
Potassium Salts	E	E	E	E	E
Propane Gas	E	E	E	E	X
Propylene Glycol	E	E	E	G	G
Propylene Oxide	E	E	E	X	G
Pyridine	G	X	X	X	G
Salicylic Acid, 1% in w	E	E	E	G	E
Silicone Oils	E	X	G	E	E
Silver Nitrate, 55% in w	E	E	E	G	E
Skydrol 500A	E	X	F	X	G
Soap Solutions	E	E	E	E	E
Sodium Acetate, 55% in w	E	E	E	G	E

CHEMICAL	TEFLON®	SILICONE	PVC	RUBBER	BRH
Sodium Benzoate, 22% in w	E	E	E	G	E
Sodium Bicarbonate, 7% in w	E	E	E	E	E
Sodium Carbonate, 7% in w	E	E	E	E	E
Sodium Chlorate, 45% in w	E	E	E	E	G
Sodium Chloride, 20% in w	E	E	E	E	G
Sodium Cyanide, 30% in w	E	E	E	E	E
Sodium Fluoride, 3% in w	E	E	E	E	E
Sodium Hydroxide, 10-15% in w	E	E	E	E	E
Sodium Hydroxide, 30-40% in w	E	E	E	E	E
Sodium Hypochlorite, 5.5% in w	E	X	E	G	G
Sodium Hypochlorite, 12.2% in w	E	X	E	G	G
Sodium Nitrate, 3.5% in w	E	E	E	G	E
Sodium Salts	E	E	E	E	E
Sodium Sulfate, 5% in w	E	E	E	E	E
Sodium Sulfide, 45% in w	E	E	E	E	E
Stannic Chloride, 50% in w	E	E	E	E	G
Stannous Chloride, 45% in w	E	E	E	E	G
Stearic Acid, 5% in alc	E	G	X	F	G
Styrene Monomer	E	X	X	X	X
Sulfur Chloride	E	X	X	X	X
Sulfur Dioxide, Gas Dry	E	E	E	X	G
Sulfur Dioxide, Gas Wet	E	E	E	X	E
Sulfur Trioxide, Wet	G	G	G	X	G
Sulfuric Acid, 10% in w	E	E	E	G	G
Sulfuric Acid, 30% in w	E	G	E	G	G
Sulfuric Acid, 95-98% in w	E	X	X	X	X
Sulfurous Acid	E	E	E	X	G
Tannic Acid, 75% in w	E	E	G	E	E
Tartaric Acid, 56% in w	E	E	E	E	G
Tetrahydrofuran	E	X	X	X	G
Thionyl Chloride	E	E	E	X	X
Tin Salts	E	E	E	E	G
Titanium Salts	E	E	E	X	-
Toluene	E	X	X	X	X
Trichloroacetic Acid, 90% in w	E	E	E	F	G
Trichloroethane	E	X	X	X	X
Triethanolamine	E	X	X	G	G
Trichloroethylene	E	X	X	G	G
Trichloropropane	E	X	X	X	X
Tricresyl Phosphate	E	E	F	X	E
Trisodium Phosphate	E	E	E	E	E

CHEMICAL	TEFLON®	SILICONE	PVC	RUBBER	BRH
Turpentine	E	X	X	X	G
Urea, 20% in w	E	E	E	G	E
Uric Acid	E	E	E	-	-
Vinegar	E	E	E	G	E
Vinyl Acetate	E	X	X	X	E
Water, De-ionized	E	E	E	E	E
Water, Distilled	E	E	E	E	E
Xylene	E	X	X	X	X
Zinc Chloride, 80% in w	E	E	E	E	E
Zinc Salts	E	E	E	E	E