

Chemical Resistance Guidelines



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This publication is intended as a general guide for pump material selection. It includes the most common liquids used in chemical, paint, industrial and food-processing applications.

The chemical resistance information in this document has been compiled using many sources, all believed to be reliable.

However, the information cannot be guaranteed.

Material	Operating Temperatures	Industry Approvals
EPDM	32 to 185 °F	
Hypalon	32 to 180 °F	
Neoprene	50 to 130 °F	
Silicone	14 to 185 °F	
Varprene	14 to 185 °F	Meets FDA Criteria
Natural Rubber ⁽¹⁾	14 to 185 °F	Meets FDA Criteria ⁽¹⁾
Nitrile Rubber	23 to 160 °F	
Pharmed®	32 to 180 °F	Meets USP Class VI, FDA, and NSF Criteria

® Pharmed Reg. Saint-Gobain Performance Plastics

(1) Natural rubber heavy-duty hose meets FDA criteria.

Hose Chemical Resistance	Perbunan-							
	EPDM	Natural Rubber	Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Acetal	C	C	C	C	C	A	A	A
Acetic Acid 10%	A	A	C	C	A	A	B	A
Acetic Acid 20%	A	B	C	C	A	A	B	A
Acetic Acid 30%	A	B	C	C	B	A	B	A
Acetic Acid 50%	A	B	C	C	C	A	B	A
Acetic Acid Anhydride	B	C	C	A	A	A	C	A
Acetic Acid (Ice-Cold)	B	B	C	C	C	B	B	B
Acetone	A	A	C	C	B	B	B	B
Acetonitrile	C	C	C	C	S	S	S	S
Acetylene	C	C	B	B	B	B	B	B
Acrylonitrile	C	C	C	C	C	S	C	S
Air	A	A	A	A	A	A	A	A
Alcohol	A	A	A	A	B	B	B	B
Aluminum Chloride	A	A	A	A	B	A	B	A
Aluminum Fluoride	A	A	A	A	A	B	B	B
Aluminum Hydroxide	A	A	A	A	A	B	B	B
Aluminum Silicate	A	A	A	A	A	A	A	A
Aluminum Sulfate	A	A	A	A	A	A	A	A
Ammonia Anhydrous	S	A	B	C	C	A	C	A
Ammonia (Liquid)	S	A	A	A	C	B	C	B
Ammonia (Gas)	A	A	A	A	S	A	C	A
Ammonium Bicarbonate	A	A	A	A	S	S	S	S
Ammonium Bisulfate 50%	A	A	C	A	S	S	S	S
Ammonium Bromide	A	B	C					
Ammonium Carbonate	A	A	A	A	S	S	S	S
Ammonium Chloride	A	A	A	A	A	A	A	A
Ammonium Hydroxide	A	A	A	A	A	A	A	A
Ammonium Nitrate	A	A	A	B	A	B	S	S
Ammonium Persulfate	A	B	B	B	A	S	S	S
Ammonium Phosphate	A	A	A	A	A	A	A	A
Ammonium Sulfate	A	A	A	A	A	S	A	S
Amyl Acetate	B	B	B	C	C	S	C	S
Amyl Alcohol	A	A	B	A	A	B	C	B
Amyl Amine	C	C	C	C	S	S	C	S
Amyl Borate	B	B	C	B	S	S	S	S
Amyl Chloride	C	C	C	C	C	C	C	C
Amyl Chloronaphthalene	C	C	C	C	C	C	C	C
Amylene	C	C	C	C	C	S	C	S
Aniline Paint	C	B	C	B	C	B	C	B
Aniline (Oil)	C	C	C	B	C	B	C	B
Animal Fat	C	C	B	B	S	B	B	B
Animal Glue	A	A	A	A	S	A	A	A
Antifreeze	A	A	A	B	A	S	S	S

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown



Hose Chemical Resistance	EPDM	Natural Rubber	Perbunan-Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Antimony Chloride 50%	A	B	C	C	S	S	S	S
Aqua Regia	B	C	C	C	C	B	C	B
Arsenic Acid	B	C	C	C	A	A	A	A
Ascorbic Acid	A	A	A	B	S	B	B	B
Asphalt	C	C	B	C	C	C	C	C
Barium Carbonate	A	A	A	A	B	S	S	S
Barium Chloride	A	A	A	A	A	A	A	A
Barium Ferrite	A	A	A	A	A	A	A	A
Barium Hydroxide	A	A	A	A	A	A	A	A
Barium Sulfate	A	A	A	A	A	A	A	A
Barium Sulfide	A	A	A	A	A	A	A	A
Beer	A	A	B	A	A	A	A	A
Beetroot Syrup	A	A	A	A	A	A	A	A
Benzaldehyde	B	C	C	C	C	A		A
Benzene	C	C	C	C	C	C	C	C
Benzene Sulphonic Acid	C	C	C	A	S	C	C	C
Benzoyl Chloride	C	C	C	C	C	C	C	C
Benzyl Alcohol	C	C	C	C	C	C	C	C
Bird Lime (Glue)	A	A	A	A	A	A	A	A
Bismuth Carbonate	A	A	A	A	S	S	S	S
Boric Acid	A	A	A	C	B	B	B	B
Borax	A	A	A	B	A	B	B	B
Bromine	C	C	C	C	C	A	C	A
Butadiene	C	C	B	B	B	B	C	B
Butane	C	C	A	A	B	B	C	B
Butane Fluid	C	C	B	C	B	B	C	B
Butter	C	B	A	B	B	B	B	B
Butyl Acetate	B	C	C	C	C	S	C	S
Butyl Alcohol	C	B	B	A	B	B	B	B
Butyl Aldehyde	C	C	C	C	S	S	C	S
Butyl Cellosolve	C	C	C	C	S	S	C	S
Butyl Cellosolve Adipate	C	C	C	C	S	S	C	S
Butyl Ether	C	C	C	C	S	S	C	S
Calcium Acetate	A	A	B	A	S	S	S	S
Calcium Bisulfate	A	A	A	A	S	S	S	S
Calcium Carbonate	A	A	A	A	A	A	A	A
Calcium Chlorate	A	A	B	A	S	S	S	S
Calcium Chloride	A	A	A	A	A	A	A	A
Calcium Hydroxide	A	A	A	A	A	A	A	A
Calcium Hypochloride	A	B	B	C	A	A	A	A
Calcium Hypochloride 30%	A	B	B	C	A	A	A	A

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown

Hose Chemical Resistance	EPDM	Natural Rubber	Perbunan-Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Calcium Nitrate	A	A	A	A	A	S	A	S
Calcium Sulfate	A	A	A	A	S	S	S	S
Calcium Sulfide	A	A	A	A	S	S	S	S
Calcium Tetra Fluoride	B	C	C	C	S	S	S	S
Calic Liquor	A	A	A	A	B	A	A	A
Cane Sugar Liquor	A	A	A	A	A	A	A	A
Carbitol	C	C	C	B	B	S	B	S
Carbolic Acid, Phenol	C	C	C	C	C	S	C	S
Carbon Dioxide (Dry)	A	A	A	B	B	A	B	A
Carbon Dioxide (Wet)	A	A	A	B	B	A	B	A
Carbon Disulfide	C	C	A	C	C	C	C	C
Carbon Monoxide (65°C)	A	A	B	A	A	A	A	A
Carbonic Acid	A	A	A	A	A	A	A	A
Castor Oil	C	C	B	B	S	B	B	B
Caustic Soda (max 50%)	A	A	B	B	S	B	B	B
Cellosolve	C	C	C	C	S	B	S	B
Chloric Acid	A	C	C	C	C	C	C	C
Chloric Acid Sulfurous	B	C	C	C	C	C	C	C
Chlorinated Solvents	C	C	C	C	C	C	C	C
Chlorine Aceton Nitrile	C	C	C	C	C	C	C	C
Chlorine Acetone	B	C	B	C	C	C	C	C
Chlorine Water 3%	A	C	C	C	C	A	C	A
Chlorine (Dry)	B	C	C	C	C	A	C	A
Chlorine (Solvent)	S	C	C	C	C	C	C	C
Chlorine (Wet)	A	C	C	C	C	A	C	A
Chloroform	C	C	C	C	C	C	C	C
Chromic Acid 10%	S	C	C	C	B	C	C	C
Chromic Acid 25%	S	C	C	C	B	B	C	B
Chromic Acid 50%	S	C	C	C	B	B	C	B
Citric Acid	A	A	B	A	A	A	A	A
Citrus Pulp	A	A	B	A	A	A	A	A
Coconut Oil	C	C	B	B	B	A	A	A
Cod Liver Oil	C	C	B	B	B	A	A	A
Copper Arsenate	A	B	B	B	S	S	S	S
Copper Chloride	A	A	A	B	A	S	A	S
Copper Cyanide	A	B	A	B	A	S	A	S
Copper Nitrate	A	A	B	B	S	S	A	S
Copper Sulfate	A	A	B	A	A	S	A	S
Cottonseed Oil	C	C	B	S	S	S	S	S
Creosote Oil	C	C	C	C	S	S	S	S
Copper Salts	S	A	A	A	S	A	A	A
Cresol 90%, Xylol 5%, DDT 5%	C	C	C	C	C	C	C	C
Cresol 95%, Xylol 5%	C	C	C	C	C	C	C	C

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown

Hose Chemical Resistance	EPDM	Natural Rubber	Perbunan-Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Cresylic Acid	C	C	C	C	C	C	C	C
Crude Oil	C	C	B	C	C	S	S	S
Cryolite 10%	B	B	B	C	S	S	S	S
Cyanide	A	A	A	A	B	S	S	S
Cyclohexane	C	C	B	C	C	C	C	C
Cyclohexanol	C	B	C	C	C	C	C	C
Cyclohexanone	C	B	C	C	C	C	C	C
Cyclopentane	C	C	C	C	C	C	C	C
Cymene	C	C	C	C	C	C	C	C
Decalin	C	C	C	C	C	C	C	C
Decane	C	C	C	C	C	C	C	C
Diesel Oil	C	C	C	C	C	C	C	C
Dioxane	C	C	C	C	C	C	B	C
Divinyl Benzene	C	C	C	C	C	C	C	C
Diacetone Alcohol	C	C	C	C	A	C	C	C
Diamyl Naphthene	C	C	C	C	C	C	C	C
Dibenzyl Ether	C	C	C	C	C	C	C	C
Dibutyl Acetate	C	S	C	C	C	C	C	C
Dibutyl Amine	C	C	C	C	C	C	C	C
Dibutyl Ether	C	C	C	C	C	C	C	C
Dibutyl Sebacate	C	C	C	C	C	C	C	C
Dicyclohexylamine	S	C	C	C	C	C	C	C
Diethyl Amine	C	S	C	C	C	C	B	C
Diethyl Carbonate	C	C	C	C	C	C	C	C
Diethyl Ether (Ether)	C	C	C	C	C	C	C	C
Diethyl Fatty Acid	C	S	C	C	C	C	C	C
Diethyl Glycol	A	A	A	A	A	S	B	S
Diethyl Ketone	B	B	C	C	C	C	C	C
Diethyl Okalate	C	C	C	C	C	C	C	C
Diisobutene	C	C	S	C	C	C	C	C
Diisobutyl Ketone	C	B	C	C	C	C	C	C
Diisopropyl Ether	C	C	C	C	C	C	C	C
Diisopropyl Ketone	C	S	C	C	C	C	C	C
Dimethyl Ether	C	C	C	C	C	C	C	C
Dimethyl Formamide	A	A	B	C	C	C	C	C
Dimethyl Sulfide	C	C	C	C	C	C	C	C
Dioctyl Adipate	C	C	C	C	C	C	C	C
Dioctyl Sebacate	C	C	C	C	C	C	C	C
Ethanolamine	C	C	C	B	C	S	B	S
Ether	C	C	C	C	C	C	C	C
Ethylene Oxide	C	C	C	C	C	B	C	B
Ethyl Acetate	B	B	C	C	C	B	B	B

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown

Hose Chemical Resistance	EPDM	Natural Rubber	Perbunan-Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Ethyl Alcohol	A	A	A	A	A	A	A	A
Ethyl Amine	C	S	C	S	S	S	S	S
Ethyl Benzene	C	C	C	C	C	C	C	C
Ethyl Benzoate	C	C	C	C	C	C	C	C
Ethyl Bromide	C	C	C	C	C	C	C	C
Ethyl Butyrate	C	C	C	C	C	C	C	C
Ethyl Cellulose	A	A	B	B	C	C	C	C
Ethyl Chloride	C	C	C	B	C	C	C	C
Ethyl Cyano Acetate	S	S	C	C	C	C	C	C
Ethyl Ether	C	C	C	C	C	C	C	C
Ethyl Formate	B	C	C	C	C	C	C	C
Ethyl Hexanol	C	S	C	C	C	C	C	C
Ethyl Hexyl Di Phenyl Phosphate	C	C	C	C	C	C	C	C
Ethyl Iodide	C	C	C	C	C	C	C	C
Ethyl Isobutyl Ether	C	C	C	C	C	C	C	C
Ethyl Isobutyrate	C	C	C	C	C	C	C	C
Ethyl Mercaptan	C	C	C	C	C	C	C	C
Ethyl Methyl Ketone	B	B	C	S	S	S	S	S
Ethyl Oxalate	C	S	C	C	C	C	C	C
Ethyl Penta Chlor Benzene	C	C	C	C	C	C	C	C
Ethyl Proponate	C	C	C	C	C	C	C	C
Ethyl Propyl Ether	C	C	C	C	C	C	C	C
Ethyl Silicate	A	A	A	A	S	S	S	S
Ferric Chloride (65°C)	A	A	A	S	S	S	S	S
Ferric Oxide	A	A	A	B	S	S	S	S
Fluoboric Acid	S	B	B	B	B	A	S	A
Formaldehyde 37%	A	A	B	A	B	A	B	A
Formaldehyde 40% (70°C)	A	C	C	B	S	B	S	B
Formamide (Formylanine)	A	A	B	B	S	A	S	A
Formic Acid	B	B	C	B	A	A	B	A
Freon 11	C	C	C	B	A	C	C	C
Freon 114	C	C	C	B	A	C	C	C
Freon 115	C	C	C	B	A	C	C	C
Freon 12 (Liquid)	C	C	C	B	A	C	C	C
Freon 13	C	C	C	B	S	C	C	C
Freon 14	C	C	C	B	S	C	C	C
Freon 21	C	C	C	B	A	C	C	C
Freon 22	C	C	C	B	A	C	C	C
Freon 31	C	C	C	B	S	C	C	C
Freon C 316	C	C	C	B	S	C	C	C
Freon C 318	C	C	C	B	S	C	C	C
Fuel Oil	C	C	B	C	C	C	C	C

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown



Hose Chemical Resistance	EPDM	Natural Rubber	Perbunan-Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Fuming Sulphuric Acid (Oleum)	B	C	C	C	C	C	C	C
Furan	C	C	C	C	C	C	C	C
Furfural	C	C	C	B	C	B		B
Gasoline 2%	C	B	C	B	B	B	C	B
Gelatin (Glue)	A	A	A	A	A	A	A	A
Glucose	A	A	A	A	A	A	A	A
Glue	A	B	A	A	A	A	A	A
Glycerine	A	A	A	A	A	A	A	A
Glycerol	B	A	A	A	A	A	A	A
Glycol	A	A	A	A	A	A	A	A
Green Sulfate Liquor	A	A	B	B	S	C	A	C
Heptane	C	C	C	B	A	S	C	S
Hexaldehyde	A	A	B	B	S	S	A	S
Hexane	C	C	C	B	B	S	C	S
Hydraulic Oil	C	B	C	B	B	B	C	B
Hydro Cyanic Acid	S	B	C	B	S	B	C	B
Hydrobromic Acid	A	B	B	B	A	A	C	A
Hydrobromic Acid 40%	B	C	C	B	A	S	C	S
Hydrochloric Acid 15%	A	A	A	B	A	A	C	A
Hydrochloric Acid 30%	A	A	B	S	B	A	C	A
Hydrochloric Acid (65°C)	A	C	C	S	S	A	C	A
Hydrochloric Acid 33% (50°C)	B	C	C	C	S	A	C	A
Hydrochloric Acid Conc 38%	A	B	C	C	S	A	C	A
Hydrocyanic Acid	A	A	B	B	C	A	C	A
Hydrofluorine Acid (Cold)	C	B	C	S	B	S	S	S
Hydrofluorine Acid (Hot)	B	B	C	S	S	S	S	S
Hydrofluosilicic Acid	A	A	B	B	A	S	C	S
Hydrogen Gas (65°C)	A	A	A	A	A	A	C	A
Hydrogen Gas Cold	A	A	A	A	A	A	C	A
Hydrogen Peroxide 10%	A	C	C	C	S	A	B	A
Hydrogen Peroxide 30%	C	C	C	C	S	A	B	A
Hydrogen Peroxide 88%	C	C	C	C	S	A	B	A
Hydrogen Sulfide	A	A	B	A	A	A	C	A
Hydrogen Sulfide (Dry Cold)	A	A	S	A	A	A	C	A
Hydrogen Sulfide (Dry Warm)	A	A	B	A	A	A	C	A
Hydrogen Sulfide (Wet Cold)	A	A	C	A	B	A	C	A
Hydrogen Sulfide (Wet Warm)	A	A	A	A	B	A	C	A
Hydrogen Sulfide (Dry)	A	A	B	A	B	A	C	A
Hydrogen Sulfide (Moist)	A	B	B	B	B	A	C	A
Ink-Oil	C	C	B	B	S	B	C	S

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown

Hose Chemical Resistance	EPDM	Natural Rubber	Perbunan-Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Ink-Water Based	S	A	S	S	S	A	S	S
Iodine	B	C	C	C	B	A	S	A
Iron Acetat Solution	A	A	A	B	S	S	S	S
Iron Chloride	A	A	A	B	S	S	S	
Iron & Zinc Phosphate Solution	A	A	A	B	S	S	S	S
Iron Nitrate (65°C)	A	A	A	B	S	S	S	S
Iron Sulfate	A	A	A	B	S	S	S	S
Isoamyl Acetate	C	C	C	C	S	S	S	S
Isoamyl Alcohol	C	C	C	C	S	S	S	S
Isoamyl Formate	C	C	C	C	S	S	S	S
Isobutene	C	C	C	C	S	S	S	S
Isobutyl Acetate	C	C	C	C	S	S	S	S
Isobutyl Alcohol	C	B	C	C	S	A	B	A
Isobutyl Aldehyde	C	C	C	C	S	S	S	S
Isobutyl Formate	C	C	C	C	S	S	S	S
Isocyanate	C	C	C	C	S	S	S	S
Isopropyl Acetate	B	B	C	C	C	S	C	S
Isopropyl Alcohol	A	A	B	B	B	B	B	B
Isopropyl Chloride	C	C	C	C	S	B	S	B
Isopropyl Ether	C	C	C	C	C	S	C	S
Isodecane	C	C	C	C	C	C	C	C
Isododecane	C	C	C	C	C	C	C	C
Isooctane	C	C	B	C	C	C	C	C
Jet Fuels (JP1 TIL JP5)	C	C	B	C	C	C	C	C
Kerosene	C	C	B	C	C	C	C	C
Lacquers	C	C	S	C	C	C	C	C
Lacquer-Solvents	C	C	S	C	C	C	C	C
Lactic Acid	B	B	S	B	B	A	B	A
Lactol	C	C	B	C	C	C	C	C
Lard	C	C	B	C	C	B	B	B
Latex	S	A	A	B	B	B	B	B
Lead Acetate	A	A	A	B	B	A	C	A
Lead Arsenate	A	A	B	B	B	B	B	B
Lead Nitrate	A	A	A	B	B	A	B	A
Lead Sulphamate	A	A	A	B	B	B	B	B
Lime Sulfur	A	A	A	B	B	A	B	A
Lime Water	A	A	A	A	B	A	B	A
Linseed Oil	C	C	C	B	B	A	B	A
Liquid Manure	A	A	A	B	S	S	S	S
Lithium-Hydroxide	A	A	A	B	S	S	S	S

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown



Hose Chemical Resistance	EPDM	Natural Rubber	Perbunan-Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Lubricating Oil	C	C	B	B	C	B	S	B
Lye (Caustic)	A	A	A	A	A	A	A	A
Magnesium Carbonate	A	A	A	S	S	S	S	S
Magnesium Chloride	A	A	A	A	A	A	A	A
Magnesium Hydroxide	A	A	A	A	A	A	S	A
Magnesium Nitrate	A	A	A	A	S	S	S	S
Magnesium Sulfate	A	A	A	A	A	A	A	A
Manganese Sulfate	A	A	A	S	S	S	S	S
Margarine Oil	C	C	A	S	S	S	S	S
Mercury	A	A	A	A	A	A	A	A
Mercury Chloride	A	A	B	A	A	A	S	A
Mercury Cyanide	A	A	B	A	S	S	S	S
Methanol (Methylalcohol)	A	A	A	A	A	A	A	A
Methylene Chloride	C	C	C	C	S	C	C	C
Methyl Acetate	B	C	C	B	C	S	C	S
Methyl Acetone	C	B	B	C	S	S	S	S
Methyl Acetoacetate	C	C	C	S	S	S	S	S
Methyl Amine	C	C	C	S	S	S	S	S
Methylamyl Acetate	C	C	C	S	S	S	S	S
Methylamyl Carbinol	C	C	C	S	S	S	S	S
Methyl Aniline	C	C	C	S	S	S	S	S
Methyl Bromide	C	C	C	C	C	S	S	S
Methyl Butyl Ketone	C	B	B	C	C	S	C	S
Methyl Butyrate	C	C	C	C	C	C	C	C
Methyl Cellosolve	C	C	C	C	C	C	C	C
Methyl Chloride	C	C	C	C	C	C	C	C
Methyl Ethyl Ketone (MEK)	C	C	C	C	C	B	C	B
Methyl Formate	C	C	C	C	C	C	C	C
Methyl Iodide	C	C	C	C	C	C	C	C
Methyl Isobutyl Carbinol	C	C	C	C	C	C	C	C
Methyl Isobutyl Ketone	C	B	B	C	C	C	C	C
Methyl Isobutyrate	C	C	C	C	C	C	C	C
Methyl Isopropyl Ketone	C	C	C	C	C	C	C	C
Methyl Methacrylate	C	C	C	C	C	C	C	C
Methyl Oleate	C	C	C	C	C	C	C	C
Methyl Propionate	C	C	C	C	C	C	C	C
Methyl Salicylate	C	C	C	C	C	C	C	C
Milk	B	B	A	B	S	A	A	A
Mineral Oil	C	C	A	B	S	A	B	A
Molasses	A	A	A	B	S	A	S	A
Mono Sodium Glutamate	C	C	A	C	C	C	C	C
Mono chlo-benzene	C	C	C	C	C	C	C	C

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown

Hose Chemical Resistance	EPDM	Natural Rubber	Perbunan-Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Monochloroanline	C	C	C	C	C	C	C	C
Monochloro Difluoro Methane	C	C	C	C	C	C	C	C
Monochloro Trifluoro Methane	C	C	C	C	C	C	C	C
Mono Ethanol Amine	C	C	C	C	C	C	C	C
Motor Oil	C	C	B	C	C	A	C	A
Naphtha	C	C	S	C	C	C	C	C
Naphthalene	C	C	C	C	C	C	C	C
Naphthene	C	C	C	C	C	C	C	C
Natural Gas	B	B	A	B	B	A	B	A
Natural Gas (Dry)	B	B	A	B	B	A	B	A
Natural Gas (Wet)	B	B	A	B	B	A	B	A
Nickel Chloride	A	A	A	A	A	A	A	A
Nickel Nitrate	A	A	A	A	S	S	S	S
Nickel Sulfate	A	A	A	A	A	S	A	S
Nicotine Bentonite	C	C	B	S	S	S	S	S
Nicotine Sulfate	A	A	A	A	B	S	S	S
Nitric Acid 2%	S	C	C	C	B	A	C	A
Nitric Acid 10%	A	C	C	C	B	A	C	A
Nitric Acid 25%	B	C	C	C	C	B	C	B
Nitric Acid 40%	B	C	C	C	C	B	C	B
Nitric Acid 60%	C	C	C	C	C	C	C	C
Nitric Acid 70%	C	C	C	C	C	C	C	C
Nitric Acid (Fuming)	C	C	C	C	C	C	C	C
Nitro Benzene	C	C	C	C	C	C	C	C
Nitroglycerine	C	C	C	C	C	C	C	C
Nitrosylchloride	C	C	C	C	C	C	C	C
Nitrous Acid	A	C	C	C	C	A	C	A
Nitro Ethane	C	C	C	C	S	A	C	A
Nitro Methane	C	C	C	C	S	S	C	C
Nitro Octane	C	C	C	C	S	C	C	C
Nitro Propene	C	C	C	C	S	S	C	S
Octane	C	C	B	C	S	S	S	S
Octyl Alcohol	A	A	A	B	S	S	S	S
Octyl Aldehyde	C	C	C	C	S	S	S	S
Oleic Acid	C	C	C	C	C	C	B	B
Olenic Acid	C	C	C	B	C	C	S	S
Olive Oil	C	C	C	B	C	A	A	A
Oxalic Acid	A	A	B	B	B	A	A	A
Oxygen	A	B	B	B	B	A	A	A
Ozone	A	C	C	C	C	A	B	A

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown



Hose Chemical Resistance	EPDM	Natural Rubber	Perbunan-Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Palmitic Acid	C	C	B	C	S	A	S	A
Palm Oil	C	C	B	C	C	B	C	B
Paraformaldehyde	C	C	B	S	S	S	S	S
Pentane	C	C	B	B	B	S	C	S
Perchlorine Acid	S	C	C	C	C	C	C	C
Perchlorine Ethene	S	C	C	C	C	C	C	C
Petroleum TIII (90°C)	S	C	C	C	C	C	C	C
Phenol	C	C	C	C	C	C	C	C
Phenyl Ethyl Ether	C	C	C	C	C	C	C	C
Phosphoric Acid 50%	A	A	B	B	B	A	B	A
Phosphoric Acid 85%	A	A	B	C	C	A	C	A
Phosphor Tributrylate	C	S	C	C	C	S	S	S
Pickling Solution (20% Ant Acid 4% HF)	B	C	C	C	C	C	C	C
Picric Acid	A	B	C	B	B	A	C	A
Pine Oil	C	C	B	C	C	C	C	C
Pinetree Oil	C	C	B	C	C	C	C	C
Polyacrylic Acid	C	C	C	C	C	C	C	C
Potassium Bichromate	A	B	B	B	S	S	S	S
Potassium Borate	A	A	A	B	B	S	B	S
Potassium Bromide	A	A	A	B	B	A	B	A
Potassium Carbonate	A	A	A	B	B	B	B	B
Potassium Chlorate	A	B	B	B	B	B	B	B
Potassium Chloride	A	A	A	A	A	A	A	A
Potassium Cyanide	A	A	A	B	B	A	B	A
Potassium Dichromate	A	B	B	B	B	A	A	A
Potassium Hydroxide	A	A	A	B	B	B	B	B
Potassium Nitrate	A	A	A	A	A	S	A	S
Potassium Permanganate	A	A	A	B	B	S	S	S
Potassium Sulfate	A	A	A	B	B	A	B	A
Potassium Sulfite	A	A	A	B	B	A	B	A
Producer Gas	B	B	A	B	B	S	S	S
Propane (Gas)	C	C	B	S	S	S	S	S
Propane (Liquid)	C	C	A	B	B	S	S	S
Propene Bromide	C	C	C	C	C	C	C	C
Propene Carbonate	A	A	C	B	C	C	C	C
Propene Glycol	S	A	A	B	C	C	C	C
Propyl Alcohol	A	C	C	S	S	A	B	A
Propyl Benzene	A	A	A	S	S	S	S	S
Quicksilver Nitrate	A	A	A	B	C	C	C	C
Rapeseed Oil	C	C	B	B	C	C	C	C
Resin (Rosin)	C	C	B	B	S	S	S	S

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown



Hose Chemical Resistance	EPDM	Natural Rubber	Perbunan-Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Rotenone in Water	A	A	A	B	S	S	S	S
Seawater	A	A	A	A	A	A	A	A
Sewage Water (no hydrocarbon)	A	A	A	A	A	A	A	A
Shell DD	C	C	B	S	S	S	S	S
Silicium Carbide Slurry	A	A	A	A	B	S	B	S
Silicone Fluoride	A	A	C	A	A	A	C	A
Silicone Oil	A	A	A	A	A	A	C	A
Silver Cyanide (74 GRLTR)	A	A	B					
Silver Nitrate	A	A	A	A	A	A	A	a
Soap Oil	C	C	B	B	A	A	A	A
Soap Solutions	A	A	B	B	A	A	A	A
Soda	A	A	A	B	B	A	A	A
Sodium Acetate	A	A	A	B	C	S	S	S
Sodium Aluminum Silicate	A	A	A	B	C	A	S	A
Sodium Bicarbonate	A	A	A	A	C	A	A	A
Sodium Bisulfate	A	A	A	B	C	A	A	A
Sodium Bromide	A	A	C	B	C	S	S	S
Sodium Carbonate	A	A	A	A	A	A	A	A
Sodium Chlorate	A	C	C	C	C	A	C	A
Sodium Chloride	A	A	A	A	A	A	A	A
Sodium Chloride (Nac0102) 25%	A	A	A	A	A	A	A	A
Sodium Cyanide	A	A	A	A	A	A	A	A
Sodium Dichromate	A	B	B	B	S	A	B	A
Sodium Fluoraluminate	A	A	A	A	A	A	S	A
Sodium Fluoride	A	A	A	B	S	B	S	B
Sodium Hydrosulphide	A	A	A	B	S	B	S	B
Sodium Hydroxide 50% (caustic soda)	A	A	B	B	A	B	B	B
Sodium Hypochlorite 20%	B	C	C	C	A	S	B	S
Sodium Meta Phosphate	A	A	A	A	B	A	S	A
Sodium Metaborate 10% (65°C)	A	A	A	A	B	S	S	S
Sodium Nitrate	A	A	A	A	B	A	S	A
Sodium Nitrite (70°F)	A	A	A	A	B	S	S	S
Sodium Perborate	A	B	C	B	B	A	B	A
Sodium Peroxide	A	C	C	B	B	B	B	B
Sodium Phosphate	A	A	A	B	B	B	B	B
Sodium Phosphate Dibasic	A	A	A	B	S	A	B	A
Sodium Phosphate Monobasic	A	A	A	B	S	A	B	A
Sodium Phosphate Tribasic	A	A	A	B	S	A	B	A
Sodium Salt	A	A	A	B	B	A	B	A
Sodium Silicate	A	A	A	B	B	A	B	A
Sodium Silico Aluminate	A	A	A	B	B	A	B	A
Sodium Sulfate	A	A	A	B	B	A	B	A

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown



Hose Chemical Resistance	Perbunan-							
	EPDM	Natural Rubber	Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Sodium Sulfide	A	A	A	B	B	A	B	A
Sodium Sulfite	A	A	A	B	B	A	B	A
Sodium Thiosulfate	A	A	A	B	B	A	B	A
Soya Oil	C	C	A	C	S	A	B	A
Spirit (Ethyl Alcohol)	A	A	B	B	S	A	B	A
Stannic Chloride	A	A	A	B	C	A	B	A
Stearic Acid	C	C	B	B	B	A	B	A
Styrene (Monomer)	C	C	C	C	C	C	C	C
Sulfamic Acid 3%	A	A	B	B	S	S	S	S
Sulfur Chloride	A	B	C	C	C	C	C	C
Sulfur Dioxide Gas	A	C	C	C	C	A	C	A
Sulfuric Acid 10% Cold	A	A	A	B	C	A	C	A
Sulfuric Acid 30%	A	A	B	B	C	A	C	A
Sulfuric Acid (65°C)	S	S	S	C	C	A	C	A
Sulfuric Acid 50%	A	B	B	C	C	A	C	A
Sulfuric Acid 75% (Cold)	A	B	C	C	B	B	C	B
Sulfuric Acid 95% (Cold)	B	C	C	C	B	C	C	C
Sulfurous Acid 10%	A	A	B	B	A	A	C	A
Sulfurous Acid 75%	A	B	C	B	A	A	C	A
Sulfur Smoke	A	A	B	B	B	S	S	S
Sulfur Trioxide	B	C	C	C	B	B	B	B
Sulfur Dioxide 5% in Water	A	A	B	B	C	A	B	A
Sulphonic Acid	C	C	C	C	C	S	S	S
Tallow	C	C	B	C	C	S	C	S
Tannic Acid	A	A	S	B	B	A	B	A
Tar	C	C	C	C	C	S	S	S
Tartaric Acid	A	A	A	A	A	A	A	A
Tartaric Oil	A	A	B	B	S	A	S	A
Tetrabromoethane	C	C	C	C	C	S	C	S
Tetrachlorodifluoroethane	C	C	C	C	C	C	C	C
Tetrachloroethane	C	C	C	C	C	C	C	C
Tetrachloronaphthalene	C	C	C	C	C	C	C	C
Tetrahydrofuran	C	C	C	C	C	C	C	C
Toluene	C	C	C	C	C	C	C	C
Tributoxy Phosphate	C	C	C	C	C	C	C	C
Tributyl Phosphate	C	C	C	C	C	C	C	C
Trichloro Benzene	C	C	C	C	C	C	C	C
Trichloro Ethene	C	C	C	C	C	C	C	C
Trichloro Fluorine Methane	C	C	C	C	C	C	C	C
Trichloro Trifluor Ethane	C	C	C	C	C	C	C	C
Triethanol Amine	C	C	C	C	C	C	C	C
Trisodium Phosphate	C	C	C	C	C	A	C	A

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown

Hose Chemical Resistance	EPDM	Natural Rubber	Perbunan-Nitrile Rubber	Neoprene	Hypalon	Varprene	Silicone	PharMed®
Tung Oil (China Wood Oil)	C	C	C	A	S	A	S	A
Turpentine	C	C	C	C	C	A	C	A
Uranium	A	A	A	S	S	S	S	s
Urea	A	A	A	S	S	A	A	A
Urine	A	A	B	C	S	A	S	A
Vegetable Oil	C	C	B	A	S	A	A	A
Vinegar	A	B	C	A	A	A	A	A
Vinegar Anhydride 50%	B	C	C	S	S	S	S	S
Vinyl Chloride	C	C	C	S	S	S	S	S
Water	A	A	A	A	A	A	A	A
Water (Condensation)	A	A	A	A	A	A	A	A
Water (Distilled)	A	A	A	A	A	A	A	A
Water (Drinking)	A	A	A	A	A	A	A	A
Water (Mineral with Oxydized Salts)	A	B	C	S	S	S	S	S
Water (Mineral without Oxydized Salts)	A	A	A	A	A	A	A	A
Whisky and Wine	A	A	A	A	A	A	A	A
White Oil 10%	C	C	A	S	S	S	S	S
White Spirit	C	C	B	S	S	B	S	B
Wood Oil	C	C	C	A	S	A	S	A
Xylene	C	C	C	C	C	C	C	C
Zeolite	A	B	B	A	S	S	S	S
Zinc Chloride	A	A	A	A	A	A	A	A
Zinc Oxide (27°C)	A	A	A	S	S	S	S	S
Zinc Sulfate	A	A	A	A	A	A	A	A

Legend:

A Little or No Action
C Strong Action

B Moderate Action
S Unknown





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