WARNING This chart indicates the suitability of various elastomers and metals for use with fluids to be conveyed. It should be used only as a guide for the selection of valve materials. Many conditions can affect the material choices, including, but not limited to; pressure, temperature, chemical mix, material compounding and environment. The user through its own analysis and testing is solely responsible for making the final selection. Therefore, Valworx does not warrant (neither express or implied) that the information in this chart is accurate or complete or that any material is suitable for any specific purpose.

A - Satisfactory B - Fair (minor effect) X - Unsatisfactory - Insufficient Data

CHEMICAL	Nitrile NBR Buna-N	EPDM	FKM Viton®	PTFE Teflon®	Brass	316 Stainless Steel
Acetaldehyde	X	B	X	A	X	A
Acetamide	A	A	X	A	-	A
Acetic Acid, 5%	B	A	A	A	X	A
Acetic Anhydride	X	B	X	A	X	B
Acetone	X	A	X	A	A	A
Acetophenone	X	A	X	A	X	X
Acetyl Chloride	X	X	A	A	A	A
Acetylene	A	A	A	A	X	A
Acrlylonitrile	X	X	X	A	A	A
Adipic Acid	A	B	X	A	-	B
Air, compressed,below 180°F (82°C)	A	A	A	A	A	A
Alcohol	A	A	B	A	-	A
Aluminum Acetate (Aqueous)	B	A	X	A	X	A
Aluminum Chloride (Aqueous)	A	A	A	A	X	B
Aluminum Fluoride (Aqueous)	A	A	A	A	X	B
Aluminum Nitrate (Aqueous)	A	A	A	A	X	A
Aluminum Sulfate (Aqueous)	A	A	A	A	X	B
Ammonia, Aqueous <30% NH3	A	A	A	A	X	A
Ammonium Carbonate (Aqueous)	X	A	A	A	X	B
Ammonium Chloride (Aqueous)	A	A	A	A	X	B
Ammonium Hydroxide (Concentrated)	X	A	X	A	X	A
Ammonium Nitrate (Aqueous)	A	A	X	A	X	X
Ammonium Persulfate (Aqueous)	X	A	X	A	X	A
Ammonium Phosphate (Aqueous)	A	A	X	A	X	A
Amyl Acetate (Banana Oil)	A	X	X	A	A	A
Amyl Alcohol	B	B	B	A	A	A
Aniline	X	B	X	A	X	A
Animal Fats	A	B	A	A	X	A
Antifreeze (Ethylene Glycol)	A	A	A	A	A	A
Argon, Compressed	A	A	A	A	A	A
Aroclor, 1254	X	B	A	A	B	B
Arsenic Acid	A	A	A	A	X	A
Askarel Transformer Oil	B	X	A	A	A	A
Asphalt	B	X	A	A	A	A
ASTM Oil No. 1,2,3,5	A	X	A	A	A	A
Banana Oil (Amyl Acetate)	A	X	X	A	A	A
Barium Chloride (Aqueous)	A	A	A	A	A	A
Barium Hydroxide (Aqueous)	A	A	A	A	X	A
Barium Sulfate (Aqueous)	A	A	A	A	B	A
Barium Sulfide (Aqueous)	A	A	A	A	X	A

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CHEMICAL	Nitrile NBR Buna-N	EPDM	FKM Viton®	PTFE Teflon®	Brass	316 Stainless Steel
Beer	A	A	A	A	A	A
Beet Sugar Liqours	A	A	A	A	-	A
Benzaldehyde	X	A	X	A	A	A
Benzene	X	X	A	A	A	A
Benzene Sulfonic Acid, 10%	X	X	A	A	B	B
Benzoic Acid	X	X	A	A	X	A
Benzyl Alcohol	X	B	A	A	A	A
Benzyl Benzoate	X	X	A	A	-	A
Bio-Diesel (B100) <125°F (52°C)	B	-	A	A	B	A
Bio-Diesel (B100) >125°F (52°C)	X	X	A	A	B	A
Bleach, <12% active chlorine	B	A	A	A	-	A
Borax	B	A	A	A	A	A
Bordeaux Mixture	B	A	A	A	-	A
Brake Fluid (Petroleum)	A	X	A	A	A	A
Brake Fluid (Synthetic) DOT 3, 4	X	A	X	A	A	A
Brine (Salt)	A	A	A	A	B	A
Bromine Water	X	B	A	A	-	A
Bunker Oil	A	X	A	A	A	A
Butter (Animal Fat)	A	B	A	A	A	A
Butyl Acetate	X	B	X	A	A	A
Butyl Alcohol	A	B	A	A	A	A
Butyl Cellosolve	X	B	X	A	A	A
Butyl Stearate	B	X	A	A	A	A
Butylene	B	X	A	A	A	A
Butyraldehyde	X	B	X	A	A	-
Calcium Bisulfite (Aqueous)	B	A	B	A	-	A
Calcium Chloride (Aqueous)	A	A	A	A	B	A
Calcium Hydroxide (Aqueous)	A	A	A	A	X	A
Calcium Hypochlorite (Aqueous)	B	A	A	A	X	B
Calcium Nitrate (Aqueous)	A	A	A	A	A	A
Calcium Sulfide (Aqueous)	A	A	A	A	-	A
Carbolic Acid (Phenol)	X	B	A	A	X	A
Carbon Dioxide	A	A	A	A	A	A
Carbonic Acid	B	A	A	A	X	A
Carbon Monoxide	A	A	A	A	A	A
Carbon Tetrachloride	B	X	A	A	B	A
Castor Oil	A	B	A	A	A	A
Cellosolve	X	B	X	A	A	A
Cellosolve Acetate	X	B	X	A	X	B
China Wood Oil (Tung Oil)	A	X	A	A	A	A
Chlorine Water	X	B	A	A	X	X
Chlorine, Liquid	X	X	X	B	X	X
Cholorobenzene	X	X	A	A	A	A
Chloroform	X	X	A	A	A	A

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CHEMICAL	Nitrile NBR Buna-N	EPDM	FKM Viton®	PTFE Teflon®	Brass	316 Stainless Steel
Chlorotoluene	X	X	A	A	A	A
Chlorox	B	A	A	A	X	
Citric Acid	A	A	A	A	X	A
Coal Tar (Creosote)	A	X	A	A	A	A
Coconut Oil	A	X	A	A	B	A
Cod Liver Oil	A	A	A	A	A	A
Coffee	A	A	A	A	A	A
Coke Oven Gas	X	X	A	A	B	A
Copper Acetate	B	A	X	A	X	A
Copper Chloride	A	A	A	A	X	A
Copper Cyanide	A	A	A	A	X	A
Copper Sulfate, 10%, 50%	A	A	A	A	X	A
Corn Oil	A	X	A	A	A	A
Cottonseed Oil	A	X	A	A	A	A
Creosote (Coal Tar)	A	X	A	A	X	A
Cresols	X	X	B	A	-	A
Cresylic Acid	X	X	A	A	A	A
Cyclohexane	A	X	A	A	A	A
Cyclohexanol	A	X	A	A	-	A
Cyclohexanone	A	B	A	A	B	A
Cymene or P-Cymene	X	X	A	A	A	A
Decalin	X	X	A	A	A	-
Denatured Alcohol	A	A	A	A	A	A
Detergent, Water Solutions	A	A	A	A	A	A
Developing Fluids (photo)	A	B	A	A	-	A
Diacetone	X	A	X	A	A	A
Diacetone Alcohol	X	A	X	A	A	A
Dibenzyl Ether	X	B	X	A	A	A
Dichlorobenzene	X	X	A	A	A	A
Diesel Fuel	B	X	A	A	A	A
Diethylene Glycol	A	A	A	A	A	A
Diisobutylene	B	X	A	A	A	A
Diisopropyl Ketone	X	A	X	A	A	A
Diisopropylidene Acetone (Phorone)	B	X	A	A	A	A
Dimethyl Aniline (Xylidine)	B	X	A	A	A	-
Dimethyl Ether (Methyl Ether)	A	B	B	A	A	A
Dimethyl Formamide (DMF)	B	A	X	A	-	A
Dimethyl Phthalate	X	B	B	A	A	-
Dioctyl Phtalate	A	B	B	A	A	A
Dioxolane	X	B	X	A	A	A
Dipentene	B	X	A	A	A	A
Dowtherm Oil, A, E	X	X	A	A	A	A
Drinking Water (Potable Water)	A	A	A	A	A	A
Ethanol	X	A	X	A	B	A

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CHEMICAL	Nitrile NBR Buna-N	EPDM	FKM Viton®	PTFE Teflon®	Brass	316 Stainless Steel
Ethanol Amine	B	A	X	A	A	A
Ethyl Acetate	X	B	X	A	A	A
Ethyl Acetoacetate	X	B	X	A	A	A
Ethyl Acrylate	X	B	X	A	-	A
Ethyl Alcohol	X	A	X	A	B	A
Ethyl Benzene	X	X	A	A	B	A
Ethyl Chloride	A	X	A	A	B	A
Ethylene Chloride	X	X	B	A	-	A
Ethylene Diamine	A	A	X	-	A	-
Ethylene Dichloride	X	X	A	A	B	A
Ethylene Glycol	A	A	A	A	A	A
Ethylene Oxide	X	X	X	A	-	A
Fatty Acids	B	X	A	A	B	A
Ferric Chloride	A	A	A	A	X	X
Ferric Nitrate	A	A	A	A	X	A
Ferric Sulfate	A	A	A	A	X	A
Fish Oil	B	X	A	A	A	A
Fluorosilicic Acid	A	B	B	A	-	X
Formaldehyde	X	B	X	A	A	A
Formic Acid	-	A	X	A	B	A
Freon 11	X	X	B	A	A	A
Freon 12	B	X	X	A	A	A
Freon 21	X	X	X	A	A	A
Freon 22	X	X	X	X	A	A
Freon 113	A	X	X	A	A	A
Freon 114	A	A	A	A	A	A
Freon 134A	A	B	X	A	A	A
Fuel Oil, #1, #2	A	X	A	A	A	A
Fuel Oil, #6	B	X	A	A	A	A
Fumaric Acid	A	B	A	A	-	A
Furan, Furfuran	X	X	A	A	A	A
Furfural	X	B	X	A	A	A
Gallic Acid	B	B	A	A	-	A
Gasoline	A	X	A	A	A	A
Gelatin	A	A	A	A	-	X
Glauber's Salt (Aqueous)	X	B	A	A	A	A
Glucose	A	A	A	A	A	A
Glycerine	A	A	A	A	A	A
Green Sulfate Liquor	B	A	A	A	X	A
Hexaldehyde or n-Hexaldehyde	X	A	X	A	A	A
Hexane or n-hexane	A	X	A	A	A	A
Hexyl Alcohol	A	X	A	A	B	A
Hydraulic Oil (Petroleum)	A	X	A	A	A	A
Hydraulic Oil (Phosphate Ester)	X	B	X	A	A	A

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CHEMICAL	Nitrile NBR Buna-N	EPDM	FKM Viton®	PTFE Teflon®	Brass	316 Stainless Steel
Hydraulic Oil (Synthetic)	B	X	A	A	A	A
Hydraulic Oil (Water Glycol)	A	A	A	A	A	A
Hydrazine	B	A	X	A	-	A
Hydrobromic Acid 20%	X	A	A	A	X	X
Hydrobromic Acid 40%	X	A	A	A	X	X
Hydrochloric Acid <37%	X	X	A	A	X	X
Hydrocyanic Acid 10%	B	A	A	A	X	A
Hydrofluosilicic Acid (Fluosilicic Acid)	B	A	A	A	X	B
Hydrogen Gas	A	A	A	A	A	A
Hydrogen Peroxide	B	A	A	A	X	A
Hydrogen Peroxide (90%)	X	B	A	A	X	A
Hypochlorous Acid	X	B	A	A	-	-
Isobutyl Alcohol	B	A	A	A	B	A
Isooctane	A	X	A	A	A	A
Isopropyl Acetate	X	B	X	A	A	A
Isopropyl Alcohol	X	A	A	A	A	A
Isopropyl Ether	B	X	X	B	A	A
Jet Fuel JP4,JP5,JP8	A	X	A	A	A	A
Kerosene	A	X	A	A	A	A
Lactic Acid (Cold), 25%	A	A	A	A	B	A
Lard (Animal Fat)	A	B	A	A	X	A
Lead Acetate (Aqueous)	B	A	X	A	A	A
Lead Nitrate (Aqueous)	A	A	A	A	-	A
Ligroin (Benzene)	A	X	A	A	-	A
Lime Sulfur	-	-	A	A	X	A
Linoleic Acid	B	X	B	A	X	B
Linseed Oil	A	X	A	A	A	A
LP Gas (LPG, Propane)	A	X	A	A	A	A
Lubricating Oils (Petroleum)	A	X	A	A	A	A
Magnesium Chloride	A	A	A	A	B	A
Magnesium Hydroxide	B	A	A	A	B	A
Magnesium Sulfate and Sulfite	A	A	A	A	A	A
Maleic Acid	X	X	A	A	X	A
Mercury Chloride (Aqueous)	X	A	X	A	X	X
Mercury	A	A	A	A	X	A
Mesityl Oxide	X	B	X	A	A	A
Methane	A	X	A	A	A	A
Methyl Acetate	X	B	X	A	A	A
Methyl Alcohol (Methanol)	X	A	X	A	A	A
Methyl Bromide	B	X	A	A	A	B
Methyl Butyl Ketone (Propyl Acetone)	X	A	X	A	A	A
Methyl Cellosolve	X	B	X	-	-	A
Methyl Chloride	X	B	A	A	A	A
Methyl Ethyl Ketone (MEK)	X	A	X	A	A	A

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CHEMICAL	Nitrile NBR Buna-N	EPDM	FKM Viton®	PTFE Teflon®	Brass	316 Stainless Steel
Methyl Formate	X	B	X	A	A	A
Methyl Isobutyl Ketone	X	X	X	A	B	A
Methyl Methacrylate	X	X	X	A	-	A
Mineral Oil	A	X	A	A	A	A
Monochlorobenzene	X	X	A	A	A	A
Motor Oil (Petroleum)	A	X	A	A	A	A
Naptha	B	X	A	A	A	A
Naphthalene	X	X	A	A	A	A
Natural Gas	A	X	A	A	A	A
Nickel Chloride	A	A	A	A	X	A
Nickel Sulfate	A	A	A	A	B	A
Nitric Acid, 0-50%	X	B	A	A	X	A
Nitrobenzene	X	A	B	A	A	A
Nitrogen	A	A	A	A	A	A
Olive Oil	A	B	A	A	-	A
Ortho-Dichlorobenzene	X	X	A	A	A	A
Oxalic Acid	B	A	A	A	X	A
Ozone	X	A	A	A	A	A
Palmitic Acid	A	B	A	A	-	A
Peanut Oil	A	X	A	A	A	A
Perchloric Acid	X	A	A	A	X	A
Perchloroethylene	B	X	A	A	X	A
Petroleum Oil-Below 250°F	A	X	A	A	A	A
Petroleum Oil-Above 250°F	X	X	B	A	A	A
Phenol (Carbolic Acid)	X	X	A	A	X	A
Picric Acid (aq)	A	A	A	A	X	A
Pinene	B	X	A	A	-	A
Pine Oil	A	X	A	A	-	A
Potassium Acetate	B	A	X	A	B	A
Potassium Chloride	A	A	A	A	A	B
Potassium Cupro Cyanide	A	A	A	A	-	-
Potassium Cyanide	A	A	A	A	X	X
Potassium Dichromate	A	A	A	A	X	A
Potassium Hydroxide 50%	B	A	X	A	B	A
Potassium Nitrate	A	A	A	A	B	A
Potassium Sulfate	A	A	A	A	B	A
Propane	A	X	A	A	A	A
Propyl Alcohol	A	A	A	A	A	A
Propylene Glycol 25%	X	A	A	A	A	A
Propylene Oxide	X	B	X	A	-	A
Pydraul, 10E	X	A	X	A	A	A
Pydraul, 90E,115E, 29 ELT	X	A	A	A	A	A
Pydraul, 115E,30E,50E,65E	X	A	A	A	A	A
Pydraul, 230C, 312C, 540C,A200	X	X	A	A	-	A

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CHEMICAL	Nitrile NBR Buna-N	EPDM	FKM Viton®	PTFE Teflon®	Brass	316 Stainless Steel
Rapeseed Oil	B	A	A	A	A	A
Red Oil (MIL-H-5606)	A	X	A	A	B	A
Salicylic Acid	B	A	A	A	-	A
Sea Water	A	A	A	A	X	B
Sewage	A	A	A	A	B	A
Silicone Oils	A	A	A	A	A	A
Silver Nitrate	B	A	A	A	B	A
Skydrol 7000	X	A	B	A	-	A
Soap Solutions	A	A	A	A	A	A
Soda Ash	A	A	A	A	A	A
Sodium Acetate	B	A	X	A	A	A
Sodium Bicarbonate (Baking Soda)	A	A	A	A	B	A
Sodium Bisulfite	A	A	A	A	-	A
Sodium Borate	A	A	A	A	A	A
Sodium Chloride	A	A	A	A	X	B
Sodium Chlorite	X	X	X	B	-	-
Sodium Cyanide	A	A	A	A	X	A
Sodium Hydroxide <40%	B	A	B	A	X	A
Sodium Hypochlorite (Chlorox)	B	A	A	A	X	X
Sodium Metaphosphate	A	A	A	A	X	A
Sodium Nitrate	B	A	-	A	X	A
Sodium Perborate	B	A	A	A	X	A
Sodium Peroxide	B	A	A	A	X	A
Sodium Phosphate	A	A	A	A	X	A
Sodium Silicate	A	A	A	A	B	A
Sodium Sulfate	A	A	A	A	B	A
Sodium Thiosulfate	B	A	A	A	X	A
Sour Crude Oil	X	X	A	A	-	A
Soybean Oil	A	X	A	A	A	A
Stannic Chloride	A	A	A	A	X	X
Stannous Chloride 15%	A	A	A	A	X	A
Stearic Acid	B	B	-	A	X	A
Stoddard Solvent	A	X	A	A	A	A
Styrene (Monomer)	X	X	B	A	B	A
Sucrose Solution	A	A	A	A	-	A
Sulfite Liquors	X	A	X	A	-	A
Sulfuric Acid <70%	X	X	A	A	X	X
Sulfurous Acid	B	B	A	A	X	A
Tannic Acid (10%)	A	A	A	A	X	A
Tar, Bitruminous	B	X	A	A	A	A
Tartaric Acid	A	B	A	A	X	A
Tetrachloroethylene	X	X	A	A	-	A
Toluene	X	X	A	A	A	A
Transformer Oil	A	X	A	A	A	A

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CHEMICAL	Nitrile NBR Buna-N	EPDM	FKM Viton®	PTFE Teflon®	Brass	316 Stainless Steel
Transmission Fluid Type A	A	X	A	A	A	A
Trichloroethylene	X	X	A	A	A	A
Tung Oil (China Wood Oil)	A	X	A	A	A	A
Turpentine	A	X	A	A	B	A
Vegetable Oils	A	X	A	A	A	A
Versilube F-50	A	A	A	A	A	A
Vinegar	B	B	X	A	X	A
Vinyl Chloride	B	X	A	A	X	A
Water (Chlorine)	X	B	A	A	X	X
Water (Deionized)	B	A	A	A	X	A
Water (Distilled)	A	A	A	A	B	A
Water, Fresh < 82°C (180°F)	A	A	A	A	A	A
Water, Fresh < 100°C (212°F)	X	A	A	A	A	A
Water (Potable)	A	A	A	A	A	A
Water (Salt)	A	A	A	A	X	A
Water (Sea)	A	A	A	A	X	B
Water (Sewage)	A	A	A	A	B	A
Whiskey, Wines	A	A	A	A	-	A
Xylene	X	X	A	A	A	A
Zinc Acetate	B	A	X	A	X	A
Zinc Chloride	A	A	A	A	X	B
Zinc Sulfate	A	A	A	A	X	A