



CHEMICAL RESISTANCE CHARTS

Fluid	Metal	Seal Material
Key: A = Excellent B = Good C = Fair / Poor D = Not Recommended Blank = Insufficient Data	Aluminum Carbon Steel Stainless Steel	Buna-N Viton EPR Rubber Butyl Teflon
Acetate Solvents	A A A	D D D D A
Acetic Acid, aerated	B D A	C C B A
Acetic Acid, Air Free	B D B	C D B A
Acetic Acid, crude	C C B	D D B B A
Acetic Acid, glacial	A D A	B D B B A
Acetic Acid, pure	B D B	D D B B A
Acetic Acid, 10%	B C B	D D B B A
Acetic Acid, 80%	B C B	D D C A
Acetic Acid Vapors	B D	D D C D A
Acetone	A A A	D D A A A
Acetylene	A A A	B A A A A
Acrylonite	B B A	D C D D A
Alcohol, Amyl	A B A	B B A A A
Alcohol, Butyl	A B A	A A B B A
Alcohol, Ethyl	B B A	B B A A A
Alcohol, Isopropyl	B B B	B A A A A
Alcohol, Methyl	B C A	B D B B A
Alcohol, Propyl	A B A	B A A A A
Aluminum Chloride	C C B	A A A A A
Aluminum Fluoride	C D C	A A A A A
Aluminum Potassium Sulfate	D B	B B B A
Aluminum Sulfate	C D B	A A A A
Ammonia, Anhydrous Liquid	B A A	B D A A A
Ammonia, Aqueous	B A A	B B B B A
Ammonia, Gas, hot	B A	C D B B A
Ammonia Solutions	B B A	B D A A A
Ammonium Chloride	C C B	B A A A A
Ammonium Hydroxide 28%	C B B	B C B B A
Ammonium Hydroxide, concentrate	C C B	D C B B A
Ammonium Nitrate	B D A	A B A A A
Ammonium Phosphate	C D B	A A A A A
Ammonium Phosphate, Di-basic	B D B	A D A A A
Ammonium Sulfate	C C B	A D A A A
Aniline	C C B	D C B B A
Asphalt Liquid	C B A	C A D D A
Barium Chloride	D C B	A A A A A
Barium Hydroxide	D C B	A A A A A
Barium Sulfide	D C B	A A A A A
Benzene (Benzol)	B B B	D B D D A
Benzine	<i>See Petroleum Ether</i>	
Borax (Sodium Borate)	C C A	B A A A A
Boric Acid	B D B	B A B A
Butadiene	B B A	C B D D A
Butane	A B B	B B D D D
Butyl Acetate	B B B	D D B B A
Butyl Stearate	B B	B A D D A
Butylcellosolve	A A A	D D B B A
Butylene	A A A	C B D D A
Calcium Acetate	C A	B D A A A
Calcium Bisulfite	C D B	A A D D A
Calcium Chloride	C C B	A A A B A
Calcium Hydroxide	D C B	A A A A A
Calcium Nitrate	C B A	B B B B A
Carbonic Acid	A D A	D B B B A
Carbonic Acid (Phenol)	A D B	D B C C A
Carbon Dioxide Dry	A A A	A B B B A
Carbon Disulphide	A B A	A A D D A
Carbon Tetrachloride, dry	B B A	B A D D A
Carbon Tetrachloride, Wet	D D B	C B D D A
Caustic Potash	D D B	B B B A
Caustic Soda	D B A	C B B B A
Cellosolve	B B B	D D B B A
Cellulose Acetate	B B	D D B B A
Chlorine Gas, dry	C B B	D B B C A
Chlorobromomethane	B A	D A C C A

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Chloroform, dry	D B A	D B D D A
Chromic Acid 50%	D C C	C B D D A
Citric Acid	B D A	B A A A A
Copper Acetate	D C A	B D A A A
Copper Cyanide	D A	A B B A
Copper Nitrite	D D B	A A B B A
Copper Sulfate	C D B	A A C C A
Cresote	B B A	A A D D A
Cresote Oil	B B B	C A D D A
Cresylic Acid	C C B	D B D D A
Cyclohexane	A A A	A A D D A
DDT	B D B	B A D D A
Detergents, synthetic	B B	B A C A
Dichloroethyl Ether (Chlorex)	B B B	D C C C A
Dowtherm	A B A	D A D A
Ethane	A C B	A A D D A
Ethanol Amine	A B A	B D B B A
Ethers	A A A	D C C C A
Ethyl Acetate	A B B	D D B B A
Ethyl Cellulose	A C A	B D B B A
Ethyl Chloride, dry	B B A	B B B B B
Ethyl Chloride, wet	D D B	B B B B A
Ethylene Chloride	C A	D B D D A
Ethylene Diamine	C B A	A D A A A
Ethylene Dichloride	D B A	D B C C A
Ethylene Glycol	A B B	A A A A A
Ethylene Oxide	B B B	D C C C A
Fatty Acids	B D A	B A C C A
Ferric Chloride	D D D	C B C C A
Ferric Sulfate	D D B	A A B B A
Formaldehyde, cold (Formalin)	A A A	B D B B A
Formaldehyde, hot (Formalin)	B D C	B D B B A
Formic Acid, cold	B D B	C C B B A
Formic Acid, hot	D D B	C C B B A
Freon Gas, dry	B B A	B B D D A
Freon 11, MF, 112, BF, 12, 13	B A	B B D D A
Freon 21	B A	D D D D A
Freon 22	A A	D D B B A
Freon 113, TF	B A	B C D D A
Fuel Oil	A B A	A A D D A
Furfural	A A A	D D B B A
Gas, Manufactured	B B B	A A C A
Gas, Natural	B B A	A A C A
Gas, Odorizers	A B B	B A A A
Gasoline, Aviation	A A A	C A D D A
Gasoline, Leaded	A A A	B A D D A
Gasoline, Sour	A B A	B A D D A
Gasoline, Unleaded	A A A	B A D D A
Gelatin	A D A	A A A A
Glucose	A B A	A A A A
Glue	A A B	A A B A
Glycerine (Glycerol)	A C A	A A A A A
Herbicides	<i>See specific chemical listing</i>	
Hexane	A B B	A A D A
Hydraulic Oil, Petroleum Base	A A A	A A D D A
Hydrocyanic Acid	A D A	B A A A A
Hydrogen Gas, cold	A B A	B A A A A
Hydrogen Gas, hot	C B B	B A A A A
Hydrogen Peroxide, Concentrate	A D B	D A C C A
Hydrogen Peroxide, Dilute	A D B	B A B A
Hydrogen Sulfide, Dry	A B A	C D A A A
Hydrogen Sulfide, Wet	B C B	D D A A A
Hypo (Sodium Thiosulfate)	B D A	A A B A
Isobutyl Acetate	B B A	B D B B A
Isobutyl Alcohol	B B A	D B A A A



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Iso-Butane	A	A	A	A	D	D	D	A
Iso-Butanol	A	B	A	A	B	B	B	A
Iso-Propanol	B	B	B	B	A	A	A	A
Iso-Propylamine	A	B	A	A	A	A	A	A
Isopropyl Acetate	A	B	B	D	B	B	B	A
Jef Fuels, P-4, P-5 and P-6	A	A	A	B	A	D	D	A
Kerosene	A	B	A	A	A	D	D	A
Lacquer (and solvent)	A	C	A	D	D	D	D	A
Lactic Acid, concentrated hot	C	D	B	D	B	D	D	A
Lactic Acid Dilute, cold	A	D	A	B	A	B	B	A
Lactic Acid Dilute, hot	B	D	A	C	D	C	C	A
Lime Sulphur Solutions	C	B	A	D	A	A	A	A
LPG	A	B	A	A	A	D	D	A
Magnesium Chloride	D	C	B	A	A	A	A	A
Magnesium Hydroxide	D	B	A	B	A	B		A
Magnesium Sulfate	D	B	A	A	A	B	B	A
Mercury	B	A	A	A	A	A	A	A
Methane	A	B	B	A	A	D	D	A
Methanol	B	C	A	B	D	B	B	A
Methyl Cellosolve	A	B	A	C	D	B		A
Methyl Chloride	D	B	A	D	B	D	D	A
Methyl Ethyl Keytone	A	A	A	D	D	A	A	A
Methyl Isobutyle Ketone	A	A	A	D	D	A	A	A
Mineral Oils	A	B	A	A	A	D	D	A
Naptha	A	B	B	B	A	D	D	A
Napthalene	B	B	B	D	A	D		A
Napthenic Acid	B	B	A	C	A	D	D	A
Natural Gas, Sour	B	B	A	A	A	D		A
Nickel Chloride	D	D	B	A	A	B	B	A
Nickel Sulfate	D	D	B	A	A	A	A	A
Nitric Acid 30%	D	D	A	C	B	B	B	A
Nitric Acid 80%	B	D	B	D	C	D	D	A
Nitric Acid 100%	B	D	A	D	C	D	D	A
Nitrobenzene	B	B	A	D	C	D	C	A
Nitrogen	A	A	A	A	A	A	A	A
Nitrogen Fertilizer Solutions	B		A	B	A	B	B	A
N. Octane	A	A	A	B	A	D	D	A
Octyl Alcohol	B	B	A	B	B	B	B	A
Oils, Petroleum Refined	A	A	A	A	A	D	D	A
Oils, Petroleum Sour	A	B	A	B	A	D	D	A
Oils, Water Mixture	A	B	A	A	A	D	D	A
Oleic Acid	B	C	B	C	B	D	D	A
Oleum	B	B	B	D	B	D	D	A
Oxalic Acid	C	D	B	C	A	B	B	A
Palmitric Acid	B	C	B	B	A	D	D	A
Perchlorethylene, dry	B	B	A	C	A	D	D	A
Pesticides	<i>See specific chemical listing</i>							
Petroleum Ether (Naptha)	A	A	A	A	A	D	D	A
Phenol	A	D	A	D	B	D		A
Phosphoric Acid 10%	D	D	B	B	B	B	B	A
Phosphoric Acid 50%	D	D	B	C	B	B	B	A
Phosphoric Acid 80%	D	B	A	C	B	B	B	A
Phosphoric Acid 85%	D	C	B	D	B	B	B	A
Phthalic Anhydride	B	C	B	C	A	C	C	A
Picric Acid	C	D	B	C	B	B	B	A
Potassium Acetate Solutions	D	B	A	B	D	A	B	A
Potassium Carbonate	D	B	B	A	A	B		A
Potassium Chloride	D	C	B	A	A	A	A	A
Potassium Cynate Solutions	B	D	A			B	B	A
Potassium Cyanide	D	B	B	A	A	A	A	A
Potassium Hydroxide, Dilute Cold	D	A	A	B	D	A	A	A
Potassium Hydroxide, Dilute Hot	D	B	A	B	D	A	A	A
Potassium Nitrite	A	B	B	A	A	A	A	A
Potassium Sulfate	A	B	A	A	A	A	A	A
Producer Gas	B	B	B	A	A	D	D	A

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Propionic Acid 20%	B	D	B			A	A	A
Propylene	A	A	A	D	A	D	D	A
Propylene Diamine	B	B	A	D	D	D	D	A
Propylene Dichloride	C	B	B	D	B	D	D	A
Propylene Glycol	A	B	B	A	A	B	B	A
Propylene Oxide	B	B	B	D	D	B	B	A
Resins & Rosins	A	C	A	C	A			A
Rubber or Latex Emulsions	A	B	A			A		A
Shellac - bleached & orange	A	A	A	A	C	B		A
Silicone Fluids	B		B	B	B	B		A
Soap Solutions (Stearates)	C	A	A	A	A	A	A	A
Sodium Aluminate	D	C	B	A	A	A	A	A
Sodium Bicarbonate	C	C	B	A	A	A	A	A
Sodium Bisulfate 10%	D	D	A	A	A	A	A	A
Sodium Borate	B	C	B	A	A	A	A	A
Sodium Carbonate (Soda Ash)	D	B	A	A	A	A	A	A
Sodium Chloride	D	C	B	A	A	B	B	A
Sodium Chronate	D	B	A	A	A	A	A	A
Sodium Cyanide	D	C	B	A	D	A	A	A
Sodium Hydroxide 20% Cold	D	D	A	B	B	A	A	A
Sodium Hydroxide 20% Hot	D	B	A	B	C	B	B	A
Sodium Hydroxide 50% Cold	D	A	A	B	C	A	A	A
Sodium Hydroxide 50% Hot	D	B	A	B	C	B	B	A
Sodium Hydroxide 70% Cold	D	C	A	B	C	A	A	A
Sodium Hydroxide 70% Hot	D	C	B	C	C	B	B	A
Sodium Metaphosphate	D	D	A	A	B	B	B	A
Sodium Nitrate	A	B	A	B	D	A	A	A
Sodium Peroxide	C	C	A	B	A	A	A	A
Sodium Phosphate	D	C	A	B	A	A	A	A
Sodium Phosphate Di-basic	D	C	B	A	A	A	A	A
Sodium Phosphate Tri-basic	B	B	A	A	A	A	A	A
Sodium Silicate	D	B	B	A	A	A	A	A
Sodium Sulfate	B	B	A	A	A	A	A	A
Sodium Sulfide	C	C	B	A	A	A	A	A
Sodium Thiosulfate	B	C	A	B	A	A	A	A
Stearic Acid	A	C	B	A	A	B	B	A
Stoddard's Solvent	A	A	A	A	A	D	D	A
Styrene	A	A	A	D	B	D	D	A
Sulfate, Liquors	C	C	B	C	B	B	B	A
Sulfuric Acid 0 to 77%	D	D	B	D	A	C	C	A
Sulfuric Acid 100%	D	C	A	D	B	D	D	A
Sulfurous Acid	C	D	B	C	A	C	C	A
Tall Oil	C	B	B	B	A	D	D	A
Tar & Tar Oils	B	B	A	B	A	D	D	A
Tartaric Acid	B	D	A	B	A	C	C	A
Toluol (Toluene) (Methyl Benzene)	A	A	A	D	B	D	D	A
Trichlorethylene	A	B	B	C	B	D	D	A
Varnish	A	C	A	C	B	D	D	A
Vinyl Chloride	D	A	D	B	C	C	A	A
Water, Distilled	A	D	A	A	C	A	A	A
Water, Fresh	A	C	A	A	C	A	A	A
Water, Sea	C	D	A	A	C	A	A	A
Xylene (Zylo), Dry	A	B	A	D	B	D	D	A

All ratings are based on media at room temperature unless otherwise specified. This chart is a guide. Please be advised that in any given case many factors such as solution, concentration, temperature, degree of agitation and presence of impurities influence the rate of corrosion. The information contained herein is general in nature and while drawn from sources deemed to be reliable and presumed accurate, is not guaranteed in any way by OILCO. Any application requires the use of qualified experts and subject to limitations normally present.