

FlowLine

Application and Corrosion Data

Series 72/73
Series 76X/77X
Series 78
Series 78X

www.flowlinevalves.com

Application and Corrosion Data

Corrosion Ratings:

A - Excellent

B - Good

C - Fair

D - Not Recommended

Blank - Insufficient Data

	Aluminum	Ductile Iron	Bronze	Carbon Steel	S.S. 304	S.S. 316	S.S. 17-4 PH	Alloy 20	Monel	Nickel	Hastelloy (B) (C)	FEP / PFA / PTFE
Acetaldehyde	B	C	D	C	A	A	A	A	A	A	A	A
Acetate Solvents	A	B	A	A	A	A	A	A	A	A		A
Acetic Acid (Aerated 0 to 50%)	C	D	D	D	B	A	A	A	C	D	A	A
Acetic Acid (Air Free 0 to 50%)	A	D	B	D	C	A	A	A	C	D	A	A
Acetic Acid (Aerated 55 to 100%)	B	D	D	D	A	B	B	A	D	D	A	A
Acetic Acid (Air Free 55 to 100%)	A	D	B	D	B	B	B	A	B	B	A	A
Acetic Anhydride	B	D	C	D	B	B	B	B	B	B	A	A
Acetone	B	B	B	B	B	B	B	B	A	A	A	A
Acetylene (Dry Only)	A	A	B	A	A	A	A	A	A		A	A
Acrylonitrile	B	C	A	A	A	A	A	A	A			A
Alcohols - Methyl, Ethyl	B	B	B	B	A	A	A	A	A		A	A
Alcohol - Amyl	A	B	B	B	A	A	B	A	A	A	A	A
Alcohol - Butyl	A	B	B	B	A	A	B	A	A	A	A	A
Aluminum Chloride (Dry)	D	D	D	D	C	C	D	B	C	C	A ^(B)	A
Aluminum Sulfate (Alums)	B	C	C	C	B	A	C	A	A	B	B	A
Alums	B	C	C	C	B	A	C	A			B	A
Amines	A	A	A	A	A	A	A	A	A	A		A
Ammonia, Anhydrous	B	B	D	A	A	A	A	A	B	A	B	A
Ammonia (Aqueous)	B	A	D	A	A	A	A	A	B	A	B	A
Ammonia Solutions	D	B	D	B	A	A	A	A	B			A
Ammonium Bicarbonate	B	B	B	C	B	B	B	B	B			A
Ammonium Carbonate	B	B	D	B	B	B	B	B	B	B	B	A
Ammonium Chloride	C	D	D	D	B	B	D	B	B	B	A	A
Ammonium Hydroxide (28%)	C	C	D	C	B	B	B	B	D	D	A	A
Ammonium Hydroxide (Conc.)	C	C	D	C	B	B	B	B	D	D	A	A
Ammonium Monophosphate	B	D	D	D	B	B	B	B	C		A	A
Ammonium Nitrate	B	D	D	D	A	A	A	A	D	D	B ^(C)	A

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Ammonium Phosphate (Dibasic)	B	D	C	D	B	B	B	B	C		B	A
Ammonium Phosphate (Tribasic)	B	D	C	D	B	B	B	B	C		B	A
Ammonium Sulfate	C	C	B	C	B	B	B	B	C	B	B ^(C)	A
Amyl Acetate	B	C	B	C	A	A	A	A	A	A	A	A
Aniline	C	C	C	C	B	B	B	B	B	B	B	A
Aniline Dyes	C	C	C	C	A	A	A	A	A			A
Antimony Trichloride	D	D	D	D	D	D	D	C	B	B	B	A
Apple Juice	B	D	C	D	B	B	B	A	A			A
Arsenic Acid	D	D	D	D	B	B	B	B	D			A
Asphalt Emulsion	C	A	A	A	A	A	A	A	A	A		A
Asphalt Liquid	C	A	A	A	A	A	A	A	A	A		A
Barium Carbonate	B	B	B	B	B	B	B	B	B	B	B	A
Barium Chloride	D	C	B	C	C	C	C	C	B	A	A	A
Barium Hydroxide	D	B	B	C	B	A	B	A	B	A	B	A
Barium Sulfate	D	C	C	C	B	B	B	B	B	B		A
Barium Sulfide	D	C	C	C	B	B	B	B	C	A		A
Beer (Alcohol Industry)	A	C	B	C	A	A	A	A	A	A	A	A
Beet Sugar Liquors	A	B	A	B	A	A	A	A	A	A		A
Benzene (Benzol)	B	B	B	B	B	B	A	A	A	A	B	A
Benzaldehyde	B	D	B	D	B	B	B	B	B	B	B	A
Benzoic Acid	B	D	B	D	B	B	B	B	B	B	A	A
Borax Liquors	C	C	B	C	B	B	B	B	B	B	A	A
Boric Acid	B	D	B	D	A	B	B	B	B	B	A	A
Brines	B	C	B	C	B	B	C	B	A			A
Bromine (Dry)	C	D	D	D	D	D	D	D	A	A	A ^(C)	A
Bromine (Wet)	D	D	D	D	D	D	D	D	D	C	A ^(C)	A
Bunker Oils (Fuel Oils)	A	B	B	B	A	A	A	A	A		A	A

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Butadiene	A	B	C	B	A	A	A	A	C			A
Butane	A	B	A	B	A	A	A	A	A		A	A
Butylene	A	A	A	A	A	A	A	A	A			A
Buttermilk	A	D	D	D	A	A	A	A	D	A	A	A
Butyric Acid	B	D	C	D	B	B	B	B	C	C	A	A
Calcium Bisulfite	C	D	B	D	C	B	B	B	D	D	B	A
Calcium Carbonate	C	D	C	D	B	B	B	B	B	B	B	A
Calcium Chloride	C	C	B	C	C	B	B	B	A	A	A	A
Calcium Hydroxide	C	C	B	C	B	B	B	B	B	B		A
Calcium Hypochlorite	C	D	D	D	C	C	C	C	C	D	B	A
Calcium Sulfate	B	C	C	C	B	B	B	B	B		B	A
Carbolic Acid	A	D	A	D	B	B	B	B	B	A	A	A
Carbon Bisulfide	A	B	C	B	B	B	B	B	B	B	B	A
Carbon Dioxide (Dry)	A	B	A	A	A	A	A	A	A	A		A
Carbonic Acid	B	D	D	D	B	B	B	B	B	B	A	A
Carbon Tetrachloride (Dry)	C	C	C	C	B	B	B	B	A	A	B	A
Carbon Tetrachloride (Wet)	C	D	D	D	B	B	B	B	B	A		A
China Wood Oil (Tung)	A	C	C	C	A	A	A	A	A	A		A
Chlorinated Solvents (Dry)	D	C	C	C	B	B	B	B	B			A
Chlorine Gas (Dry)	D	D	C	D	B	B	C	B	B	B	B ^(C)	A
Chlorine (Wet)	D	D	D	D	D	D	D	D	B			A
Chloroacetic Acid	C	D	C	D	C	C	C	C	B	A	A ^(C)	A
Chlorobenzene (Dry)	B	B	B	B	B	B	B	B	B	B	B	A
Chloroform (Dry)	D	B	B	B	A	A	A	A	A	A	A	A
Chlorosulphonic Acid (Dry)	B	B	B	B	B	B	B	B	B	B	A	A
Chlorosulphonic Acid (Wet)	D	D	D	D	D	D	D	D	C			A
Chrome Alum	C	B	C	B	A	A	A	A	B			A

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Chromic Acid	C	D	D	D	C	C	C	B	D	D	B	A
Citrus Juices	C	D	B	D	B	B	A	A	B	B	A	A
Coconut Oil	B	C	B	C	B	B	B	B	B			A
Coffee Extracts (Hot)	A	C	B	C	A	A	A	A	A	A		A
Coke Oven Gas	A	B	C	B	A	A	A	A	B			A
Copper Acetate	C	D	D	D	B	B	B	B	C	B	B	A
Copper Chloride	D	D	D	D	D	D	D	D	C	D	B ^(C)	A
Copper Nitrate	C	D	D	D	B	B	B	B	D	D	B	A
Copper Sulfate	C	D	D	D	B	B	A	A	B	B	A ^(C)	A
Corn Oil	B	C	B	C	A	B	B	B	B		B	A
Creosote Oil	B	B	B	B	B	B	B	A	B	B	B	A
Cresylic Acid	C	D	C	C	B	B	B	B	B	B	B	A
Crude Oil, Sweet	A	B	B	B	A	A	A	A	A			A
Crude Oil, Sour	A	C	C	B	A	A	A	A	A			A
Cutting Oils, Water Emulsions	A	B	A	B	A	A	A	A				A
Cyclohexane	A	A	A	A	A	A	A	A	A			A
Diacetone Alcohol	A											A
Diethylamine	A	A	D	A	A	A	A	A	A			A
Dowtherms	A	B	A	B	A	A	A	A	A			A
Drilling Mud	B	B	B	B	A	A	A	A	A			A
Drip Cocks, Gas	B	B	B	B	A	A	A	A	A			A
Dry Cleaning Fluids	A	B	C	B	A	A	A	A	B			A
Drying Oil	C	B	C	C	B	B	B	B	B		B	A
Epsom Salt	A	C	B	C	B	B	B	B	B			A
Ethane	A	A	A	A	A	A	A	A	A	A		A
Ethers	B	B	B	A	A	A	A	A	B	B	B	
Ethyl Acetate	A	C	C	B	B	B	A	B	B	B	B	A

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Ethyl Acetate	A	C	C	B	B	B	A	B	B	B	B	A
Ethyl Acrylate				A			A					A
Ethyl Chloride (Dry)	B	B	B	B	A	A	A	A	B	A	B	A
Ethyl Chloride & Ethyl Fluoride (Wet)	D	D	C	D	C	C	B	A	B		B	
Ethylene Glycol	A	B	B	B	B	B	B	B	B		B	A
Ethylene Oxide	A	B	D	B	B	B	B	B	B	B	A	A
Fatty Acids	B	D	B	D	B	A	B	A	B	B	A	A
Ferric Chloride	D	D	D	D	D	D	D	D	D	D	B	A
Ferric Nitrate	D	D	D	D	B	B	C	A	D	D	B	A
Ferric Sulfate	D	D	D	D	B	A	B	A	D	D	B	A
Ferrous Chloride	D	D	B	C	D	D	D	C	C	D	B	A
Ferrous Sulfate	D	D	B	D	B	A	B	A	D	D	B	A
Fertilizer Solutions	B	C	C	B	B	B	B	B	B			A
Fluorine (Dry)	B	B	B	B	B	B	B	B	B	A		A
Fluorosilicic Acid	D	D	A	D	B	B	C	B	A	B	B	A
Food Fluids and Pastes	A	C	B	C	A	A	A	A	A			A
Formaldehyde (Cold)	A	B	A	B	B	A	A	A	B	B	B	A
Formaldehyde (Hot)	B	D	B	D	B	B	B	A	B	B	B	A
Formic Acid (Cold)	D	D	B	D	C	A	B	A	B	B	A	A
Formic Acid (Hot)	D	D	B	D	C	B	D	B	B	B	A	A
Freon (Dry)	B	B	B	B	A	A	B	A	A	A		A
Fruit Juices	B	D	B	D	A	A	A	A	A	A	A	A
Furfural	B	B	B	B	A	A	B	A	B	B	B	A
Gallic Acid	B	D	C	D	B	B	B	B	B	B	B	A
Gas, Manufactured	B	B	B	B	B	B	B	B	A	A		A
Gas, Natural	B	B	B	B	A	A	A	A	A	A		A
Gas Odorizers	A	B	A	B	B	B	B	B	B			A

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Gasoline	A	B	A	A	A	A	A	A	A	A	A	A
Gasoline (Sour)	A	B	B	B	A	A	A	A	A	D		A
Gelatin	A	D	A	D	A	A	A	A	A	A		A
Glucose	A	B	A	B	A	A	A	A	A			A
Glue	A	A	B	A	A	A	A	A	A		A	A
Glycerine or Glycerol	A	B	B	B	A	A	A	A	B	A	A	A
Glycols	B	B	B	B	B	B	B	A	B			A
Grease	A	A	B	A	A	A	A	A	B			A
Heptane	A	B	A	B	A	A	A	B	B		A	A
Hexane	A	B	B	B	B	B	A	B	B			A
Hexanol, Tertiary	A	A	A	A	A	A	A	A	A			A
Hydraulic Oil, Petroleum Base	A	B	B	A	A	A	A	A	A			A
Hydrobromic Acid	D	D	D	D	D	D	D	D	D	D	B	A
Hydrochloric Acid (Air Free)	D	D	D	D	D	D	D	D	B	B	A ^(B)	A
Hydrocyanic Acid	B	C	D	C	B	B	B	A	B	B	B	A
Hydrofluoric Acid	D	D	D	D	D	D	D	C	B	B	B ^(C)	A
Hydrogen Gas (Cold)	A	B	B	B	A	A	A	A	A	A		A
Hydrogen Peroxide (Dilute)	A	D	B	D	B	B	B	B	B	B	B	A
Hydrogen Peroxide (Conc.)	A	D	D	D	B	B	B	B	B	B	B	A
Hydrogen Sulfide (Dry)	B	B	C	B	B	A	B	A	B	B	B	A
Hydrogen Sulfide (Wet)	C	D	D	C	B	B	D	B	B	B	B	A
Hydrofluosilicic Acid	D	D	A	D	C	C	C	B	B			A
Hypo (Sodium Thiosulfate)	A	C	C	D	B	B	B	B	B	B		A
Hypochlorites, Sodium	C	D	D	D	C	C	C	C	B	D	A ^(C)	A
Ink	B	D	C	D	B	A	A	A	B	A	B	A
Iodine (Wet)	D	D	D	D	D	D	D	D	D	C	B ^(C)	A
Iodoform	B	C	C	B	A	A	B	A	C	B	C	A

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Iso-octane	A	B	A	A	A	A	A	A	A		A	A
Isopropyl Alcohol	B	B	B	B	B	B	B	B	B		B	A
Isopropyl Ether	A	B	A	A	A	A	A	A	A			A
Jet Fuel	A	A	A	A	A	A	A	A	A		A	A
Kerosene	A	B	A	B	A	A	A	A	A	A	A	A
Ketchup	D	D	D	D	A	A	A	A	B		B	A
Ketones	A	A	A	A	A	A	A	A	A		A	A
Lacquers (and Solvents)	A	C	A	C	A	A	A	A	A		A	A
Lactic Acid (Dilute Cold)	A	D	D	D	B	A	B	A	C	B	A	A
Lactic Acid (Dilute Hot)	B	D	D	D	B	A	B	A	D	B	A	A
Lactic Acid (Conc. Cold)	C	D	D	D	B	A	B	A	D	B	A	A
Lactic Acid (Conc. Hot)	C	D	D	D	B	B	B	A	D	B	A	A
Lard Oil	A	C	A	C	A	A	A	A	B		A	A
Lead Acetate	D	D	C	D	B	B	B	B	B	B	B	A
Linoleic Acid	A	B	B	B	A	A	B	A	B			A
Linseed Oil	A	A	B	A	A	A	A	A	B	A	A	A
Liquefied Pet. Gas (LPG)	A	B	A	B	B	B	B	B	B			A
Magnesium Bisulfate	B	B	B	B	A	A	A	A	B			A
Magnesium Chloride	D	D	B	C	B	B	C	B	B	B	B	A
Magnesium Hydroxide	D	B	B	B	B	B	B	B	B	B	B	A
Magnesium Hydroxide (Hot)	D	B	D	B	B	B	B	B	B	B	B	A
Magnesium Sulfate	B	B	B	B	B	A	B	A	B	B	A	A
Maleic Acid	B	B	B	B	B	B	B	B	B	B	A	A
Malic Acid	B	D	B	D	A	A	A	A	B	A		A
Mayonnaise	D	D	D	D	A	A	A	A	B	A	B	A
Mercuric Chloride	D	D	D	D	B	B	D	B	C	C	B ^(C)	A
Mercuric Cyanide	D	D	D	D	B	B	B	B	B	A	B	A

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Mercury	C	A	D	B	B	B	B	B	B	B	B	A
Methane	A	B	A	A	A	A	A	A	A	A	A	A
Methyl Acetate								B			A	A
Methyl Acetone	A	A	A	A	A	A	A	A	A			A
Methylamine	B	B	D	B	B	B	B	B	C			A
Methyl Cellosolve	A	B	A	B	A	A	B	A	B			A
Methyl Chloride (Dry)	D	B	A	B	B	A	A	A	B	B	B ^(C)	A
Methyl Ethyl Ketone	A	A	A	A	A	A	A	A	A		A	A
Methyl Formate	A	C	A	C	A	A	B	A	A			A
Methylene Chloride (Dry)	C	B	B	B	B	B	B	A	B	B	B	A
Milk	A	D	A	D	A	A	A	A	A	A	A	A
Mine Waters (Acid)	D	D	C	D	B	B	B	B	B	A	D	A
Mineral Spirits	A	B	B	B	B	B	B	B	B	A		A
Mixed Acids (Cold)	D	C	D	C	B	B	B	A	D	D		A
Molasses, Edible	A	A	A	A	A	A	A	A	A	A	A	A
Molasses, Crude	A	A	A	A	A	A	A	A	A	A	A	A
Muriatic Acid	D	D	D	D	D	D	D	D	B			A
Mustard	B	B	A	B	A	A	A	A	A			A
Naphtha	A	B	B	B	B	B	B	B	B	B	B	A
Naphthalene	B	B	B	A	B	B	A	B	B		B	A
Nickel Ammonium Sulfate	D	D	D	D					B			A
Nickel Chloride	D	D	D	D	B	B	B	B	B	C	A ^(B)	A
Nickel Nitrate	C	D	D	D	B	B	B	A	B	D	B	A
Nickel Sulfate	D	D	D	D	B	B	C	A	B	B	B	A
Nicotinic Acid												A
Nitric Acid (10%)	D	D	D	D	A	A	A	A	D	C	B ^(C)	A
Nitric Acid (30%)	D	D	D	D	A	A	A	A	D	C	D	A

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Nitric Acid (80%)	B	D	D	D	A	A	B	A	D	C	B ^(C)	A
Nitric Acid (100%)	A	D	D	A	A	A	B	A	D	C	B ^(C)	A
Nitric Acid Anhydrous	B	A	D	A	A	A	B	A	D	D	D	A
Nitrobenzene	C	B	D	B	B	B	B	B	B	B	B	A
Nitrogen	A	A	A	A	A	A	A	A	A	A	A	A
Nitrous Acid (10%)	D	D	D	D	B	B	B	B	D	D	D	A
Nitrous Gases	B	C	D	B	A	A	A	A	D			A
Nitrous Oxide	C	C	D	B	B	B	B	B	D	D	D	A
Oils, Animal	A	A	A	A	A	A	A	A	A			A
Oil, Cottonseed	B	C	B	C	B	B	B	B	B			A
Oils, Fish	B	B	B	B	A	A	A	A	A			A
Oils, Fuel	A	B	B	B	A	A	A	A	A			A
Oils, Lube	A	A	B	A	A	A	A	A	B			A
Oils, Mineral	A	B	B	B	A	A	A	A	A			A
Oil, Petroleum (Refined)	A	B	B	A	A	A	A	A	A			A
Oil, Petroleum (Sour)	A	C	C	B	A	A	A	A	A			A
Oil-Water Mixtures	A	B	A	B	A	A	A	A				A
Oleic Acid	A	B	B	B	B	B	B	B	A	A	B	A
Oleum	B	D	D	B	B	B	B	B	D		B	A
Olive Oil	A	B	B	B	A	A	A	A	A			A
Oxalic Acid	C	D	B	D	B	B	D	B	B	C	B	A
Oxygen	A	B	A	B	A	A	A	A	A			A
Ozone (Wet)	B	C	B	C	A	A	A	A	A			A
Ozone (Dry)	A	A	A	A	A	A	A	A	A			A
Paints and Solvents	A	A	A	A	A	A	A	A	A			A
Palmic Acid	B	C	B	C	B	B	B	B	B	B	B	A
Palm Oil	A	C	B	C	B	B	B	A	A			A

Application and Corrosion Data

Corrosion Ratings:

A - Excellent

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D - Not Recommended

Blank - Insufficient Data

	Aluminum	Ductile Iron	Bronze	Carbon Steel	S.S. 304	S.S. 316	S.S. 17-4 PH	Alloy 20	Monel	Nickel	Hastelloy (B) (C)	FEP / PFA / PTFE
Paraffin	A	B	A	B	A	A	A	A	A		A	A
Para formaldehyde	B	B	B	B	B	B	B	B	B	B	B	A
Pentane	A	B	B	B	B	B	B	B	B	B	A	A
Perchloroethylene (Dry)	B	B	C	B	B	B	B	B	A	A		A
Petrolatum	B	C	B	C	B	B	B	B	A			A
Phenol (100%)	A	B	B	B	B	B	B	B	A	A	A	A
Phosphoric Acid (10%) Cold	D	D	D	D	B	B	B	B	B	B	A ^(B)	A
Phosphoric Acid (10%) Hot	D	D	D	D	B	B	D	B	B	C	A ^(B)	A
Phosphoric Acid (50%) Cold	D	D	D	D	B	B	B	B	B	C	A ^(B)	A
Phosphoric Acid (50%) Hot	D	D	D	D	B	B	D	B	B	C	B ^(B)	A
Phosphoric Acid (85%) Cold	D	D	D	D			B	B	A	B	B ^(B)	A
Phosphoric Acid (85%) Hot	D	C	D	C			D	B	B	D		A
Phthalic Acid	B	C	B	C	A	A	B	B	B	B	B	A
Phthalic Anhydride	B	C	B	C	B	B	B	B	A	A	A	A
Picric Acid	B	D	D	D	B	B	B	B	C	D	B ^(C)	A
Pine Oil	A	B	B	B	A	A	A	A	A			A
Pineapple Juice	A	C	C	C	A	A	B	A	A			A
Potassium Bisulfite	C	D	C	D	B	B	B	B	D	D	D	A
Potassium Bromide	C	D	C	D	B	B	B	B	B	B	A	A
Potassium Carbonate	C	B	B	B	B	B	B	B	B	A	B	A
Potassium Chlorate	C	B	B	B	B	B	B	B	C	C	B	A
Potassium Chloride	B	B	B	C	A	A	B	A	B	B	B	A
Potassium Cyanide	D	B	D	B	B	B	B	B	B	B	B	A
Potassium Dichromate	A	B	B	B	A	A	A	A	B	B	B	A
Potassium Diphosphate	B	A	B	A	A	A	A	A	B			A
Potassium Ferricyanide	B	B	C	B	B	B	B	B	B	B	B	A
Potassium Ferrocyanide	A	B	B	B	B	B	B	B	B	B	B	A

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	Aluminum	Ductile Iron	Bronze	Carbon Steel	S.S. 304	S.S. 316	S.S. 17-4 PH	Alloy 20	Monel	Nickel	Hastelloy (B) (C)	FEP / PFA / PTFE
Potassium Hydroxide (Dilute Cold)	D	B	D	B	B	B	B	B	A	A	B	A
Potassium Hydroxide (Dilute Hot)	D	B	D	B	B	B	B	B	A	A	B	A
Potassium Hydroxide (to 70% Cold)	D	B	D	B	B	B	B	B	A	A	B	A
Potassium Hydroxide (to 70% Hot)	D	B	D	B	B	B	B	B	A	A	B	A
Potassium Iodide	C	C	B	C	B	B	B	B	B	B	B	A
Potassium Nitrate	A	B	B	B	B	B	B	B	B	B	B	A
Potassium Permanganate	A	B	B	B	B	B	B	B	B	B	A	A
Potassium Sulfate	B	C	B	B	B	B	B	B	B	B	B	A
Potassium Sulfide	D	D	D	D	B	B	B	B	D	B	B	A
Potassium Sulfite	B	D	D	D	B	B	B	B	D	D		A
Producer Gas	B	B	B	B	B	B	B	B	A	A		A
Propane	A	A		A	A	A	A	A	A	A	A	A
Propyl Alcohol	A	B	A	B	A	A	A	A	A			A
Propylene Glycol	A	B	B	B	B	B	B	B	B			A
Pyrogalllic Acid	B	B	B	B	B	B	B	B	B	B	A	A
Quench Oil	A	B	B	B	A	A	A	A				A
Resins and Rosins	B	C	B	C	B	B	B	B	A	A		A
Road Tar	A	A	A	A	A	A	A	A	A			A
Roof Pitch		A	A	A	A	A	A	A	A			A
Rubber Latex Emulsions	A	B	A	B	A	A	A	A				A
Rubber Solvent	A	A	A	A	A	A	A	A	A			A
Salad Oil	B	C	B	C	B	B	B	B	B		A	A
Salicylic Acid	C	D	C	D	A	A	A	A	A	A	A	A
Salt	B	C	B	C	B	B	B	B	A			A
Sea Water	C	D	C	D	B	B	B	B	A		A ^(C)	A
Shellac (Bleached)	A	B	A	A	A	A	A	A	A			A
Shellac (Orange)	A	B	A	A	A	A	A	A	A			A



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	Aluminum	Ductile Iron	Bronze	Carbon Steel	S.S. 304	S.S. 316	S.S. 17-4 PH	Alloy 20	Monel	Nickel	Hastelloy (B) (C)	FEP / PFA / PTFE
Silver Nitrate	D	D	D	D	B	A	B	A	D	B	A	A
Soap Solutions (Stearates)	C	A	A	A	A	A	A	A	A	A		A
Sodium Acetate	A	B	B	B	B	B	B	B	B	B	B	A
Sodium Aluminate	C	C	B	C	B	A	B	B	A	B	B	A
Sodium Bicarbonate	B	C	B	C	B	B	B	A	B	B	B	A
Sodium Bisulfate (10%)	D	D	B	D	B	A	B	A	B	B	B ^(B)	A
Sodium Bisulfite (10%)	D	D	B	D	B	B	D	B	B		B ^(C)	A
Sodium Borate	B	C	B	C	B	B	D	B	B		B	A
Sodium Bromide (10%)	B	D	B	C	B	B	B	B	B	B	A	A
Sodium Carbonate	D	B	B	B	B	B	B	A	B	B	B	A
Sodium Chlorate	B	C	B	C	B	B	B	B	B			A
Sodium Chloride	B	C	B	C	B	B	B	B	A	A	B	A
Sodium Chromate	D	B	C	B	B	B	B	B	B	B	B	A
Sodium Cyanide	D	B	D	A	A	A	A	A	B	C	B	A
Sodium Fluoride	C	D	C	B	B	B	B	B	B	D	B	A
Sodium Hydroxide (Cold) 20%	D	A	A	A	A	A	A	A	A	A	A ^(B)	A
Sodium Hydroxide (Hot) 20%	D	B	B	B	A	A	B	A	A	A	A ^(B)	A
Sodium Hydroxide (Cold) 50%	D	A	A	A	A	A	B	A	A	A	A ^(B)	A
Sodium Hydroxide (Hot) 50%	D	B	A	B	A	A	B	A	A	A	A ^(B)	A
Sodium Hydroxide (Cold) 70%	D		D	D	B	B	B	B	A	A	A ^(B)	A
Sodium Hydroxide (Hot) 70%	D		D	D	B	B	C	B	A	A	A ^(B)	A
Sodium Hypochloride	D	D	D	D	D	D	D	D	D	D	A	A
Sodium Metaphosphate	D	B	C	B	B	B	B	B	B	A		A
Sodium Metasilicate (Cold)	B	C	B	C	A	A	A	A	A	A	A	A
Sodium Metasilicate (Hot)	B	D	B	D	A	A	A	A	A	A	A	A
Sodium Nitrate	A	B	B	B	A	A	B	A	B	B	A ^(C)	A
Sodium Perborate	B	B	B	B	B	B	B	B	B	B	B	A

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Sodium Peroxide	C	C	D	C	B	B	B	B	B	B	B	A
Sodium Phosphate (Dibasic)	D	B	B	B	B	B	B	B	B	B	B	A
Sodium Phosphate (Tribasic)	D	B	B	B	B	B	B	B	B	B	B	A
Sodium Silicate	B	B	B	B	B	B	B	B	B	B	B	A
Sodium Silicate (Hot)	C	B	B	B	B	B	B	B	B	B	B	A
Sodium Sulfate	A	B	B	B	B	A	B	A	B	B	B	A
Sodium Sulfide	C	B	D	B	B	B	B	B	B	B	B	A
Sodium Sulfide (Hot)	D	C	D	C	B	B	B	B	B	B	B	A
Sodium Thiosulfate	A	B	B	B	B	B	B	B	B			A
Soybean Oil	B	C	B	C	A	A	A	A	A		A	A
Stannic Chloride	D	D	C	D	D	D	D	D	D	D	B	A
Stannous Chloride	D	D	D	D	D	A	C	A	C	B	B	A
Starch	A	A	B	A	A	A	A	A	A			A
Stearic Acid	B	C	C	C	B	B	B	B	B	B	A	A
Stoddard Solvent	A	B	B	B	B	B	B	B	B			A
Styrene	A	B	A	A	A	A	A	A	A			A
Sugar Liquids	A	B	A	B	A	A	B	A	A	A	A	A
Sulfate, Black Liquor	D	B	D	B	B	A	B	B	B	D	A	A
Sulfate, Green Liquor	D	B	D	B	B	A	B	B	B	B	B	A
Sulfate, White Liquor	B	C	C	C	B	A	C	B	C		B	A
Sulphur	A	A	D	A	A	A	A	A	A	A	A ^(C)	A
Sulphur Dioxide (Dry)	B	B	B	B	B	B	C	B	B	B	A ^(C)	A
Sulfuric Trioxide (Dry)	C	B	B	B	B	B	B	B	B	B	B	A
Sulfuric Acid (0-7%)	B	D	C	D	C	B	C	A	A	D	A ^(B)	A
Sulfuric Acid (20%)	D	D	C	D	D	D	D	A	B	D	A ^(B)	A
Sulfuric Acid (50%)	D	D	C	D	D	D	D	A	B	D	B	A
Sulfuric Acid (100%)	D	B	C	B	B	B	D	A	D	D	B ^(B)	A

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Sulfurous Acid	C	D	C	D	B	B	D	B	D	C	A ^(C)	A
Synthesis Gas	B	B	B	B	B	B	B	B	A	A		A
Tall Oil	D	B	B	B	B	B	B	B	B	B	A	A
Tannic Acid	C	C	B	C	B	B	B	B	B	B	B	A
Tartaric Acid	B	D	C	D	B	A	B	B	B	B	B	A
Tetraethyl Lead	B	C	B	C	B	B	B	B	A			A
Toluene or Toluol	A	A	A	A	A	A	A	A	A	A	A	A
Tomato Juice	A	C	C	C	A	A	A	A	A	A	A	A
Transformer Oil	A	B	B	A	A	A	A	A	A	A	A	A
Tributyl Phosphate	A	A	A	A	A	A	A	A	A	A	A	A
Trichloroethylene	A	C	B	B	B	B	B	B	A	A	A	A
Tung Oil	B	B	B	B	A	A	B	A	C			A
Turpentine	A	B	B	B	A	A	A	A	B	A	A	A
Urea	B	C	B	B	B	B	B	B	B	B	B	A
Varnish	A	C	A	A	A	A	A	A	A	A	A	A
Vegetable Oil, Edible	A	B	B	B	A	A	A	A	B	A	B	A
Vegetable Oil, Non-edible	A	B	B	B	A	A	A	A	B	A	B	A
Vinegar	C	D	B	D	A	A	A	A	A	A	A	A
Water, Distilled (Aerated)	A	D	A	D	A	A	A	A	A	A	A	A
Water, Fresh	A	C	A	C	A	A	A	A	A	A	A	A
Water, Sea	B	D	B	D	A	A	B	A	A	A	A	A
Wax Emulsions	A	B	A	A	A	A	A	A	A	A	A	A
Whiskey and Wine	D	D	A	D	A	A	A	A	A	A	A	A
Xylene (Dry)	A	A	A	A	A	A	A	A	A	A		A
Zinc Chloride	D	C	D	D	D	D	A	B	B	B	B ^(B)	A
Zinc Hydrosulfite	D	B	C	B	A	A	A	A	B	B	B	A
Zinc Sulfate	D	D	B	D	A	A	B	A	B	B	B	A



Application and Corrosion Data

The references in this document of available valve component materials and line media are a guide only. It is to be used as a basis for selecting suitable valve component materials to the applicable line media. In no way does this guide guarantee full valve component and line media capability. Only testing of components with line media assures compatibility.

The customer or engineering firms representing the customer bears the full responsibility of complete compatibility of valve components with line media. In no way will Flow Line Valve and Controls, L.L.C. assume the responsibility for chemical resistance on various valve components that may affect the life expectancy of the valve.

The customer and or engineering firm representing the customer should always take into consideration factors of temperature, combinations of media components and media concentrations. The customer performing their own test are the only positive way of assuring compatibility.