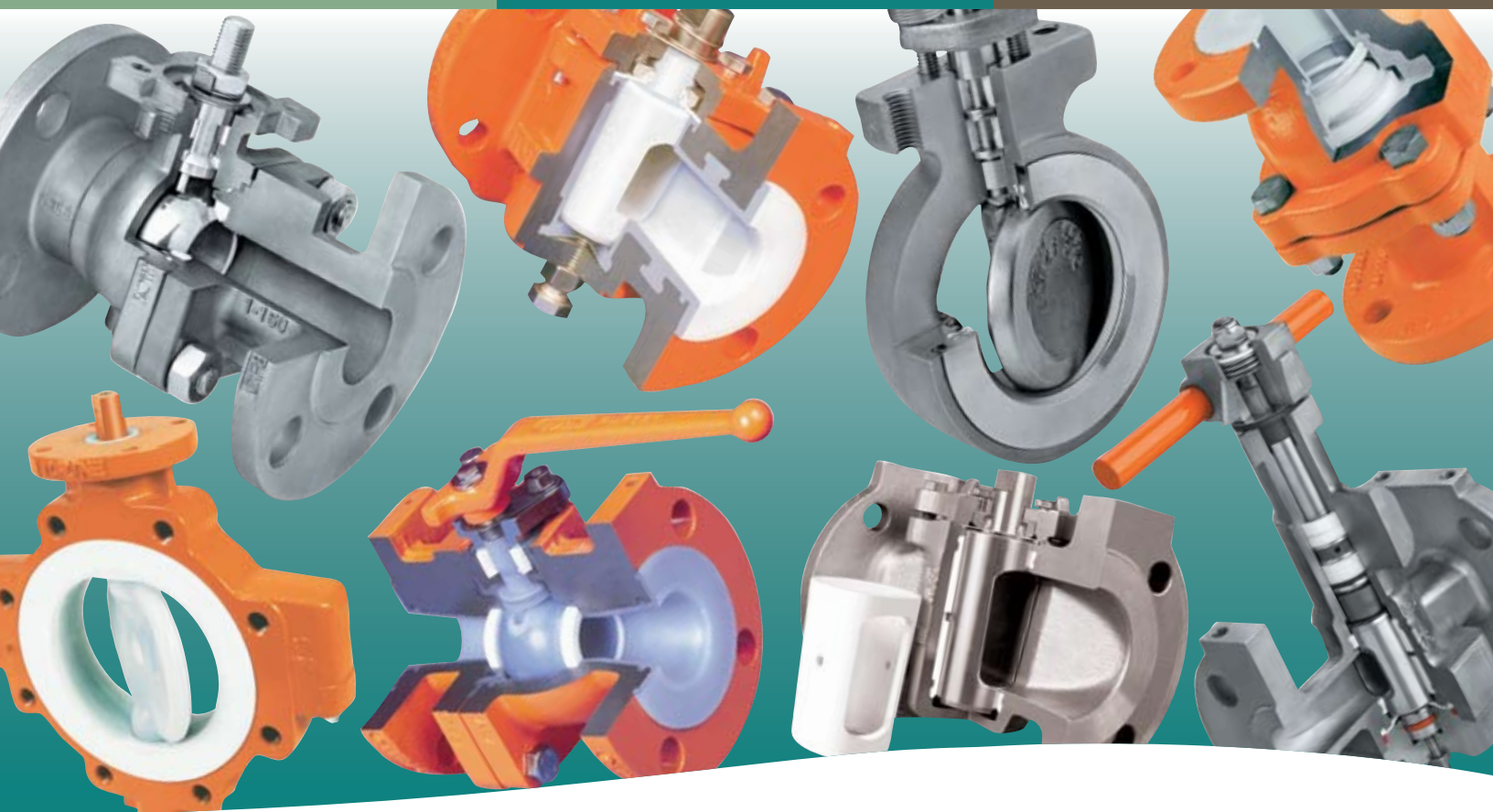


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Application & Corrosion Data

CRANE

ChemPharma Flow Solutions

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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 to 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 |
| 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 |

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 |
|----------------------------|----------|--------------|--------|--------------|----------|----------|--------------|----------|-------|--------|-------------------|------------------|
| 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 |
| 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 |

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 |
|---------------------------------------|----------|--------------|--------|--------------|----------|----------|--------------|----------|-------|--------|-------------------|------------------|
| Chrome Alum | C | B | C | B | A | A | A | A | B | | | A |
| 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 |
| 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 |
| 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 |

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 |
|-------------------------------|----------|--------------|--------|--------------|----------|----------|--------------|----------|-------|--------|-------------------|------------------|
| 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 |
| 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 |

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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 |
|---------------------------|----------|--------------|--------|--------------|----------|----------|--------------|----------|-------|--------|-------------------|------------------|
| Iodoform | B | C | C | B | A | A | B | A | C | B | C | A |
| Iso-octane | A | B | A | A | A | A | A | A | A | | A | A |
| Isopropyl Alcohol | B | B | B | B | B | B | A | 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 | C | A | C | B | A | A |
| Lactic Acid (Dilute Hot) | B | D | D | D | B | A | D | A | D | B | A | A |
| Lactic Acid (Conc. Cold) | C | D | D | D | B | A | D | A | D | B | A | A |
| Lactic Acid (Conc. Hot) | C | D | D | D | B | B | D | 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 |
| Mercury | C | A | D | A | 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 |

Corrosion Ratings:

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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 |
|--------------------------|----------|--------------|--------|--------------|----------|----------|--------------|----------|-------|--------|-------------------|------------------|
| 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 |
| 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 |

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 |
|-----------------------------------|----------|--------------|--------|--------------|----------|----------|--------------|----------|-------|--------|-------------------|------------------|
| 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 |
| Paraffin | A | B | A | B | A | A | A | A | A | | A | A |
| Paraformaldehyde | 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 |
| 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 |

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 |
|-----------------------------|----------|--------------|--------|--------------|----------|----------|--------------|----------|-------|--------|-------------------|------------------|
| 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 |
| Pyrogallic 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 |
| 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 |

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 |
|-----------------------------|----------|--------------|--------|--------------|----------|----------|--------------|----------|-------|--------|-------------------|------------------|
| 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 |
| 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 |
| 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 |

Corrosion Ratings:

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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 |
|----------------------------|----------|--------------|--------|--------------|----------|----------|--------------|----------|-------|--------|-------------------|--------------|
| 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 | C | B | B | B | B | B | B | B | A |
| Varnish | A | C | A | C | 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 | D | A | 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 |

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