

X. FLUID COMPATIBILITY TABLE

The following table is intended as a guide to the user in the selection of materials for fluid compatibility. The information in the table is based on fluids at **room temperature** unless otherwise specified. The compatibility ratings are intended only as general guides. Factors such as solution concentration, temperature, degree of agitation, and presence of impurities influence the compatibility ratings. **No one material can be expected to be compatible with the wide variety of fluids found in the world today. Users must test under their own operating conditions to determine the suitability of any material in a particular application. Do not assume the chemical compatibility of any elastomer or plastic in your application, including fluids such as water.**

Valve **internal components**, in contact with the fluid should carry an **"A"** rating. **Body materials** in direct contact with the fluid can, in many cases, carry a **"B"** rating because the rate of corrosion is not fast enough to become a serious problem.

EXPLANATION OF RATINGS

A = Satisfactory

C = Poor

B = Fair

D = Unsatisfactory

Blank = No Information

A "B" or "C" rating for a plastic or elastomer often indicates that the fluid will swell the material at room temperature without chemically degrading it. When such swelling occurs, valve performance can be jeopardized.

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Viton is a registered trademark of DuPont.

Vespel is a registered trademark of DuPont.

17-4 PH is a registered trademark of Armco Steel.

Monel is a registered trademark of International Nickel.

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Delrin is a registered trademark of Dupont

PEEK is a registered trademark of the ICI Corporation.

Kel-F is a registered trademark of the 3M Corporation.

Grafoil is a registered trademark of Union Carbide.

Kalrez is a registered trademark of DuPont.

Hastelloy is a registered trademark of the Cabot Corporation.

Fluid Compatibility Table

| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Grafoil® | Teflon® | Peek® | UHMWPE |
|---------------------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|----------|---------|-------|--------|
| Acetaldehyde | C | C | A | | A | A | A | C | B | D | C | C | A | B | | A | A | A | D |
| Acetamine | B | B | B | | | | A | A | | | | B | | | | A | A | A | |
| Acetate Solvents | B | A | A | | | A | A | D | | D | A | D | D | | | A | A | A | |
| Acetic Acid, aerated | D | D | A | | | A | A | C | | C | | C | D | B | A | A | A | A | |
| Acetic Acid, Air Free | B | D | A | A | A | A | A | C | | D | | C | D | B | A | A | A | A | |
| Acetic Acid, crude | C | C | A | A | A | B | A | D | | D | | D | D | B | A | A | A | A | |
| Acetic Acid, glacial | | | D | A | | | A | B | B | D | A | D | D | B | A | A | A | A | |
| Acetic Acid, pure | C | D | A | A | A | D | A | D | | D | A | D | B | B | A | A | A | A | C |
| Acetic Acid, 10% | C | C | A | A | A | B | A | D | B | D | A | C | | B | A | A | A | A | A |
| Acetic Acid, 80% | C | C | A | A | A | B | A | D | C | D | A | D | D | B | A | A | A | A | C |
| Acetic Acid Vapors | D | | D | D | B | C | A | D | | | A | | | B | | A | A | A | C |
| Acetic Anhydride | D | D | B | B | B | B | A | D | B | D | A | B | C | | A | A | A | A | C |
| Acetone | A | A | A | A | A | A | A | D | A | D | A | D | A | A | A | A | A | A | A |
| Other Ketones | A | A | A | A | A | A | A | D | D | D | | D | A | | | A | A | A | |
| Acetyl Chloride | A | | C | | | B | A | D | D | A | A | D | D | | | A | A | A | |
| Acetylene | B | A | A | A | A | A | A | A | A | A | A | B | A | A | | A | A | A | |
| Acid Fumes | D | D | B | | B | | | C | | | | B | D | | A | C | A | A | |
| Acrylonite | A | A | A | | B | A | A | D | D | C | | D | D | A | | A | A | A | |
| Air | A | A | | A | A | A | A | A | A | A | | A | A | A | A | B | A | A | A |
| Alcohol, Amyl | B | B | A | | B | B | B | C | A | B | | C | A | A | | A | A | A | |
| Alcohol, Butyl | B | B | A | | A | A | A | B | C | A | | B | A | A | | A | A | A | |
| Alcohol, Diacetone | A | A | A | | A | B | A | D | B | D | | C | A | A | | A | A | A | |
| Alcohol, Ethyl | B | B | B | | A | B | A | A | A | A | | B | A | A | | A | A | A | A |
| Alcohols, Fatty | B | B | A | | A | | A | B | | | | B | A | A | | A | A | A | |
| Alcohol, Isopropyl | B | B | B | | A | B | B | C | A | A | | B | A | A | | A | A | A | |
| Alcohol, Methyl | B | B | A | | A | A | A | B | A | C | | A | A | A | | A | A | A | |
| Alcohol, Propyl | A | B | A | | A | A | A | B | A | A | | B | A | A | | A | A | A | |
| Alumina | A | | A | | | C | A | A | A | | | A | A | A | | A | A | A | |
| Aluminum Acetate | D | | A | B | B | B | B | B | A | D | A | B | D | | | A | A | A | A |
| Aluminum Chloride dry | B | C | C | | D | | B | A | A | A | A | A | A | A | A | A | A | A | A |
| Aluminum Chloride solution | | | D | C | B | B | A | A | | A | A | A | D | A | A | A | A | A | A |
| Aluminum Fluoride | | D | C | | | B | A | A | A | A | A | C | | | | A | A | A | A |
| Aluminum Hydroxide | A | D | A | B | B | B | B | A | A | A | A | A | C | | | A | A | A | A |
| Aluminum Nitrate | D | | C | | B | C | B | A | A | A | A | A | D | | | B | A | A | A |
| Aluminum Oxalate | | | D | | A | B | A | | | | | A | | | | | A | A | A |
| Alum (Alum. Potassium Sulphate) | D | | B | C | B | C | A | A | A | D | A | A | D | | | A | A | A | A |
| Aluminum Sulfate | C | D | B | A | B | C | A | A | A | A | A | A | D | A | | A | A | A | A |
| Amines | B | B | A | A | A | B | B | D | B | D | A | B | C | B | | A | A | A | |
| Ammonia, Alum | | | A | | A | | A | B | | | | B | C | D | | A | A | A | |
| Ammonia, Anhydrous Liquid | D | A | A | A | A | B | A | B | A | D | A | A | D | A | A | A | A | D | |
| Ammonia, Aqueous | D | A | A | | A | B | B | B | | A | A | B | D | B | | A | A | A | |
| Ammonia, Gas, hot | D | | A | | A | B | B | D | B | D | A | B | D | | | A | A | A | A |
| Ammonia Liquor | | | A | | A | | B | | | | | | | B | | A | A | A | |
| Ammonia Solutions | D | B | A | | A | B | B | B | B | D | | B | D | B | | A | A | A | |
| Ammonium Acetate | D | | B | | A | B | B | B | A | D | A | B | D | | | A | A | A | |
| Ammonium Bicarbonate | B | C | B | | B | B | | B | A | A | A | A | A | B | | A | A | A | A |
| Ammonium Bromide 5% | | | B | | B | B | | | | | | A | A | | | A | A | A | A |
| Ammonium Carbonate | B | B | B | | B | B | | D | A | A | A | A | D | | | A | A | A | A |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®

Fluid Compatibility Table

| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Gratfol® | Teflon® | Peek® | UHMWPE |
|-----------------------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|----------|---------|-------|--------|
| Ammonium Chloride | D | D | C | C | B | B | B | A | A | A | A | A | C | D | | A | A | A | A |
| Ammonium Hydroxide 28% | D | C | B | A | A | D | B | B | B | A | A | A | D | B | A | A | A | A | A |
| Ammonium Hydroxide (Concentrated) | D | C | B | A | A | C | B | C | A | A | A | A | D | | | A | A | A | A |
| Ammonium Monosulfate | | | A | | B | B | B | | | | | | D | | | | A | A | A |
| Ammonium Nitrate | D | D | A | A | B | D | B | A | A | A | A | A | D | C | | B | A | A | A |
| Ammonium Oxalate 5% | | | A | | A | B | | | | | A | | A | | | | A | A | A |
| Ammonium Persulfate | C | | A | | A | D | | D | A | B | A | C | D | | A | | A | A | A |
| Ammonium Phosphate | D | D | B | | B | C | | A | A | D | A | A | C | A | | A | A | A | A |
| Ammonium Phosphate Di-basic | C | D | B | | B | C | B | A | A | A | A | A | A | A | | A | A | A | |
| Ammonium Phosphate Tri-basic | C | D | B | | B | C | B | A | A | A | A | A | A | A | | A | A | A | |
| Ammonium Sulfate | C | C | B | B | B | B | B | A | A | D | A | A | B | A | A | A | A | A | A |
| Ammonium Sulfide | D | D | B | | B | B | | A | A | D | A | A | A | | | A | A | A | A |
| Ammonium Sulfite | C | C | A | | B | D | | B | B | A | A | A | A | | | A | A | A | |
| Amyl Acetate | B | C | B | A | A | B | A | D | C | D | A | D | A | D | A | A | A | A | A |
| Amyl Chloride | B | | A | | A | B | B | D | D | A | A | D | A | B | | A | A | A | D |
| Aniline | D | C | B | | A | B | B | D | B | C | A | D | D | B | A | A | A | A | A |
| Aniline Dyes | C | C | A | | A | A | | D | B | B | A | B | A | | | A | A | A | |
| Apple Juice | C | D | B | | A | A | | A | B | A | | A | A | | | A | A | A | |
| Aqua Regia (Strong Acid) | D | D | B | | B | | | D | D | D | A | D | D | | A | D | A | C | C |
| Aromatic Solvents | A | C | A | | A | B | | D | D | | A | D | A | | | A | A | A | |
| Arsenic Acid | D | D | B | | B | D | B | A | A | A | A | A | D | | A | A | A | A | A |
| Asphalt Emulsion | A | B | A | | A | A | A | D | D | A | | C | A | A | | A | A | A | |
| Asphalt Liquid | A | B | A | | A | A | A | C | D | A | | C | A | | | A | A | A | |
| Barium Carbonate | B | B | B | | B | B | A | B | A | A | A | A | A | | | A | A | A | A |
| Barium Chloride | B | C | B | B | C | B | | A | A | A | A | A | A | | | A | A | A | A |
| Barium Cyanide | C | | B | | B | D | | B | B | B | A | B | A | | | A | A | A | |
| Barium Hydrate | D | | A | | A | B | | | | | | | | | | A | A | A | |
| Barium Hydroxide | C | C | B | A | A | B | | A | A | A | A | A | A | A | | A | A | A | A |
| Barium Nitrate | | | A | | A | | | | | | A | B | A | | | B | A | A | |
| Barium Sulfate | C | C | A | | A | B | | A | B | A | A | A | A | | | A | A | A | A |
| Barium Sulfide | D | C | B | | B | C | | A | A | A | A | A | A | B | | A | A | A | A |
| Beer | B | D | A | A | A | A | | A | A | A | | A | A | A | | A | A | A | A |
| Beet Sugar Liquors | A | B | A | | A | A | | A | A | A | | B | A | A | | A | A | A | |
| Benzaldehyde | A | A | A | | A | B | B | D | A | D | | D | A | A | A | A | A | A | D |
| Benzene (Benzol) | B | B | B | B | A | A | B | D | D | A | A | D | C | A | A | A | A | A | D |
| Benzoic Acid | B | D | B | A | B | B | A | D | D | A | A | D | A | D | A | A | A | A | A |
| Beryllium Sulfate | B | | B | | A | B | | B | B | B | A | B | A | | | A | A | A | |
| Bleaching Powder wet | B | | C | | B | D | A | D | B | B | | A | D | D | A | A | A | A | A |
| Blood (Meat Juices) | B | | A | A | A | B | | B | B | B | | B | A | | | A | A | A | |
| Borax (Sodium Borate) | D | C | A | | | A | A | B | A | A | | D | A | | | A | A | A | A |
| Bordeaux Mixture | | | A | | A | | | B | A | A | | B | A | | | A | A | A | |
| Borax Liquors | A | C | B | | A | A | B | | A | A | | C | A | | | A | A | A | |
| Boric Acid | C | D | B | | B | B | A | A | A | A | A | A | A | D | | A | A | A | A |
| Brake Fluid | B | | B | A | | B | | C | A | D | | B | B | | | A | A | A | |
| Brines, saturated | B | D | B | | B | B | A | A | A | A | A | B | A | C | | A | A | A | A |
| Bromine, dry | B | D | D | | B | A | A | D | D | A | A | D | D | D | A | B | A | C | D |
| Bunker Oils (Fuel) | B | B | A | | A | A | | A | D | A | | D | A | | | A | A | A | D |
| Butadiene | C | B | A | | A | C | B | D | D | A | | D | A | | | A | D | A | D |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®

Fluid Compatibility Table

| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Grafoil® | Teflon® | Peek® | UHMWPE |
|---------------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|----------|---------|-------|--------|
| Butane | A | B | A | | A | B | A | A | D | A | | A | A | A | | A | A | A | A |
| Butter | | | A | | A | | | A | A | A | | B | A | | | A | A | A | A |
| Buttermilk | D | D | A | | A | D | | A | B | A | | A | A | | | A | A | A | B |
| Butyl Acetate | B | | B | | A | B | B | D | B | D | A | D | B | | B | A | A | A | D |
| Butylene | A | A | A | | A | A | | B | D | A | | C | A | A | | A | A | A | |
| Butyric Acid | C | D | B | | B | B | A | D | B | B | C | D | A | D | | A | A | A | D |
| Calcium Bisulfite | C | D | B | | B | D | B | B | A | B | A | B | D | | | A | A | A | |
| Calcium Carbonate | C | D | B | | B | B | B | A | A | A | A | A | A | A | | A | A | A | A |
| Calcium Chlorate | D | | B | | B | B | | B | B | B | A | B | D | | | B | A | A | A |
| Calcium Chloride | B | C | B | B | B | B | A | A | A | A | A | A | A | D | A | A | A | A | A |
| Calcium Hydroxide | C | C | B | | B | A | A | A | A | A | A | A | A | A | | A | A | A | A |
| Calcium Nitrate | | | B | | B | | | A | A | A | A | A | C | | | B | A | A | A |
| Calcium Phosphate | C | | B | | B | | | A | A | A | A | B | B | | | A | A | A | A |
| Calcium Silicate | C | | B | | B | | | A | A | A | | A | A | | | A | A | A | |
| Calcium Sulfate | C | C | B | B | B | B | B | A | B | A | A | A | A | | | A | A | A | A |
| Caliche Liquor | | B | A | | A | | | A | A | A | | A | A | | | A | A | A | |
| Camphor | C | | B | | C | C | | B | B | B | A | B | A | | | A | A | A | D |
| Cane Sugar Liquors | B | | A | | A | B | | A | A | A | | A | A | | | A | A | A | |
| Carbonated Beverages | B | D | B | B | B | C | | B | B | B | | B | A | | | A | A | A | |
| Carbonated Water | B | B | A | B | A | B | | A | A | A | | A | A | | | A | A | A | A |
| Carbon Bisulfide | C | B | B | | B | B | | D | D | A | | D | A | | | A | A | A | D |
| Carbon Dioxide, Dry | A | A | A | A | A | A | | A | A | A | A | B | A | | | A | A | A | A |
| Carbolic Acid Phenol | D | D | B | B | A | B | | D | B | A | A | D | A | | | A | A | A | |
| Carbon Monoxide | A | | A | A | A | A | A | A | A | A | A | B | A | A | | | A | A | A |
| Carbon Tetrachloride, dry | C | B | A | A | A | A | A | D | D | B | B | D | A | A | D | A | A | A | D |
| Carbon Tetrachloride, wet | D | D | B | | B | B | B | D | D | B | B | D | B | A | D | A | A | A | D |
| Casein | C | | B | | B | C | | B | B | B | A | B | A | | | A | A | A | |
| Castor Oil | A | B | A | | A | A | A | A | B | A | | A | A | A | | A | A | A | A |
| Caustic Potash | | | A | | A | B | | B | | | | B | D | | | A | A | A | |
| Caustic Soda | | B | A | | A | A | | C | B | B | A | | D | | | A | A | A | |
| Cellulose Acetate | B | | B | | B | B | D | B | D | A | D | C | | | | A | A | A | |
| China Wood Oil (Tung) | C | C | A | | A | A | A | A | D | A | | B | A | A | | A | A | A | |
| Chlorinated Solvents | C | C | A | | A | B | | D | D | A | | D | A | | | A | A | A | |
| Chlorinated Water | | | C | D | A | D | D | B | | A | | A | D | D | | A | A | D | C |
| Chlorine Gas, dry | C | B | B | C | A | A | A | C | D | B | A | D | D | D | A | A | A | A | D |
| Chlorobenzene, dry | B | B | A | | A | B | B | D | D | A | A | D | B | A | D | A | A | A | D |
| Chloroform, dry | B | B | A | B | A | A | B | D | D | A | A | D | A | B | D | A | A | A | |
| Chlorophyll, dry | B | | B | | A | B | | B | B | B | | B | | | | A | A | A | |
| Chlorosulfonic Acid, dry | C | B | B | | B | B | A | D | D | D | A | D | D | D | A | A | A | D | D |
| Chrome Alum | C | B | A | | A | B | | A | A | A | A | A | B | D | | A | A | A | A |
| Chromic Acid < 50% | D | D | C | C | B | C | B | D | C | C | A | D | D | D | A | A | A | A | A |
| Chromic Acid > 50% | D | D | C | D | B | D | B | D | C | C | A | D | D | D | A | A | A | D | |
| Chromium Sulfate | C | | B | | C | B | | B | B | B | | B | | | | A | A | A | |
| Cider | | | A | | B | A | | | | | | A | | | | A | A | A | A |
| Citric Acid | C | D | B | C | A | B | A | A | A | A | | A | A | B | | A | A | A | A |
| Citrus Juices | B | D | B | | A | A | | A | A | A | | A | A | | | A | A | A | A |
| Coca-Cola Syrup | | | A | | A | | | B | | B | | B | A | | | A | A | A | A |
| Coconut Oil | B | C | B | | A | B | | A | C | A | | C | A | | | A | A | A | A |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®

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| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Grafoil® | Teflon® | Peek® | UHMWPE |
|-------------------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|----------|---------|-------|--------|
| Coffee | A | | A | | A | B | | A | A | A | | A | A | | | A | B | A | A |
| Coffee Extracts, hot | B | C | A | | A | A | | | | | | | A | D | | A | A | A | |
| Coke Oven Gas | C | B | A | | A | B | | D | D | A | | D | D | C | | A | A | A | |
| Cooking Oil | B | B | A | | A | A | | A | D | A | | B | A | | | A | A | A | |
| Copper Acetate | D | D | A | | A | C | B | B | A | D | A | B | D | | | A | A | A | |
| Copper Carbonate | | | A | | A | | | | | | A | | A | | | A | A | A | |
| Copper Cyanide | D | | A | | A | C | | A | A | A | A | A | A | | | A | A | A | A |
| Copper Nitrate | D | D | B | | B | D | | A | B | A | A | A | A | | | B | A | A | A |
| Copper Sulfate | D | D | B | B | B | C | A | A | A | A | A | A | A | A | | A | A | A | A |
| Corn Oil | B | C | B | | B | B | | A | C | A | | C | A | | | A | A | A | A |
| Cottonseed Oil | B | C | B | | B | B | | A | C | A | | C | A | | | A | A | A | A |
| Cresol | | | B | | B | | | D | D | B | A | D | D | | A | A | A | A | D |
| Creosote Oil | B | B | B | B | A | B | B | C | D | A | A | D | D | | | A | A | A | D |
| Cresylic Acid | C | C | B | | B | B | | D | D | A | A | D | D | | | A | A | A | A |
| Crude Oil, sour | C | B | A | | A | B | | A | D | A | | B | A | | | A | A | A | |
| Crude Oil, sweet | B | B | A | | A | A | | A | | A | | B | A | | | A | A | A | |
| Cupric Nitrate | | | A | | A | D | | | | | | | D | | | B | A | A | |
| Cutting Oils, Water Emulsions | A | B | A | | A | | | A | D | A | | B | A | | | A | A | A | |
| Cyanide | D | | B | | B | D | | B | B | B | A | B | D | | | A | A | A | |
| Cyclohexane | A | A | A | | A | B | B | A | D | A | A | C | A | A | | A | A | A | C |
| Cyclohexanone | B | | A | | A | B | B | D | B | D | A | D | A | A | A | A | A | A | D |
| Detergents, synthetic | B | B | A | | A | B | | A | A | A | | B | A | | | A | A | A | A |
| Dextrin | B | | B | | B | B | | B | B | B | | B | A | | | A | A | A | A |
| Dichloroethane | | | C | | B | B | | D | D | | A | D | D | | A | A | A | A | |
| Dichloroethyl Ether | B | | B | | B | | | D | D | D | | D | D | | | | A | A | |
| Diesel Oil Fuels | A | A | A | | A | A | | A | D | A | A | C | A | | | A | A | A | |
| Diethylamine | B | A | A | | A | B | | B | B | D | | B | A | B | C | A | A | A | |
| Diethyl Benzene | | | B | | B | | | D | D | | A | D | C | | | A | A | A | |
| Diethylene Glycol | B | | A | | A | B | | A | A | A | A | A | A | | | A | A | A | A |
| Diethyl Sulfate | B | | B | | B | B | | C | C | B | | C | A | | | A | A | A | |
| Dimethyl Formamide | B | | A | | A | B | | B | A | D | A | C | A | | A | A | A | A | |
| Dimethyl Phthalate | | | D | | | | | D | B | B | A | D | C | | | A | A | A | |
| Dioxane | B | | B | | B | B | | D | B | D | A | D | C | | A | A | A | A | |
| Dipentane (Pinene) | A | | A | | A | | | B | D | B | A | D | A | | | A | A | A | |
| Disodium Phosphate | | | B | | B | C | | B | | B | | B | A | | | A | A | A | A |
| Dowtherm | A | B | A | | A | A | | D | D | A | A | D | A | C | | A | A | A | |
| Drilling Mud | B | B | A | | A | B | | A | A | A | | C | A | | | A | A | A | |
| Dry Cleaning Fluids | C | B | A | | A | B | | C | D | A | | D | A | | | A | A | A | |
| Drying Oil | C | C | B | | B | B | | A | | | | B | A | | | A | A | A | |
| Enamel | A | | A | | | | | B | D | | | B | A | | | A | A | A | |
| Epsom Salts (MgSo4) | B | C | B | | B | B | | A | | A | | A | A | B | | A | A | A | |
| Ethane | B | C | B | | B | B | | A | D | A | | B | A | | | A | A | A | |
| Ethers | B | A | A | B | A | B | | D | C | C | | D | C | | | A | A | A | D |
| Ethyl Acetate | C | B | B | A | B | B | B | D | B | D | A | D | C | A | C | A | A | A | C |
| Ethyl Acrylate | B | C | A | | A | B | A | D | B | D | A | D | B | A | | A | A | A | |
| Ethyl Benzene | | | B | | A | | A | D | D | A | A | D | A | B | | A | A | A | |
| Ethyl Bromide | A | | B | | C | B | | B | D | A | A | D | A | | | A | A | A | |
| Ethyl Chloride, dry | B | B | A | A | A | B | B | C | C | B | A | C | A | A | | A | B | A | D |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®

Fluid Compatibility Table

| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Grafol® | Teflon® | Peek® | UHMWPE |
|----------------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|---------|---------|-------|--------|
| Ethyl Chloride, wet | C | D | B | | B | B | B | C | B | B | A | C | A | A | | A | A | A | D |
| Ethylene Chloride | | | A | | A | B | B | D | D | B | A | D | A | | A | A | A | A | |
| Ethylene Dichloride | | | B | | A | B | | D | C | A | A | D | C | A | A | A | A | A | D |
| Ethylene Glycol | B | B | B | A | A | B | A | A | A | A | A | A | A | A | A | A | A | A | A |
| Ethylene Oxide | C | B | B | | B | B | A | D | C | D | A | D | A | D | | A | A | A | C |
| Ethyl Ether | B | | A | | A | A | B | C | C | D | | D | A | | C | A | A | A | |
| Ethyl Silicate | B | | B | | B | B | | A | A | A | | A | A | | | A | A | A | |
| Ethyl Sulfate | | | B | | B | | | B | C | A | | B | A | | | A | A | A | |
| Fatty Acids | C | D | A | | A | B | A | B | C | A | A | B | A | A | | A | A | A | A |
| Ferric Hydroxide | | | A | | A | A | | B | | | A | A | A | | | A | A | A | |
| Ferric Nitrate | D | D | C | B | A | D | B | A | A | A | A | A | A | | | B | A | A | A |
| Ferric Sulfate | D | D | B | B | A | D | | A | A | A | A | A | A | C | | A | A | A | A |
| Ferrous Ammonium Citrate | | | B | | B | | | | | | A | | A | | | A | A | A | A |
| Ferrous Chloride | B | D | D | | D | D | D | A | A | A | A | A | A | C | A | A | A | A | A |
| Ferrous Sulfate | B | D | B | | B | B | B | A | A | A | A | A | A | | A | A | A | A | A |
| Ferrous Sulfate, Saturated | C | C | A | | A | B | B | C | B | B | | C | A | | A | A | A | A | |
| Fertilizer Solutions | C | B | B | | B | B | | B | | | | B | | | | A | A | A | |
| Fish Oils | B | B | A | | A | A | | A | D | A | | B | A | | | A | A | A | |
| Fluorine Gas, dry | | | B | | A | A | A | | | | | | | A | | A | A | A | |
| Flue Gases | B | | A | | A | B | | C | D | C | | C | C | | | A | A | A | |
| Fluoboric Acid | | | B | | A | | | A | | | A | B | D | | | | A | D | A |
| Fluorosilicic Acid | B | D | B | | B | A | B | C | C | C | A | C | C | | | | A | D | A |
| Formaldehyde, cold | A | A | A | A | A | A | B | B | B | D | A | C | A | A | | A | A | A | A |
| Formaldehyde, hot | B | D | C | | B | B | B | B | | | A | B | A | | B | A | A | A | A |
| Formic Acid, cold | B | D | B | B | A | B | A | D | | B | B | B | D | A | A | A | A | A | A |
| Formic Acid, hot | B | D | B | D | B | B | B | D | | A | B | A | D | D | B | A | A | A | A |
| Freon Gas, dry | B | B | A | A | A | A | B | C | C | C | | C | A | A | | A | A | A | |
| Freon 11, MF, 112, BF | B | | A | | A | B | B | C | C | D | D | C | A | A | C | A | A* | A | |
| Freon 12, 13, 32, 114, 115 | A | | A | | A | B | B | B | A | D | D | A | A | A | C | A | A* | A | |
| Freon 21, 31 | B | | A | | A | B | B | D | D | D | A | D | A | A | C | A | A* | A | |
| Freon 22 | A | | A | | A | | B | D | D | D | C | B | A | A | C | A | A* | A | |
| Freon 113, TF | B | | A | | A | B | B | B | C | C | D | C | A | A | C | A | A* | A | |
| Freon, wet | D | | C | B | B | B | B | B | B | D | | B | A | D | | A | A | A | |
| Fruit Juices | B | D | A | | A | B | | A | A | A | | A | A | | | | A | A | A |
| Fuel Oil | B | B | A | | A | B | | A | D | A | | B | A | | | A | A | A | D |
| Fumaric Acid | | | | | A | | | A | B | A | A | B | A | | | | A | A | |
| Furfural | A | A | A | B | A | B | B | D | C | D | | C | A | | | A | A | A | D |
| Gallic Acid 5% | C | D | B | | B | B | B | B | B | A | A | B | A | A | A | | A | A | A |
| Gas, Manufactured | B | B | B | | B | A | | A | | A | | A | A | A | A | A | A | A | |
| Gas, Natural | B | B | A | | B | A | | A | D | A | | A | A | A | | A | A | A | |
| Gas, Odorizers | A | B | B | | A | B | | B | | A | | B | A | A | | A | A | A | |
| Gasoline, Aviation | A | A | A | | A | A | A | C | | A | A | D | A | A | | A | A | A | D |
| Gasoline, Leaded | A | A | A | | A | B | A | C | | A | A | D | A | A | | A | A | A | D |
| Gasoline, Motor | A | A | A | A | A | A | A | C | D | A | A | D | A | A | | A | A | A | D |
| Gasoline, Refined | B | B | A | | A | B | A | C | D | A | A | C | A | A | | A | A | A | D |
| Gasoline, Sour | B | B | A | | A | C | A | C | D | A | | D | A | B | | A | A | A | D |
| Gasoline, Unleaded | A | A | A | | A | A | A | C | | A | A | D | A | A | | A | A | A | D |
| Gelatin | A | D | A | | A | B | | A | A | A | | A | A | A | | A | A | A | A |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®

Fluid Compatibility Table

| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Grafoil® | Teflon® | Peek® | UHMWPE |
|-------------------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|----------|---------|-------|--------|
| Glucose | A | B | A | | A | A | A | A | A | A | A | A | A | A | | A | A | A | A |
| Glue | B | A | B | | A | B | A | A | B | A | A | A | A | A | | A | A | A | A |
| Glycerin (Glycerol) | B | C | A | A | A | A | A | A | A | A | A | A | A | A | | A | A | A | A |
| Glycol Amine | D | | B | A | | | D | A | D | D | | | C | | | A | | A | |
| Glycol | B | C | B | | A | B | | A | A | A | | A | C | | | A | A | A | A |
| Graphite | B | | B | | A | B | | B | B | B | | B | A | | | A | A | A | |
| Grease | C | A | A | | A | B | | A | D | A | A | C | A | | | A | A | A | |
| Helium Gas | B | | A | | A | B | A | A | A | A | | A | A | | | A | A | A | A |
| Heptane | A | B | A | | A | B | A | A | D | A | A | B | A | | | A | A | A | C |
| Hexane | B | B | A | | A | B | A | A | D | A | | B | A | A | C | A | A | A | D |
| Hexanol, Tertiary | A | A | A | | A | A | A | A | D | B | A | C | A | A | | A | A | A | A |
| Hydraulic Oil, Petroleum Base | B | A | A | | A | A | | A | D | A | | B | A | | | A | A | A | |
| Hydrazine | D | | B | | B | D | | B | A | D | A | B | D | | | | A | A | |
| Hydrocyanic Acid | D | D | A | | A | C | B | B | A | A | A | B | D | | | | A | A | A |
| Hydrofluosilicic Acid | A | D | C | | B | B | | B | A | A | A | B | A | | | A | A | D | |
| Hydrogen Gas, cold | B | B | A | | A | A | | A | A | A | | A | A | A | | A | A | A | A |
| Hydrogen Gas, hot | | B | B | | A | | A | A | A | A | | A | A | | | A | A | A | A |
| Hydrogen Peroxide >25% | D | D | B | | B | D | D | D | B | B | A | D | D | D | A | D | A | A | C |
| Hydrogen Peroxide <25% | C | D | B | | B | D | D | A | B | A | A | B | D | D | A | C | A | A | A |
| Hydrogen Sulfide, dry | C | B | A | B | B | B | B | C | A | A | A | A | C | D | A | A | A | A | A |
| Hydrogen Sulfide, wet | D | C | B | | B | C | D | C | B | A | A | B | C | D | A | A | A | A | A |
| Hypo (Sodium Thiosulfate) | C | D | B | | B | B | | A | A | A | | A | A | | | A | A | A | |
| Illuminating Gas | A | A | A | | A | A | | C | D | A | | C | A | | | A | A | A | |
| Ink-Newsprint | C | D | A | | A | B | | A | B | A | A | B | A | A | | A | A | A | A |
| Iodoform | C | B | A | | A | C | | | A | C | | A | | | | | A | A | |
| Iso-Butane | | | B | | B | | | B | D | | A | D | A | | | A | A | A | |
| Iso-Octane | A | A | A | | A | A | | A | D | A | A | B | A | | | A | A | A | |
| Isopropyl Acetate | | | B | | A | | | D | B | D | A | D | A | | | A | A | A | |
| Isopropyl Ether | A | A | A | | A | B | A | B | D | D | A | C | A | A | A | A | A | A | |
| J P-4 Fuel | A | A | A | | A | A | A | A | D | A | A | D | A | A | | A | A | A | |
| J P-5 Fuel | A | A | A | | A | A | A | A | D | A | A | D | A | A | | A | A | A | |
| J P-6 Fuel | A | A | A | | A | A | A | A | D | A | | D | A | A | | A | A | A | |
| Kerosene | A | B | A | | A | A | A | A | D | A | A | B | A | A | | A | A | A | C |
| Ketchup | D | D | A | | A | B | | A | A | A | | A | A | | | A | A | A | |
| Ketones | A | A | A | | A | A | | D | D | D | | D | A | | | A | A | A | |
| Laquer (and Solvent) | A | C | A | | A | A | | D | D | D | A | D | A | | | A | A | A | |
| Lactic Acid Concentrated Cold | D | D | A | D | A | D | A | B | B | A | A | A | D | A | | A | A | A | A |
| Lactic Acid Concentrated Hot | D | D | B | D | A | D | B | C | B | B | A | C | D | | | A | A | A | A |
| Lactic Acid Dilute Cold | D | D | A | B | A | C | A | B | B | A | A | A | D | | | A | A | A | A |
| Lactic Acid Dilute Hot | D | D | A | D | A | D | B | C | | D | A | D | D | | | A | A | A | A |
| Lactose | B | | B | | B | B | | B | B | B | | C | A | | | A | A | A | |
| Lard | B | | A | | A | | | A | B | A | | B | A | | | A | A | A | A |
| Lard Oil | B | C | B | | A | B | | A | B | A | | B | A | | | A | A | A | A |
| Lead Acetate | C | D | B | | B | B | | B | A | D | A | B | A | | | A | A | A | A |
| Lead Sulfate | C | | B | | B | B | | B | B | B | | B | A | | | A | A | A | |
| Lecithin | C | | B | | B | B | | D | D | B | | D | A | | | | A | A | |
| Linoleic Acid | B | B | A | | A | B | | B | D | B | | B | A | | | A | A | A | |
| Linseed Oil | B | A | A | | A | B | | A | C | A | | C | A | | | A | A | A | A |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®

Fluid Compatibility Table

| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Grafoil® | Teflon® | Peek® | UHMWPE |
|--------------------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|----------|---------|-------|--------|
| Lithium Chloride | B | | B | | A | B | | B | B | B | A | B | A | | | A | A | A | |
| LPG | A | B | B | | B | B | | A | D | A | | B | A | | | A | A | A | |
| Lubricating Oil Petroleum Base | B | A | A | | A | B | | A | D | A | | B | A | | | A | A | A | C |
| Ludox | D | | B | | B | B | | B | B | B | | B | B | | | | A | A | |
| Magnesium Bisulfate | B | B | A | | A | B | | B | B | B | | B | A | | | A | A | A | |
| Magnesium Bisulfide | D | | B | | B | B | | B | B | B | | B | A | | | A | A | A | |
| Magnesium Carbonate | B | | A | | A | B | | B | B | B | | B | A | | | A | A | A | A |
| Magnesium Chloride | B | C | B | C | B | B | A | A | A | A | | A | A | C | | A | A | A | A |
| Magnesium Hydroxide | B | B | A | A | A | B | B | B | A | A | A | B | A | D | | A | A | A | A |
| Magnesium Hydroxide Hot | D | B | A | A | A | A | B | B | | A | A | B | A | D | | A | A | A | A |
| Magnesium Nitrate | | | A | | A | B | | B | | B | | A | A | | | B | A | A | A |
| Magnesium Sulfate | B | B | A | A | A | B | A | A | A | A | | A | A | A | | A | A | A | A |
| Maleic Acid | B | B | B | | B | B | A | B | D | A | A | B | A | | | A | A | A | A |
| Maleic Anhydride | B | | B | | B | B | B | D | D | A | A | D | C | | | A | A | A | |
| Malic Acid | B | D | B | | B | B | | A | B | A | A | B | A | | | A | A | A | |
| Malt Beverages | | | A | | B | A | | A | B | A | | A | A | | | A | A | A | |
| Manganese Carbonate | | | B | | A | | | B | | | A | | A | | | A | A | A | |
| Manganese Sulfate | B | | A | | A | B | | B | B | B | A | B | A | | | A | A | A | |
| Mayonnaise | D | D | A | | D | B | | A | | A | | A | A | | | A | A | A | |
| Meat Juices | D | | A | | A | | | B | | | | B | A | | | A | A | A | A |
| Melamine Resins | | | C | | C | | | B | | | | B | A | | | A | A | A | |
| Mercuric Chloride | D | D | B | | B | D | B | A | A | A | A | A | A | C | A | A | A | A | A |
| Mercuric Cyanide | D | D | A | | A | C | B | A | A | A | A | B | A | | | A | A | A | A |
| Mercurous Nitrate | D | | A | | A | D | | | | B | A | | A | | | B | A | A | A |
| Mercury | D | A | A | | A | B | B | A | A | A | A | A | A | | | A | A | A | A |
| Methane | A | B | A | | A | B | A | A | D | A | | B | A | | | A | A | A | |
| Methanol | B | | A | | A | B | | A | A | D | A | A | C | | A | A | A | A | |
| Methyl Acetate | A | B | A | | A | B | A | D | B | D | A | B | B | A | A | A | A | A | |
| Methyl Acetone | A | A | A | | A | A | | D | A | D | | D | B | A | | A | A | A | |
| Methylamine | D | B | A | | A | C | B | D | B | D | A | D | A | A | | A | A | A | |
| Methyl Bromide 100% | C | | B | | A | B | | B | D | A | A | D | A | | | A | A | A | D |
| Methyl Cellosolve | A | B | A | | A | B | B | C | B | D | | C | A | B | | A | A | A | |
| Methyl Cellulose | | | A | | A | | B | B | B | D | | B | A | | | A | A | A | |
| Methyl Chloride | B | B | A | | A | B | | D | C | A | A | D | A | A | C | A | A | A | D |
| Methyl Ethyl Ketone | A | A | A | | A | A | B | D | A | D | A | D | A | A | A | A | A | A | D |
| Methylene Chloride | A | B | A | | A | B | B | D | D | B | A | D | A | A | | A | A | A | D |
| Methyl Formate | A | C | B | | A | B | B | D | B | D | | B | A | | A | A | A | A | |
| Methyl Isobutyle Ketone | | | A | | A | | | D | C | D | | D | A | | | A | A | A | |
| Milk & Milk Products | B | D | A | | A | B | | A | A | A | | A | A | A | | A | A | A | B |
| Mineral Oils | B | B | A | | A | A | | A | C | A | | B | A | | A | A | A | A | D |
| Mineral Spirits | B | B | B | | B | B | | A | | A | | C | A | | | A | A | A | D |
| Mixed Acids (cold) | D | C | B | | B | C | | D | D | B | | D | D | C | | A | A | A | |
| Molasses, crude | A | A | A | | A | A | | A | | A | | A | A | A | | A | A | A | B |
| Molasses, edible | A | C | A | | A | A | | A | | A | | A | A | A | | A | A | A | B |
| Molybdic Acid | | | A | | A | | | | | | | | A | | | A | A | A | |
| Monochloro Benzene Dry | | | B | | B | B | | D | D | A | | D | C | | | A | A | A | |
| Morpholine | B | | A | | A | B | | D | B | D | | D | A | | | A | A | A | |
| Mustard | A | B | A | | A | A | | A | | A | | A | A | | | A | A | A | |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®

Fluid Compatibility Table

| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Grafoil® | Teflon® | Peek® | UHMWPE |
|----------------------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|----------|---------|-------|--------|
| Naptha | B | B | B | | B | B | A | B | D | A | A | D | A | A | | A | A | A | D |
| Napthalene | B | B | B | | B | B | B | D | D | A | A | D | A | A | | A | A | A | D |
| Natural Gas, Sour | B | B | A | | A | D | A | A | D | A | A | A | A | A | | A | A | A | A |
| Nickel Ammonium Sulfate | D | D | A | | A | C | | A | B | D | A | B | C | A | A | A | A | A | |
| Nickel Chloride | D | D | B | | A | B | A | A | A | A | A | B | D | C | | A | A | A | A |
| Nickel Nitrate | D | D | B | | A | B | | A | A | A | A | A | C | | | B | A | A | A |
| Nickel Sulfate | D | D | B | | A | B | B | A | A | A | A | A | C | A | | A | A | A | A |
| Nicotinic Acid | A | B | A | | A | A | | D | D | B | | D | C | | | A | A | A | A |
| Nitric Acid 10% | D | D | A | A | A | D | | C | | A | A | B | D | D | A | A | A | A | A |
| Nitric Acid 30% | D | D | A | D | A | D | | C | B | A | A | C | D | D | A | B | A | A | A |
| Nitric Acid 80% | D | D | A | D | A | D | | D | D | B | A | D | D | D | A | C | A | D | D |
| Nitric Acid 100% | D | D | A | D | A | D | | D | D | B | A | D | D | D | A | D | A | D | D |
| Nitric Acid Anhydrous | D | D | A | D | A | D | | D | D | A | | D | D | D | | D | A | D | |
| Nitrobenzene | D | B | A | | A | B | B | D | A | B | A | D | B | A | A | A | A | A | D |
| Nitrogen | A | A | A | | A | A | | A | A | A | A | A | A | | | A | A | A | A |
| Nitrous Acid 10% | D | D | B | | B | D | | C | | A | A | A | B | | | A | A | A | |
| Nitrous Gases | D | B | A | | A | D | | | | | | | B | | | A | A | A | |
| Nitrous Oxide | B | B | B | | B | D | B | A | A | A | | B | A | A | | A | A | A | |
| Oils & Fats | | | A | | A | | | B | D | | | | A | A | | A | A | A | |
| Oils, Animal | A | A | A | | A | B | A | A | B | B | | B | A | A | | A | A | A | |
| Oils, Petroleum Refined | B | A | A | | A | A | A | A | D | A | A | B | A | A | | A | A | A | |
| Oils, Petroleum Sour | C | B | A | | A | A | A | B | D | A | A | B | A | A | | A | A | A | |
| Oils, Water Mixture | A | B | A | | A | A | | A | A | A | A | B | A | A | | A | A | A | |
| Olaic Acid | | | B | | B | A | | D | | C | | D | C | A | | A | A | A | |
| Oleic Acid | B | C | B | | A | B | B | C | D | B | A | D | C | A | | A | A | A | C |
| Oleum | C | B | B | | B | C | B | D | D | A | A | D | D | D | | | A* | D | D |
| Oleum Spirits | D | B | B | | B | D | | B | D | A | | C | D | D | | | A | D | |
| Olive Oil | C | B | A | | A | A | | A | B | A | | B | A | A | | A | A | A | A |
| Oxalic Acid | B | D | B | D | B | B | | B | A | A | | B | C | D | A | A | A | A | A |
| Oxygen | A | B | A | A | A | A | A | B | A | A | A | | A | D | D | D | A | A | A |
| Ozone, dry | A | A | A | | A | A | A | D | A | A | | C | C | D | A | | A | A | C |
| Ozone, wet | B | C | A | | A | A | A | D | A | A | | C | C | D | A | | A | A | C |
| Paints & Solvents | A | A | A | | A | A | | D | D | B | | D | A | | | A | A | A | |
| Palmitic Acid | B | C | B | | B | B | | A | B | A | A | B | A | D | | A | A | A | |
| Palm Oil | B | C | B | | A | A | | B | D | A | | B | A | A | | A | A | A | A |
| Paper Pulp | B | | A | | A | B | | B | B | B | | B | A | A | | A | A | A | A |
| Paraffin | A | B | A | | A | A | A | A | D | A | A | C | A | A | | A | A | A | C |
| Paraformaldehyde | B | B | B | | B | B | | B | D | | C | B | A | | | A | A | A | |
| Paraldehyde | | | B | | B | | | B | D | | | B | A | | | A | A | A | |
| Pentane | A | B | A | | A | B | | A | D | A | A | B | A | | | A | A | A | |
| Perchlorethylene, dry | C | B | A | | A | B | B | B | D | A | C | D | B | A | | A | A | A | |
| Petrolatum (Vaseline Pet. Jelly) | B | C | B | | A | A | | A | D | A | | B | A | | | A | A | A | A |
| Phenol | B | D | A | B | A | A | A | D | D | A | A | D | C | D | A | A | A | A | D |
| Phosphate Ester | D | A | A | | A | A | | D | A | | | | A | A | | A | A | A | |
| Phosphoric Acid 10% | D | D | D | B | B | D | | A | A | A | A | B | D | D | A | A | A | A | A |
| Phosphoric Acid 50% Cold | D | D | B | B | B | C | | B | B | A | A | B | D | D | A | A | A | A | A |
| Phosphoric Acid 50% Hot | D | D | D | D | B | C | | B | B | A | A | B | D | D | A | A | A | A | A |
| Phosphoric Acid 85% Cold | D | B | A | C | B | A | | C | | B | A | C | D | D | A | A | A | B | A |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®

Fluid Compatibility Table

| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Grafoil® | Teflon® | Peek® | UHMWPE |
|---------------------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|----------|---------|-------|--------|
| Phosphoric Acid 85% Hot | D | C | B | D | B | | | C | | | A | C | D | D | A | A | A | B | A |
| Phosphoric Anhydride | | | A | | A | | | D | | B | | D | B | D | | A | A | A | |
| Phosphorous Trichloride | | B | A | | A | | | D | A | A | | D | D | D | | A | A | A | A |
| Phthalic Acid | B | C | B | | B | A | B | C | | A | | C | B | A | | A | A | A | |
| Phthalic Anhydride | B | C | B | | B | A | A | C | | A | | C | A | A | | A | A | A | A |
| Picric Acid | C | D | B | C | B | D | B | C | B | B | | A | D | B | | | A | A | A |
| Pineapple Juice | C | C | A | | A | A | | A | | A | | A | A | | | A | A | A | |
| Pine Oil | B | B | A | | A | B | | A | D | A | | D | A | | | A | A | A | D |
| Pitch (Bitumen) | | | A | | A | | | C | D | | | C | A | | | A | A | A | |
| Polysulfide Liquor | D | | B | | A | B | | B | B | B | | B | D | | | A | A | A | |
| Polyvinyl Acetate | B | | B | | B | B | | | A | | A | B | A | | | A | A | A | |
| Polyvinyl Chloride | B | | B | | B | B | | | B | | A | C | A | | | A | A | A | |
| Potassium Bicarbonate | | | A | | A | B | | B | | | A | | A | | | A | A | A | A |
| Potassium Bichromate | | | A | | A | A | | B | | B | A | B | B | | | A | A | A | |
| Potassium Bisulfate | | | A | | A | B | | B | | A | A | B | A | | | A | A | A | |
| Potassium Bisulfite | C | D | B | | B | D | | A | B | A | A | A | A | | | A | A | A | |
| Potassium Bromide | C | D | A | C | B | B | | A | B | A | A | A | A | | | A | A | A | A |
| Potassium Carbonate | B | B | B | A | B | B | | A | B | A | A | A | A | | | A | A | A | A |
| Potassium Chlorate | B | B | B | B | B | C | | A | B | A | A | A | A | | | C | A | A | A |
| Potassium Chloride | C | C | B | B | A | B | B | A | A | A | A | A | A | A | | A | A | A | A |
| Potassium Chromate | B | | B | | B | B | | B | B | B | A | A | A | | | | A | A | A |
| Potassium Cyanide | D | B | B | | B | B | B | A | A | A | A | A | A | | | A | A | A | A |
| Potassium Dichromate | D | C | B | | A | B | | A | B | A | A | A | A | | A | | A | A | A |
| Potassium Ferricyanide | D | C | A | B | B | B | | A | B | A | A | A | A | | | A | A | A | A |
| Potassium Ferrocyanide | B | C | B | | B | A | | A | | A | A | A | A | | | A | A | A | A |
| Potassium Hydroxide Dilute Cold | D | A | B | B | B | A | | A | | D | A | B | D | B | A | A | A* | A | A |
| Potassium Hydroxide 70% Cold | D | B | B | C | B | A | | B | B | D | A | B | D | B | A | A | A* | A | A |
| Potassium Hydroxide Dilute Hot | D | B | B | C | B | A | | B | | | A | B | D | | A | A | A* | A | A |
| Potassium Hydroxide 70% Hot | D | A | B | D | B | A | | C | A | | A | B | D | | A | A | A* | A | A |
| Potassium Iodide | D | C | B | B | B | C | | A | B | A | A | A | A | | | A | A | A | |
| Potassium Nitrate | B | B | B | B | B | B | B | A | A | A | A | A | A | | | B | A | A | A |
| Potassium Oxalate | | | A | | A | | | | | | A | | A | | | A | A | A | |
| Potassium Permanganate | B | B | B | B | B | B | B | A | B | A | A | A | A | | A | | A | A | A |
| Potassium Phosphate | C | | B | | B | B | B | A | A | A | A | A | A | A | | A | A | A | |
| Potassium Phosphate Di-basic | B | A | A | | A | B | B | A | B | A | A | A | A | A | | A | A | A | |
| Potassium Phosphate Tri-basic | | A | B | | B | B | | B | B | | A | B | | A | | A | A | A | |
| Potassium Sulfate | B | B | A | A | A | B | | A | A | A | A | A | A | A | | A | A | A | A |
| Potassium Sulfide | B | B | A | | A | C | A | A | B | B | A | B | A | A | | A | A | A | A |
| Potassium Sulfite | B | B | A | | A | C | B | A | A | A | A | A | A | A | | A | A | A | A |
| Producer Gas | B | B | B | A | B | A | | A | D | A | | B | A | | | A | A | A | |
| Propane Gas | A | B | B | A | A | B | A | A | D | A | A | B | A | A | | A | A | A | A |
| Propyl Bromide | B | | B | | A | B | | B | B | B | | B | A | | | A | A | A | |
| Propylene Glycol | B | B | B | | B | B | | A | B | A | A | A | C | | | A | A | A | A |
| Pyridine | | | B | | A | | | D | B | D | A | D | D | | A | A | A | A | |
| Pyrogalllic Acid | B | B | B | B | A | B | | A | | A | A | A | A | | A | | A | A | |
| Quench Oil | B | B | A | | A | | | A | | A | | B | A | | | A | A | A | |
| Quinine, Sulfate, dry | | | A | B | A | B | | | | | A | | A | | | A | A | A | |
| Resins & Rosins | A | C | A | B | A | A | | C | | A | | C | A | A | | A | A | A | |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®

Fluid Compatibility Table

| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Grafoil® | Teflon® | Peek® | UHMWPE |
|------------------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|----------|---------|-------|--------|
| Resorcinol | | | B | | B | | | | | | | | | | | A | A | A | A |
| Road Tar | A | A | A | | A | A | | B | D | A | | C | A | | | A | A | A | |
| Roof Pitch | A | A | A | | A | A | | B | | A | | C | A | | | A | A | A | |
| Rosin Emulsion | B | C | A | | A | A | | D | | B | | C | A | | | A | A | A | |
| R P-1 Fuel | A | A | A | | A | A | | A | D | A | | B | A | | | A | A | A | |
| Rubber Latex Emulsions | A | B | A | | A | A | | | | A | | A | A | | | A | A | A | |
| Rubber Solvents | A | A | A | | A | A | | D | | D | | C | C | | | A | A | A | |
| Salad Oil | B | C | B | | A | B | | A | B | A | | A | A | | | A | A | A | |
| Salicylic Acid | C | D | A | | B | B | | B | A | A | A | A | A | | | A | A | A | A |
| Salt (NaCl) | B | C | B | | A | A | | A | A | A | | A | A | | | A | A | A | A |
| Salt Brine | B | | B | | B | B | | A | B | B | | D | A | C | | A | A | A | A |
| Sauerkraut Arine | | | B | | B | | | | | | | | C | | | A | A | A | |
| Sea Water | C | D | B | | B | A | | A | A | A | A | B | A | C | | A | A | A | A |
| Sewage | C | C | B | A | B | B | | A | A | A | A | B | B | | | A | A | A | A |
| Shellac | A | A | A | | A | A | | A | | A | | A | A | | | A | A | A | A |
| Silicone Fluids | B | | B | | B | | | B | | B | A | B | A | | A | A | A | A | C |
| Silver Bromide | | | | C | A | B | | | | | A | | D | | | A | A | A | |
| Silver Cyanide | D | | A | | A | B | | B | | B | A | B | D | | | A | A | A | |
| Silver Nitrate 10% | D | D | A | | A | D | | B | A | A | A | A | A | | | B | A | A | A |
| Silver Plating Sol. | | | A | | A | | | | | | | B | D | | | | A | A | |
| Soap Solutions (Stearates) | A | A | A | | A | A | | A | A | A | A | B | A | | | A | A | A | |
| Sodium Acetate | B | C | B | | B | B | B | B | A | D | A | B | A | A | | A | A | A | A |
| Sodium Aluminate | B | C | A | | B | B | B | A | B | A | A | A | A | A | | A | A | A | A |
| Sodium Benzoate | | | B | | B | B | | | | | A | | B | | | A | A | A | A |
| Sodium Bicarbonate | B | C | B | | A | B | | A | A | A | A | A | B | | | A | A | A | A |
| Sodium Bichromate | | | B | | B | | | D | | | A | | A | | | | A | A | |
| Sodium Bisulfate 10% | B | D | A | | A | B | | A | A | A | A | A | D | A | A | A | A | A | A |
| Sodium Bisulfite 10% | B | D | A | | B | B | B | A | A | A | A | A | D | A | A | A | A | A | A |
| Sodium Borate | B | C | B | | B | B | | A | B | A | A | A | A | | A | A | A | A | A |
| Sodium Bromide 10% | B | C | B | | B | B | | A | B | A | A | A | A | | | A | A | A | A |
| Sodium Carbonate (Soda Ash) | B | B | A | | A | B | B | A | B | A | A | A | A | A | A | A | A | A | A |
| Sodium Chlorate | B | C | B | | B | C | B | A | B | A | A | A | A | | | B | A | A | A |
| Sodium Chloride | B | C | B | | A | A | B | A | A | A | A | A | A | A | A | A | A | A | A |
| Sodium Chromate | C | B | A | | B | B | | A | B | A | A | A | A | | | | A | A | |
| Sodium Citrate | | | B | | B | | | | | | A | | A | | | A | A | A | |
| Sodium Cyanide | D | B | A | B | A | B | | A | A | A | A | A | A | | | A | A | A | |
| Sodium Ferricyanide | | | A | | A | B | | | | | A | | A | | | A | A | A | A |
| Sodium Fluoride | C | D | B | B | A | B | | A | B | A | A | A | A | C | | A | A | A | A |
| Sodium Hydroxide 20% Cold | A | A | A | A | B | A | | A | B | B | A | A | D | C | A | A | A* | A | A |
| Sodium Hydroxide 20% Hot | A | B | A | C | A | A | | B | B | C | A | B | D | C | A | A | A* | A | A |
| Sodium Hydroxide 50% Cold | A | A | A | B | A | A | | A | B | C | A | A | D | C | A | A | A* | A | A |
| Sodium Hydroxide 50% Hot | A | B | A | C | A | B | | B | | C | A | B | D | C | A | A | A* | A | A |
| Sodium Hydroxide 70% Cold | A | A | A | B | B | A | | B | B | C | | C | D | C | A | A | A* | A | A |
| Sodium Hydroxide 70% Hot | B | B | A | C | B | B | | D | B | C | | D | D | C | A | A | A* | A | A |
| Sodium Hypochlorite (Bleach) | D | D | D | D | C | D | A | B | A | A | A | B | D | B | | A | A | A | A |
| Sodium Hyposulfite | | | B | | B | B | | | | | A | | A | | | A | A | A | |
| Sodium Lactate | | | A | | A | B | | | | | A | | A | | | A | A | A | |
| Sodium Metaphosphate | C | B | B | B | B | | A | A | A | A | A | B | B | | | A | A | A | |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®

Fluid Compatibility Table

| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Grafoil® | Teflon® | Peek® | UHMWPE |
|----------------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|----------|---------|-------|--------|
| Sodium Metasilicate Cold | B | C | A | | A | A | | B | | B | A | A | A | A | | A | A | A | |
| Sodium Metasilicate Hot | B | D | A | | A | A | A | | | | | | A | | | A | A | A | |
| Sodium Nitrate | B | B | A | B | A | B | B | B | A | A | A | B | A | A | | | A | A | A |
| Sodium Nitrite | | | B | | B | C | B | C | A | B | A | D | B | A | | B | A | A | A |
| Sodium Perborate | B | B | B | B | B | B | B | B | A | A | A | B | A | | | A | A | A | |
| Sodium Peroxide | D | C | B | B | B | B | B | B | A | A | A | B | A | | | A | A | A | |
| Sodium Phosphate | C | C | B | B | B | B | B | A | A | A | A | B | B | A | A | A | A | A | A |
| Sodium Phosphate Di-basic | C | C | B | | B | B | B | A | A | A | A | A | A | A | | A | A | A | A |
| Sodium Phosphate Tri-basic | C | C | B | | B | B | B | A | A | A | A | B | A | A | | A | A | A | |
| Sodium Polyphosphate | | | B | | B | B | B | B | A | | A | B | | | | A | A | A | |
| Sodium Salicylate | | | A | | A | | | | | | A | | A | | | A | A | A | |
| Sodium Silicate | B | B | B | | B | B | | A | A | A | A | A | A | D | | A | A | A | A |
| Sodium Silicate, hot | C | C | B | | B | B | | | B | | | | A | D | | A | A | A | A |
| Sodium Sulfate | B | B | A | B | A | A | | A | A | A | A | A | A | | | A | A | A | A |
| Sodium Sulfide | D | B | B | A | B | B | | A | A | A | A | A | A | A | | A | A | A | A |
| Sodium Sulfite | C | | A | A | A | B | B | A | A | A | A | A | A | D | | A | A | A | A |
| Sodium Tetraborate | | | A | | A | | | A | B | | A | A | A | | | A | A | A | |
| Sodium Thiosulfate | C | B | B | A | B | B | | B | A | A | A | A | A | A | | A | A | A | |
| Soybean Oil | B | C | A | | A | A | | A | C | A | | C | B | | | A | A | A | A |
| Starch | B | C | B | | A | A | | A | C | A | A | A | A | | | A | A | A | A |
| Steam (212°F) | A | A | A | A | A | B | | D | B | D | A | D | D | | | A | A | A | A |
| Stearic Acid | C | C | B | | B | B | A | B | B | A | A | B | A | A | | A | A | A | A |
| Styrene | A | A | A | | A | B | A | D | D | B | A | D | A | A | | A | A | A | |
| Sugar Liquids | A | B | A | | A | A | | A | B | A | | A | A | A | | A | A | A | A |
| Sugar, Syrups & Jam | B | | A | A | A | | | | | | | B | A | | | A | A | A | A |
| Sulfate, Black Liquor | C | C | B | A | B | B | | C | B | C | A | B | C | | | A | A | A | |
| Sulfate, Green Liquor | C | C | B | A | B | B | | C | | C | A | B | A | | | A | A | A | |
| Sulfate, White Liquor | C | C | B | B | D | C | | C | | C | A | B | D | | | A | A | A | |
| Sulfur | D | C | B | | A | B | | D | A | A | A | A | A | C | | A | A | A | A |
| Sulfur Chlorides | B | D | D | | A | B | | D | D | A | A | D | A | | | A | A | A | |
| Sulfur Dioxide, dry | B | B | A | A | B | B | A | D | A | D | A | D | A | A | | A | A | A | A |
| Sulfur Dioxide, wet | D | | A | C | B | A | B | D | A | D | A | B | D | | | A | A | A | A |
| Sulfur Hexafluoride | B | | A | | A | | | | | | C | B | A | | | A | A | A | |
| Sulfur, Molten | D | C | B | | A | D | B | D | C | A | | C | D | | | D | A | A | |
| Sulfur Trioxide | B | B | B | B | B | B | B | D | B | A | A | D | D | | | D | A | A | |
| Sulfur Trioxide, dry | B | B | B | B | B | B | B | D | B | A | A | D | A | A | | D | A | A | |
| Sulfuric Acid 0 to 77% | C | D | C | | B | B | | B | | A | A | B | D | D | A | A | A | A | B |
| Sulfuric Acid 100% | C | C | A | B | A | D | | D | C | B | A | D | D | D | A | D | A | D | D |
| Sulfurous Acid | D | D | B | | B | D | B | B | B | A | A | B | C | D | | A | A | A | A |
| Tall Oil | B | B | B | | B | B | A | B | D | A | | B | A | D | | A | A | A | |
| Tannic Acid (Tannin) | B | C | B | B | B | B | B | A | A | A | A | B | A | A | | A | A | A | A |
| Tanning Liquors | | | B | | B | | | B | | | | D | D | | | A | A | A | |
| Tar & Tar Oils | A | A | A | A | A | A | | B | D | A | A | C | A | | | A | A | A | |
| Tartaric Acid | B | D | A | A | A | B | B | A | B | A | A | B | A | | | A | A | A | A |
| Tetraethyl Lead | B | C | B | | B | A | | B | D | A | | B | A | | | A | A | A | |
| Toluol (Toluene) | A | A | A | | A | A | A | D | D | A | A | D | C | A | A | A | A | A | D |
| Tomato Juice | C | C | A | | A | B | | A | | A | | A | A | | | A | A | A | |
| Transformer Oil | B | A | A | | A | A | | A | D | A | | B | A | | | A | A | A | C |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®

Fluid Compatibility Table

| | Brass | Carbon Steel | 316 Stainless Steel | 17-4PH® | Carpenter 20® | Monel® | Hastelloy C® | Buna N (Nitrile) | EPDM/EPR | Viton® | Kalrez® | Neoprene | Delrin® | Nylon | Kel-F® | Grafoil® | Teflon® | Peek® | UHMWPE |
|----------------------|-------|--------------|---------------------|---------|---------------|--------|--------------|------------------|----------|--------|---------|----------|---------|-------|--------|----------|---------|-------|--------|
| Tributyl Phosphate | A | A | A | | A | A | | D | A | D | A | D | A | A | | A | A | A | |
| Trichlorethylene | B | B | B | A | B | B | A | C | D | A | B | D | A | A | C | A | A | A | D |
| Trichloroacetic Acid | B | | D | | B | B | A | B | B | C | C | D | D | | A | | A | A | C |
| Triethanolamine | | | B | | B | B | A | C | B | | A | B | A | | | A | A | A | C |
| Triethylamine | B | | B | | B | | A | B | | | A | B | C | | | | A | A | |
| Trisodium Phosphate | | | B | | B | | A | A | B | B | | A | A | | | A | A | A | A |
| Tung Oil | B | B | A | | A | C | A | A | D | A | | B | A | | | A | A | A | |
| Turpentine | B | B | B | A | B | B | A | A | D | A | A | D | A | A | | A | A | A | D |
| Urea | B | C | B | | B | B | A | C | B | D | A | B | A | | | A | A | A | A |
| Uric Acid | | | A | | A | | A | | | | A | | B | | | A | A | A | |
| Varnish | A | C | A | | A | A | A | B | D | A | A | D | A | | | A | A | A | |
| Vegetable Oils | B | B | A | | A | B | A | A | C | A | | C | A | | | A | A | A | |
| Vinegar | B | D | A | | A | B | A | B | B | C | | B | B | | | A | A | A | A |
| Vinyl Acetate | B | | B | | B | B | A | | A | | A | B | D | A | | A | A | A | |
| Water, Distilled | A | D | A | A | A | A | A | A | A | B | A | B | A | | | A | A | A | A |
| Water, Fresh | A | C | A | A | A | A | A | A | A | B | A | B | A | C | | A | A | A | A |
| Water, Acid Mine | D | D | B | B | | D | C | B | A | D | A | A | A | | | A | A | A | A |
| Waxes | A | A | A | | A | A | A | A | C | A | | B | A | | | A | A | A | |
| Whiskey & Wines | B | D | A | | A | A | A | A | A | A | | A | A | A | | A | A | A | A |
| Xylene (Xylo), dry | A | B | A | | A | A | A | D | D | A | A | D | A | A | A | A | A | A | D |
| Zinc Bromide | B | | B | | B | B | A | B | B | B | | B | A | | | A | A | A | |
| Zinc Hydrosulfite | C | A | A | | A | B | A | A | A | A | A | A | A | | | | A | A | |
| Zinc Sulfate | B | D | B | | A | B | A | A | A | A | A | A | A | | | A | A | A | A |

Ratings: A-Satisfactory B-Fair C-Poor D-Unsatisfactory Blank-No Information *Unsatisfactory with Reinforced Teflon®