

ENGINEERING

Chemical Resistance Chart

| CHEMICALS | PLASTICS | | ELASTOMERS | | | | | | ALLOYS | | | | | | | | | | |
|-----------------------------|--|---|-------------------|-------------------|-------|--------|------------------------------------|---|---------------------|---------------------|---------|-------------------------|---|---|---|---|---|---|---|
| | APPROX. SP. GR. AT 100% CONCENTRATION | POLYETHYLENE-CROSS LINKED (XLPE) POLYVINYLIDENE FLUORIDE (PVDF) POLYPROPYLENE (PP) CPVC PVC | POLYETHYLENE (PE) | POLYETHYLENE (PE) | RYTON | TEFLON | POLYSULFONE VINYLESTER EPOXY | BUNA N (NITRILE) NEOPRENE EPDM VITON | 304 STAINLESS STEEL | 316 STAINLESS STEEL | HYPALON | HASTELLOY C TITANIUM | | | | | | | |
| Acetyl Benzene | | | | | | | A | D | A | D | D | D | | | | | | | |
| Acetyl Bromide | | | | | A | | A | | | | | | | | | | | | |
| Acetyl Chloride | CH ₃ COCl | 1.1 | D | D | A | A | A | A | C | D | D | C | D | A | B | | | | |
| Acetyl Oxide | | | | | | | A | | D | B | B | C | D | | | | | | |
| Acetyl Propane | | | | | | | A | | D | B | D | D | D | | | | | | |
| Acetylene | HC•CH | | C | C | A | A | A | A | A | A | B | A | C | A | A | | | | |
| Acetylene Dichloride | | | | | | | A | | A | | D | D | D | | | | | | |
| Acetylene Tetrachloride | | | | | | | A | | A | D | D | D | D | | | | | | |
| Acid Mine Water | | | A | A | B | A | A | | A | | | | | | | | | | |
| Acrylic Acid | | | D | | | A | A | C | C | | | | | | | | | | |
| Acrylic Emulsions* | | | | | D | D | A | A | | | | | | | | | | | |
| Acrylonitrile | CH ₂ =CHCN | | D | D | B | A | A | A | A | C | D | D | D | C | C | C | A | B | |
| Adipic Acid Aqueous | | | A | A | A | A | A | A | A | A | A | A | A | A | | | | | |
| Air | | | A | A | A | A | | A | A | A | | | | | | | | | |
| Alcohol (See Ethyl Alcohol) | | | | | | | A | | B | A | A | A | A | | | | | | |
| Alcohol, Allyl | | | D | D | A | A | A | A | B | A | A | A | A | | | | | | |
| Alcohol, Amyl | C ₄ H ₉ CH ₂ OH | | C | B | A | A | A | A | A | A | C | A | A | A | A | A | A | A | |
| Alcohol, Benzyl | C ₆ H ₅ CH ₂ OH | | D | D | A | A | D | | A | | | A | C | C | D | A | A | A | |
| Alcohol, Butyl | C ₃ H ₇ CH ₂ OH | .806 | C | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | |
| Alcohol Diacetone | (CH ₃) ₂ COHCH ₂ COCH ₃ | | D | | C | B | | | A | A | | | D | A | C | C | A | A | A |
| Alcohol, Ether | | | | | | | | A | B | A | C | C | B | | | | | | |
| Alcohol, Ethyl | CH ₃ CH ₂ OH | | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| Alcohol, Hexyl | C ₅ H ₁₁ CH ₂ OH | | A | | A | | A | A | A | A | | | A | A | B | A | A | A | A |
| Alcohol, Isobutyl | C ₃ H ₇ CH | | | | A | A | | | A | A | B | A | A | A | B | A | A | A | A |
| Alcohol, Isopropyl | C ₂ H ₅ CH ₂ OH | | A | A | A | B | A | A | A | B | A | A | A | B | A | A | A | A | A |
| Alcohol, Methyl | CH ₃ OH | | A | A | A | A | A | A | A | A | A | D | A | A | A | A | A | A | A |
| Alcohol, Octyl | CH ₇ H ₁₅ CH ₂ OH | | | | | | | | A | | | | A | A | B | A | A | A | A |
| Alcohol, Polyvinyl | | | A | A | A | | | | A | A | C | A | A | | | | | | |
| Alcohol, Propargyl | | | A | | | | | | | | | | | | | | | | |
| Alcohol, Propyl | C ₂ H ₅ CH ₂ OH | | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| Aldehyde | | | | | | | | A | D | A | C | D | C | | | | | | |
| Alkanes | | | | | | | | A | A | D | A | D | | | | | | | |
| Alkazene | | | | | | | | A | B | D | D | D | | | | | | | |
| Allyl Aldehyde | | | | | | | | A | A | | B | B | | | | | | | |
| Allyl Bromide | | | | | | | | A | B | | D | D | D | | | | | | |
| Allyl Chloride | | | D | | A | A | A | B | A | D | B | D | D | D | D | A | A | A | A |
| Allyl Trichloride | | | | | | | | A | | | A | | D | D | | | | | |
| Alum | | | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| Alum, Ammonium | | | D | D | A | A | | A | A | | A | A | A | A | A | | | | |
| Alum, Chrome | | | A | A | A | | | A | A | | A | A | A | A | | | | | |
| Alum, Potassium | | | A | A | A | A | A | A | A | A | D | A | A | A | A | A | A | A | A |
| Aluminum, Acetate | | | | | | | | A | C | A | B | B | B | | | | | | |
| Aluminum, Ammonium Sulfate | | | | | A | A | | A | A | A | B | B | | | | | | | |
| Aluminum, Bromide | | | | | | | | A | A | A | A | A | A | | | | | | |
| Aluminum, Chloride | AlCl ₃ | 2.44 | A | A | A | A | A | A | A | A | A | A | A | A | A | C | C | C | A |

A = Excellent, No Effect B = Good, Minor Effect C = Fair, Data Not Conclusive, Testing Recommended D = Not Recommended



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|--------------------------------------|--|------|---------------------------------------|--------------|---------------|-------------------------|---------------------------|--------------|---------------|-------|--------|-------------|------------|-------|--------|----------|------|-------|---------|---------------------|---------------------|-------------|----------|--|
| | | | APPROX. SP. GR. AT 100% CONCENTRATION | POLYETHYLENE | POLYPROPYLENE | POLYVINYLIDENE FLUORIDE | POLYETHYLENE-CROSS LINKED | POLYETHYLENE | POLYPROPYLENE | RYTON | TEFLON | POLYSULFONE | VINYLESTER | EPOXY | BUNA N | NEOPRENE | EPDM | VITON | HYPALON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | HASTELLOY C | TITANIUM | |
| Ammonium, Phosphate Monobasic | (NH ₄) ₂ H ₂ PO ₄ | | | A | A | A | | | | | | | A | A | A | | | | C | A | A | | | |
| Ammonium, Phosphate Tribasic | (NH ₄) ₃ H ₂ PO ₄ | | | A | A | A | | | | | | | A | C | A | | | | A | A | A | | | |
| Ammonium, Salts | | | A | A | A | A | A | | A | A | | | C | A | A | A | | | D | | | | | |
| Ammonium, Sulfate | (NH ₄) ₂ SO ₄ | 1.8 | A | A | A | A | A | | A | A | A | | C | A | A | B | A | | B | A | A | | | |
| Ammonium, Sulfide | | | A | A | A | A | A | | A | A | | | C | A | | A | | | | | | | | |
| Ammonium, Thiocyanate | NH ₄ SCN | 1.3 | A | A | A | | A | | A | A | A | A | A | A | A | A | | | | | | | | |
| Ammonium, Thiosulfate | (NH ₄) ₂ S ₂ O ₃ | | | | | | | | | A | A | A | A | A | A | A | | | A | | A | | | |
| Amyl Acetate | CH ₃ CO ₂ C ₅ H ₁₁ | .86 | D | D | D | C | C | C | A | A | A | C | D | A | A | C | D | | A | A | D | A | | |
| Amyl Alcohol* (See Alcohol Amyl) | | 0.8 | C | B | A | | A | A | A | A | A | | C | A | A | A | | | A | | C | C | | |
| Amyl Borate | | | | | | | A | | | A | | | | A | D | A | A | | A | | | | | |
| Amyl Bromide | | | | | | | | | | A | | | | B | D | D | D | | | | | | | |
| Amyl Chloride | CH ₃ (CH ₂) ₃ CH ₂ Cl | 0.8 | D | D | D | A | D | D | A | A | A | C | | A | D | D | D | | | B | C | C | B | |
| Aniline* | C ₆ H ₅ NH ₂ | 1.02 | D | D | A | C | C | A | A | A | D | D | | B | B | D | D | | | A | A | B | C | |
| Aniline Chlorohydrate | | | A | | | | | | | | | | | | | | | | | | | | B | |
| Aniline Hydrochloride | | | C | D | A | A | | | A | A | | | | B | B | D | C | D | | | | | | |
| Anisole | C ₆ H ₅ OCH ₃ | 1.0 | | | | | | | | A | | | | | | | | | | | | | | |
| Anthraquinone Sulfonic Acid | | | A | A | A | A | | | | A | | | | A | | | | | | | | | | |
| Anti-Freeze | | | A | | A | | B | | A | A | A | | | A | A | A | A | | | A | A | | A | |
| Antichlor | | | | | | | | | | A | | | | A | A | A | A | A | | | | | | |
| Antimony Chloride | SbCl ₃ | 3.1 | | | A | A | A | A | | A | A | | | A | | D | D | | | | | | | |
| Antimony Pentachloride | | | | | | | | | | A | A | A | | | D | D | D | | | | | | | |
| Antimony Trichloride | | | A | | A | A | | | A | A | A | A | | A | A | | A | | | | | | | |
| Aqua Regia 80% HCL, 20% Nitric | | | D | D | D | A | B | D | A | A | D | D | | C | C | C | C | D | | D | D | B | C | |
| Argon | | | | | | | | | | A | | | | A | A | D | C | D | | | | | | |
| Arochlor 1248 | | | | | | | B | | | | A | | | A | | D | D | | | | | | | |
| Aromatic Hydrocarbons | | | D | D | | | C | | | | A | | | A | D | D | D | | | A | | | | |
| Arsenic Acid | H ₃ ASO ₄ | | A | A | A | A | A | | A | A | A | A | | A | A | B | B | | | B | A | | | |
| Arsenous Acid | | | | | | | | | | | A | A | | | | | | | | | | | | |
| Aryl Supfonic Acid | | | D | D | D | D | | | | | | | | | | | | | | | | | | |
| Asphalt | | | D | D | A | A | D | | A | A | A | | | A | D | B | B | C | | A | A | | | |
| Aviation Fuel (115-145 OCT) | | | | | | | | | B | A | | | | | | | | | | | | | | |
| Aviation Turbine Fuel | | | | | | | | | B | A | | | | | | | | | | | | | | |
| Baking Soda (See Sodium Bicarbonate) | | | | | | | | | | | A | | | A | A | A | A | A | | | | | | |
| Barium Acetate | | | | | | | | | | | A | A | | | | | | | | | | | | |
| Barium Carbonate | BaCO ₃ | 4.3 | A | A | A | A | A | A | A | A | A | A | | A | A | A | A | A | | B | A | A | A | |
| Barium Chloride | BaCl ₂ | 3.1 | A | A | A | A | A | A | A | A | A | | | A | A | A | A | | | B | B | A | A | |
| Barium Cyanide | | | | | | | B | | | | A | | | A | | C | | | | A | | | | |
| Barium Hydrate | | | | | | | | | | A | | | | A | A | A | A | | | | | | | |
| Barium Hydroxide | Ba(OH) ₂ | 2.2 | A | A | A | A | A | A | A | A | A | A | | A | A | A | A | | | A | C | B | B | |
| Barium Nitrate | BaNO ₃ | | A | A | A | | | | | | A | B | | A | | A | | | | A | | A | | |
| Barium Salts | | | A | | A | A | A | A | | | A | A | | A | A | A | A | | | A | | | | |

A = Excellent, No Effect B = Good, Minor Effect C = Fair, Data Not Conclusive, Testing Recommended D = Not Recommended



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|--|---------------------------------------|----------------------------------|--------------------------------|--------------------|------|-----|--|--------|--------|-------------|------------|-------|------------------|----------|------|-------|---------------------|---------|---------------------|-------------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | APPROX. SP. GR. AT 100% CONCENTRATION | POLYETHYLENE-CROSS LINKED (XLPE) | POLYVINYLIDENE FLUORIDE (PVDF) | POLYPROPYLENE (PP) | CPVC | PVC | POLYETHYLENE (PE) | RYTON | TEFLON | POLYSULFONE | VINYLESTER | EPOXY | BUNA N (NITRILE) | NEOPRENE | EPDM | VITON | 304 STAINLESS STEEL | HYPALON | 316 STAINLESS STEEL | HASTELLOY C | TITANIUM | | | | | | | | | | | | | | | | | | | | |
| Butyl Bromide | | | | | | | A | | | | | | B | | | | | D | D | | | | | | | | | | | | | | | | | | | | | | |
| Butyl Butyrate (Butyl Butanoate) | | | | | | | | | | | | | A | | | | | | C | B | D | D | D | | | | | | | | | | | | | | | | | | |
| Butyl Carbitol | | | | | | | | | | | | | A | | | | | | A | A | B | C | A | | | | | | | | | | | | | | | | | | |
| Butyl Cellosolve (Ethylene Glycol Monobutyl Ether) | | | | | | | A | A | | | | | A | A | C | D | | | D | B | C | C | B | | | A | | | | | | | | | | | | | | | |
| Butyl Chloride (Chlorobutane) | | | | | | | | A | | | | | A | | | | | | A | | | | D | D | | | | | | | | | | | | | | | | | |
| Butyl Diol | | | | | | | B | A | A | A | | | A | A | | | | | A | A | | | | | | | | | | | | | | | | | | | | | |
| Butyl Ether | | | | | | | D | D | D | A | | | A | | | | | | A | | | | D | D | C | B | C | | A | | | | | | | | | | | | |
| Butyl Formate | | | | | | | | | | | | | A | | | | | | | | | | | | D | D | | | | | | | | | | | | | | | |
| Butyl Hydrate | | | | | | | | | | | | | A | | | | | | | A | B | A | A | A | | | | | | | | | | | | | | | | | |
| Butyl Hydride (See Butane) | | | | | | | | | | | | | A | | | | | | | A | D | A | A | B | | | | | | | | | | | | | | | | | |
| Butyl Hydroxide | | | | | | | | | | | | | A | | | | | | | A | B | A | A | A | | | | | | | | | | | | | | | | | |
| Butyl Mercaptan | | | | | | | | | | | | | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Butyl Phenol | | | | | | | C | A | A | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Butyl Phthalate | | | | | | | D | D | A | A | | | | | | | | | | | | | | C | B | | D | D | | | | | | | | | | | | | |
| Butyl Stearate | | | | | | | | | | | | | A | | | | | | | A | B | D | B | D | | | | | | | | | | | | | | | | | |
| Butylene (Liquified Petroleum Gas) | | | | | | | A | A | D | A | B | | | | | | | | | A | A | A | | | | | | | | | A | A | | | | | | | | | |
| Butyraldehyde | | | | | | | | | | | | | | | | | | | | | | | | | A | A | | | | | | | | | | | | | | | |
| Butyric Acid | | | | | | | CH ₃ (CH ₂) ₂ CHO | | | | | | | | | | | | | | | | | | D | B | A | A | B | | | | | | | | | | | | |
| Butyric Acid | | | | | | | CH ₃ (CH ₂) ₂ COOH | | | | | | | | | | | | | | | | | | D | B | A | A | B | | | | | | | | | | | | |
| Cadmium Cyanide | | | | | | | | | | | | | | | | | | | | | | | | | A | A | | | | | | | | | | | | | | | |
| Cadmium Salts | | | | | | | | | | | | | | | | | | | | | | | | | A | A | | | | | | | | | | | | | | | |
| Caffeine Citrate | | | | | | | | | | | | | | | | | | | | | | | | | A | | | | | | | | | | | | | | | | |
| Calamine | | | | | | | 3.5 | | | | | | | | | | | | | | | | | | A | | B | B | A | | | | | | | | | | | | |
| Calcium Acetate | | | | | | | | | | | | | | | | | | | | | | | | | D | A | B | B | B | | | | | | | | | | | | |
| Calcium Bisulfide | | | | | | | | | | | | | | | | | | | | | | | | | A | D | A | A | | | | | B | A | A | | | | | | |
| Calcium Bisulfite | | | | | | | | | | | | | | | | | | | | | | | | | A | D | A | A | A | | | | | | | | | | | | |
| Calcium Carbonate | | | | | | | CaCO ₃ | 2.7 | | | | | | | | | | | | | | | | | A | A | A | A | A | | | | | A | A | A | A | | | | |
| Calcium Chlorate | | | | | | | Ca(ClO ₃) ₂ | 2.7 | | | | | | | | | | | | | | | | | A | A | A | A | A | | | | | A | C | | B | | | | |
| Calcium Chloride | | | | | | | CaCl ₂ | 2.1 | | | | | | | | | | | | | | | | | | A | A | A | A | A | A | A | | | B | B | A | A | | | |
| Calcium Cyanide | | | | | | | | | | | | | | | | | | | | | | | | | | A | A | A | A | | | | | | | | | | | | |
| Calcium Hydroxide | | | | | | | Ca(OH) ₂ | 2.3 | | | | | | | | | | | | | | | | | | A | A | A | A | A | | | | | A | A | A | A | | | |
| Calcium Hypochloride | | | | | | | | | | | | | | | | | | | | | | | | | | A | | | | | | | | | | | | | | | |
| Calcium Hypochlorite | | | | | | | Ca(ClO) ₂ | 2.3 | | | | | | | | | | | | | | | | | | A | A | D | B | A | | | | | D | A | B | A | | | |
| Calcium Nitrate | | | | | | | | 1.820 | | | | | | | | | | | | | | | | | | A | A | A | B | A | | | | | | | | | | | |
| Calcium Oxide | | | | | | | | | | | | | | | | | | | | | | | | | | A | A | A | A | | | | | | | | | | | | |
| Calcium Phosphate | | | | | | | CaHPO ₄ | 2.3 | | | | | | | | | | | | | | | | | | A | A | B | A | A | | | | | | | | | | | |
| Calcium Sulfate | | | | | | | CaSO ₄ | 2.9 | | | | | | | | | | | | | | | | | | A | A | B | A | A | | | | | A | A | A | B | | | |
| Calcium Sulfide | | | | | | | | | | | | | | | | | | | | | | | | | | A | A | B | A | A | | | | | | | | | | | |
| Calcium Thiosulfate | | | | | | | | 1.872 | | | | | | | | | | | | | | | | | | A | A | A | B | A | | | | | | | | | | | |
| Calgon (Sodium Hexametaphosphate) | | | | | | | (NaPO ₃) ₆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A | A | | | |
| Cane Sugar Liquors | | | | | | | | | | | | | | | | | | | | | | | | | | A | A | A | A | A | | | | | | | A | A | | | |
| Caprylic Acid (Octanic Acid) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | C | B | | | |
| Carbinol (See Alcohol, Methyl) | | | | | | | | | | | | | | | | | | | | | | | | | | A | | | | | | | | | | | D | A | A | A | A |

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| Cod Liver Oil | | | | | | | | | | | | A | A | A | B | B | B | | | | | |
| Coffee | | | | | | A | A | | | | A | A | A | A | A | A | | | | | A | A |
| Coke Oven Gas | | | | | | D | A | A | A | | | A | | | | | | | | | | |
| Cola Concentrates | | | | | | | | | | | | | | | | | | | | | | |
| Copper Acetate | | | | | | | | | | | | | | | | | | | | | | |
| Copper Borofluoride | | | | | | A | A | A | A | | | | | | | | | | | | | |
| Copper Carbonate | | | | | | A | A | A | A | | | | | | | | | | | | | |
| Copper Chloride | | CuCl ₂ •2H ₂ O | 3.4 | | | A | A | A | A | B | A | A | A | A | B | A | | | | | | |
| Copper Cyanide | | Cu(CN) ₂ | | | | A | A | A | A | B | A | A | A | B | A | | | | | | | |
| Copper Fluoborate | | CuBF ₆ •4H ₂ O | | | | A | | | | A | A | | | | | | | | | | | |
| Copper Fluoride | | CuF ₂ | 2.9 | | | A | A | A | A | | | | | | | | | | | | | |
| Copper Nitrate | | Cu(NO ₃) ₂ | 2.3 | | | A | A | A | A | B | A | A | A | A | A | | | | | | | |
| Copper Salts | | | | | | A | A | A | A | | | | | | | | | | | | | |
| Copper Sulfate | | CuSO ₄ •5H ₂ O | 2.3 | | | A | A | A | A | | | | | | | | | | | | | |
| Copper Sulfate 5% | | | | | | A | A | A | | B | A | A | A | | | | | | | | | |
| Corn Oil | | | | | | A | A | A | | | | | | | | | | | | | | |
| Corn Syrup | | | | | | A | A | A | A | | | | | | | | | | | | | |
| Cottonseed Oil* | | | | | | A | A | A | A | C | A | A | A | A | A | A | | | | | | |
| Cream | | | | | | A | A | | | | | | | | | | | | | | | |
| Creosol | | CH ₃ C ₆ H ₄ OH | 1.05 | | | C | D | C | C | C | D | A | A | A | | | | | | | | |
| Creosote | | | | | | D | D | | | | | | | | | | | | | | | |
| Cresols* | | C ₆ H ₄ OH•CH ₃ | | | | D | D | C | A | D | A | A | A | A | | | | | | | | |
| Cresylic Acid | | | | | | C | C | A | A | C | | | | | | | | | | | | |
| Croton Aldehyde | | | | | | D | D | A | C | | | | | | | | | | | | | |
| Crude Oil | | | | | | A | A | A | A | | | | | | | | | | | | | |
| Cryolite | | | | | | B | B | A | A | | | | | | | | | | | | | |
| Cupric Cyanide (See Copper Cyanide) | | | | | | | | | | | | | | | | | | | | | | |
| Cupric Fluoride | | | | | | A | A | A | A | A | | | | | | | | | | | | |
| Cupric Nitrate | | | | | | | | | | | | | | | | | | | | | | |
| Cupric Salts | | | | | | A | | | | A | A | | | | | | | | | | | |
| Cupric Sulfate (See Copper Sulfate) | | | | | | A | A | A | A | A | | | | | | | | | | | | |
| Cutting Oil | | | | | | | | | | | | | | | | | | | | | | |
| Cyanic Acid (Isocyanic Acid) | | HOCN | | | | | | | | | | | | | | | | | | | | |
| Cyclohexane | | | | | | A | A | D | A | C | | | | | | | | | | | | |
| Cyclohexanol | | C ₆ H ₁₁ OH | 0.94 | | | D | D | A | C | | | | | | | | | | | | | |
| Cyclohexanone* | | C ₆ H ₁₀ O | 0.95 | | | D | D | B | C | D | D | B | A | | | | | | | | | |
| Decalin | | | | | | D | D | A | A | | | | | | | | | | | | | |
| Decanal | | | | | | | | | | | | | | | | | | | | | | |
| Decane | | | | | | | | | | | | | | | | | | | | | | |
| Detergents* | | | | | | A | A | B | A | C | A | A | A | A | A | | | | | | | |
| Detergents, Heavy Duty | | | | | | A | A | A | A | | | | | | | | | | | | | |
| Developers | | | | | | | | | | | | | | | | | | | | | | |
| Dextrin | | | | | | A | A | A | A | A | A | | | | | | | | | | | |
| Dextrose | | | | | | A | A | A | A | A | A | | | | | | | | | | | |

A = Excellent, No Effect B = Good, Minor Effect C = Fair, Data Not Conclusive, Testing Recommended D = Not Recommended



ENGINEERING

Chemical Resistance Chart

| CHEMICALS | PLASTICS | | ELASTOMERS | | | | | ALLOYS | | | | | | | | | | | | |
|-------------------------------------|--|----------------------------------|------------------------------|--------------------|------|-----|-------------|------------|-------|--------|-------|------------------|----------|------|-------|---------------------|---------------------|---------|-------------|-------------|
| | APPROX. SP. GR. AT 100% CONCENTRATION | POLYETHYLENE-CROSS LINKED (XLPE) | POLYETHYLENE FLUORIDE (PVDF) | POLYPROPYLENE (PP) | CPVC | PVC | POLYSULFONE | VINYLESTER | EPOXY | TEFLON | RYTON | BUNA N (NITRILE) | NEOPRENE | EPDM | VITON | 304 STAINLESS STEEL | 316 STAINLESS STEEL | HYPALON | HASTELLOY C | HASTELLOY C |
| Diacetone Alcohol | | D | D | A | B | | | A | | | | D | A | C | D | B | | | | |
| Diallyl Phthalate | | | | | | | | A | A | | | | | | | | | | | |
| Diazo Salts | | A | A | A | A | A | A | A | | | | | | | | | | | | |
| Dibenzyl Ether | (C ₆ H ₅ CH ₂) ₂ O | | | A | | | | A | | | | | C | D | | | | | | |
| Dibutyl Amine | | | | A | | | | A | | | | C | D | D | C | C | | | | |
| Dibutyl Ether | CH ₃ (CH ₂) ₃ O(CH ₂) ₃ CH ₃ | | | A | | | | A | | | | C | C | D | C | C | | | | |
| Dibutyl Phthalate | | D | D | B | A | | C | A | A | A | | B | A | D | D | D | | | | |
| Dibutyl Sebacate | | B | | | A | | | | A | | | C | B | | | D | | | | |
| Dicalcium Phosphate | | | | | | | | | A | A | | | | | | | | | | |
| Dichlorethane | | D | | | | | D | | A | A | | C | | D | | | | A | A | A |
| Dichloro Benzene | | D | | | | | | | A | A | D | B | D | | D | D | | | | |
| Dichlorobenzene | | | | | A | | | | A | B | D | A | D | D | D | D | | | | |
| Dichloroethylene | ClHC | 1.25 | D | | D | A | | | A | | | A | D | D | D | D | | | | |
| Dichloroisopropyl Ether | | | | | A | | | | | | | | | | | | | | | |
| Dichloromethane | | | | | | | | | A | D | D | B | D | D | D | D | | | | |
| Diemethyl Phthalate | | | | | | | | | B | B | | | | | | | | | | |
| Diesel Fuel | | A | A | B | A | D | A | A | A | A | A | A | D | D | A | D | | A | A | |
| Diethanolamine | (HOCH ₂ CH ₂) ₂ NH | 1.1 | | | | | | | D | D | | | | | | | | | | |
| Diethyl Cellosolve | | | | | A | | | A | | | | | D | | | | | | | |
| Diethyl Ether | | D | D | B | A | | | A | A | B | D | D | C | C | C | D | C | | | |
| Diethyl Ketone | | | | | | | | | A | | D | | D | B | D | D | D | | | |
| Diethyl Oxide | | | | | | | | | A | | | | D | D | C | B | C | | | |
| Diethylamine | | D | D | A | C | | | A | A | C | D | D | B | B | B | C | | | A | |
| Diethylbenzene | | | | | | | | | A | | | | A | D | D | D | | | | |
| Diethylene Glycol* | O(CH ₂ CH ₂ OH) ₂ | | | A | A | B | A | | A | A | A | A | A | A | A | | | A | A | |
| Diethylenetriamine | | | | | A | | | | A | D | D | | | | | B | C | | | |
| Diglycolic Acid | | A | A | A | A | | A | A | A | | | | A | A | | A | | | | |
| Diisobutyl Ketone | | | | | A | | | | | | | | D | D | | | | | | |
| Diisobutylene | | | | | A | | | | A | | | | A | D | | A | | | A | |
| Diisooctyl Phthalate | | | | | | | | | A | | | | B | B | | D | | | | |
| Diisopropyl Ketone | (CH ₃) ₂ CHCOCH(CH ₃) ₂ | | | | B | | | | A | | | | D | B | | | | | | |
| Dimethyl Amine | | D | D | A | B | | | | A | | | | D | C | | B | D | | | |
| Dimethyl Benzene | | | | | | | | | A | | | | A | D | D | D | D | | | |
| Dimethyl Ether | | | | | | | | | A | | | | B | B | C | B | C | | | |
| Dimethyl Formamide | | D | D | A | A | | | D | A | D | D | | C | B | | B | D | | A | |
| Dimethyl Ketone | | | | | | | | | A | | | | D | A | C | D | C | | | |
| Dimethyl Phthalate | | | | | B | | | | A | C | C | | B | B | D | D | D | | A | |
| Dimethylamine | | D | D | A | D | | C | A | | D | D | | D | D | | | | | | |
| Dioctyl Phthalate | | D | D | D | A | D | D | A | A | | | A | | | | | | | A | |
| Dioxane | | D | D | B | D | | | D | A | | | | D | B | D | D | D | | | C |
| Dioxolane | 1.065 | | | | D | | | | | | | | D | D | | | | | | |
| Diphenyl | 1.0 | | | | | | | | A | | | | A | D | D | D | D | | | |
| Diphenyl Ether (See Diphenyl Oxide) | | | | | | | | | | | | | | | | | | | | |
| Diphenyl Oxide | | | | | | | | | A | B | | | A | D | D | D | | | A | |
| Dipropylene Glycol | 1.252 | | | | | | | | A | A | A | | A | | | A | A | | | |

A = Excellent, No Effect B = Good, Minor Effect C = Fair, Data Not Conclusive, Testing Recommended D = Not Recommended



ENGINEERING

Chemical Resistance Chart

| | PLASTICS | | | | ELASTOMERS | | | | ALLOYS | | | | | | | | | | | |
|---------------------------------------|--|----------------------------------|------------------------------|--------------------|------------|-----|-------------|------------|--------|--------|-------|------------------|----------|------|-------|---------------------|---------|---------------------|-------------|-------------|
| | APPROX. SP. GR. AT 100% CONCENTRATION | POLYETHYLENE-CROSS LINKED (XLPE) | POLYETHYLENE FLUORIDE (PVDF) | POLYPROPYLENE (PP) | CPVC | PVC | POLYSULFONE | VINYLESTER | EPOXY | TEFLON | RYTON | BUNA N (NITRILE) | NEOPRENE | EPDM | VITON | 316 STAINLESS STEEL | HYPALON | 304 STAINLESS STEEL | HASTELLOY C | HASTELLOY C |
| Disodium Methylarsenate | | | | | | | | | | | | | | | | | | | | |
| Disodium Phosphate | | A | A | A | A | A | A | A | A | A | | | A | | A | | A | | | |
| Distilled Water | | A | A | A | A | | | | | | | | | | | | | | | |
| Divinylbenzene | | D | D | D | D | | | | A | | | | | | | | | | | |
| Dolomite | | | | | | | | | A | | | | A | B | A | A | A | | | |
| Dowtherm (Ethylene Glycol) | | | | | | | | | A | | | | | | | D | | | | |
| Dry Cleaning Solvents | | | | | | | | | A | | | | A | D | C | A | D | | | |
| Epichlorohydrin | CH ₂ CHCH ₂ Cl | D | D | A | A | | | | A | | | | D | D | | | | | A | |
| Epsom Salts | | A | | A | A | | | | A | A | | | A | A | B | A | A | | A | A |
| Esters | | D | D | C | A | | | | A | | | | | | | | | | | B |
| Ethane | | | | | | | D | | A | A | | | A | D | B | A | B | | A | A |
| Ethanol (See Alcohol, Ethyl) | | | | | | | | | | | | | | | | | | | | |
| Ethanolamine | HOCH ₂ CH ₂ NH ₂ | 1.02 | D | D | D | D | | | A | A | A | | A | | D | A | D | B | | A |
| Ethers | | | D | D | C | | C | | A | A | A | | | C | C | D | D | D | | A |
| Ethyl Acetate | CH ₃ COO•C ₂ H ₅ | | D | D | C | A | C | D | A | A | B | D | | D | B | D | D | D | | A |
| Ethyl Acetoacetate | | | D | D | | A | | | A | A | | | | D | A | | D | | | B |
| Ethyl Acrylate | CH ₂ CHCOOC ₂ H ₅ | | D | D | D | A | | | B | A | | | | D | B | D | D | D | | |
| Ethyl Alcohol* | | 0.8 | A | A | A | A | D | A | A | A | A | | | B | A | A | A | A | | |
| Ethyl Benzene | | | | | | | | | A | | | | | A | D | D | D | D | | |
| Ethyl Bromide | | | | | | D | | D | D | | | | | | | | | | | |
| Ethyl Butyrate | | | | | | | | D | D | | | | | | | | | | | |
| Ethyl Cellosolve | | | | | | | | | | | | | | | | | | | B | D |
| Ethyl Chloride (Chloroethane) | CH ₃ CH ₂ Cl | 0.92 | D | D | D | A | D | D | A | A | D | D | | A | A | C | B | C | | A |
| Ethyl Ether | C ₂ H ₅ OC ₂ H ₅ | | D | D | B | A | D | D | | A | C | D | | C | D | D | D | D | | A |
| Ethyl Formate | | | | | | | | | | | | | | B | B | B | D | C | | |
| Ethyl Hexanol | | | | | | | A | | | | | | | A | A | B | B | A | | |
| Ethyl Sulfate | | | | | | | | | | | | | | A | A | | | | | |
| Ethylcellulose | | | | | | | | | | | | | | | | | | A | A | |
| Ethylene Bromide | | | D | D | C | A | | | C | A | | | | B | C | D | D | D | | |
| Ethylene Chloride | | | D | D | C | A | D | D | A | A | A | | | A | C | D | D | D | | A |
| Ethylene Chlorohydrin | | | D | D | A | A | | D | | A | B | B | | A | A | B | D | B | | |
| Ethylene Diamine | | | D | D | A | C | | | D | A | D | D | | D | A | A | A | B | | A |
| Ethylene Dichloride* (Dichloroethane) | CH ₂ Cl•CH ₂ •Cl | 1.25 | D | D | C | A | D | D | A | A | B | D | | A | D | D | D | D | | A |
| Ethylene Glycol* | HOCH ₂ •CH ₂ OH | 1.1155 | A | A | A | A | B | A | A | A | A | A | A | A | A | A | A | | | A |
| Ethylene Oxide | (CH ₂) ₂ O | 0.9 | D | D | D | A | A | A | D | A | A | | | D | D | D | D | D | | A |
| Extrin | | | A | A | A | A | | | | | | | | A | A | | | | | |
| Fatty Acids* | | | A | B | A | A | C | A | | | | | | A | D | B | B | D | | A |
| Ferric Acetate (Iron Acetate, Basic) | | | B | | | | | | | | | | | | | | | D | A | |
| Ferric Chloride, Anhydrous | FeCl ₃ | 2.9 | A | A | A | A | B | A | A | A | A | A | | A | A | B | B | B | | D |
| Ferric Hydroxide | | | A | A | A | | | | | | | | | C | A | | | | | |
| Ferric Nitrate | FeNO ₃ | 1.7 | A | A | A | A | B | A | A | A | A | A | | A | A | A | A | A | | B |
| Ferric Sulfate | Fe(SO ₄) ₃ | 3.1 | A | A | A | A | A | | A | | | | | A | A | A | B | A | | B |
| Ferrous Chloride | FeCL ₂ | 3.2 | A | A | A | A | B | A | A | A | A | A | | A | A | B | B | B | | D |
| Ferrous Nitrate | | | A | A | A | A | | | | | | | | A | A | B | A | B | | |

A = Excellent, No Effect B = Good, Minor Effect C = Fair, Data Not Conclusive, Testing Recommended D = Not Recommended



ENGINEERING

Chemical Resistance Chart

| CHEMICALS | APPROX. SP. GR. AT 100% CONCENTRATION | PLASTICS | | | | ELASTOMERS | | | | ALLOYS | | | |
|---------------------------------------|---|--|----------------------------------|-------------------|--------------------|------------------------------------|--------|-------|------|---|--|---------|-------------------------|
| | | POLYETHYLENE POLYVINYLIDENE FLUORIDE POLYPROPYLENE (PP) CPVC PVC | POLYETHYLENE-CROSS LINKED (XLPE) | POLYETHYLENE (PE) | POLYPROPYLENE (PP) | POLYSULFONE VINYLESTER EPOXY | TEFLON | RYTON | XLPE | BUNA N (NITRILE) NEOPRENE EPDM VITON | 304 STAINLESS STEEL 316 STAINLESS STEEL | HYPALON | HASTELLOY C TITANIUM |
| Green Liquor | | A | A | A | A | A | | | A | A | B | B | B |
| Helium | | | | | | A | | | A | A | A | A | A |
| Heptane* | CH ₃ (CH ₂) ₅ CH ₃ | A | A | B | A | D | | A | A | A | A | A | |
| Hexane* | CH ₃ (CH ₂) ₄ CH ₃ | 0.6594 | B | A | B | A | D | A | A | A | B | A | |
| Hexene | | 0.6734 | | | | | | | A | | | | |
| Hexyl Alcohol (Hexanol) | | | A | A | A | A | | | | A | B | | |
| Honey | | | A | | A | A | A | A | A | A | | | A |
| Hydraulic Oil | | | | | | | D | | A | A | A | | |
| Hydraulic Oil (Synthetic) | | | | | | | | | A | A | | | |
| Hydrazine | | 1.004 | D | D | D | D | A | | A | C | | | |
| Hydrobromic Acid | HBr | 48% = 1.5 | A | A | B | A | B | | A | B | B | | |
| Hydrobromic Acid 20% | | | A | A | A | A | | | A | B | | A | |
| Hydrobromic Acid 50% | | | A | A | B | A | A | A | | | | | |
| Hydrochloric Acid (Dry Gas) | HCl | | A | | | | | | A | A | | | |
| Hydrochloric Acid 10% | | | A | A | A | A | | | A | B | A | A | |
| Hydrochloric Acid 20% | | | A | A | A | A | A | C | A | B | A | A | |
| Hydrochloric Acid 25% | | | A | A | A | A | | | A | | | | |
| Hydrochloric Acid 37% (Muriatic Acid) | | 1.19 | A | | A | A | A | D | A | C | B | A | |
| Hydrocyanic Acid | HCN | | A | A | A | A | A | A | A | A | | | |
| Hydrocyanic Acid 10% | | | A | A | A | A | A | A | A | A | | | |
| Hydrofluoric Acid 10% | | | A | A | A | A | | | A | | | | |
| Hydrofluoric Acid 20% | HF•H ₂ O | | A | A | | C | A | A | A | B | D | | |
| Hydrofluoric Acid 30% | | | A | A | A | A | | | A | | | | |
| Hydrofluoric Acid 40% | | | B | D | A | A | | | A | | | | |
| Hydrofluoric Acid 50% | | | B | D | A | B | C | A | A | A | | C | |
| Hydrofluoric Acid 65% | | | | | | | | | A | | | | |
| Hydrofluoric Acid 75% | HF | 0.987 | C | C | A | A | D | A | C | A | | | |
| Hydrofluosilicic Acid | H ₂ SiF ₆ | | D | D | A | A | A | A | | A | A | | |
| Hydrofluosilicic Acid 20% | | | D | | A | | | | A | C | | | |
| Hydrogen | H | | A | A | A | A | A | A | A | A | | | |
| Hydrogen Chloride Gas Dry | | | | | A | A | A | | A | | | | |
| Hydrogen Cyanide | | | A | A | A | A | | | A | | | | |
| Hydrogen Fluoride | | | D | D | A | A | | | | | | | |
| Hydrogen Peroxide 05% | | | A | D | A | A | | | A | | | | |
| Hydrogen Peroxide 10% | | | A | A | A | A | A | | B | A | D | | |
| Hydrogen Peroxide 30% | | | A | D | C | | A | A | C | A | B | C | |
| Hydrogen Peroxide 50% | | | B | B | A | A | | B | A | A | | | |
| Hydrogen Peroxide 90% | | | D | D | D | A | | C | A | A | | | |
| Hydrogen Peroxide | H ₂ O ₂ | | A | | A | A | B | A | C | A | C | B | |
| Hydrogen Phosphide (See Phosphine) | | | D | A | A | A | A | A | | | | | C |
| Hydrogen Sulfide | H ₂ S | | A | | A | A | A | A | | A | A | A | |
| Hydrogen Sulfide (Aq. Sol.) | | 1.1895 | A | A | A | | A | A | A | A | A | A | |
| Hydrogen Sulfide (Dry) | | | A | A | A | A | A | A | A | A | A | A | |
| Hydroquinone | | | A | A | A | A | A | A | | A | | | |

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ENGINEERING

Chemical Resistance Chart

| | PLASTICS | | ELASTOMERS | | | | | ALLOYS | | | | | | | | | | |
|--|--|---|-------------------|----------------------------------|-------|--------|-------------|------------|-------|------------------|----------|------|-------|---------------------|---------------------|---------|-------------|-------------|
| | APPROX. SP. GR. AT 100% CONCENTRATION | POLYETHYLENE-CROSS LINKED (XLPE) POLYVINYLIDENE FLUORIDE (PVDF) POLYPROPYLENE (PP) PVC CPVC | POLYETHYLENE (PE) | POLYETHYLENE TEREPHTHALATE (PET) | RYTON | TEFLON | POLYSULFONE | VINYLESTER | EPOXY | BUNA N (NITRILE) | NEOPRENE | EPDM | VITON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | HYPALON | HASTELLOY C | HASTELLOY C |
| Hydroxyacetic Acid (Glycolic Acid) | | | A | A | | | | | A | A | A | | | | | | A | |
| Hydroxyacetic Acid 70% | HOCH ₂ COOH | | A | A | A | | | A | A | A | A | | | | | | B | |
| Hydroxylamine Sulfate | | | A | A | A | | | | A | | | | | | | | A | |
| Hypochlorous Acid | | | A | A | A | A | A | A | B | B | D | D | D | | | | D | |
| Ink* | | | | A | A | D | A | | | | | | | | | | A | A |
| Iodine Solution | I ₂ | | B | A | C | A | D | D | B | A | A | C | | | | | D | D |
| Isobutyl Alcohol (See Alcohol, Isobutyl) | (CH ₃) ₂ CHOH | 0.806 | | | | | | | A | A | | | | | | | | |
| Isooctane | (CH ₃) ₃ CCH ₂ CH(CH ₃) ₂ | 0.7 | A | A | A | A | | | A | | | A | | | | | A | |
| Isophorone | | | D | D | | | | | | | | | | | | | | |
| Isopropyl Acetate | | 0.9226 | | | | | B | | A | A | | | | | | | | B |
| Isopropyl Alcohol (See Alcohol, Isopropyl) | | | | | | | | | | | | | | | | | | |
| Isopropyl Chloride (See Chlorpropene) | | | | | | | | | | | | | | | | | | |
| Isopropyl Ether | | 0.723 | D | D | C | A | D | | A | | | | | | | | | A |
| Jet Fuel JP-3 | | | | | A | | D | | C | A | A | A | | | | | | A |
| Jet Fuel JP-4 | | | A | A | C | A | D | | C | A | A | A | | | | | | A |
| Jet Fuel JP-5 | | | A | A | C | A | D | | C | A | A | A | | | | | | A |
| Kerosene* | | 0.81 | A | A | A | A | D | D | B | A | A | A | | | | | | A |
| Ketones | | | D | D | A | A | D | | A | A | C | | | | | | | A |
| Kraft Liquor | | | A | A | A | A | | | | | | | | | | | | A |
| Lacquer | | | | | A | | D | | A | A | | | | | | | | A |
| Lacquer Thinner | | | C | | B | | | | A | | | | | | | | | A |
| Lactic Acid* (Milk Acid) | CH ₃ CHOHCOOH | 1.2 | A | A | A | A | B | A | A | A | A | A | A | | | | | A |
| Lard | | | A | A | A | A | B | | A | A | A | | | | | | | A |
| Lard Oil | | | A | A | A | A | | | A | | | | | | | | | A |
| Latex* | | | | | A | | A | A | A | B | B | | | | | | | A |
| Lauric Acid | | 0.833 | A | A | A | A | | | A | A | A | A | | | | | | A |
| Lauryl Chloride | C ₁₂ H ₂₅ Cl | | A | A | A | A | | | A | | | | | | | | | |
| Lead Acetate (Sugar of Lead) | Pb(C ₂ H ₃ O ₂) ₂ ·3H ₂ O | 2.5 | A | A | A | A | B | A | A | A | A | A | | | | | | A |
| Lead Chloride | PbCl ₂ | | A | A | A | A | | | A | | | | | | | | | A |
| Lead Nitrate | Pb(NO ₃) ₂ | | A | A | A | | | | A | A | A | | | | | | | A |
| Lead Sulfate | | | A | A | A | A | | | A | | | | | | | | | A |
| Lemon Oil | | | A | A | D | A | | | A | D | | | | | | | | |
| Levulinic Acid | | | | | | | | | | | | | | | | | | A |
| Ligroin (Benzine) | | | D | D | C | A | D | | | | | | | | | | | A |
| Lime (Calcium Oxide) | CaO | | A | A | | | A | | A | A | A | | | | | | | A |
| Lime-Sulfur Solution | | | A | A | A | A | | | | | | | | | | | | D |
| Linoleic Acid (Linolic Acid) | | 0.905 | B | A | A | A | | | A | A | | | | | | | | B |
| Linseed Oil (Flaxseed Oil) | | | A | A | A | A | D | A | A | A | A | A | A | | | | | B |
| Lithium Bromide | Li Br | | A | | | | | | A | | | | | | | | | A |
| Lithium Chloride | Li Cl | | | | | | | | | | | | | | | | | B |

A = Excellent, No Effect B = Good, Minor Effect C = Fair, Data Not Conclusive, Testing Recommended D = Not Recommended



ENGINEERING

Chemical Resistance Chart

| | PLASTICS | | | | ELASTOMERS | | | | ALLOYS | | | | | | | | | | | | | | |
|---|--|--------------|----------------------------------|--------------------------------|--------------------|-----|-------------|------------|--------|--------|-------|------------------|----------|------|-------|---------------------|---------|---------------------|-------------|-------------|---|---|---|
| | APPROX. SP. GR. AT 100% CONCENTRATION | POLYETHYLENE | POLYETHYLENE-CROSS LINKED (XLPE) | POLYVINYLIDENE FLUORIDE (PVDF) | POLYPROPYLENE (PP) | PVC | POLYSULFONE | VINYLESTER | EPOXY | TEFLON | RYTON | BUNA N (NITRILE) | NEOPRENE | EPDM | VITON | 304 STAINLESS STEEL | HYPALON | 316 STAINLESS STEEL | HASTELLOY C | HASTELLOY C | | | |
| LPG | | | | | | | | | | | | | | | | | | | | A | | | |
| Lubricants | | A | A | | | | | | A | A | A | | | | A | D | A | | A | A | A | | |
| Lubricating Oil | | A | A | A | A | | | | A | | | | | A | | | | | | | | | |
| Lye Solution (See Sodium Hydroxide & Potassium Hydroxide) | | | | | | | | | | | | | | | | | | | | | | | |
| Machine Oil | | A | A | A | A | | | | A | | | | | A | D | | | | | | | | |
| Magnesium Acetate | | | | | | | | | A | | | | | D | | D | A | | | | | | |
| Magnesium Carbonate | MgCO ₃ | 3.0 | A | A | A | A | B | A | A | A | A | B | | A | B | A | A | A | | A | A | B | |
| Magnesium Chloride | MgCl ₂ | 2.3 | A | A | A | A | B | A | A | A | A | A | | A | A | A | A | | B | B | A | A | |
| Magnesium Citrate | | | A | A | A | A | | | A | | | | | A | A | | | | | | | B | |
| Magnesium Hydroxide (Milk of Magnesia) | Mg(OH) ₂ | 2.36 | A | A | A | A | | | A | | | | | A | A | | | | | | | | |
| Magnesium Nitrate | Mn(NO ₃) ₂ •6H ₂ O | 2.03 | A | A | A | A | A | A | A | A | A | A | | A | B | B | A | A | | A | A | A | A |
| Magnesium Oxide | | | | | | | | | A | A | | | | A | A | A | A | | | A | A | | |
| Magnesium Sulfate (Epsom Salts) | MgSO ₄ | 2.6 | A | A | A | A | A | A | A | A | A | A | | A | C | A | A | A | | A | B | A | B |
| Maleic Acid | | | A | A | A | A | A | A | A | A | A | A | | A | C | B | D | C | | A | A | A | A |
| Maleic Anhydride | | | | | | | D | | | A | | | | A | D | D | | | | | | | A |
| Malic Acid (Apple Acid) | | | A | A | A | A | D | | A | A | A | A | | A | D | C | A | B | | A | A | A | A |
| Manganese Sulfate | | | A | A | A | | | | A | | | | | A | A | A | A | A | | | | | |
| Mash | | | | | | | | | | | | | | | | | | | | | | | |
| Mayonnaise | | | | | | | | | | | | | | | | | | | | | | | |
| Melamine (Triazane) | N•C(NH ₂)N•C(NH ₂)N•C(NH ₂)N•C(NH ₂) | | | | | | | | | | | | | | | | | | | | | | |
| Mercuric Chloride | HgCl ₂ | 5.4 | A | A | A | A | A | | A | A | A | A | | A | A | A | A | A | | D | D | A | B |
| Mercuric Cyanide | Hg(CN) ₂ | 4.0 | A | A | A | A | A | | A | A | A | | | A | B | B | A | A | | A | A | A | |
| Mercuric Nitrate | HgNO ₃ | 4.8 | | | | | | | A | | | | | A | A | A | | A | | | | | |
| Mercuric Sulfate | | | A | A | A | A | | | A | | | | | A | A | | A | | | | | | |
| Mercurous Chloride | | | | | | | | | | | | | | | | | | | | | | | |
| Mercurous Nitrate | | | A | A | A | A | A | | A | A | | | | A | A | | | | | | | | |
| Mercury (Quicksilver) | Hg | 13.59 | A | A | A | A | A | A | A | A | A | A | | A | A | A | A | A | | A | | B | A |
| Methacrylic Acid Glacial | | 1.015 | D | | | | | | | | | | | D | D | | | | | | | | |
| Methane (Methyl Hydride) | CH ₄ | | A | A | A | A | | | A | | | | | A | C | B | A | B | | | | | |
| Methane Sulfonic Acid | | | | | | | | | A | | | | | | | | | | | | | | |
| Methanol (See Alcohol, Methyl) | CH ₃ OH | 0.8 | | | | | | | A | | | | | A | | | | | | | | | |
| Methoxyethyl Oleate | | 0.898 | A | | | | | | | | | | | | | | | | | | | | |
| Methyl "Cellosolve" TM | | | D | D | A | A | | | A | | | | | D | B | D | D | | | | | | |
| Methyl Acetate | CH ₃ CO ₂ CH ₃ | 0.9244 | D | D | B | A | | | | | | | | D | B | C | D | C | | A | | A | |
| Methyl Acetone | | | | | | | D | | | | | | | D | D | D | | | | | | | |
| Methyl Acrylate | CH ₂ •CHOOCH ₃ | | | | | | | | A | A | | | | D | B | C | D | | | A | | | |
| Methyl Alcohol* | CH ₃ OH | | A | A | A | A | C | A | | A | A | | | C | A | | A | A | | | | | |
| Methyl Benzene (See Toluene) | | | | | | | | | | | | | | | | | | | | | | | |
| Methyl Bromide | CH ₃ Br | 1.732 | D | D | D | A | D | C | A | A | | | | A | C | D | D | | | | | | |

A = Excellent, No Effect B = Good, Minor Effect C = Fair, Data Not Conclusive, Testing Recommended D = Not Recommended



ENGINEERING

Chemical Resistance Chart

| CHEMICALS | APPROX. SP. GR. AT 100% CONCENTRATION | PLASTICS | | | | ELASTOMERS | | | | ALLOYS | | | | | | | | | | | | |
|--|---------------------------------------|--------------|---------------|-------------------------|---------------------------|------------|-------|-------------|------------|--------|-------|--------|----------|------|---------------------|---------------------|---------|-------------|----------|---|---|---|
| | | POLYETHYLENE | POLYPROPYLENE | POLYVINYLIDENE FLUORIDE | POLYETHYLENE-CROSS LINKED | TEFLON | RYTON | POLYSULFONE | VINYLESTER | EPOXY | VITON | BUNA N | NEOPRENE | EPDM | 304 STAINLESS STEEL | 316 STAINLESS STEEL | HYPALON | HASTELLOY C | TITANIUM | | | |
| Oils, Silicone | | | | | A | | | | A | | | | A | A | A | | A | A | | | | |
| Oils, Vegetable* | | | A | A | A | A | | | A | | | | A | | A | | | | | | | |
| Oleic Acid (Red Oil) | 0.895 | A | B | A | A | D | D | A | A | A | A | | B | C | B | B | B | A | A | B | | |
| Oleum | | D | D | D | D | | D | D | A | D | D | | D | D | D | D | | A | | | | |
| Orange Extract | | | | | A | A | A | A | | A | | | | | | | | | | | | |
| Oxalic Acid (COOH) ₂ | 1.7 | A | A | A | A | A | A | A | A | A | A | A | A | A | B | B | A | | B | A | C | B |
| Oxygen Gas | | A | A | A | A | | | | A | A | | | A | A | A | C | A | | | | | |
| Ozone | | B | B | C | A | C | C | A | | | A | | A | A | B | D | A | | | | | |
| Palmitic Acid 10% | | A | A | A | A | B | | A | A | A | A | | A | B | C | A | C | | | | | |
| Palmitic Acid 70% | | C | A | A | | B | | A | A | A | A | | A | B | C | A | C | | | | | |
| Paraffin | | A | A | A | A | | | | A | A | | | B | D | B | A | D | | A | A | | |
| Pentane (Amyl Hydride) | | | | | | | | | A | A | | | A | D | B | A | B | | C | C | | B |
| Peracetic Acid 40% | 1.15 | D | D | D | A | | | | A | | | | A | B | | | | | | | | |
| Perchloric Acid 10% | | A | A | A | A | A | A | A | A | D | | | A | B | D | D | D | | | | | |
| Perchloric Acid 70% | 1.764 | D | D | A | A | | | D | A | D | | | A | A | D | D | D | | | | | |
| Perchloroethylene (CCl ₂) ₂ | 1.6 | D | D | C | A | | | A | A | B | D | | A | D | D | D | D | | A | A | | |
| Perphosphate | | A | A | A | | | | | A | | | | A | A | | | | | | | | |
| Petrolatum (Petroleum Jelly) | | A | A | A | A | | | | A | A | | | A | C | B | A | B | | A | | | |
| Petroleum (Sour)* | | A | | | | | | | | | | | A | D | | A | | | | | | |
| Petroleum Oils | | A | A | B | A | | | | A | | | | A | D | C | A | C | | | | | |
| Phenols 100% (Carbolic Acid) C ₆ H ₅ OH | 1.1 | D | A | A | A | B | D | A | A | D | D | | B | C | D | D | C | | A | A | C | A |
| Phenylacetate | 1.073 | | | | | | | | A | | | | D | B | D | D | C | | | | | |
| Phenylhydrazine | | D | D | D | A | | | | A | | | | C | C | D | D | D | | | | | |
| Phenylhydrazine Hydrochloride | | A | A | D | A | | | | | | | | | | | | | | | | | |
| Phosgene Gas | | D | D | C | A | | | A | | | | | D | A | C | D | | | | | | |
| Phosgene Liquid | 1.392 | D | D | D | C | | | A | | | | | D | A | C | D | | | | | | |
| Phosphoric Acid 10% | | A | A | A | A | | A | A | A | C | A | | A | A | C | C | A | | A | D | B | A |
| Phosphoric Acid 20% | | A | A | A | A | | | | A | | | A | A | A | B | C | A | | | | | |
| Phosphoric Acid 40% | | A | | A | | B | | A | A | A | | | A | B | D | D | | | A | B | A | A |
| Phosphoric Acid 50% | | A | A | A | A | A | A | A | A | C | A | A | A | A | C | C | B | | B | D | B | A |
| Phosphoric Acid 80% | | A | A | A | A | | | | A | | | | A | A | | | | | | | | |
| Phosphoric Acid 85% | 1.8 | A | A | A | B | B | A | A | A | C | A | | A | A | C | C | B | | B | D | C | A |
| Phosphoric Acid 100% | | A | | A | | C | A | A | A | C | A | A | A | B | D | D | C | | B | C | B | A |
| Phosphoric Acid Crude H ₃ PO ₄ | 1.834 | | | | | C | | A | A | C | A | | A | B | D | C | A | | C | D | C | A |
| Phosphorus Oxychloride | 1.675 | | | | | | | | A | | D | | | D | | D | | | | | | |
| Phosphorus Red | | A | A | A | A | | | A | A | | | | | | | | | | | | | |
| Phosphorus Trichloride PCI ₃ | 1.574 | D | D | C | A | A | | D | A | | | | C | C | D | D | | | A | A | | |
| Phosphorus Yellow | | A | A | A | A | | A | A | A | | | | | | C | | | | | | | |
| Photographic Developer | | A | A | A | A | B | A | | | A | | | A | | A | A | | | A | C | A | A |
| Photographic Solutions* | | A | A | A | A | A | A | A | A | | | | A | | A | | | | | | | |
| Phthalic Acid (Terephthalic Acid) | | D | D | D | A | | | | A | | | | A | A | | | | | | | | |
| Phthalic Anhydride C ₆ H ₄ (CO) ₂ O | | D | D | D | | | | | A | B | A | | A | A | | C | | | B | A | | A |
| Pickle Brine | | A | A | A | A | | | | | | | | | | | A | | A | | | | |
| Pickling Solutions* | | A | A | A | A | | | | A | | | | B | C | D | D | D | | | | | |

A = Excellent, No Effect B = Good, Minor Effect C = Fair, Data Not Conclusive, Testing Recommended D = Not Recommended



ENGINEERING

Chemical Resistance Chart

| CHEMICALS | APPROX. SP. GR. AT 100% CONCENTRATION | | PLASTICS | | | | ELASTOMERS | | | | ALLOYS | | | | | | | | | | | | | | |
|---|---------------------------------------|---------------|----------------------------------|-------------------|--------------------------------|--------------------|------------|------|-------------|------------|--------|--------|-------|------------------|----------|------|-------|---------------------|---------------------|---------|-------------|-------------|----------|---|---|
| | | | POLYETHYLENE-CROSS LINKED (XLPE) | POLYETHYLENE (PE) | POLYVINYLIDENE FLUORIDE (PVDF) | POLYPROPYLENE (PP) | PVC | CPVC | POLYSULFONE | VINYLESTER | EPOXY | TEFLON | RYTON | BUNA N (NITRILE) | NEOPRENE | EPDM | VITON | 304 STAINLESS STEEL | 316 STAINLESS STEEL | HYPALON | HASTELLOY C | HASTELLOY C | TITANIUM | | |
| Picric Acid | | | C | C | A | A | C | A | A | A | C | | | A | C | A | B | A | | A | A | | A | A | |
| Pine Oil | | | | | | | | | | A | B | B | | A | D | C | B | D | | | | | | | |
| Plating Solutions, Antimony | | | A | A | A | | | | | A | B | | | A | | A | | | | | | A | A | A | |
| Plating Solution, Arsenic | | | A | A | A | | | | | | B | | | A | | A | | | | | | A | A | A | |
| Plating Solutions, Brass | | | A | A | A | A | A | A | A | A | B | | | A | A | A | | | | | | A | A | A | |
| Plating Solutions, Bronze | | | A | A | A | | | | | A | B | | | A | | A | | | | | | A | A | A | |
| Plating Solutions, Cadmium | | | A | A | C | A | A | A | A | A | B | | | A | A | C | A | | | | | A | A | A | |
| Plating Solutions, Chrome | | | A | A | C | A | A | | | B | A | D | | C | B | C | D | D | | | | C | A | A | |
| Plating Solutions, Copper | | | A | A | A | A | A | A | A | A | D | | | A | A | A | | | | | | D | A | A | |
| Plating Solutions, Gold | | | A | A | C | A | A | A | A | A | | | | A | A | A | | | | | | C | A | A | |
| Plating Solutions, Indium | | | A | A | A | | A | A | | A | A | | | A | | A | | | | | | C | A | A | |
| Plating Solutions, Iron | | | D | A | C | | | | | A | D | | | A | | C | A | | | | | C | A | D | |
| Plating Solutions, Lead | | | A | A | A | A | A | A | A | A | | | | A | A | C | B | | | | | C | D | A | |
| Plating Solutions, Nickel | | | A | A | A | A | A | A | A | A | D | | | A | A | A | | | | | | C | A | A | |
| Plating Solutions, Rhodium | | | A | A | A | A | A | A | A | A | | | | A | A | B | A | | | | | D | D | D | |
| Plating Solutions, Silver | | | A | A | A | A | A | A | A | A | | | | A | A | A | | | | | | A | A | A | |
| Plating Solutions, Tin | | | A | A | A | A | A | A | A | A | | | | A | A | C | B | | | | | C | D | A | |
| Plating Solutions, Zinc | | | A | A | A | A | A | A | A | A | | | | A | A | A | | | | | | D | A | D | |
| Polyethylene Glycol | | | A | A | A | A | | | | A | | | | A | A | | A | A | | | | | | | |
| Polyvinyl Acetate Emulsion | | | | | | | A | | | A | C | | | A | A | B | | B | | | | | | | |
| Polyvinyl Alcohol | | | A | A | A | A | | | | A | B | C | | A | A | | | | | | | | | | |
| Potash (Potassium Carbonate) | | K_2CO_3 | A | A | A | A | B | | | A | A | | | C | B | D | C | A | | | | A | A | A | |
| Potassium Acetate | | $KC_2H_3O_2$ | 1.6 | A | A | A | A | | | A | | | | D | A | B | B | B | | | | | | | |
| Potassium Alum (Aluminum Potassium Sulfate) | | | A | A | A | A | | | | A | | | | A | A | A | A | A | | | | | | | |
| Potassium Bicarbonate | | $KHCO_3$ | 2.2 | A | A | A | A | A | A | A | A | B | | A | A | A | A | A | | | | B | A | A | B |
| Potassium Bichromate | | | A | A | A | A | | | | A | A | A | | A | A | B | A | A | | | | | | | |
| Potassium Bisulfate | | $KHSO_4$ | | A | A | A | A | | | A | | | | A | A | A | A | A | | | | | | | |
| Potassium Bromate | | $KBrO_3$ | 3.3 | A | A | A | A | A | A | A | | | | A | A | A | A | | | | | | | | |
| Potassium Bromide | | KBr | 2.7 | A | A | A | A | B | A | B | A | A | A | A | A | A | A | A | | | | B | A | A | B |
| Potassium Carbonate (Potash) | | K_2CO_3 | 2.4 | A | A | A | A | B | A | A | A | C | C | A | A | A | B | A | | | | A | A | A | B |
| Potassium Chlorate, Aqueous | | $KClO_3$ | 2.3 | A | A | A | A | B | A | A | A | A | | A | A | C | A | | | | | A | A | A | B |
| Potassium Chloride | | KCl | 2.0 | A | A | A | A | B | A | A | A | A | A | A | A | A | A | A | | | | A | C | A | B |
| Potassium Chromate | | K_2CrO_4 | 2.7 | A | A | A | A | B | A | A | A | C | | A | A | A | A | C | | | | B | | | B |
| Potassium Coppercyanide | | | | A | A | A | A | | | A | | | | A | A | | | | | | | | | | |
| Potassium Cyanide | | KCN | 1.5 | A | A | A | A | B | A | A | A | B | A | B | A | A | A | A | | | | B | A | A | A |
| Potassium Dichromate | | $K_2Cr_2O_7$ | 2.7 | A | A | A | A | A | A | A | A | B | B | A | A | A | A | | | | | A | | A | B |
| Potassium Ferricyanide | | | | A | A | A | A | A | A | A | A | A | A | A | A | A | A | | | | | | | | |
| Potassium Ferrocyanide | | $K_4Fe(CN)_6$ | 1.9 | A | A | A | A | A | A | A | A | B | A | A | A | | C | | | | | A | | | B |
| Potassium Fluoride | | KF | 2.5 | A | A | A | A | A | A | A | | | | A | A | A | A | A | | | | | | | |
| Potassium Hydroxide* (Caustic Potash) | | KOH | 2.0 | A | A | A | A | C | A | A | A | B | B | C | B | B | C | A | | | | C | C | C | B |
| Potassium Hydroxide* 25% | | | | | | | | | | | | | | C | B | | | | | | | | | | A |
| Potassium Hydroxide* 50% | | | | A | A | A | B | | | | | | | | | | | | | | | | | | B |
| Potassium Hypochlorite | | | | A | A | A | A | | | A | A | | | A | A | D | D | B | | | | | | | |

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ENGINEERING

Chemical Resistance Chart

| | | PLASTICS | | | | ELASTOMERS | | | | ALLOYS | | | | | | | | | | | | | | |
|--|--|---------------------------------------|--------------|-------------------------|---------------|------------|----------------------------------|-------------------|-------|--------|-------------|------------|-------|------------------|----------|------|-------|---------------------|---------------------|---------|-------------|-------------|----------|---|
| | | APPROX. SP. GR. AT 100% CONCENTRATION | POLYETHYLENE | POLYVINYLIDENE FLUORIDE | POLYPROPYLENE | PVC | POLYETHYLENE-CROSS LINKED (XLPE) | POLYETHYLENE (PE) | RYTON | TEFLON | POLYSULFONE | VINYLESTER | EPOXY | BUNA N (NITRILE) | NEOPRENE | EPDM | VITON | 304 STAINLESS STEEL | 316 STAINLESS STEEL | HYPALON | HASTELLOY C | HASTELLOY C | TITANIUM | |
| Sodium Phosphate Alkaline (Mono Basic) | NaH ₂ PO ₄ | | A | A | A | A | | | | A | | | A | A | | A | | | | | | | | B |
| Sodium Phosphate Neutral (Tri Basic) | Na ₃ PO ₄ | | A | A | A | A | | | | A | | | A | A | | A | | | | | | | | |
| Sodium Polyphosphate | | | | | | | | | | A | A | | A | A | D | B | B | | | | A | A | A | A |
| Sodium Silicate | NaSiO ₃ | | A | A | A | A | | | | A | A | | A | A | A | A | A | | | | B | | A | |
| Sodium Sulfate | Na ₂ SO ₄ | 2.7 | A | A | A | A | A | A | A | A | A | A | A | A | A | A | | | | | B | A | A | B |
| Sodium Sulfide | Na ₂ S | 1.4 | A | A | A | A | A | A | A | A | A | B | A | A | A | C | | | | | B | A | A | B |
| Sodium Sulfite | Na ₂ SO ₃ | 2.6 | A | A | A | A | A | A | A | A | A | A | A | A | A | A | | | | | C | C | A | A |
| Sodium Tetraborate | | | A | | | | | | | A | | | A | | | A | | | | A | | | | |
| Sodium Thiocyanate | NaSCN | | A | A | A | A | | | | A | B | B | A | A | | | | | | | | | | |
| Sodium Thiosulfate | Na ₂ S ₂ O ₃ •5H ₂ O | 1.7 | A | A | A | A | | | | A | A | B | A | A | A | | B | | | | A | | | |
| Sorghum | | | | | | | | | | A | | | A | | | A | A | | | A | A | | | |
| Soy Sauce | | | | | | | | | | A | | | A | | | A | A | | | A | A | | | |
| Soybean Oil | | | A | A | A | A | | | | A | | | A | A | A | A | | | | | A | A | | |
| Stannic Chloride | SnCl ₄ | 2.3 | A | A | A | A | B | | A | A | A | A | A | A | C | A | A | | | | A | | A | |
| Stannic Salts | | | A | | A | A | A | A | | A | A | | A | A | A | | | | | | | | | |
| Stannous Chloride (Tin Salts) | | | A | A | A | A | A | | A | A | A | A | B | B | C | C | A | | | | C | D | A | A |
| Starch (Amylum) | C ₆ H ₁₀ O ₅ | 1.513 | A | A | A | | B | | | A | A | | A | A | A | A | A | | | | A | A | | |
| Stearic Acid* | CH ₃ (CH ₂) ₁₆ COOH | | A | A | B | A | C | A | A | A | A | A | A | C | C | B | C | | | | B | A | A | A |
| Stoddard Solvent | | | D | D | C | A | D | | A | A | | | A | D | D | B | | | | | A | A | A | A |
| Strontium Carbonate | SrCO ₃ | | | | | | | | | A | A | | | | | | | | | | | | | |
| Styrene | | | | | | | A | | | A | C | | C | D | D | D | D | | | | A | A | | |
| Succinic Acid (Butanedioic Acid) | CO ₂ H(CH ₂) ₂ CO ₂ H | | A | A | A | A | | | | A | | | A | A | | | | | | | | | | |
| Sugar Solutions | | | | | | | A | | | A | A | | A | | B | A | A | | | | A | A | | A |
| Sulfamic Acid | HSO ₃ NH ₂ | | D | D | D | D | | | A | | | | | | | | | | | | | | | |
| Sulfate Liquors | | | A | A | A | A | | | | | | A | A | A | C | A | A | | | | C | C | | A |
| Sulfated Detergents | | | A | A | A | A | | | | | | | | | | | | | | | | | | A |
| Sulfur 10% | | | A | | A | | B | | A | A | A | | A | D | D | C | | | | | C | D | A | A |
| Sulfur Dioxide | | | D | | D | | C | | A | A | C | | C | A | B | D | | | | | A | A | A | B |
| Sulfite Liquor | | | A | A | A | A | | | | A | B | A | A | A | C | B | | | | | | | | |
| Sulfur | | | A | A | D | A | B | A | A | A | | | A | C | B | C | A | | | | | | | |
| Sulfur Chloride | S ₂ Cl ₂ | 1.690 | A | A | C | A | A | | D | A | C | D | A | D | D | D | A | | | | D | D | | |
| Sulfur Dioxide Dry | SO ₂ | | A | A | A | A | | | C | A | | | A | A | D | D | D | | | | B | A | | B |
| Sulfur Dioxide Wet | | | C | A | A | A | B | | A | A | D | A | A | A | C | D | C | | | | | | | |
| Sulfur Slurries | | | A | A | A | A | | | | | | | | | | | | | | | | | | |
| Sulfur Trioxide Dry | SO ₃ | | C | C | D | D | | | C | B | A | B | C | C | C | C | C | | | | C | | | |
| Sulfuric Acid 10% | | | A | A | A | A | B | | A | A | A | | A | B | C | C | B | | | | C | D | A | A |
| Sulfuric Acid 30% | | | A | A | A | A | A | | A | A | B | B | A | A | A | C | A | | | | D | D | C | B |
| Sulfuric Acid 50% | | 1.8 | A | A | A | A | A | | D | A | B | A | A | A | B | C | C | B | | | D | D | C | B |
| Sulfuric Acid 60% | | | A | A | A | B | B | | A | A | C | C | A | A | B | D | D | | | | D | | C | B |
| Sulfuric Acid 70% | | | A | A | C | A | B | | A | A | C | C | A | A | D | C | | | | | D | | C | B |
| Sulfuric Acid 80% | | | D | A | A | A | C | | A | A | D | | A | A | D | C | A | | | | D | | D | A |
| Sulfuric Acid 90% | | | D | A | C | A | D | | A | A | D | D | A | A | D | C | | | | | D | | D | A |
| Sulfuric Acid 95% | | | D | C | D | A | D | | A | D | A | D | D | A | D | D | D | C | | | D | A | D | A |

A = Excellent, No Effect B = Good, Minor Effect C = Fair, Data Not Conclusive, Testing Recommended D = Not Recommended



ENGINEERING

Chemical Resistance Chart

| CHEMICALS | APPROX. SP. GR. AT 100% CONCENTRATION | PLASTICS | | | ELASTOMERS | | | | | ALLOYS | | | | | | | | | | | | |
|---------------------------------------|---|--------------|-------------------------|---------------|------------|---------------------|-------------------|-------|--------|--------|-------------|------------|------------------|----------|------|-------|---------------------|---------------------|---------|-------------|----------|---|
| | | POLYETHYLENE | POLYVINYLIDENE FLUORIDE | POLYPROPYLENE | PVC | CROSS LINKED (XLPE) | POLYETHYLENE (PE) | RYTON | TEFLON | EPOXY | POLYSULFONE | VINYLESTER | BUNA N (NITRILE) | NEOPRENE | EPDM | VITON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | HYPALON | HASTELLOY C | TITANIUM | |
| Sulfuric Acid 98%* | H ₂ SO ₄ | 1.84 | D | D | D | A | D | D | B | | | D | D | D | | | | D | | | | |
| Sulfuric Acid 100% | H ₂ SO ₄ | | D | D | D | C | | | C | B | D | D | C | D | D | D | D | C | | D | B | |
| Sulfurous Acid | H ₂ SO ₃ | 1.03 | A | A | A | A | B | A | A | A | A | A | A | C | D | D | | B | C | A | B | |
| Sulfuryl Chloride | | 1.667 | A | | | | | | A | A | | | A | | | | | | | | | |
| Syrup | | | A | | A | | | | A | A | | | A | | B | A | | A | | A | | |
| Tall Oil | | | A | A | A | A | | | A | A | D | A | A | D | B | A | C | | | | | |
| Tallow | | 0.86 | | | A | A | B | A | | A | A | | A | A | B | A | B | | A | A | | |
| Tannic Acid* | C ₇₆ H ₅₂ O ₄₆ | | A | A | A | A | C | A | A | A | A | A | A | B | A | C | A | C | A | A | B | |
| Tanning Liquors | | | A | A | A | A | | | A | A | A | | A | B | A | C | | A | A | A | A | |
| Tar | | | D | D | B | A | | | | A | | | A | D | | C | | | | | | |
| Tartaric Acid (Dihydrxysuccinic Acid) | C ₄ H ₆ O ₆ | 1.8 | A | A | A | A | B | A | A | A | A | A | A | B | B | C | A | B | A | A | B | |
| Tertiary Butyl Alcohol | | | A | A | A | A | | | | A | | | A | B | | | | | | | | |
| Tetrachlorethane | (Cl ₂ HC) ₂ | | D | | A | | | | | A | A | | A | D | | D | | A | | A | A | |
| Tetrachloroethane | | | | | | A | | | | A | | | D | A | D | | | | | | | |
| Tetraethyl Lead | Pb(C ₂ H ₅) ₄ | | B | A | A | A | | | A | A | C | | B | D | | C | | | | | | |
| Tetrahydrofuran* | | | D | D | B | B | D | D | A | A | | | D | D | D | D | | A | A | | | |
| Tetralin | C ₁₀ H ₁₂ | | D | D | D | A | | | | A | | | A | D | D | D | D | | | | | |
| Thionyl Chloride | SOCl ₂ | 1.638 | D | D | D | D | D | | D | A | D | D | | | | | | | | | | |
| Thread Cutting Oils | | | A | A | A | A | | | | A | | | | D | | | | | | | | |
| Titanium Tetrachloride | | | D | D | D | D | | C | A | A | | | A | D | D | C | D | | | | | |
| Titanous Sulfate | | 1.47 | A | A | A | A | | | | A | | | | | | | | | | | | |
| Toluene* | CH ₃ C ₆ H ₅ | 0.9 | D | D | C | A | D | D | D | A | B | D | D | B | D | | | A | A | | | |
| TolueneToluol | C ₇ H ₈ | | D | D | C | B | D | | A | A | A | | C | D | D | D | D | A | A | A | A | |
| Tomato Juice | | | A | A | C | A | | | C | A | A | | | A | A | A | | A | A | | | |
| Toxaphene-Xylene | | | D | D | D | A | | | | | | | | | | | | | | | | |
| Transformer Oil | | | A | A | A | A | C | A | B | A | A | A | | A | D | B | A | D | | | | |
| Tributyl Phosphate | (C ₄ H ₉) ₃ PO ₄ | | D | D | C | A | | | A | A | | | D | D | A | D | D | D | | | | |
| Trichloroacetic Acid | CCl ₃ COOH | 1.6 | A | A | C | A | | | D | A | | | | D | D | D | D | D | D | | | |
| Trichloroethane | C ₂ H ₃ Cl ₃ | | | | | | | | | A | A | | | A | D | D | D | | A | C | A | A |
| Trichloroethylene | ClCH=CCl ₂ | 1.1 | D | D | B | A | D | D | D | A | C | D | D | A | D | D | C | D | A | C | B | |
| Trichloropropane | | 1.3888 | | | | | | | | A | A | C | | A | C | A | | A | | | | |
| Tricresyl Phosphate | | | D | | | | | | A | A | A | | | B | A | D | D | | A | | B | A |
| Triethanolamine | | | B | | C | C | | | | | B | | | D | A | | | | | | | |
| Triethyl Phosphate | | | A | A | A | A | | | D | A | | | | A | A | | | | A | A | | |
| Triethylamine | | | A | A | D | C | | | A | | C | | | A | | C | A | | | | | |
| Trimethylpropane | | | A | A | A | A | | | | A | | | | | | | | | | | | |
| Trisodium Phosphate | | | A | A | A | A | A | A | C | A | A | B | | A | A | A | A | A | A | A | | |
| Turbine Oil | | | A | A | B | | | | | A | | | | A | D | D | B | D | | | | |
| Turpentine* | C ₁₀ H ₁₆ | 0.9 | C | A | B | A | D | D | A | A | B | | C | A | C | D | C | D | A | A | | A |
| Urea* | CO(NH ₂) ₂ | 1.3 | A | A | A | A | C | A | A | A | A | A | | A | A | A | C | A | | | | |
| Urine | | | A | A | A | A | A | A | A | A | A | | | A | A | D | A | | A | A | | |
| Vanilla Extract* | | | | | A | | C | A | | A | | | | | | | | | | | | |
| Varnish | | | | | A | A | | | | A | A | | | A | D | D | B | D | | A | A | |
| Vaseline | | | A | A | A | A | | | | A | | | | A | D | B | A | B | | | | |
| Vegetable Oil | | | A | A | A | A | | | | A | | | | A | A | D | A | | A | | | |

A = Excellent, No Effect B = Good, Minor Effect C = Fair, Data Not Conclusive, Testing Recommended D = Not Recommended



ENGINEERING

Chemical Resistance Chart

| CHEMICALS | PLASTICS | | ELASTOMERS | | | | | | | ALLOYS | | | | | | | | | | | | |
|---------------------|---------------------------------------|---|-------------------|-------------------|-------|--------|-------|-------------|------------|--------|------------------|----------|------|---------------------|---------------------|---------|-------------|-------------|---|---|---|---|
| | APPROX. SP. GR. AT 100% CONCENTRATION | POLYETHYLENE-CROSS LINKED (XLPE) POLYVINYLIDENE FLUORIDE (PVDF) POLYPROPYLENE (PP) CPVC PVC | POLYETHYLENE (PE) | POLYETHYLENE (PE) | RYTON | TEFLON | EPOXY | POLYSULFONE | VINYLESTER | VITON | BUNA N (NITRILE) | NEOPRENE | EPDM | 316 STAINLESS STEEL | 304 STAINLESS STEEL | HYPALON | HASTELLOY C | HASTELLOY C | | | | |
| Vinegar | | | A | A | A | A | A | A | A | A | B | | A | A | B | C | B | | A | A | A | A |
| Vinyl Acetate | | 0.9345 | D | D | | A | | | | A | B | D | | D | B | C | D | C | | | | |
| Vinyl Chloride | | | | | | | | | | A | | | | A | C | A | D | D | | | | |
| Vinyl Ether | | | | | | | | | | A | | | | D | | B | B | | | | | |
| Water Acid Mine | | | A | A | A | A | | A | A | A | | | | A | A | C | A | A | | A | A | |
| Water Delonized | | | A | A | A | A | A | A | C | A | A | A | | A | A | A | A | A | | A | A | |
| Water Demineralized | | | A | A | A | A | | | | A | | A | A | A | A | A | | | | | | |
| Water Distilled | | | A | A | A | A | | A | A | A | A | A | | A | A | C | A | A | | A | A | |
| Water Potable | | | A | A | A | A | | | | A | A | A | A | A | A | A | A | | | A | A | |
| Water Salt | | | A | A | A | A | | | | A | A | A | A | A | A | A | A | | | A | A | |
| Water Sewage | | | A | A | A | A | | | | A | A | | | A | A | | A | | | | | |
| Weed Killers | | | | | | | | | | | | | | A | | C | B | | | A | A | |
| Whey | | | | | | | | | | | | | | A | | A | | | | A | A | |
| Whiskey | | 0.9 | A | A | A | A | C | A | A | A | A | | | A | A | A | A | A | | A | A | |
| White Acid | | | | | | A | | | | | A | | | | | | | | | | | |
| White Liquor | | | A | A | A | A | | | | A | A | C | B | | A | A | A | B | | A | A | A |
| Wines | | | A | A | A | A | A | A | A | A | A | | | A | A | A | A | A | | A | A | |
| Xenon | | | | | | | | | | | | | | A | A | A | A | A | | | | |
| Xylene* | | 0.9 | D | D | D | A | C | C | B | A | C | D | D | B | D | D | D | D | | A | A | A |
| Xylol | | | D | D | D | A | | | | | A | D | | A | D | D | C | D | | | | |
| Yeast | | | | | | A | A | A | A | | A | A | | A | A | A | | | | | | |
| Zeolite | | | | | | | | | | | | | | A | | | | | | | | |
| Zinc Acetate | | | A | A | A | A | | | | | A | A | A | C | A | B | B | C | | | | |
| Zinc Carbonate | | | | | | | | | | | | | | A | | | A | A | | | | |
| Zinc Chloride | | | | | | | | | | | | | | A | | | | | | | | |
| Zinc Chromate | | | | | | | | | | | | | | A | | | | | | | | |
| Zinc Nitrate | | | A | A | A | A | | | | | A | | | A | A | | | | | | | |
| Zinc Phosphate | | | | | | | | | | | | | | | | | | | | | | |
| Zinc Salts | | | | | | A | A | A | A | | A | A | | A | A | A | A | A | | | | |
| Zinc Sulfate | | | A | A | A | A | B | A | A | | A | A | A | A | A | A | A | A | | A | A | A |
| Zirlite | | | | | | | | | | | | | | A | | | | | | | | |
| | | | | | | | | | | | | | | C | A | A | B | B | | | | |

*These chemicals can cause stress-cracking of LDPE and HDPE under certain conditions. Rotomolded tanks are essentially stress-free and are not usually affected by stress-cracking chemicals. However, these chemicals may affect the service life of tanks with welded fittings or seams, and unsupported tanks operating under heavy loads. Use XLPE tanks which have excellent environmental stress-crack resistance.

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A = Excellent, No Effect B = Good, Minor Effect C = Fair, Data Not Conclusive, Testing Recommended D = Not Recommended

