

Chemical Resistance Reference Chart for HDPE (High Density Polyethylene)

The following summary table is a guide to the compatibility of Liquids with High Density Polyethylene. The table does not imply compliance with the requirements found in 49CFR.

Chemical Resistance Classification:

- E – 30 days of constant exposure to reagent causes no damage
- G – Little or no damage after 30 days of constant exposure to the reagent
- F – Some effect after 7 days exposure to the reagent. Solvents may cause swelling and permeation losses
- N – Not recommended for continuous use

[First letter of each pair applies to conditions at 20°C (68°F); The second to those at 50°C (122°F).]

Acetaldehyde – GF	Diethyl Ketone – GG	Nitric Acid, 1-10% – EE
Acetamide, Sat. – EE	Diethyl Malonate – EE	Nitric Acid, 50% – GN
Acetic Acid, 5% – EE	Diethylamine – FN	Nitric Acid, 70% – GN
Acetic Acid, 50% – EE	Diethylene Glycol – EE	Nitrobenzene – FN
Acetic Anhydride – FF	Diethylene Glycol Ethyl Ether – EE	Nitromethane – FN
Acetone – EE	Dimethyl Acetamide – EE	n-Octane – EE
Acetonitrile – EE	Dimethyl Formamide – EE	Orange Oil – GF
Acrylonitrile – EE	Dimethylsulfoxide – EE	Ozone – EE
Adipic Acid – EE	1,4-Dioxane – GG	Perchloric Acid – GN
Alinine – EE	Dipropylene Glycol – EE	Perchloroethylene – NN
Allyl Alcohol – EE	Ether – FN	Phenol, Crystals – GF
Aluminum Hydroxide – EE	Ethyl Acetate – EE	Phenol, Liquid – NN
Aluminum Salts – EE	Ethyl Alcohol (Absolute) – EE	Phosphoric Acid, 1-5% – EE
Amino Acids – EE	Ethyl Alcohol (40%) – EE	Phosphoric Acid, 85% – EE
Ammonia – EE	Ethyle Benzene – GF	Picric Acid – NN
Ammonium Acetate, Sat. – EE	Ethyl Benzoate – GG	Pine Oil – EG
Ammonium Glycolate – EE	Ethyl Butyrate – GF	Potassium Hydroxide, 1% – EE
Ammonium Hydroxide, 5% – EE	Ethyl Chloride, Liquid – FF	Potassium Hydroxide, Conc. – EE
Ammonium Hydroxide, 30% – EE	Ethyl Cyanoacetate – EE	Propane Gas – FN
Ammonium Oxalate – EE	Ethyl Lactate – EE	Propionic Acid – EF
Ammonium Salts – EE	Ethylene Chloride – GF	Propylene Glycol – EE
n-Amyl Acetate – EG	Ethylene Glycol – EE	Propylene Oxide – EE
Amyl Chloride – FN	Ethylene Glycol Methyl Ether – EE	Resorcinol, Saturated – EE
Aniline – EG	Ethylene Oxide – GF	Resorcinol, 5% -- EE
Aqua Regis – NN	Fatty Acids – EE	Sallylaldehyde – EE
Benzaldehyde – EE	Fluorides – EE	Sallylic Acid, Powder – EE
Benzene – GG	Flourine – GN	Sallylic Acid, Saturated – EE
Benzoic Acid, Sat. – EE	Formaldehyde, 10% – EE	Salt Solutions, Metallic – EE
Benzyl Acetate – EE	Formaldehyde, 40% – EE	Silicone Oil – EE
Benzyl Alcohol – FN	Formic Acid, 3% – EE	Silver Acetate – EE
Bromine – FN	Formic Acid, 50% – EE	Silver Nitrate – EE
Bromobenzine – FN	Formic Acid, 100% – EE	Skydrol LD4 – EG
Bromoform – NN	Freon TF – EG	Sodium Acetate, Saturated – EE
Butadiene – FN	Fuel Oil – GF	Sodium Hydroxide, 1% – EE
Butyl Chloride – NN	Gasoline – GG	Sodium Hydroxide, 100% – EE
n-Butyl Acetate – EG	Glacial Acetic Acid – EE	Sodium HypoChlorite, 15% – EE
n-Butyl Alcohol – EE	Glutaraidehyde – EE	Stearic Acid, Crystals – EE
sec-Butyl Alcohol – EE	Glycerine – EE	Sulphuric Acid, 1-6% – EE
tert-Butyl Alcohol – EE	n-Heptane – GF	Sulphuric Acid, 20% – EE
Butyric Acid – FN	Hexane – GF	Sulphuric Acid, 60% – EE
Calcium Hydroxide, Conc. – EE	Hydrazine – NN	Sulphuric Acid, 98% – GG
Calcium Hydroxide, Sat. – EE	Hydrochloric Acid, 5% – EE	Sulphur Dioxide, Liquid – FN

Carbazole – EE	Hydrochloric Acid, 20% – EE	Sulphur Dioxide, Wet or Dry – EE
Carbon Disulfide – NN	Hydrochloric Acid, 35% – EE	Sulphur Salts – GF
Carbon Tetrachloride – GF	Hydrofluoric Acid, 4% – EE	Tararic Acid – EE
Cedarwood Oil – FN	Hydrofluoric Acid, 48% – EE	Tetrahydrofuran – GF
Cellosolve Acetate – EE	Hydrogen Peroxide, 3% – EE	Thionyl Chloride – NN
Chlorobenzene – FN	Hydrogen Peroxide, 30% – EE	Toluene – GG
Chlorine, 10% in Air – EF	Hydrogen Peroxide, 90% – EE	Tributyl Citrate – EG
Chlorine, 10% (Moist) – GF	Iodine Crystals – NN	Trichloroacetic Acid – FF
Chloroacetic Acid – EE	Isobutyl Alcohol – EE	1,2,4-Trichlorobenzene – NN
p-Chloroacetophenone – EE	Isopropyl Acetate – EG	Trichloroethylene – FN
Chloroform – GF	Isopropyl Alcohol – EE	Triethylene Glycol – EE
Chromic Acid, 10% – EE	Isopropyl Benzene – GE	2,2,4-Trimethylpentane – FN
Chromic Acid, 50% – EE	Isopropyl Ether – NN	Tripropylene Glycol – EE
Cinnamon Oil – FN	Jet Fuel – FN	Tris Buffer, Solution – EG
Citric Acid, 10% – EE	Kerosene – GG	Turpentine – GG
Cresol – FN	Lacquer Thinner – FN	Undecyl Alcohol – EG
Cyclohexane – FN	Lactic Acid, 3% – EE	Urea – EE
Cyclohexanone – FN	Lactic Acid, 85% I – EE	Vinylidene Chloride – GF
Cyclopentane – FN	Mercury – EE	Xylene – GF
DeCalin – EG	2-Methoxyrthanol – EE	Zinc Stearate – EE
n-Decane – FN	Methoxyethyl Oleate – EE	
Diacetone Alcohol – EE	Methyl Acetate – FF	
o-Dichlorobenzine – FF	Methyl Alcohol – EE	
p-Dichlorobenzine – GF	Methyl Ethyl Ketone – EE	
1,2-Dichloroethane – NN	Methyl-y-butyl Ether – FN	
2,4-Dichlorophenol – NN	Methylene Chloride – GF	
Diethyl Benzene – FN	Mineral Oil – EE	
Diethyl Ether – FN	Mineral Spirits – FN	