



Technical
Chemical Resistance
Terms of Sale



Technical

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Chemical Resistance

+ = Tensile Strength @ Yield and Elongation @ Break Unchanged to 60 °C (140 °F)
 - = No Data Available

Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELRIN	316L STAINLESS
Ammonium Nitrate	A	A1	A1	-	A	A	A2	A
Ammonium Persulfate	A	A2	D	-	A	A1	D	B
Ammonium Phosphate:								
Dibasic	-	A2	C1	A2	A	A	B2	C
Monobasic	-	A	B	-	A	-	B	C
Tribasic	-	C	B	-	A	-	B	B
Ammonium Sulfate	A	A1	A1	A2	A	A	B1	B
Ammonium Thiosulfate	-	A	-	-	-	-	B	A
Amyl Alcohol	A	B2	A1	B1	B1	A	A	A
Aqua Regia 80% HCL-20% HNO ₃	D	B1	D	D	B1	A2	D	D
Asphalt	-	A1	A	D	B1	A	B2	A
Barium Hydroxide	-	B2	A1	D	B	A	D	B
Barium Sulfate	B	B2	A1	D	B1	A	B2	B1
Barium Sulfide	A	B2	A1	-	B	A	A	B2
Beer	A	A2	A1	A2	A1	A	A1	A
Benzaldehyde	B	A1	A1	D	D	A2	A	B
Benzene	D	D	A1	D	D	A2	A1	B
Benzene Sulfonic Acid	A	A1	D	D	D	-	-	B
Benzoic Acid	A	A1	D	B1	B1	A	B	B
Benzyl Chloride	-	-	A2	-	C1	-	A	B1
Bleach	-	-	A	-	D	A	D	A
Borax (Sodium Borate)	A	A2	A	-	B	A	B	A
Boric Acid	A	A2	B	-	A	A	A	A1
Bromine	D	D	D	C1	D	A	D	D
Butadiene	D	D	C1	D	C	A	A	A1
Butane	-	C1	A2	D	A1	A	A	A2
Butanol (Butyl Alcohol)	-	B2	B1	B1	A1	A	A	A1
Butyl Amine	-	C1	A2	D	B1	A1	C1	A
Butyl Ether	-	-	A2	-	D	A1	D	A1
Butylene	-	B1	B1	D	-	A	A	A
Butyric Acid	D	D	C1	D	B1	A	A	B2
Calcium Carbonate	+	B1	A	C2	A	A	A	B

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Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELRIN	316L STAINLESS
Ammonium Nitrate	A	A1	A1	-	A	A	A2	A
Ammonium Persulfate	A	A2	D	-	A	A1	D	B
Ammonium Phosphate:								
Dibasic	-	A2	C1	A2	A	A	B2	C
Monobasic	-	A	B	-	A	-	B	C
Tribasic	-	C	B	-	A	-	B	B
Ammonium Sulfate	A	A1	A1	A2	A	A	B1	B
Ammonium Thiosulfate	-	A	-	-	-	-	B	A
Amyl Alcohol	A	B2	A1	B1	B1	A	A	A
Aqua Regia 80% HCL-20% HNO ₃	D	B1	D	D	B1	A2	D	D
Asphalt	-	A1	A	D	B1	A	B2	A
Barium Hydroxide	-	B2	A1	D	B	A	D	B
Barium Sulfate	B	B2	A1	D	B1	A	B2	B1
Barium Sulfide	A	B2	A1	-	B	A	A	B2
Beer	A	A2	A1	A2	A1	A	A1	A
Benzaldehyde	B	A1	A1	D	D	A2	A	B
Benzene	D	D	A1	D	D	A2	A1	B
Benzene Sulfonic Acid	A	A1	D	D	D	-	-	B
Benzoic Acid	A	A1	D	B1	B1	A	B	B
Benzyl Chloride	-	-	A2	-	C1	-	A	B1
Bleach	-	-	A	-	D	A	D	A
Borax (Sodium Borate)	A	A2	A	-	B	A	B	A
Boric Acid	A	A2	B	-	A	A	A	A1
Bromine	D	D	D	C1	D	A	D	D
Butadiene	D	D	C1	D	C	A	A	A1
Butane	-	C1	A2	D	A1	A	A	A2
Butanol (Butyl Alcohol)	-	B2	B1	B1	A1	A	A	A1
Butyl Amine	-	C1	A2	D	B1	A1	C1	A
Butyl Ether	-	-	A2	-	D	A1	D	A1
Butylene	-	B1	B1	D	-	A	A	A
Butyric Acid	D	D	C1	D	B1	A	A	B2
Calcium Carbonate	+	B1	A	C2	A	A	A	B

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Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELRIN	316L STAINLESS
Calcium Chloride 30% in water	A	B2	A1	—	A2	A	D	B2
Calcium Hydroxide 10%	A	+	A	—	A	A	A	B
Calcium Hydroxide (saturated)	A	—	A	—	A	A	—	B
Calcium Hypochlorite 30%	A	+	—	—	A	A	—	B
Calcium Nitrate	B	A1	A1	A2	A2	A2	D	B2
Calcium Oxide	+	B1	B	—	A	A	A	A
Calcium Sulfate	+	B1	D	A2	A	A	D	B
Carbolic Acid (Phenol)	—	D	D	D	B	A1	D	B
Carbon Dioxide (dry)	+	A1	A1	—	A2	A	A	A1
Carbon Monoxide	+	A2	A1	—	A	B	A	A
Carbonated Water	—	A	A	—	B	—	A	A
Carbonic Acid	B	B2	A1	A1	A	A	B1	A
Chlorine Water	C	B1	C1	—	D	B	D	C
Chlorine, Anhydrous Liquid	C	D	D	C	D	A1	A1	C
Chlorine (dry)	B	D	D	—	D	A	D	B
Chloroacetic Acid	A	D	D	D	C1	A1	D	A1
Chlorobenzene (mono)	D	C1	D	D	C1	A1	D	B
Chlorobromomethane	—	A	C	—	A	—	—	—
Chlorosulfonic Acid	D	D	D	C1	D	D	D	B2
Citric Acid	A	D	A1	A1	A	A	B1	A2
Citric Oils	B	—	—	—	A	—	B	A
Clorox® (bleach)	—	—	A	—	D	A	—	—
Coffee	+	+	A	—	A	—	A	A
Copper Chloride	+	+	D	—	A	A	A	D
Copper Sulfate 5%	A	A2	D	A1	A	A	D	B
Cresols	D	C1	D	D	D	A2	D	A
Cyclohexane	D	B1	A	B	D	A	A1	A
Cyclohexanone	B	D	A	D	D	D	A	A2
Detergents	A	+	A1	A1	A	A	A1	A1
Dextrin	A	+	—	—	A	A	—	B
Diacetone Alcohol	A	A	A1	D	A1	D	—	B
Dichloroethane	C	C1	A1	D	D	A	A1	B

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Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELRIN	316L STAINLESS
Diesel Fuel	D	C1	D	A2	A1	A	A	A1
Diethyl Ether	D	—	A1	D	A1	A1	—	B2
Diethylamine	D	D	A	D	A1	D	B	A
Disodium Phosphate	A	—	—	—	A	A	—	A
Ethane	+	—	D	—	D	A	A1	A1
Ethanol	A	B	A1	B2	A	A	A1	A
Ethanolamine	—	—	A	—	D	C1	D	A
Ether	D	D	A	—	D	B1	—	A
Ethyl Acetate	A	A	A2	D	A1	D	A	B
Ethyl Benzoate	B	C2	—	D	B1	D	—	—
Ethyl Chloride	C	C1	A1	D	D	A	A1	A
Ethyl Ether	D	D	A1	—	D	A2	A1	B
Ethylene Glycol	A	A2	A	B1	A	A	B	B
Ethylene Oxide	B	A	A1	C1	D	A	D	B
Fatty Acids	A	D	A1	B1	A	A	A	A
Ferric Chloride	D	A1	A	A2	A	A	D	D
Ferric Nitrate	+	A2	A1	A1	A	A	D	B
Ferric Sulfate	+	A2	A1	A1	A	A	D	A
Ferrous Sulfate	+	A2	D	A1	A	A	D	B
Formaldehyde:								
Formaldehyde 40%	A	D	A	A1	A	A	A2	A
Formaldehyde 100%	A	B	D	A2	C	A	A	A
Formic Acid	A	D	D	A1	A1	A	A2	A1
Fruit Juice	+	A	A	—	B	A	D	A
Fuel Oils	C	B	A1	B1	A	B	A	A
Furfural	A	D	B	D	D	B2	A	B
Gallic Acid	A	A	A	—	A	A1	—	B
Gasoline (high aromatic)	B	A	A	A	A	A	B	A
Gasoline (unleaded)	B	—	A2	A2	C1	A	A	A2
Glucose	A	A2	A	A1	A	A	A	A
Glue P.V.A.	A	A1	A1	—	—	—	A	A2
Glycerine	A	A1	A1	A2	A	A	A	A

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A Excellent (no effect)
B Good (minor effect)
C Fair (moderate effect)
D Poor (severe effect)

(1) Satisfactory to 22 °C 72 °F
(2) Satisfactory to 48 °C 120 °F

Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELRIN	316L STAINLESS
Glycolic Acid < 70%	+	+	-	-	A	B	A	A
Heptane	B	B1	A	B	C2	A	A	A
Hexane	C	D	B	D	B1	A	A	A
Honey	+	+	A	A1	A	A	A	A
Hydraulic Oil (petroleum)	A	C	A1	-	D	A	B	A
Hydraulic Oil (synthetic)	A	A	A1	-	D	A	-	A
Hydrazine	D	+	-	D	C	A	B	A
Hydrochloric Acid 20%	A	A2	D	B1	B2	A	C	D
Hydrochloric Acid 100%	D	+	D	D	B1	A	D	D
Hydrofluoric Acid								
Hydrofluoric Acid < 50%	A	A1	D	D	A2	A	D	D
Hydrofluoric Acid 75%	B	C1	D	D	C1	A	D	D
Hydrofluoric Acid 100%	D	-	D	D	C1	A	D	B1
Hydrofluosilicic Acid 20%	B	B2	D	-	A	A	B	B1
Hydrofluosilicic Acid 100%	C	B1	D	-	A	A1	A	D
Hydrogen Gas	A	A2	A2	A2	A	A	-	A
Hydrogen Peroxide								
Hydrogen Peroxide 10%	A	A	C1	A2	A	A	D	B
Hydrogen Peroxide 30%	A	C2	D	A2	B1	A	D	B
Hydrogen Peroxide 50%	A	C2	D	A2	B1	A1	D	A2
Hydrogen Peroxide 100%	A	C2	D	A	B1	A1	D	A2
Hydrogen Sulfide (aqua)	A	A	C1	A	A1	A	C	A
Hydroquinone	-	A	D	-	A	-	A	B
Hydroxyacetic Acid 70%	-	A	-	-	-	A	A	-
Iodine	B	A1	A	-	C	A2	D	D
Iodine (in alcohol)	B	B	C	-	-	A	D	-
isooctane	B	B	A1	B1	A2	A2	-	A1
Isopropyl Acetate	B	B1	B1	D	B1	D	D	A
Jet Fuel (JP3, JP4, JP5)	D	D	C	A1	A1	B	A1	A
Kerosene	B	C1	A	D	B	A	A2	A
Ketones	D	C1	A2	D	C	C1	D	A
Lacquer Thinner	D	A	A1	B	D	-	D	A

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Lacquer	D	A	A1	D	D	D	D	A
Lactic Acid	A	A1	B	B	B	B1	B	B1
Latex	+	+	A1	-	A2	A	B	A2
Ligroin	-	A	D	-	A2	A	B	A
Lime	+	A	A1	-	-	A	B	A
Linoleic Acid	-	A	-	-	B1	A2	B	A
Lithium Hydroxide	D	-	-	D	-	-	-	B
Lubricants	B	D	A1	A1	A1	A	A	A2
Lye:								
KOH Potassium Hydroxide	B	A	C	D	A	A	A	A1
NaOH Sodium Hydroxide	B	D	A	D	A	D	C	B1
CaOH ₂ Calcium Hydroxide	B	A2	A2	D	A2	A2	D	B
Magnesium Bisulfate	-	-	A1	A1	A2	-	-	A1
Magnesium Chloride	A	A1	A1	A2	A2	A	B1	D
Magnesium Hydroxide	B	A2	B1	A1	A	A	A	A1
Malic Acid	-	B2	A	-	A1	A	A	A2
Methane	-	-	A	-	A	A	A	A
Methanol (Methyl Alcohol)	A	A1	B1	B1	A2	A	A	A
Methyl Alcohol 10%	A	A1	B1	B1	A2	A	A	A
Methyl Cellosolve	-	-	C	D	B	A	D	B
Methyl Chloride	-	C1	B1	D	D	A	B	A
Methyl Ethyl Ketone (MEK)	D	D	A1	D	B2	D	C	A
Methyl Isobutyl Ketone	D	C	B2	D	A	D	-	B
Methyl Isopropyl Ketone	-	D	A	D	-	-	-	A
Methylamine	-	A1	-	-	A2	C	D	A
Methylene Chloride	D	D	C1	D	B1	B1	B	B
Milk	+	A	A	A	B	A2	A	A
Mineral Spirits	D	B	A	C	B	-	A	A
Monochloroacetic Acid	D	-	D	D	-	B1	D	A1
Monoethanolamine	-	C	A	-	B	C	D	A
Morpholine	+	-	A2	D	B2	B1	-	A1
Motor Oil	-	C1	A2	A	A1	B	B	A2

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Naphtha	-	A1	A	B	B	A	A1	A
Natural Gas	-	A	-	-	A	-	B	A
Nitric Acid								
Nitric Acid (5-10%)	A	B	D	A	A	A1	D	A
Nitric Acid (20%)	B	C	D	B1	A2	A	D	A
Nitric Acid (50%)	D	B1	D	B	B	A1	D	A1
Nitrobenzene	D	C1	B1	D	B1	A1	C	B
Nitromethane	D	A	B1	D	B2	A2	A	A1
Nitrous Oxide	-	C	C	-	D	D	-	B
Oils:								
Citric	-	A	A	A	A	A	A	A
Corn	-	A	A	-	A2	A	A	A
Cottonseed	-	A	B	-	A	A	A	A
Crude Oil	D	-	A	-	A	A	A	A
Diesel Fuel (20, 30, 40, 50)	-	A	A	-	A1	A	D	A
Fuel (1, 2, 3, 5A, 5B, 6)	-	B	A	B	B	B	D	A
Silicone	A	A	A1	-	A	A	A	A
Turbine	-	C	A	-	B1	A	A	A
Oleic Acid	C	C2	A	-	B1	A	A	A
Oxalic Acid (cold)	A	A2	B2	-	A2	B	B	A
Ozone	A	C1	D	A1	B	A	C	A
Palmitic Acid	+	+	A	-	B1	A2	A	A1
Paraffin	B	B	A1	A1	A1	A	A	A
Pentane	-	D	A1	A	D	A	B	A
Perchloric Acid	D	B	D	-	C	A	C	C
Petroleum	D	C1	A1	-	B1	A	B	A1
Phenol (10%)	D	B	D	B1	B1	A	B	B
Phenol (Carbolic Acid)	D	D	D	D	B	A1	D	B
Phosphoric Acid (<40%)	A	A	B1	A	A2	B	D	C
Phosphoric Acid (>40%)	A	B1	B1	A	A2	B	D	D
Plating Solutions								
Copper Sulfate Bath R.T.	-	-	D	-	A	A	A	D

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Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELRIN	316L STAINLESS
Gold Plating (Acid 75 °F)	-	-	A	-	A	-	-	C
Silver Plating (80°F-120 °F)	-	-	A	-	A	-	-	A
Potassium Bicarbonate	B	A	A1	-	A	B	-	B
Potassium Bromide	B	A	A1	A1	A	A	A	B
Potassium Chloride	A	A1	A1	A	A	A	A	A1
Potassium Dichromate	B	A	B1	A1	A	A	A	B1
Potassium Ferricyanide	+	A2	B1	-	A2	A2	B1	B1
Potassium Hydroxide	A	A	C1	D	A	A	A	A1
Potassium Iodide	B	B1	A1	-	A2	A2	-	A1
Potassium Nitrate	B	A	B1	A1	A	A	A	B
Potassium Permanganate	A	A	D	A2	A1	A	A	B
Propane (liquefied)	D	C1	A1	C1	A	A	A	A
Propylene Glycol	A	B2	A	B1	A2	-	B	B
Pyridine	D	B1	C1	D	A2	D	B	A
Quinine	+	+	-	-	-	-	-	-
Resorcinol	-	B2	D	B1	A2	-	-	-
Rosins	B	B1	A1	-	A2	-	B	A1
Salicylic Acid	+	B2	A1	A1	A1	A	D	B2
Sea Water	A	A2	A2	A2	A	A	A	C
Shellac (Orange)	-	A1	A1	-	A	-	A	A
Silicone	+	+	A1	A2	A	A	A	A
Silver Bromide	-	A	-	-	-	-	C	D
Silver Nitrate	A	A	A1	A2	A1	A	A	B
Soap Solutions	B	D	A1	A1	A	A1	A	A1
Sodium Acetate	A	A	B1	A1	A	A	B	B1
Sodium Benzoate	B	A2	B1	A2	A2	A2	-	-
Sodium Bicarbonate	A	A2	A	A2	A	A	A	A1
Sodium Bisulfate	B	A2	A1	A1	A	A	B	C
Sodium Bisulfite	B	A2	C1	A1	A	A	C	B1
Sodium Borate (Borax)	B	A2	A1	A1	A2	A	-	B
Sodium Bromide	+	A2	B1	-	-	A2	A	C
Sodium Carbonate	A	B2	B1	A2	A	A	A1	A

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Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELRIN	316L STAINLESS
Sodium Chlorate	+	B2	D	A1	A	A	A	B1
Sodium Chloride	A	A2	A1	A2	A	A	A1	B
Sodium Hydrosulfite	-	-	A	-	-	-	-	-
Sodium Hydroxide								
(20%)	C	B	A	A2	A	A	A	B2
(50%)	C	B	A	D	A	D	A	B1
(80%)	C	-	C	D	A	D	D	B1
Sodium Hypochlorite (100%)	C	B2	D	-	B	A	D	D
Sodium Hypochlorite (< 20%)	A	A	D	C	A	A	D	C
Sodium Nitrate	B	A2	A1	-	A	A	A	B1
Sodium Perborate	-	A1	B1	-	A	-	B	B
Sodium Polyphosphate	B	A	A1	-	A	A	B	B
Sodium Silicate	A	A2	A1	-	A	A	C	B
Sodium Sulfate	+	A2	A	A2	A	A	B	B1
Sodium Sulfite	B	B1	D	-	A2	A	-	A
Sodium Tetraborate	B	A2	A	-	-	-	B	A
Sodium Thiosulfate	+	A1	B	D	A2	A	C1	B
Stearic Acid	A	B1	A2	A1	A2	A	A	A
Stoddard Solvent	-	C2	A	A2	C	A	A	A
Styrene	-	-	A1	D	-	-	A	A
Sulfate (liquors)	A	A2	B1	-	A	A	D	B
Sulfur Dioxide	D	B1	C1	-	A1	A	B	A1
Sulfur Trioxide	-	-	D	-	C	-	-	C
Sulfur Hexafluoride	-	B	B	-	-	-	-	-
Sulfuric Acid								
Sulfuric Acid (< 10%)	A	A1	C1	A1	A2	A	D	B
Sulfuric Acid (10-75%)	A	A1	D	B1	A1	A	D	D
Sulfuric Acid (cold concentrated)	B	D	D	-	A2	A	-	B
Sulfuric Acid (hot concentrated)	B	D	D	D	D	C	-	C
Sulfurous Acid	B	B2	D	-	A	A	C	B
Tannic Acid	A	B2	C1	C	A	B	B	A
Tetrachloroethane	-	-	C1	-	C	A	C	A

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Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELRIN	316L STAINLESS
Tetrahydrofuran	C	C1	A	D	C2	B1	A	A
Toluene (Toluol)	D	C1	A1	D	C1	A1	C1	A
Trichloroacetic Acid	C	A	C	D	A	B	-	C
Trichloroethylene	D	D	C1	-	C1	B	D	B
Tricresylphosphate	+	B1	A2	-	A1	D	C	B
Triethylamine	-	-	A1	-	D	A2	D	A
Trisodium Phosphate	A	A	A	-	A	A	A	B
Turpentine	B	D	B	D	D	A	A2	A
Urea	A	A	A	D	A	A	A	B
Vegetable Juice	-	-	A	-	-	-	A	A
Vinegar	A	A	A	A2	A	B	B	A
Water, Deionized	A	-	A1	-	A2	A2	-	A2
Water, Distilled	A	A2	A1	A2	A	A	B	A
Water, Fresh	A	A2	A1	A2	A	A	A2	A
Water, Salt	A	A2	A2	A2	A	A	A	B
Weed Killers	-	-	A	-	-	-	A	A
Whiskey & Wines	B	C	A1	A1	A	A	A	A
Zinc Sulfate	A	A2	A	A2	A	A	C	A

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