

Precision Punch & Plastics

1-800-227-0690

info@precisionpunch.com

03-047 Polyurethane Chemical, Oil, & Solvent Resistance

Samples of both polyether and polyester were immersed for seven days at 75 degrees Fahrenheit. The rating was based on the volume change according to the following key:

(1) Excellent

(2) Good

(3) Fair

(4) Poor

Chemical	Ether	Ester	Chemical	Ether	Ester
Acetaldehyde	4	4	Acetic Acid	4-3	
Acetic Anhydride	4	4	Acetone	4	4
Acetyl Bromide	4-3	4	Acetyl Chloride	3-4	4
Acetylene	2-3	3	Adipic Acid	1	2
Aluminum Chloride	2	2	Aluminum Sulphate	2	2
Aluminum Sulfide	2	2	Ammonia	2	2-3
Ammonium Acetate	3-4	3-4	Ammonium Carbonate	2	2
Ammonium Hydroxide	1-2	2	Ammonium Nitrate	2	2-3
Ammonium Persulfate	2	2	Ammonium Sulfate	2	2
Ammonium Sulfide	2	2	Ammonium Thiocyanide	2	2
Amyl Acetate	4	4	Amyl Alcohol	3	3-4
Amyl Chloride	3	3	Aniline	4	4
Aniline Hydrochloride	4	4	Animal Fats & Oil	2-3	2-3
Antimony Salts	2	2	Aqua Regia	4	4
Arsenic Salts	2-1	2	ASTM Oil #1	1-2	1
ASTM Oil #2	2	1	ASTM #3	2	1
ASTM Reference Fuel A	1	1-2	ASTM Reference Fuel B	2	2
Atlantic Oil	1	1-2	Barium Carbonate	2	2
Barium Hydroxide	1	2	Benzaldehyde	3-2	4
Benzene	4	4	Benzene (Gasoline Aromatic)	2-3	3
Benzoic Acid	2-3	3-4	Boric Acid	1	2
Bromine	2-3	2-3	Bunker Oil	1-2	2
Butane	1	2-3	Butyl Acetate	4	4
Butyl Alcohol	2	3	Calcium Carbonate	2	2
Calcium Chloride	1	2	Calcium Hydroxide	1	2
Calcium Nitrate	2	2	Calcium Sulfate	2	2
Carbon Dioxide	1	1	Carbon Disulfide	2-3	2-3
Carbon Monoxide	1	1	Carbon Tetrachloride	3	4
Caster Oil	1-2	2	Chlorine	2-3	2-3
Chloroacetic Acid	3-4	4	Chloroform	4	4
Chromic Acid	3-4	4	Chromium Potassium Sulfate	2	2
Citric Acid	2	2	Cottonseed Oil	1	2
Cresol (meta)	4	4	Cupric Chloride	1	2
Cupric Nitrate	2	2	Cupric Sulphate	2	2
Cyclohexanone	4	4	Cyclohexane	2	2
Dibutyl Phthalate	3-4	4	Dibutyl Ether	2	2
Dichlorobenzene (Ortho)	3	3	Dodecyl Mercaptan	2-3	2
Diester Oil	2	2	Dimethyl Acetamide	4	4
Dimethyl Formamide	4	4	DTE Oil (heavy, medium)	2	2-3
Ether	2-3	2-3	Ethyl Acetate	4	4
Ethyl Alcohol (Etnanol)	3	2-3	Ethyl Bromide	3	3-4

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Chemical	Ether	Ester	Chemical	Ether	Ester
Ethyl Chloride	3	3-4	Ethylene Glycol	2	2-3
Esso # 90 Lub. Oil	1	2	Ferric Chloride	2	2
Ferric Nitrate	2	2	Ferrous Chloride	2	2
Ferrous Sulfate	2	2	Formaldenyde	3	2
Formic Acid	3-4	4	Freon, 12 or 113	1	2
Fuel Oil	2	2	Gasoline	2	2-3
Glycerine (Glycerol)	1	2	Glycolic Acid	2	2-3
Greases	1-2	2	Heptane	1	2
Hexane	1	2	Hydrazine	4	4
Hydrobromic Acid	2	2	Hydrocarbon Oil	1	2
Hydrochloric Acid, 20%	2	2-3	Hydrofluoric Acid	2-3	3
Hydrogen	1-2	2	Hydrogen Peroxide	2	2
Hydrogen Sulfide	3-4	4	Hydroiodic Acid	2	2
Iodine Solution	1	2	Isooctane	2	2
Isopropyl Alcohol (Isopropanol)	2-3	3	Isopropyl Ether	2	2-3
JP- 4 Oil	2-3	3	JP- 5 & 6	2-3	3
Kerosene	2	2-3	Lactic Acid	2	2
Lead Acetate	2	2	Linseed Oil	2	2-3
Lubricating Oil	2	2-3	Magnesium Hydroxide	1	1-2
Magnesium Salts	2	2	Malaic Acid	3-4	4
Mercury	1-2	2	Methyl Alcohol (methanol)	4	3
Methyl Ethyl Ketone	4	4	Methylene Chloride	4	4
Mil- D- 5606 Oil	3	3-4	Mil- L- 7808	1-2	2-3
Mineral Oil	1	1	Mobil Artic Oil	1	2
Naphthalene	2	2-3	Natural Gas	2	2
Nickel Salts	3	3-4	Nitric Acid	4	4
Nitrobenzene	4	4	Nitrogen	1	1
Oleic Acid	1-2	2	Oxalic Acid (5%)	1	1-2
Oxygen	1	1	Ozone	1	1
Palmitic Acid	1	2	Paints	1-2	2
Perchloric Acid	4	4	Perchloroethylene	3-4	4
Petroleum	1-2	2	Phenol (carbolic acid)	4	4
Phosphoric Acid (dil.)	2-3	3	Phosphoric Acid (conc.)	3	4
Potassium Cyanide	1	2	Potassium Salts	2	2
Propane	2	2	Propyl Alcohol	2-3	3
Propylene Glycol	2	2	Pydraul Oil	4	4
SAE # 10 Oil	1	1	Seawater	1-2	2
Silicic Acid	2-1	2	Skydrol Oil (500)	4	3
Silver Nitrate	2	2	Soap	2-3	2-3
Sodium Acetate	1-2	2	Sodium Bicarbonate	2	2
Sodium Bisulfate	2	2	Sodium Borate	2	2

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Chemical	Ether	Ester	Chemical	Ether	Ester
Sodium Carbonate	2	2	Sodium Chlorate	2	2
Sodium Chloride	2	2	Sodium Cyanide	2	2
Sodium Dichromate	2	2	Sodium Ferrocyanide	2	2
Sodium Fluoride	2		Sodium Hydrosulfite	2	2
Sodium Hydroxide, 45%	2	2	Sodium Nitrate	2	2
Sodium Silicate	1-2	2	Sodium Sulfate	2	2
Sodium Sulfide	2	2	Sodium Hypochlorite, 5%	4	4
Sperry Oil	2	2-3	Steam	4	4
Stoddard Solvent	1	2	Styrene	2	2
Sulfur Dioxide	2	2-3	Sulfuric Acid, 10-50%	3-4	4
Tannic Acid, 10%	1	2	Tartaric Acid	1	2-3
Tin Salts	2	2	Titanium Salts	2	2
Toluene	4	4	Transformer Oil	2-3	3
Trichloroacetic Acid	4	4	Trichloroethylene	4	4
Tricresyl Phosphate	3-4	4	Triethanol Amine	2	2
Trisodium Phosphate	2	2	Turpentine	3	2
Urea	2	2	Varnish	2	2-3
Vegetable	1	2	Water	2	2
Xylene	3	3-4	Xylol	3-4	4
Zinc Chloride	2	2	Zinc Sulfate	2	2