

Urethane and Reinforcement Chemical Resistance

Provided below is a general guide for the exposure of Fenner Precision materials to a wide range of chemicals. We emphasize that this is only a guide. All other requirements for satisfactory performance must be considered (such as operational temperature ranges, aeration, exposure time, and other pertinent factors).

Key

- A** - Little or no effect.
- B** - Minor to moderate effect.
- C** - Severe effect to complete destruction.
- T** - Test before using. No data, but most likely to be satisfactory.
- X** - No data but most likely to be unsatisfactory.
- N** - No data available.

Chemical	Concentration	Polyurethane	Kevlar®	Glass*	Polyester
Acetamide	100%	N	N	T	B
Acetic acid	40%	B	A	T	A
Acetone	100%	C	A	T	A
Ammonia, anhydrous	-	T	N	T	N
Ammonium chloride solutions	-	T	N	T	N
Ammonium hydroxide	28%	A	A	T	N
Ammonium sulfate solutions	-	T	N	T	N
Amyl acetate	100%	C	N	T	A
Amyl alcohol	100%	T	A	T	A
ASTM hydrocarbon test fluid	-	T	N	T	N
ASTM oil #1	-	A	N	T	N
ASTM oil #3	-	B	N	T	N
Benzaldehyde	100%	N	A	T	A
Benzene	100%	C	A	T	B
Benzoyl chloride	100%	T	N	T	A
Benzyl alcohol	100%	N	N	T	A
Borax solutions	-	A	N	T	N
Brake fluid	100%	N	B	T	N
Butane	-	A	N	T	N
Butyl acetate	-	C	N	T	N
Butyl aldehyde	-	T	N	T	N
Calcium bisulfate solutions	-	A	N	T	N
Calcium chloride solutions	-	T	N	T	N
Calcium hydroxide solutions	-	A	N	T	N
Carbon bisulfide	-	T	N	T	N
Carbon monoxide	-	A	N	T	N
Castor oil	-	A	N	T	N
Chlorobenzene	100%	X	N	T	A
Chloroform	100%	C	N	T	A
Cottonseed oil	100%	A	A	T	A
Dibutyl phthalate	-	B	N	T	N
Dimethyl acetamide	100%	N	N	T	A
Dimethyl formamide	100%	N	N	T	C
Ethyl acetate	100%	C	N	T	A
Ethyl alcohol	100%	B	A	T	A
Ethyl chloride	-	C	N	T	N
Ethyl ether	100%	N	A	T	N
Ethylene glycol/water	50/50	B	B	T	A
Ethylene dichloride	-	C	N	T	N
Ferric chloride	3%	T	B	T	N
Formaldehyde in water	10%	X	A	T	A
Formic acid	90%	X	C	T	A
Fuel oil	100%	B	N	T	A

* Fiberglass is generally inert when exposed to most chemicals. Hydrofluoric Acid is the main exception.

Chemical	Concentration	Polyurethane	Kevlar®	Glass*	Polyester
Glycerol	100%	N	N	T	A
Hydraulic oils	-	B	N	T	N
Hydrochloric acid	10%	B	C	T	N
Hydrofluoric Acid	-	C	A	C	C
Hydrogen	-	A	N	T	N
Isooctane	-	B	N	T	N
Isopropyl alcohol	-	C	N	T	N
Kerosene	100%	C	N	T	A
Lard	100%	N	A	T	A
Linseed oil	100%	B	A	T	A
Lubricating oils	-	B	N	T	N
m-Xylene	100%	N	N	T	A
Magnesium hydroxide	-	A	N	T	N
Methyl alcohol	100%	C	A	T	A
Methylethyl ketone	100%	C	N	T	A
Methylene chloride	100%	C	N	T	A
Mineral oil	100%	A	A	T	A
n-Butyl alcohol	100%	N	N	T	A
n-Hexane	-	B	N	T	N
Naphthalene	100%	B	N	T	A
Nitric acid	10%	C	B	T	N
o-Phenylphenol	100%	N	N	T	A
Oleic acid	100%	B	N	T	A
p-Dichlorobenzene	100%	N	N	T	A
Palmitic acid	-	A	N	T	N
Phenol	100%	C	N	T	C
Phenol in water	5%	N	A	T	N
Phosphoric	10%	T	B	T	N
Pine oil	100%	N	N	T	A
Potassium hydroxide	-	A	N	T	N
Propylene carbonate	100%	N	N	T	A
Pyridine	100%	N	N	T	A
Resorcinol	100%	N	A	T	A
SAE #10 oil	-	A	N	T	N
Salicylic	3%	N	A	T	N
Soap solutions	-	A	N	T	N
Sodium carbonate	1%	N	N	T	N
Sodium chloride	10%	N	B	T	N
Sodium hydroxide	10%	A	C	T	N
Sodium hypochlorite	0.4%	X	N	T	N
Sodium phosphate	5%	N	B	T	N
Soybean oil	-	B	N	T	N
Stearic acid	-	A	N	T	N
Stoddard solvent	100%	N	N	T	A
Sulfuric	70%	C	B	T	N
Tannic acid	10%	N	N	T	A
Tartaric acid	-	A	N	T	N
Toluene	-	C	N	T	N
Turpentine	100%	C	N	T	A
Water, tap	100%	A	A	T	N
Xylene	100%	C	N	T	N

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