CHEMICAL, OIL and SOLVENT RESISTANCE

OF POLYURETHANE

Samples of both polyether and polyester

were immersed for seven days at 75

°F.

The rating was

based on volume change according

**to**

the following \*key:

**1**

**=**

Excellent

**(**

**0**

**-**

**3%)**

**2**

**=**

Good

**(**

**4**

**-**

**15%)**

**3**

**=**

Fair

**(16 - 35%)**

**4**

**=**

Poor

**( 36% Up )**

Chemical

**Ether**

**Ester**

Acetaldehyde

**4**

**4**

Acetic Acid

**4-3**

Acetic Anhydride

**4**

**4**

Acetone

**4**

**4**

Acetyl Bromide

**3-4**

**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**

**9**

Ammonium Sulfate

**2**

**2**

Ammonium Sulfide

**2**

Ammonium Thiocyanide

**2**

*2*

Amyl Acetate

**4**

Amyl Alcohol

**3**

**3-4**

**Amyl**

Chloride

**3**

**3**

**Aniline**

**4**

Chemical

Ether

Ester

Animal Fats & Oils

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 Oil #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

Castor 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

Chemical

Ether

Ester

Dibutyl Phthalate

3-4

4

Dibutyl Ether

2

2

Dichlorobenzene (Ortho)

3

3

Dodecyl Mercaptan

2-3

2

Diester Oil

2

2

Dimetnyl Acetamide

4 .

4

Dimetnyl Formamide

4

4

DTE Oil (neavy,medium)

2

2-3

Etner

2-3

2-3

Etnyl Acetate

4

4

Etnyl Alcohol (Etnanol)

3

2-3

Ethyl Bromide

3

3-4

Etnyl Chloride

3

3-4

Ethylene Glycol

2

2-3

Esso #90 Lub.Oil

1 .

2

Ferric Chloride

2

2

Ferric Nitrate

2

2

Ferrous Cnloride

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

,

Hydrolodic Acid

2

2

Iodine Solution

1

2

Isooctane

2

2

Isopropyl Alconol

(Isopropanol)

2-3

3

Isopropyl Ether

2

2-3





CHEMICAL

 Ether Ester

Xylene 3 3-4

Xylol 3-4 4

Zinc Chloride 2 2

Zinc sulfate 2 2