



Denix 12 Chemical Resistance

Test Methods:

Method A:

For volatile chemical a cotton ball saturated with the test chemical was placed in a once ounce bottle (10mm x 75mm test tube). The container was inverted on the test material surface for a period of 24 hours. The Temperature of the test was 23 degrees C. This testing method was used for all of the organic solvents.

Method B:

For non-volatile chemicals five drops (1/4cc) of the test chemical were placed on the test material surface. The chemical was then covered with a watch glass (25mm) for a period of 24 hours. The Temperature of the test was 23 degrees C. This testing method was used for all of the chemicals listed below with the exception of the organic solvents.

Evaluation of Test:

After the 24 hour period the exposed surface areas were then washed with water, then a detergent solution, and finally with isopropyl alcohol. Materials were then rinsed with distilled water and dried with a cloth. Samples are numerically rated as follows:

- (1) No Effect – No detectable change in the material surface.
- (2) Excellent – Slight detectable change in color or gloss, but no change in function or life of the surface.
- (3) Good – A clearly discernible change in color or gloss, but no significant impairment of surface life or function.
- (4) Fair – Objectionable change in appearance due to dis-coloration or etching, possibly resulting in deterioration of function over an extended period of time.
- (5) Failure – Pitting, cratering or erosion of the surface. Obvious and significant deterioration.

Results:

Inorganic Acids - Corrosive	Pure White	Telegrey	Signal Grey	Jet Black
Chromic Acid (CrO3) 40%	2	2	2	2
Hydrochloric Acid (HCl) 10%	1	1	1	1
Hydrochloric Acid (HCl) 37%	1	1	1	1
Nitric Acid (HNO3) 40%	1	1	1	1
Nitric Acid (HNO3) 70%	2	2	2	2
Sulfuric Acid (H2SO4) 40%	1	1	1	1
Sulfuric Acid (H2SO4) 96%	5	5	5	5

Organic Acids - Corrosive	Pure White	Telegrey	Signal Grey	Jet Black
Acetic Acid (CH3CO2H) -5%	1	1	1	1
Acetic Acid (CH3CO2H) -Glacial	1	1	1	1
Citric Acid (C6H8O7) -1% Oleic	1	1	1	1
Acid (C18H34O2) Phenol	1	1	1	1
Solution (C6H5OH) -5%	1	1	1	1

Alkaline Solutions - Corrosive	Pure White	Telegrey	Signal Grey	Jet Black
Ammonium Hydroxide (NH4OH) -10%	1	1	1	1
Potassium Hydroxide (KOH) -15%	1	1	1	1
Sodium Carbonate Sol (Na2CO3) -20%	1	1	1	1
Sodium Hydroxide Sol (NaOH) -60%	1	1	1	1
Sodium Hypochlorite Sol (NaOCl) -4%	1	1	1	1

Organic Solvents	Pure White	Telegrey	Signal Grey	Jet Black
Acetone (CH3COCH3)	2	2	2	2
Benzene (C6H6)	1	1	1	1
Carbon Tetrachloride (CCl4)	1	1	1	1
Diethyl Ether (CH3CH2OCH2CH3)	1	1	1	1
Dimethyl Formamide (HCON[CH3]2)	1	1	1	1
Ethyl Acetate (CH3CO2C2H5)	1	1	1	1
Ethyl Alcohol (CH3CH2OH) -95%	1	1	1	1
Ethylene Dichloride (ClCH2CH2Cl)	1	1	1	1
Heptane (CH3[CH2]5CH3)	1	1	1	1
Isooctane (C8H18)	1	1	1	1
KerosenE	1	1	1	1
Methyl Alcohol (CH3OH)	1	1	1	1
Sodium Hypochlorite Sol (NaOCl) -4%	1	1	1	1

Organic Compounds	Pure White	Telegrey	Signal Grey	Jet Black
Aniline (C6H5NH2)	1	1	1	2
Mineral Oil	1	1	1	1
Olive Oil	1	1	1	1
Soap Solution -1%	1	1	1	1
Transformer Oil	1	1	1	1
Turpentine	1	1	1	1

**Note: The chemical testing criteria was taken from the SEFA 3-2007 Recommended Practices for Laboratory Work Surfaces.