

Chemical Resistance 3 and 30 Day Immersion Test

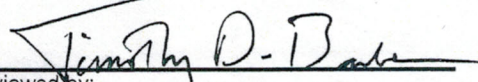
Product Name	Elastuff 110
Batch Number	Part A #98278 Part B #98279
Manufacture Date	Part A - 7/29/04 Part B - 7/30/04
Test Date / Temperature / Description	4/7/05 / 23 ± 2° C. / 2"x 1" (approx) sample cut from free film.
Application / Date	9/8/04 / 160° F. material temperature at 3000 psi pump pressure
Test Method (Modified)	ASTM D471 Standard Test Method for Rubber Property - Effect of Liquids
Test Conditions	Reported at end of certificate.

Test Results

Immersion Liquid	Immersion Period	
	3 Day	30 Day
DI Water (23° C)	3.4%	4.9%
DI Water (93° C)	8.8%	12.1%
Sea Water	3.1%	3.1%
50% Ethanol	22.1%	23.1%
Detergent (10%)	3.2%	3.4%
Oil (Vegetable)	0.1%	0.1%
Fat (Butter)	4.5%	5.2%
Calcium Chloride 10%	2.7%	2.6%
Antifreeze	0.7%	1.4%
Motor oil	0.2%	0.3%
Diesel Fuel	0.7%	1.0%
Transmission Fluid	0.5%	0.8%
Brake Fluid	33.3%	64.3%
Hydrogen Peroxide	4.4%	9.0%
Bleach	2.4%	Complete Degradation
5% Acetic Acid	7.1%	19.6%
5% HCL	5.1%	15.0%
10% HCL	4.9%	11.6%
5% Nitric	12.8%	34.5%
10% Nitric	24.0%	37.6%
20% Phosphoric	11.4%	36.5%
5% Sulfuric	3.9%	7.4%
10% Sulfuric	4.8%	11.6%
5% Sodium Hydroxide	2.7%	2.9%
10% Sodium Hydroxide	2.3%	2.3%
20% Sodium Hydroxide	1.6%	1.6%
28 % Ammonium Hydroxide	3.7%	7.4%
Lighter fluid	0.2%	0.7%
Gasoline	4.9%	11.9%
Jet fuel	1.2%	2.2%
Acetone	44.1%	45.3%
n-Butyl Acetate	40.9%	40.4%
Methanol	31.7%	31.5%
Xylene	29.5%	29.1%
MEK	51.6%	51.2%

Test conditions (deviations from standard test conditions) and/or notes
 Test results correspond to ASTM D471 Sec. 10 - Change in Mass (Percent change after immersion).
 One specimen tested in 4 oz. Polyethylene jar used to house sample and liquid during immersion period.

Results witnessed and verified by a technical representative of
 GeoEngineers, Inc.

Reviewed by: 
 Timothy D. Barber