

ACC EP RAP 45 EPI Engineered Polymers Aliphatic Polyurea

Category : Polymer , Thermoset

Material Notes:

EP RAP 45 Aliphatic Polyurea, "Powered by Reactamine® Technology", is a two component 100% solids, no VOC is, aliphatic polyurea (silicone optional) coating, that was developed for UV stable (colorfast) polyurea flooring applications. This new generation polyurea displays fast cure times and excellent adhesion characteristics. EP RAP 45 was designed to be quick gelling (15 minutes) in order to optimize leveling and wetting properties. EP RAP 45 can be spray applied at temperatures ranging from 20°F to 120°F. This 100% polyurea elastomer displays excellent chemical resistance, water insensitivity and UV resistance (in any color) at a wide range of temperatures. EP RAP 45 will provide a smooth glossy finish when fully cured. An aggregate can be broadcast into this self-leveling material to provide a non-skid surface. EP RAP 45 emits virtually no odors and can be applied indoors without high VOC levels contributed to most epoxies and polyurethanes. EP RAP 45 meets to USDA and FDA specifications. Applications: AIRCRAFT HANGAR FLOORS LOW TEMPERATURE EQUIPMENT MAINTENANCE FACILITIES FLOORS REQUIRING UV STABILITY UV-STABLE TOP COAT INDUSTRIAL SHOP FLOORS NON-CONDUCTIVE FLOORING Part of the Amber Chemical Group. Data provided by manufacturer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_ACC-EP-RAP-45-EPI-Engineered-Polymers-Aliphatic-Polyurea.php

Physical Properties	Metric	English	Comments
Viscosity	575 cP	575 cP	B Side
	@Temperature 75.0 °C	@Temperature 167 °F	
	750 cP	750 cP	A Side
	@Temperature 75.0 °C	@Temperature 167 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	40	40	ASTM 2240
Tensile Strength, Yield	24.9 MPa	3610 psi	ASTM D412
Elongation at Break	290 %	290 %	ASTM D412
Adhesive Bond Strength	>= 1.72 MPa	>= 250 psi	Wood (no primer), Delamination; ASTM D4541 Elcometer
	>= 2.07 MPa	>= 300 psi	Concrete (primer), Concrete Failure; ASTM D4541 Elcometer
	>= 2.07 MPa	>= 300 psi	Concrete (no primer), Concrete Failure; ASTM D4541 Elcometer
	>= 2.07 MPa	>= 300 psi	Concrete (epoxy), Concrete Failure; ASTM D4541 Elcometer
	>= 6.21 MPa	>= 900 psi	Steel (no primer), Substrate Failure; ASTM D4541 Elcometer
	>= 10.3 MPa	>= 1500 psi	Steel (epoxy primer), Primer Failure; ASTM D4541 Elcometer

Mechanical Properties	Metric	English	Comments
Tear Strength	34.1 kN/m	788 psi	ASTM D412
Taber Abrasion, mg/1000 Cycles	40	40	CS17 WHEEL, 1kg per 1000 cycles; ASTM D4060

Thermal Properties	Metric	English	Comments
Flash Point	>= 93.3 °C	>= 200 °F	ASTM Pensky-Martin

Processing Properties	Metric	English	Comments
Cure Time	>= 30.0 min @Temperature 75.0 °C	>= 0.500 hour @Temperature 167 °F	tack free
Pot Life	40.0 min @Temperature 75.0 °C	40.0 min @Temperature 167 °F	

Descriptive Properties	Value	Comments
Color	All primary colors.	
Flexibility	Pass	ASTM D1737, 1/8" Mandrel
Resistance to 1,1,1-Trichlorethane	Conditional	
Resistance to Acetic Acid (100%)	Conditional	
Resistance to Acetone	Conditional	
Resistance to Ammonium Hydroxide (50%)	Recommended Conditional	
Resistance to Benzene	Conditional	
Resistance to Brine-Saturated H ₂ O	Recommended	Resistance to Brine-Saturated H ₂ O (310g/l)
Resistance to Chlorinated H ₂ O	Recommended	
Resistance to Clorox® (10%) H ₂ O	Recommended	
Resistance to Diesel Fuel	Recommended Conditional	
Resistance to Gasoline	Recommended Conditional	
Resistance to Gasoline/ 5% Methanol	Recommended Conditional	
Resistance to Gasoline/5% MTBE	Recommended Conditional	
Resistance to H ₂ O	Recommended	
Resistance to H ₂ O (14 days at 82°C)	Recommended Conditional	

Resistance to Hydraulic Fluid (oil) Descriptive Properties	Recommended Conditional Value	Comments
Resistance to Hydrochloric Acid (20%)	Recommended	
Resistance to Hydrofluoric Acid(10%)	Not Recommended	
Resistance to Isopropyl Alcohol	Recommended	
Resistance to Lactic Acid	Recommended Conditional	
Resistance to MEK	Recommended Conditional	
Resistance to Methanol	Recommended	
Resistance to Methylene chloride	Conditional	
Resistance to Mineral Spirits	Recommended Conditional	
Resistance to Motor Oil	Recommended	
Resistance to MTEB	Conditional	
Resistance to Muriatic Acid (10%)	Recommended	
Resistance to NaCl/H2O (10%)	Recommended	
Resistance to Nitric Acid (20%)	Not Recommended	
Resistance to Phosphoric Acid (10%)	Recommended	
Resistance to Phosphoric Acid (50%)	Not Recommended	
Resistance to Potassium Hydroxide (10%)	Recommended	
Resistance to Potassium Hydroxide (20%)	Recommended, Discoloration	
Resistance to Propylene Carbonate	Recommended Conditional	
Resistance to Skydrol®	Conditional	
Resistance to Sodium Bicarbonate	Recommended	
Resistance to Sodium Hydroxide (25%)	Recommended	
Resistance to Sodium Hydroxide (50%)	Recommended, Discoloration	
Resistance to Sodium Hypochlorite (10%)	Recommended	
Resistance to Stearic Acid	Recommended	
Resistance to Sugar/H2O	Recommended	
Resistance to Sulfuric Acid (>50%)	Recommended Conditional	
Resistance to Sulfuric Acid (10%)	Recommended	

Descriptive Properties	Value	Comments
Resistance to Trisodium Phosphate	Recommended	
Resistance to Vinegar/ H2O (5%)	Recommended	
Resistance to Xylene	Recommended Conditional	

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