ACC SMP[™] EP 82 EPI Engineered Polymers Silicone Modified Polyurea

Category : Polymer , Thermoset , Silicone

Material Notes:

EP 82, "Powered by Reactamine® Technology", is a new hydrophobic silicone polyurea. The product is characterized by its low viscosity and ability to readily blend with polyisocyanates. It may be processed to produce elastomers of varying hardness. Water absorption of this product is shown to be five to ten times lower than regular polyureas. These elastomers were subjected to a severe hydrolysis test which involves immersing them in water at 90 °C. for a period of 28 days. A similar test has been used for military applications, where specimens are conditioned for 28 days at 100 °C and 95 % relative humidity, stimulating about 10 years of service at 35 °C. and 95 % relative humidity. The EP 82 shows excellent resistance to oxidizing agents, such as those used to treat swimming pools. Thus, chlorinated water resistance of elastomers produced from EP 82 and isocyanates, are superior to those obtained from a conventional polyurea. Applications: electrical encapsulation, swimming pool filter end-caps, re-enterable encapsulants, cable splicing, and others where the polyurea is exposed to a hard, moisture laden environment, requiring hydrophobic resins that can provide pli necessary resistance to (i) water ingress, (ii) degradation of physical properties and (iii) corrosion of electrical components.Part of the Amber Chemical Group. Data provided by manufacturer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_ACC-SMP-EP-82-EPI-Engineered-Polymers-Silicone-Modified-Polyurea.php

Physical Properties	Metric	English	Comments
Water Absorption	11 %	11 %	7 days
Mechanical Properties	Metric	English	Comments
Hardness, Shore D	60	60	12 hours post cure.
	67	67	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	72	72	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength, Yield	14.51 MPa	2104 psi	After 28 days, 90°C H ₂ 0
	15.80 MPa	2291 psi	After 14 days, 90°C H ₂ 0
	16.12 MPa	2338 psi	12 hours post cure
	19.48 MPa	2826 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	70 %	70 %	12 hours post cure
	56 %	56 %	
	@Temperature 23.0 °C	@Temperature 73.4 °F	



Mechanical Properties	92.5 kN/m Metric	177 ali English	Comments
	115 kN/m	654 pli	Die C
Taber Abrasion, mg/1000 Cycles	253	253	
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Descriptive Properties	Value	Comments
Resistance to Chlorinated Water Resistance	+2.7	Tensile Change (%)
	+5.6	Tear Strength Change
	0	Elongation Change (%)
	0	Hardness Change
	Slight Discoloration	Appearance Change

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