

Master Bond EP21SC-1 Two Component Epoxy Resin System

Category : Polymer , Thermoset , Epoxy , Epoxy Encapsulant, Unreinforced

Material Notes:

Product Description: Master Bond Polymer System EP21SC-1 is a two component epoxy system featuring abrasion resistance. This high performance compound utilizes silicon carbide as a filler material and can be used as a coating, adhesive or sealant. It has a convenient, non-critical one to one mix ratio by weight or volume. It is 100% reactive and does not contain any solvents or diluents. Also, the system has minimal shrinkage upon cure. Not only does EP21SC-1 offer good abrasion resistance, it can also withstand exposure to chemicals including water, oils, hydraulic fluids, acids and bases over the wide temperature range of -60°F to 250°F. It has very good adhesion to treated metals, ceramics and many plastics. EP21SC-1 cures rigid with a Shore D over 95. It has good electrical insulation properties and its thermal expansion coefficient is desirably low. The color of Parts A and B is dark gray. EP21SC-1 is widely used in chemical and mechanical processing, maintenance and tank and chute applications, where excellent abrasion resistance is needed. **Product Advantages:** Convenient mixing: non-critical one to one weight or volume mix ratio. Easy application: smooth paste consistency. Versatile cure schedules: convenient room temperature cures or faster elevated temperature cures. Good abrasion resistance, tough, high strength coatings, liners and adhesive/sealants. High bond strength to a wide variety substrates. Low thermal expansion coefficient. Information provided by MasterBond®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Master-Bond-EP21SC-1-Two-Component-Epoxy-Resin-System.php

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	>= 41.4 MPa @Temperature 23.9 °C	>= 6000 psi @Temperature 75.0 °F	
Compressive Strength	>= 103 MPa	>= 15000 psi	
Shear Strength	>= 8.27 MPa	>= 1200 psi	Al/Al, bond

Thermal Properties	Metric	English	Comments
CTE, linear	21.0 - 24.0 µm/m-°C	11.7 - 13.3 µin/in-°F	
Maximum Service Temperature, Air	121 °C	250 °F	
Minimum Service Temperature, Air	-51.1 °C	-60.0 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	
Dielectric Constant	4.1 @Frequency 60.0 Hz, Temperature 25.0 °C	4.1 @Frequency 60.0 Hz, Temperature 77.0 °F	

Processing Properties	Metric	English	Comments
Cure Time	120 - 180 min	2.00 - 3.00 hour	
	@Temperature 93.3 °C	@Temperature 200 °F	
	2880 - 4320 min	48.0 - 72.0 hour	
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Pot Life	120 - 150 min	120 - 150 min	100 gram mass
Shelf Life	12.0 Month	12.0 Month	ambient temperatures in original closed containers
	@Temperature 23.9 °C	@Temperature 75.0 °F	

Descriptive Properties	Value	Comments
Mixing Ratio (A to B)	1:1	by weight or volume

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