

Master Bond EP41S Fast Curing Epoxy Features Chemical Resistance

Category : Polymer , Adhesive , Thermoset , Epoxy , Epoxy Adhesive

Material Notes:

Description: Master Bond EP41S is a two component epoxy resin compound for durable, high performance, tough, high strength coatings, liners and sealants with outstanding resistance to organic solvents including alcohols and fuels. EP41S is formulated to cure at room temperature or more rapidly at elevated temperatures with a convenient five to one non-critical mix ratio by weight, offers excellent resistance to organic solvents. It can successfully withstand, for example, prolonged immersion in such active organic solvents as alcohols, gasoline, trichloroethylene and butyl acetate, inorganic acids, bases, etc for more than one year making it a prime candidate for applications such as chemical storage tanks, fuel tanks and chemical processing equipment. Additionally, it is fast curing and will have a relatively short fixture time. EP41S is 100% reactive, does not contain any solvents or diluents and cures with minimal shrinkage. It readily develops a high bonding strength of more than 2,500 psi at room temperature to both metallic and many non-metallic substrates. The service temperature range is -60°F to 250°F. Adhesion to metals, glass, ceramics, cements, wood, vulcanized rubbers and many plastics is excellent. EP41S cures readily to produce an abrasion resistant, tough, strong, thermoset plastic with superior electrical insulation characteristics and a desirably low coefficient of thermal expansion. Color of Part A is clear; Part B is amber. This versatile epoxy compound is widely used in the maintenance, repair, chemical process, metalworking, appliance and electrical/electronic industries where durable, high performance, tough coatings, liners and sealants with outstanding resistance to solvents and chemicals is required. **Product Advantages:** Convenient mixing: non-critical five to one (weight basis) mix ratio. Easy application: 100% reactive compound does not contain any solvents or diluents. Compound spreads evenly and smoothly; minimal shrinkage upon cure. Versatile cure schedules; fast setting at ambient temperatures. High bonding strength to either similar or dissimilar substrates. Outstanding resistance to organic solvents alcohols and fuels. Superior thermal shock resistance, good electrical insulation properties and resistance to abrasion. Low thermal expansion coefficient. Wide temperature service capability from -60°F to +250°F. Information provided by MasterBond®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Master-Bond-EP41S-Fast-Curing-Epoxy-Features-Chemical-Resistance.php

Physical Properties	Metric	English	Comments
Viscosity	8000 - 90000 cP	8000 - 90000 cP	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	>= 62.1 MPa	>= 9000 psi	
Compressive Strength	>= 75.8 MPa	>= 11000 psi	
Shear Strength	17.2 MPa	2500 psi	Tensile lap, Al to Al
	17.2 MPa	2500 psi	Tensile lap, Al to Al, After 30 days water immersion

Thermal Properties	Metric	English	Comments
Thermal Conductivity	5.76 - 6.48 W/m-K	40.0 - 45.0 BTU-in/hr-ft ² -°F	

Maximum Service Temperature, Air Thermal Properties	121 °C Metric	250 °F English	Comments
Minimum Service Temperature, Air	-51.1 °C	-60.0 °F	

Electrical Properties	Metric	English	Comments
Dielectric Strength	17.3 kV/mm @Thickness 3.17 mm	440 kV/in @Thickness 0.125 in	

Processing Properties	Metric	English	Comments
Cure Time	60.0 - 90.0 min @Temperature 93.3 °C	1.00 - 1.50 hour @Temperature 200 °F	
	1440 min @Temperature 23.9 °C	24.0 hour @Temperature 75.0 °F	
Pot Life	10 - 15 min	10 - 15 min	100 gram batch
Shelf Life	12.0 Month @Temperature 23.9 °C	12.0 Month @Temperature 75.0 °F	in original unopened container

Descriptive Properties	Value	Comments
Mixing Ratio (A to B)	100:20	by weight

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