Master Bond EP21TPFL-1AO Two Part, Flexible, Lower Viscosity Epoxy Polysulfide System

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

Material Notes:

Product Description: Master Bond EP21TPFL-1AO is a two component, low viscosity epoxy polysulfide for high performance bonding, sealing, coating and casting offering thermal conductivity, electrical insulation and excellent flexibility. This system has superior resistance to a wide array of chemicals including fuels, oils, water, gasoline, hydrocarbons and hydraulic fluids. It has been formulated to cure readily at ambient and more quickly at elevated temperatures. This system has a non-critical mix ratio of two to three, by weight or volume. This compound is 100% reactive and does not emit any solvents or volatiles during curing. This material is very special because of its thermal conductivity and electrical insulation properties along with its flexibility and chemical resistance. Its excellent flexibility permits this compound to be utilized in situations involving rigorous thermal cycling as well as thermal and mechanical shocks. Its lower viscosity and flow properties make it well suited for many potting and encapsulation applications. It has very good adhesion to metals, ceramics, glass, and many rubbers and plastics. The service temperature range is -60°F to +250°F. The color of Part A is black while Part B is off-white. EP21TPFL-1AO can be used in a wide range of different applications in the electronic, aerospace and OEM industries. Product Advantages: Convenient mixing: non-critical two to three mix ratio by weight or volume. Lower viscosity enhances ease of application, compound flows evenly and smoothly; ideal for potting. Versatile cure schedules—ambient temperature or fast elevated temperature cures as desired. 100% reactive—no volatiles emitted during curing. Outstanding flexibility with superior resistance to thermal cycling. Excellent chemical resistance to extended exposure to fuels, oils, water and other chemicals. Thermally conductive and electrically isolative.Information provided by MasterBond®

Order this product through the following link:
http://www.lookpolymers.com/polymer_Master-Bond-EP21TPFL-1AO-Two-Part-Flexible-Lower-Viscosity-Epoxy-Polysulfide-System.php

Physical Properties	Metric	English	Comments
Viscosity	14000 - 28000 cP	14000 - 28000 cP	Part B
	15000 - 30000 cP	15000 - 30000 cP	Part A

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	70 - 90	70 - 90	
Tensile Strength at Break	3.45 MPa	500 psi	
Elongation at Break	>= 100 %	>= 100 %	

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

Electrical Properties	Metric	English	Comments

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	
Dielectric Constant	4.4 @Frequency 60.0 Hz, Temperature 25.0 °C	4.4 @Frequency 60.0 Hz, Temperature 77.0 °F	

Processing Properties	Metric	English	Comments
Cure Time	120 - 180 min @Temperature 93.3 °C	2.00 - 3.00 hour @Temperature 200 °F	
	2880 - 4320 min @Temperature 23.9 °C	48.0 - 72.0 hour @Temperature 75.0 °F	
Pot Life	90 - 120 min	90 - 120 min	100 gram mass
Shelf Life	12.0 Month @Temperature 23.9 °C	12.0 Month @Temperature 75.0 °F	in original unopened containers

Descriptive Properties	Value	Comments
Mixing Ratio (A to B)	2:3	by weight or volume

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