

Master Bond EP51FL Toughened and Flexible Adhesive Compound

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

Material Notes:

Master Bond EP51FL is a two component epoxy system for high performance bonding sealing and coating. It combines superior toughness with user friendly handling properties, along with unusually fast curing times. Normally, toughened epoxies are slower curing but EP51FL has a dazzling rate of polymerization. EP51FL, will set up in 20-30 minutes and will fully cure in 12-24 hours at room temperature. It has an easy to use one to one mix ratio by weight or volume. It bonds well to a wide variety of substrates including metals, composites, glass, ceramics and many rubbers and plastics. It has excellent electrical insulation properties and offers solid resistance to chemicals such as water, oils and fuels. It withstands rigorous thermal cycling along with mechanical shock and impact. It is cryogenically serviceable.

Product Advantages: Convenient mixing: non-critical one to one mix ratio by weight or volume Easy application; moderate viscosity liquid spreads evenly and smoothly Fast ambient temperature cures. Can be accelerated by heat Excellent adhesion to a wide variety of substrates Good electrical insulation properties Serviceable at cryogenic temperatures down to 4K

Key Features: Good toughness and flexibility Easy handling Very rapid curing Cryogenically serviceable Information provided by MasterBond®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Master-Bond-EP51FL-Toughened-and-Flexible-Adhesive-Compound.php

Physical Properties	Metric	English	Comments
Viscosity	3000 - 10000 cP	3000 - 10000 cP	Part A
	50000 - 90000 cP	50000 - 90000 cP	Part B

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	75 - 80	75 - 80	
Tensile Strength at Break	34.5 MPa	5000 psi	
Shear Strength	>= 9.65 MPa	>= 1400 psi	Tensile lap, Al to Al
Peel Strength	>= 2.63 kN/m	>= 15.0 pli	T-peel

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	121 °C	250 °F	
Minimum Service Temperature, Air	-168 °C	-270 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	
Dielectric Constant	3.3	3.3	
	@Frequency 60.0 Hz, Temperature 25.0 °C	@Frequency 60.0 Hz, Temperature 77.0 °F	

Processing Properties	Metric	English	Comments
Cure Time	60.0 min	1.00 hour	
	@Temperature 65.6 - 93.3 °C	@Temperature 150 - 200 °F	
Pot Life	720 - 1440 min	12.0 - 24.0 hour	
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Pot Life	5.0 - 10 min	5.0 - 10 min	100 gram batch
Shelf Life	12.0 Month	12.0 Month	in original, unopened containers

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

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