

Master Bond EP45HTND-2 Chemically Resistant, Non-Drip Epoxy

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

Material Notes:

Description: Master Bond EP45HTND-2 is a two component epoxy system for high performance bonding, sealing and coating. It is used for applications requiring solid temperature resistance and capable of withstanding aggressive chemicals. In fact, it is formulated to resist many of these chemicals even at elevated temperatures. EP45HTND-2 has a 100 to 30 mix ratio by weight. It contains no solvents or diluents, has a very smooth paste-like consistency as well as a very long open time. The system requires oven curing at 250-300°F for 3-4 hours. The optimal cure schedule is more of a ramp up type cure, that being 30-60 minutes at 200°F, 1 hour at 250°F and 2-3 hours at 300°F, followed by a post cure of 1-2 hours at 350°F. EP45HTND-2 will not flow or run when curing. It bonds well to metals, glass, ceramics, rubber and many plastics. The service temperature range is -80°F to +500°F. It is especially effective against aggressive chemicals particularly those found in downhole applications as well as many potent acids, bases and solvents. It is an outstanding electrical insulator with excellent physical strength properties. Both Parts A and B are colored amber. This versatile system is widely used in oil well, aerospace, electronic, specialty OEM and related applications where the cured properties mentioned above are needed and the material will stay in place while curing.
Product Advantages: Easy to apply; paste viscosity; spreads evenly and smoothly. Exceptionally long working life at room temperature. Outstanding adhesion to a wide variety of substrates. Highly resistant to many chemicals especially those in petroleum products. Remarkable temperature resistance from -80°F to +500°F. Fine physical strength property profile.
Key Features: Non-drip paste consistency. Will not flow when curing. Outstanding chemical resistance. Serviceable from -80°F to +500°F. Information provided by MasterBond®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Master-Bond-EP45HTND-2-Chemically-Resistant-Non-Drip-Epoxy.php

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	>= 70	>= 70	
	@Temperature 149 °C	@Temperature 300 °F	
Tensile Strength at Break	>= 85	>= 85	
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Tensile Modulus	>= 82.7 MPa	>= 12000 psi	
Shear Strength	3.10 GPa	450 ksi	
	>= 17.2 MPa	>= 2500 psi	Tensile lap, Al to Al

Thermal Properties	Metric	English	Comments
CTE, linear	35.0 - 40.0 µm/m-°C	19.4 - 22.2 µin/in-°F	
Maximum Service Temperature, Air	260 °C	500 °F	
Minimum Service Temperature, Air	-62.2 °C	-80.0 °F	
Glass Transition Temp, Tg	>= 185 °C	>= 365 °F	

Thermal Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	
Dielectric Constant	4.3	4.3	
	@Frequency 60.0 Hz, Temperature 25.0 °C	@Frequency 60.0 Hz, Temperature 77.0 °F	

Processing Properties	Metric	English	Comments
Cure Time	30.0 - 60.0 min	0.500 - 1.00 hour	1 hour at 250°F and 2-3 hours at 300°F, plus a post cure of 1-2 hours at 350°F
	@Temperature 93.3 °C	@Temperature 200 °F	
	180 - 240 min	3.00 - 4.00 hour	
	@Temperature 121 - 149 °C	@Temperature 250 - 300 °F	
Pot Life	720 - 1440 min	720 - 1440 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)	100:30	by weight

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