

Master Bond EP46HT-1 Epoxy For Serviceability Up To 600°F

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

Material Notes:

Description: Master Bond EP46HT-1 is a two component epoxy system for high performance structural bonding and sealing suitable for applications where resistance to temperatures from -100°F to +550°F is required. It is 100% reactive and does not contain any solvents or diluents. It is formulated to cure rapidly at elevated temperatures. The cured epoxy produces bonds and seals with high mechanical strength and excellent chemical resistance. EP46HT-1 is an excellent choice as a matrix resin for fiber reinforced, high performance, heat resistant composite structures which are resistant to thermal cycling and chemicals, including water, oil and many organic solvents over an wide temperature range of -100°F to +550°F. The fully cured EP46HT-1 polymer system features a glass transition temperature over 235°C. Adhesion to metals, glass, ceramics, wood, vulcanized rubber and many plastics is excellent. The hardened system is an electrical insulator. Color of Part A is tan, Part B is brown. EP46HT-1 is widely used in aerospace, electronic, electrical, computer, construction, metal working, appliance, automotive and chemical industries

Product Advantages: Convenient mixing: product properties relatively unaffected by small changes in mix ratio Easy application: contact pressure only required for cure, system spreads evenly and smoothly For bonding non-drip application version called EP46HT-1ND2 is recommended Convenient cure schedules, fast elevated temperature cures as required Outstanding heat resistance and thermal stability 100% reactive, does not contain any solvents or diluents, excellent dimensional stability Excellent electrical insulation properties even upon prolonged exposure to hostile environments

Key Features: Glass transition temperature over 235°C Excellent dimensional stability Superior durability, thermal shock resistance Long pot life at room temperature Service temperature range of -100°F to +550°F High bonding strength

Order this product through the following link:

http://www.lookpolymers.com/polymer_Master-Bond-EP46HT-1-Epoxy-For-Serviceability-Up-To-600F.php

Physical Properties	Metric	English	Comments
Viscosity	27000 - 30000 cP	27000 - 30000 cP	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	75 - 90	75 - 90	
Tensile Strength at Break	73.1 MPa	10600 psi	
Elongation at Break	2.9 %	2.9 %	
Tensile Modulus	3.10 GPa	450 ksi	
Compressive Strength	>= 16.5 MPa	>= 2400 psi	
Shear Strength	>= 172 MPa	>= 25000 psi	Tensile lap, Al to Al

Thermal Properties	Metric	English	Comments
CTE, linear	40.0 µm/m-°C	22.2 µin/in-°F	
Maximum Service Temperature, Air	288 °C	550 °F	

Thermal Properties	Metric	English	Comments
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Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	
Dielectric Strength	17.1 kV/mm	435 kV/in	

Processing Properties	Metric	English	Comments
Cure Time	120 min	2.00 hour	
	@Temperature 177 - 204 °C	@Temperature 350 - 400 °F	
Pot Life	120 - 180 min	2.00 - 3.00 hour	
	@Temperature 121 - 149 °C	@Temperature 250 - 300 °F	
Shelf Life	>= 1440 min	>= 1440 min	100 gram batch
	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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