

Master Bond EP17HT One component epoxy system for bonding, sealing, coating and casting

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

Material Notes:

Product Description: Master Bond EP17HT is an one component, heat cured epoxy system for bonding, sealing, coating and encapsulating. It features good physical properties, electrical insulation profile and chemical resistance even with heat exposure to 650°F. Its glass transition temperature (Tg) is 220-225°C. This system is also distinctive in that it has very low exotherm upon curing and can be used in castings and encapsulations well beyond ½ inch in thickness. The minimum curing temperature for EP17HT is 300°F with faster cures attainable at higher temperatures. EP17HT is 100% reactive and contains no solvents or diluents. EP17HT bonds well to similar as well as dissimilar substrates such as metal, ceramics, plastics and composites. It has a striking resistance to many chemicals such as acids, bases, salts, fuels, oils and many solvents. Shrinkage upon cure is minimal. It is serviceable from -80°F to +650°F. This system is tan in color. EP17HT retains its exceptional electrical insulation properties, even at higher temperatures. It should be noted, in order to obtain the optimum properties, a post cure of 2-12 hours at 350°F is recommended. It is widely used in a variety of applications in the aerospace, oil and chemical processing and specialty OEM industries. A paste version, EP17HTND-2, in black is also available. **Product Advantages:** Single component system; no mixing prior to use Easy application; only positive contact pressure required during heat cure High tensile, lap shear and compressive strength properties 100% reactive. Contains no solvents, diluents or volatiles High temperature resistance. Staggering Tg Tip-top electrical insulation properties, even at higher temperatures Information provided by MasterBond®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Master-Bond-EP17HT-One-component-epoxy-system-for-bonding-sealing-coating-and-casting.php

Physical Properties	Metric	English	Comments
Solids Content	100 %	100 %	
Viscosity	15000 - 25000 cP	15000 - 25000 cP	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	>= 80	>= 80	
Tensile Strength at Break	68.9 MPa	10000 psi	
Tensile Modulus	2.76 - 3.10 GPa	400 - 450 ksi	
Compressive Strength	>= 138 MPa	>= 20000 psi	
Shear Strength	15.9 MPa	2300 psi	
	@Temperature 204 °C	@Temperature 400 °F	
	22.1 MPa	3200 psi	tensile lap, aluminum to aluminum
	@Temperature 23.9 °C	@Temperature 75.0 °F	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	343 °C	650 °F	
Minimum Service Temperature, Air	-62.2 °C	-80.0 °F	
Glass Transition Temp, Tg	220 - 225 °C	428 - 437 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+12 ohm-cm	>= 1.00e+12 ohm-cm	
	@Temperature 400 °C	@Temperature 752 °F	
	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	
	@Temperature 75.0 °C	@Temperature 167 °F	
Dielectric Constant	4.4	4.4	
	@Frequency 60.0 Hz, Temperature 25.0 °C	@Frequency 60.0 Hz, Temperature 77.0 °F	
	4.7	4.7	
	@Frequency 60.0 Hz, Temperature 204 °C	@Frequency 60.0 Hz, Temperature 399 °F	
Dissipation Factor	0.0080	0.0080	
	@Frequency 60.0 Hz, Temperature 25.0 °C	@Frequency 60.0 Hz, Temperature 77.0 °F	
	0.018	0.018	
	@Frequency 60.0 Hz, Temperature 204 °C	@Frequency 60.0 Hz, Temperature 399 °F	

Processing Properties	Metric	English	Comments
Cure Time	60.0 - 90.0 min	1.00 - 1.50 hour	
	@Temperature 177 °C	@Temperature 350 °F	
	90.0 - 120 min	1.50 - 2.00 hour	
	@Temperature 149 °C	@Temperature 300 °F	
	120 min	2.00 hour	plus 2-12 hrs at 350°F
	@Temperature 149 °C	@Temperature 300 °F	
Shelf Life	3.00 - 6.00 Month	3.00 - 6.00 Month	in original, unopened containers
	@Temperature 4.44 - 7.22 °C	@Temperature 40.0 - 45.0 °F	

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