

Master Bond EP30P Epoxy Bonds Glass, Polycarbonates and Acrylics

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

Material Notes:

Description: Master Bond Polymer Adhesive EP30P is a two component, transparent, low viscosity epoxy resin system for high performance bonding, sealing, coating, encapsulating and casting. It is formulated to cure readily at room temperature or more quickly at elevated temperatures. It has a 4 to 1 mix ratio by weight and contains no solvents or diluents. Master Bond Polymer System EP30P produces high strength, rigid bonds which are resistant to chemicals including water, oil, acids, and many organic solvents. It is serviceable over the wide temperature range of -60°F to + 250°F. It bonds well to a wide variety of substrates including metals, glass, ceramics, and many plastics, especially polycarbonates and acrylics. EP30P has low linear shrinkage upon cure as well as good optical clarity. The cured compound is also an outstanding electrical insulator. This, coupled with its low viscosity, makes it an excellent encapsulating and potting compound. EP30P is widely used in fiber optics, electro-optics, optical, and related industries. EP30P can be conveniently dispensed with a gun type mixing device. **Product Advantages:** Convenient mixing: 4 to one 1 by weight, low viscosity. Easy application: contact pressure only required for cure; adhesive spreads evenly and smoothly. Versatile cure schedules: ambient temperature cures or fast, elevated temperature cures as required. Forms high strength, rigid bonds to a wide variety of substrates, particularly glass, polycarbonates and acrylics. Good optical clarity. Exceptionally low shrinkage. Excellent electrical insulation properties. Low viscosity, ideal for potting and encapsulation. Outstanding chemical resistance to water, acids, bases and salts. Information provided by MasterBond®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Master-Bond-EP30P-Epoxy-Bonds-Glass-Polycarbonates-and-Acrylics.php

Physical Properties	Metric	English	Comments
Viscosity	400 cP	400 cP	Part B
	1200 - 1400 cP	1200 - 1400 cP	mixed compound
	1600 - 1800 cP	1600 - 1800 cP	Part A

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	>= 65.5 MPa	>= 9500 psi	
Tensile Modulus	2.76 GPa	400 ksi	
Shear Strength	21.5 MPa	3120 psi	Bond, Al to Al, after 30 days water absorption
	22.1 MPa	3200 psi	Bond, Al to Al, RT Cure

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

Optical Properties	Metric	English	Comments
Refractive Index	1.56	1.56	
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	
Dielectric Strength	15.7 kV/mm @Thickness 3.17 mm	400 kV/in @Thickness 0.125 in	

Processing Properties	Metric	English	Comments
Cure Time	120 - 180 min @Temperature 93.3 °C	2.00 - 3.00 hour @Temperature 200 °F	
	1440 - 2880 min @Temperature 23.9 °C	24.0 - 48.0 hour @Temperature 75.0 °F	
Pot Life	30 - 35 min	30 - 35 min	100 gram batch
Shelf Life	6.00 Month @Temperature 23.9 °C	6.00 Month @Temperature 75.0 °F	in unopened container

Descriptive Properties	Value	Comments
Mixing Ratio (A to B)	4/1	by weight

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