

## Master Bond EP41S-1HT Solvent Resistant Adhesive, Sealant and Coating

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

### Material Notes:

**Description:** Master Bond EP41S-1HT is a two component epoxy resin system for high performance bonding, sealing, coating and encapsulating. It has a 100 to 30 mix ratio by weight and is formulated to cure at ambient temperatures or more quickly at elevated temperatures. In order to optimize the properties, it is strongly recommended that curing be carried out overnight at room temperature followed by a post cure of 2-3 hours at 200°F. It has resistance to a wide array of chemicals, including solvents, alcohols and fuels (a more detailed list of these chemicals appears below). Of special significance is its resistance to gasohol, which is fairly aggressive against many types of plastics and rubbers. EP41S-1HT is 100% reactive and contains no solvents or diluents. It has very low linear shrinkage upon cure. Also, it has outstanding physical properties and electrical insulation values. EP41S-1HT can be used as an adhesive, sealant, coating, potting or encapsulating material. It is serviceable over the wide temperature range of -60°F to +400°F. It adheres well to a wide variety of substrates including metals, glass, ceramics and many rubbers and plastics. EP41S-1HT has excellent flow properties and can be used in smaller encapsulations. Part A is clear and Part B is amber clear. This epoxy compound is widely used in aerospace, electronic, chemical processing applications and in other applications where chemical resistance to solvents and fuels is needed. **Product Advantages:** 100% reactive compound does not contain any solvents or diluents. Versatile cure schedules; ambient temperature cures or fast elevated temperature cures. High bonding strength to both similar and dissimilar substrates. Wide temperature service capability from -60°F to +400°F. Good electrical insulator. Moderate viscosity. Well suited for potting and encapsulation. Outstanding chemical resistance, particularly to fuels, alcohols and solvents. **Key Features** Room temperature cures Outstanding resistance to chemicals Moderate viscosity High temperature resistance to +400°F Good electrical insulator Impressive bond strength Information provided by MasterBond®

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Master-Bond-EP41S-1HT-Solvent-Resistant-Adhesive-Sealant-and-Coating.php](http://www.lookpolymers.com/polymer_Master-Bond-EP41S-1HT-Solvent-Resistant-Adhesive-Sealant-and-Coating.php)

Physical Properties	Metric	English	Comments
Viscosity	250 - 400 cP	250 - 400 cP	Part B
	60000 - 110000 cP	60000 - 110000 cP	Part A

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	>= 75	>= 75	
Tensile Strength at Break	>= 62.1 MPa	>= 9000 psi	
Shear Strength	18.6 MPa	2700 psi	Tensile lap, Al to Al

Thermal Properties	Metric	English	Comments
CTE, linear	40.0 - 45.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	22.2 - 25.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
Maximum Service Temperature, Air	204 $^\circ\text{C}$	400 $^\circ\text{F}$	
Minimum Service Temperature, Air	-51.1 $^\circ\text{C}$	-60.0 $^\circ\text{F}$	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{14}$ ohm-cm	$\geq 1.00 \times 10^{14}$ ohm-cm	
Dielectric Constant	3.7	3.7	
	@Frequency 60.0 Hz, Temperature 25.0 °C	@Frequency 60.0 Hz, Temperature 77.0 °F	
Dielectric Strength	17.3 kV/mm	440 kV/in	
	@Thickness 3.17 mm	@Thickness 0.125 in	

Processing Properties	Metric	English	Comments
Cure Time	120 - 180 min	2.00 - 3.00 hour	
	@Temperature 93.3 °C	@Temperature 200 °F	
	1440 - 2880 min	24.0 - 48.0 hour	
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Pot Life	20 - 35 min	20 - 35 min	100 gram batch
Shelf Life	12.0 Month	12.0 Month	in original unopened container
	@Temperature 23.9 °C	@Temperature 75.0 °F	

Descriptive Properties	Value	Comments
Mixing Ratio (A to B)	100:30	by weight

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