

## Master Bond EP21ARHT Two component epoxy adhesive, sealant, coating and encapsulating system

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

### Material Notes:

**Product Description:** Master Bond EP21ARHT is a two component epoxy resin system for high performance bonding, sealing, coating and encapsulating. It has a convenient 100 to 50 mix ratio by weight and is formulated to cure at ambient temperatures or more quickly at elevated temperatures. It has resistance to a wide array of chemicals, particularly to acids (a more detailed list appears below). It is resistant to sulfuric and hydrochloric acids. EP21ARHT 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. EP21ARHT can be used as an adhesive, sealant, coating, potting or encapsulating material. EP21ARHT is especially useful for coating tanks and other vessels that may contain acids. 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. The standard version of this system has a lower viscosity with good flow. A non-drip version called EP21ARHTND is also available. Part A is clear and Part B is amber clear. This epoxy compound is widely used in aerospace, electronic, electrical, chemical processing applications and in other applications where chemical resistance to acids is needed.

**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. Low viscosity. Ideal for potting and encapsulation Outstanding chemical resistance, particularly to acids

Information provided by MasterBond®

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Master-Bond-EP21ARHT-Two-component-epoxy-adhesive-sealant-coating-and-encapsulating-system.php](http://www.lookpolymers.com/polymer_Master-Bond-EP21ARHT-Two-component-epoxy-adhesive-sealant-coating-and-encapsulating-system.php)

Physical Properties	Metric	English	Comments
Viscosity	4000 - 6000 cP	4000 - 6000 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	
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Shear Strength	17.2 MPa	2500 psi	AI/AI, Tensile lap

Thermal Properties	Metric	English	Comments
CTE, linear	40.0 - 45.0 µm/m-°C	22.2 - 25.0 µin/in-°F	
Maximum Service Temperature, Air	204 °C	400 °F	
Minimum Service Temperature, Air	-51.1 °C	-60.0 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	
Dielectric Constant	3.8 @Frequency 60.0 Hz, Temperature 25.0 °C	3.8 @Frequency 60.0 Hz, Temperature 77.0 °F	
Dielectric Strength	17.3 kV/mm @Thickness 3.17 mm	440 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	
	120 - 180 min @Temperature 93.3 °C	2.00 - 3.00 hour @Temperature 200 °F	Overnight at 75°F followed by
	1440 - 2880 min @Temperature 23.9 °C	24.0 - 48.0 hour @Temperature 75.0 °F	
Pot Life	30 - 50 min	30 - 50 min	100 gram mass
Shelf Life	12.0 Month @Temperature 23.9 °C	12.0 Month @Temperature 75.0 °F	in original, unopened containers

Descriptive Properties	Value	Comments
Mixing Ratio (A to B)	100:50	by weight

## Contact Songhan Plastic Technology Co.,Ltd.

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