

Atom Adhesives AA-SUPERTHERM 05 Epoxy Adhesive

Category : Polymer , Thermoset , Epoxy , Epoxy Adhesive

Material Notes:

AA-SUPERTHERM 05 is a thixotropic (smooth paste) Pure Diamond ultra-high thermally conductive epoxy two-part adhesive that develops strong, durable, high-impact bonds at room temperature which improve heat transfer while maintaining electrical insulation. AA-SUPERTHERM 05 bonds readily to itself, and to metals, silica, alumina, sapphire and other ceramics, glass, plastics and many other materials, because its coefficient of thermal expansion provides a good match for those materials over a fairly wide temperature range. Fully cured AA-SUPERTHERM 05 provides excellent resistance to salt solutions, mild acids and alkalis, and many other chemicals including petroleum solvents, lubricating oils, and alcohol. AA-SUPERTHERM 05 passes NASA's outgassing specification making it ideal for demanding space applications. Appearance: White Cure Type: Heat cure or Room Temperature Benefits: Strong Durable High-impact bonds Fully cured Excellent resistance to many chemicals Mix Ratio by weight: 100:100/Resin:Hardener Substrates: metals, silica, alumina, sapphire and other ceramics, glass, plastics and many other materials Typical Application: Extremely sensitive thermal cooling applications Information provided by Atom Adhesives

Order this product through the following link:

http://www.lookpolymers.com/polymer_Atom-Adhesives-AA-SUPERTHERM-05-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.30 g/cc	2.30 g/cc	mixed, uncured
Viscosity	33000 cP	33000 cP	uncured

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	90	90	
Izod Impact, Notched	0.262 J/cm	0.490 ft-lb/in	

Thermal Properties	Metric	English	Comments
CTE, linear	25.9 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	14.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
Thermal Conductivity	1.06 W/m-K	7.36 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	115 °C	239 °F	
Minimum Service Temperature, Air	-70.0 °C	-94.0 °F	
Glass Transition Temp, Tg	48.0 °C	118 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.20e+13 ohm-cm	3.20e+13 ohm-cm	
	@Temperature 75.0 °C	@Temperature 167 °F	

Electrical Properties	2.10e+15 ohm-cm Metric	2.10e+15 ohm-cm English	Comments
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Dielectric Constant	5.9	5.9	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	16.1 kV/mm	410 kV/in	
Dissipation Factor	0.010	0.010	
	@Frequency 1000 Hz	@Frequency 1000 Hz	

Processing Properties	Metric	English	Comments
Cure Time	120 - 240 min	2.00 - 4.00 hour	
	@Temperature 65.0 °C	@Temperature 149 °F	
	1440 min	24.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	45.0 min	45.0 min	uncured

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