

Lord Adhesives Circalok,ç 6037 Epoxy Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy , Epoxy , Thermally Conductive

Material Notes:

Circalok,ç 6037 is an epoxy adhesive formulated for use by the semiconductor industry. An easy-to-spread thixotropic paste, it offers high heat transfer, low shrinkage, and a coefficient of thermal expansion comparable to that of copper and aluminum. Its strong bond to a wide variety of substrates resists severe temperature cycling. This adhesive is principally used to form thermally conductive joints in fabricated heat sinks and between heat sinks and power devices. When used to bond semiconductors to heat sinks, it also serves as an electrical insulator; but the semiconductor's mating surfaces should be precoated with E-343 and allowed to cure to insure the dielectric integrity of the epoxy interface. All information provided by Lord.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lord-Adhesives-Circalok-6037-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.30 - 2.40 g/cc @Temperature 25.0 Å°C	2.30 - 2.40 g/cc @Temperature 77.0 Å°F	
Water Absorption	0.15 % @Temperature 25.0 Å°C	0.15 % @Temperature 77.0 Å°F	10 days
Linear Mold Shrinkage	0.0020 cm/cm	0.0020 in/in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	92 - 94	92 - 94	
Tensile Strength, Yield	72.4 MPa @Temperature 25.0 Å°C	10500 psi @Temperature 77.0 Å°F	
Elongation at Yield	1.4 - 1.6 %	1.4 - 1.6 %	
Compressive Strength	203 MPa @Temperature 25.0 Å°C	29400 psi @Temperature 77.0 Å°F	
Shear Strength	20.2 MPa @Temperature 25.0 Å°C	2930 psi @Temperature 77.0 Å°F	After 30 days in H2O
	26.5 MPa @Temperature 25.0 Å°C	3840 psi @Temperature 77.0 Å°F	Bond; Aluminum to aluminum, 1" overlap
Izod Impact, Notched	0.160 J/cm	0.300 ft-lb/in	

Mechanical Properties	Metric	English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear	22.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	12.2 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
Thermal Conductivity	1.40 W/m-K	9.72 BTU-in/hr-ftÅ²-Å°F	
Maximum Service Temperature, Air	155 Å°C	311 Å°F	Continuous
	250 Å°C	482 Å°F	Intermittent
Heat Distortion Temperature	155 Å°C	311 Å°F	
Minimum Service Temperature, Air	-100 Å°C	-148 Å°F	Intermittent
	-65.0 Å°C	-85.0 Å°F	Continuous

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm @Temperature 25.0 Å°C	1.00e+16 ohm-cm @Temperature 77.0 Å°F	
Dielectric Constant	6.1 @Frequency 1.00e+7 Hz, Temperature 25.0 Å°C	6.1 @Frequency 1.00e+7 Hz, Temperature 77.0 Å°F	
Dielectric Strength	39.4 - 78.7 kV/mm @Thickness 0.0762 mm	1000 - 2000 kV/in @Thickness 0.00300 in	
Dissipation Factor	0.020 @Frequency 1.00e+7 Hz, Temperature 25.0 Å°C	0.020 @Frequency 1.00e+7 Hz, Temperature 77.0 Å°F	

Processing Properties	Metric	English	Comments
Shelf Life	12.0 Month @Temperature 21.0 - 27.0 Å°C	12.0 Month @Temperature 69.8 - 80.6 Å°F	

Descriptive Properties	Value	Comments
Appearance	Black or Green	
Consistency	Paste	
Thermal Resistance (Å°C-in/W)	28	

Descriptive Properties	Value	Comments
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