Epoxy Technology EPO-TEK® H20F Electrically Conductive, Flexible Epoxy

Category : Polymer , Thermoset , Epoxy , Epoxy, Electrically Conductive

Material Notes:

Product Description: EPO-TEK® H20F is a two component, flexible silver epoxy. It was designed for flexible type circuitry, such as switching circuits in a flexible panel system, as well as large die-attach or substrate attach.Advantages & Application Notes: Flexible alternative to EPO-TEK® H20E, designed to offer lower stress, less cracking, and more flexibility. Rheology provides a very soft, smooth, thixotropic paste. No solvents are present.A film suitable for Kapton or Mylar can be flexed 180 degrees and creased without de-lamination or loss of conductivity; can be used instead of conductive silicone RTVs.Can be applied by screen printing, stamping, roller coating techniques; or hand applied. Recommended for fiber-optic packaging. Also suggested for bonding SAW devices, as a low stress adhesive.Applications or end-use could be speaker or microphone circuit related.Hybrid level die attach epoxy capable of resisting wire bonding operations. Also, lid sealing operations will not affect bonded chips in the package.Suggested as a low stress conductive adhesive for large die sizes, as well as oversized components or substrates.Information Provided by Epoxy Technology

Order this product through the following link:
http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-H20F-Electrically-Conductive-Flexible-Epoxy.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.51 g/cc	2.51 g/cc	Part A
	3.56 g/cc	3.56 g/cc	Part B
Particle Size	<= 45 µm	<= 45 µm	
Viscosity	1500 - 3000 cP @Temperature 23.0 °C	1500 - 3000 cP @Temperature 73.4 °F	100 rpm

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	46	46	
Tensile Modulus	0.14584 GPa	21.153 ksi	Storage
Shear Strength	>= 4.69 MPa	>= 680 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 µm/m-°C	5.56 µin/in-°F	Below Tg
Thermal Conductivity	4.10 W/m-K	28.5 BTU-in/hr-ft²-°F	
Maximum Service Temperature, Air	175 °C	347 °F	Continuous
	275 °C	527 °F	Intermittent
Minimum Service Temperature, Air	-55.0 °C	-67.0 °F	Continuous

Thermal Properties	Metric	English	Comments
	-55.0 °C	-67.0 °F	Intermittent
Glass Transition Temp, Tg	>= 20.0 °C	>= 68.0 °F	Dynamic Cure 20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min
Decomposition Temperature	384 °C	723 °F	Degradation Temperature

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 0.00010 ohm-cm	<= 0.00010 ohm-cm	

Processing Properties	Metric	English	Comments
Cure Time	10.0 min @Temperature 150 °C	0.167 hour @Temperature 302 °F	Minimum Bond Line
	20.0 min @Temperature 120 °C	0.333 hour @Temperature 248 °F	Minimum Bond Line
Pot Life	2160 min	2160 min	
Shelf Life	12.0 Month @Temperature 25.0 °C	12.0 Month @Temperature 77.0 °F	

Descriptive Properties	Value	Comments
Color	Silver	Part A
	Silver	Part B
Consistency	Smooth thixotropic paste	
Mix Ratio By Weight	1:1	
Number of Components	Two	
Thixotropic Index	4	
Weight Loss	0.51%	200°C
	0.78%	250°C
	1.79%	300°C

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