

Parker Chomerics THERM-A-FORM 1642 Cure-in-Place Potting and Underfill Material

Category : Polymer , Thermoset , Silicone

Material Notes:

Description: THERM-A-FORM™ thermally conductive silicone elastomer products are dispensable form-in-place compounds designed for heat transfer without excessive compressive force in electronics cooling applications. These versatile liquid reactive materials can be dispensed and cured into complex geometries for cooling of multi-height components on a PCB without the expense of a molded sheet. Each compound is available in ready-to-use cartridge systems, eliminating weighing, mixing, and degassing procedures. Product Attributes: General duty, economical thermal solution and two-component thermally conductive encapsulant/sealant/caulk/potting compound, supplied with primer 1087. (primer is not required for cure but promotes adhesion) Information provided by Chomerics

Order this product through the following link:

http://www.lookpolymers.com/polymer_Parker-Chomerics-THERM-A-FORM-1642-Cure-in-Place-Potting-and-Underfill-Material.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.30 g/cc	2.30 g/cc	ASTM D792
Viscosity	3.0 cP	3.0 cP	ASTM D2196
Outgassing - Total Mass Loss	0.18 %	0.18 %	CVCM; ASTM D595
	0.40 %	0.40 %	TML; ASTM D595

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	76	76	ASTM D2240

Thermal Properties	Metric	English	Comments
CTE, linear	200 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	111 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E831
Specific Heat Capacity	1.00 J/g $\cdot^{\circ}\text{C}$	0.239 BTU/lb $\cdot^{\circ}\text{F}$	ASTM E1269
Thermal Conductivity	0.950 W/m-K	6.59 BTU-in/hr-ft $^2\cdot^{\circ}\text{F}$	ASTM D5470
Maximum Service Temperature, Air	200 $^{\circ}\text{C}$	392 $^{\circ}\text{F}$	
Minimum Service Temperature, Air	-70.0 $^{\circ}\text{C}$	-94.0 $^{\circ}\text{F}$	
Brittleness Temperature	-75.0 $^{\circ}\text{C}$	-103 $^{\circ}\text{F}$	ASTM D2137

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	ASTM D257
Dielectric Constant	3.9	3.9	
			ASTM D150

Electrical Properties	@Frequency 1.00e+6 Metric Hz	@Frequency 1.00e+6 English Hz	Comments
Dielectric Strength	20.0 kV/mm	508 kV/in	ASTM D149
Dissipation Factor	0.010 @Frequency 1.00e+6 Hz	0.010 @Frequency 1.00e+6 Hz	Chomerics

Processing Properties	Metric	English	Comments
Cure Time	60.0 min @Temperature 100 °C	1.00 hour @Temperature 212 °F	
	240 min @Temperature 65.0 °C	4.00 hour @Temperature 149 °F	
	10100 min @Temperature 23.0 °C	168 hour @Temperature 73.4 °F	
Pot Life	60.0 min @Temperature 23.0 °C	60.0 min @Temperature 73.4 °F	2X Starting Viscosity
Shelf Life	12.0 Month	12.0 Month	From date of Manufacture

Descriptive Properties	Value	Comments
Binder	Silicone	
Color	Purple	
Filler	Aluminum Oxide	
Mix Ratio	100:3	
Number of Components	2-part	

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