

Parker Chomerics THERM-A-FORM T642 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:

High thermal performance with flexibility; ideal for underfilling and low outgassing. Information provided by Chomerics

Order this product through the following link:

http://www.lookpolymers.com/polymer_Parker-Chomerics-THERM-A-FORM-T642-Cure-in-Place-Potting-and-Underfill-Material.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.50 g/cc	1.50 g/cc	ASTM D792
Viscosity	2.5 cP	2.5 cP	ASTM D2196
Outgassing - Total Mass Loss	0.21 %	0.21 %	CVCM; ASTM D595
	0.32 %	0.32 %	TML; ASTM D595

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	70	70	ASTM D2240

Thermal Properties	Metric	English	Comments
CTE, linear	300 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	167 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	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	1.20 W/m-K	8.33 BTU-in/hr-ft $^2\cdot^{\circ}\text{F}$	ASTM D5470
Maximum Service Temperature, Air	150 $^{\circ}\text{C}$	302 $^{\circ}\text{F}$	
Minimum Service Temperature, Air	-50.0 $^{\circ}\text{C}$	-58.0 $^{\circ}\text{F}$	
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	4.0	4.0	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Electrical Properties	Metric /mm	English in	Comments
Dissipation Factor	0.0010 @Frequency 1.00e+6 Hz	0.0010 @Frequency 1.00e+6 Hz	Chomerics

Processing Properties	Metric	English	Comments
Cure Time	3.00 min @Temperature 150 °C	0.0500 hour @Temperature 302 °F	
	30.0 min @Temperature 70.0 °C	0.500 hour @Temperature 158 °F	
Pot Life	2880 min @Temperature 23.0 °C	48.0 hour @Temperature 73.4 °F	
	60.0 min @Temperature 23.0 °C	60.0 min @Temperature 73.4 °F	2X Starting Viscosity
Shelf Life	3.00 Month	3.00 Month	From date of Manufacture

Descriptive Properties	Value	Comments
Binder	Silicone	
Color	Blue	
Filler	Boron Nitride	
Mix Ratio	10:1	
Number of Components	2-part	

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