

Brady T400-7 Thermally Conductive Tsoft® Material Elastomeric Thermal Pad

TDS No. BT-8650
Effective Date: 08/03/2011

Description:

GENERAL

Tsoft® T400-7 is a fiberglass reinforced, aluminum oxide filled silicone elastomer designed to provide exceptional cost effective thermal management and high performance electrical properties.

APPLICATION

Tsoft® materials are thermally conductive insulators typically mounted between a transistor and a heat sink offering low thermal resistance as well as electrical insulation. Tsoft® materials do not require thermal grease. Using Tsoft® materials can lead to dramatic production cost reductions and improved product uniformity eliminating messy grease mica application, contamination, mica cracking, silicone migration and drying out.

Some of the common applications would include:

- Power conversion
- Automotive electronics
- Consumable electronics

COMPLIANCE

BT-8650 is halogen-free in accordance to definition in IEC61249-2-21 and IPC-4101B, tested using IPC-TM-650.

BT-8650 is RoHS compliant in accordance to the EU Directive 2002/95/EC and its amendments.

BT-8650 is QMFZ2 recognized and V-0 rated as per UL94 standard. Refer to File# E316839 under *Certifications* at www.ul.com

Details:

PHYSICAL PROPERTIES	TEST METHOD	TYPICAL RESULTS
Colour	-	Grey
Binder	-	Silicone elastomer
Reinforcement	-	Fiberglass
Filler	-	Aluminum oxide
Thickness	ASTM D374	7 mil
Specific Gravity	ASTM D792	2.1 g/cm ³
Hardness (Shore A)	ASTM D257	85
Flame Resistance	UL 94	V-0
Tensile Strength	ASTM D828	97 MPa
Elongation	ASTM D828	2-4 %
Breaking Strength	ASTM D828	18 KN/m
Cut-Thru Resistance	-	0.8 KN
ELECTRICAL PROPERTIES		
Dielectric Strength	ASTM D149	4000 volts
Volume Resistivity	ASTM D257	2 x 10 ¹⁵ ohm-cm
Dielectric Constant	ASTM D257	<ul style="list-style-type: none"> • 2.19 • 2.15
<ul style="list-style-type: none"> • 60Hz • 1KHz 		<ul style="list-style-type: none"> • 0.0011 • 0.0011
Dissipation Factor	ASTM D257	<ul style="list-style-type: none"> • 0.0011 • 0.0011
<ul style="list-style-type: none"> • 60Hz • 1KHz 		
THERMAL PROPERTIES		
Thermal Impenceance	ASTM D5470	0.45 Cin ² /watt
Continuous Use Temperature	MIL-I-49546A	-60°C to 180°C

Weight Loss, 24hr @200°C	Modified UL746B	< 1%
Thermal Conductivity	ASTM D5470	0.9 W/mK

Available Forms:

Tsoft® thermal management materials are available in Sheet Form, Standard and Special Configurations.

Trademarks:

ASTM: American Society for Testing and Materials (U.S.A.)

UL: Underwriters Laboratories Inc. (U.S.A.)

Note: All values shown are averages and should not be used for specification purposes.

Test data and test results contained in this document are for general information only and shall not be relied upon by Brady customers for designs and specifications, or be relied on as meeting specified performance criteria. Customers desiring to develop specifications or performance criteria for specific product applications should contact Brady for further information.

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