

Transtherm® T1500-6

Thermally conductive material

Product Description

Transtherm® T1500-6 is a fiberglass reinforced, boron nitride filled silicone elastomer designed for use where the lowest possible thermal resistance is required. Transtherm® T1500-6 is technologically the most advanced of the silicone elastomer. Transtherm® products incorporating boron nitride technology. Transtherm® T1500-6 is available dry or with a pressure sensitive adhesive (T1500-6 2011).

Application

Transtherm® materials are thermally conductive electrical insulators typically mounted between a transistor and a heat sink. They offer low thermal resistance as well as electrical insulation. Transtherm® materials do not require thermal grease. Since greased mica, and other two-component systems do require thermal grease, using Transtherm® 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.

Product Data

Physical Properties:		
Color		Salmon
Thickness, inches mm	ASTM D 1458 **	.006 ±.001 .152 ±.025
Binder		Silicone Elastomer
Reinforcement		Fiberglass
Filler		Boron Nitride
Specific Gravity, g/cm ³		1.5
Hardness, Shore A	ASTM D2240	80
Tensile Strength, PSI N/mm ²	ASTM D828	6500 45
Elongation, %	ASTM D828	2-4
Breaking Strength, lbs/in N/cm	ASTM D828	65 114
Cut-Thru Resistance, lbf		120
Flammability	UL E145242	94 V0

Electrical Properties:		
Breakdown Voltage, dry, volts	ASTM D149	2000
Volume Resistivity, ohm-cm	ASTM D257	1 x 10 ¹⁵
Dielectric Constant, ohm-cm, 60 Hz 1000 Hz	ASTM D257	2.56 2.47
Dissipation Factor, 60 Hz 1000 Hz	ASTM D150	0.0007 0.0006

Thermal Properties:		
Thermal Resistance, °C.in ² /W (typical TO-3 test values)	MIL-I-49546A ***	.17
Continuous Use Temperature, °C	MIL-I-49546A	-60 to 180

Weight Loss, %	24 hrs @ 200°C	<1
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- * Adhesive peel strength is approximately 100 to 250 grams per inch of width.
- ** The presence of a pressure sensitive adhesive will increase thickness, .0005-.001”
- ***The presence of a pressure sensitive adhesive will result in 10-15% rise in thermal resistance.

Shelf Life

Shelf life is in excess of one year when stored at room temperature.

*Adhesive shelf life at 70°F is six months.

Available Forms

Transtherm® thermal management materials are available in Roll Form with or without adhesive on 3 inch cores in width multiples utilizing a full 36 inch width, Sheet Form, Standard and Special Configurations.

Specifications

The properties shown are typical values only, and should not be used as the basis for preparing specifications. Contact Brady for assistance in preparation of specifications for your specific application.

Safety Precautions

Material Safety Data Sheets (MSDS) defining the known hazards and describing safety precautions appropriate for this product are available upon request.

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