



Tgard™6000

Electrically Insulating Thermal Interface Materials

Description

The Tgard™ 6000 series is a high-performance electrically insulating material. The construction combines a polyimide film dielectric layer with a thermally conductive silicone coating, delivering a compliant interface that enables effective thermal performance under low clamping pressure.

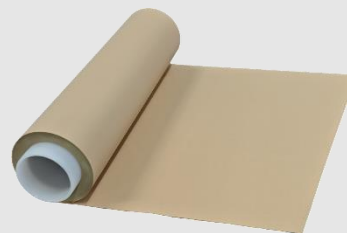
This series provides excellent electrical insulation, high dielectric strength, and strong resistance to puncture, ensuring reliable operation in demanding environments. It is well-suited for power electronics, automotive systems, and other applications requiring durable, long-term reliability performance.

Advantages

- High breakdown voltage
- Resistant to tears and punctures
- Good thermal performance at low pressure
- CTI>600
- Available in sheet, roll form and die cut parts.

Applications

- Automotive electronics
- Power conversion equipment
- Power module and power electronics system
- Power supply



Main Properties

Typical Physical Properties	TEST METHOD	Tgard™ 6000	Tgard™ 6000A1
Color	Laird	Tan	Tan
Density	Laird	2.4	2.4
Dielectric Breakdown Voltage 6.3mm probe 50Hz, volts AC	ASTM D149	>6000	>6000
Volume Resistivity (ohm-m)	ASTM D257	>10 ¹⁵	>10 ¹⁵
Surface Resistivity(ohm)	ASTM D257	>10 ¹²	>10 ¹²
Dielectric Constant with Adhesive (1.1GHz)	ASTM D150	5.14	5.14
Dissipation Factor (1.1GHz)	ASTM D150	0.003	0.003
Comparative Tracking Index (CTI)	IEC 60112	> 600	> 600
Thermal Resistance (@50psi), °C-in2/W	Modified ASTM D5470	0.38	0.45
Thermal Resistance (@30psi); °C-in2/W	Modified ASTM D5470	TBD	TBD
Operation Temperature	Laird	-40°C to 150°C	N/A
Product Thickness (mm)	Laird	0.127	0.137
Flammability	UL 94	V-0	V-0

Note: Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

Safe handling information

Product safety information required for safe use is not included in this document. Before handling, read product and material safety data sheets and container labels for safe use, physical and health hazard information. For material safety datasheet, contact your local Laird sales office.

Storage Condition

Tgard™ 6000 should be stored in original product packaging until ready for use. Recommended storage conditions are 0°C to 35°C with relative humidity <=75% control to maintain optimum product characteristic for one year shelf-life if laminated with adhesive.

Standard options:

Request no adhesive with “A0” suffix. Request adhesive on one side with “A1” suffix.

Standard product is to use acrylic-based adhesive to aid in the assembly process, not a structural adhesive meant to bond two surfaces. Please contact the regional manufacturing site for your special options.

Disposal considerations

Dispose in accordance with all local, state and federal regulations. Contact your Laird representative for more information.

Heath and environmental information

To support customers in their product safety needs, Qnity has an extensive product stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area. For further information, please see our website, www.qnityelectronics.com, or consult your local Laird representative.

For more information on Tgard™6000 or other Qnity products, please visit our website, www.qnityelectronics.com.

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