



## HIGH PERFORMANCE THERMAL INTERFACE PRODUCTS

The Tgard™ 200 is a high performance interface pad. Consisting of a silicone/boron nitride composite, these fiberglass-reinforced pads are used when the lowest thermal resistance and highest dielectric strength are required

A high-tear, cut-through and puncture-resistant product, the Tgard™ 200 is tough and strong. Burrs cause no problems for the material and the pad will not dry out, crack or fail when pressured between mating parts.

The Tgard™ 200 is available in the following sizes:

- 0.010" (0.25 mm) die cut shapes only
- 0.020" (0.51 mm) sheets and die cut shapes
- 0.030" (0.75 mm) sheets and die cut shapes

## FEATURES AND BENEFITS

- High thermal Conductivity of 5.0 W/mK
- High breakdown voltage of > 6,000 volts
- Resistant to tears and punctures
- UL® 94 V0 rated

## APPLICATIONS

- Audio and video components
- Automotive control units
- General high pressure interfaces
- Motor controllers
- Power conversion equipment
- Power semiconductors
  - TO packages, MOSFETs and IGBTs

Americas: +1.800.843.4556  
Europe: +49.8031.2460.0  
Asia: +86.755.2714.1166

CLV-customerservice@lairdtech.com  
[www.lairdtech.com/thermal](http://www.lairdtech.com/thermal)

	TGARD <sup>™</sup> 210	TGARD <sup>™</sup> 220	TGARD <sup>™</sup> 230	TEST METHOD
Construction & Composition	Reinforced boron nitride filled silicone elastomer	Reinforced boron nitride filled silicone elastomer	Reinforced boron nitride filled silicone elastomer	
Color	White	Blue	Green	Visual
Thickness	0.010" (0.25mm)	0.020" (0.51mm)	0.030" (0.76mm)	
Thickness tolerance	±0.002" (±0.05mm)	±0.002" (±0.05mm)	±0.003" (±0.075mm)	
Specific Gravity (Density)	1.52 g/cc	1.45 g/cc	1.47 g/cc	Helium Pycnometer
Hardness	85 Shore A	80 Shore A	80 Shore A	ASTM D2240
Tensile Strength	N/A	N/A	N/A	ASTM D412
% Elongation	N/A	N/A	N/A	ASTM D412
Outgassing TML (Post Cured)	0.06%	0.06%	0.06%	ASTM E595
Outgassing CVCM (Post Cured )	0.05%	0.05%	0.05%	ASTM E595
UL Flammability Rating	94 V0	94 V1	Not Rated	E180840
Temperature Range	-60°C to 200°C	-60°C to 200°C	-60°C to 200°C	
Thermal Conductivity	5 W/mK	5 W/mK	5 W/mK	ASTM D5470 (modified)
Thermal Impedance @ 100 psi @ 689 KPa	0.18°C-in <sup>2</sup> /W 1.17°C-cm <sup>2</sup> /W	0.35°C-in <sup>2</sup> /W 2.26°C-cm <sup>2</sup> /W	0.40°C-in <sup>2</sup> /W 2.28°C-cm <sup>2</sup> /W	ASTM D5470 (modified)
Breakdown Voltage	6,000 VAC	10,000 VAC	20,000 VAC	ASTM D149
Volume Resistivity	5x10 <sup>13</sup> ohm-cm	5x10 <sup>13</sup> ohm-cm	5x10 <sup>13</sup> ohm-cm	ASTM D257
Dielectric Constant @ 1 MHz	3.32	3.32	3.32	ASTM D150

Standard thicknesses: 0.010" (0.25 mm) die cut shapes only, 0.020" (0.51 mm), 0.030" (0.76 mm)  
 Standard sheet sizes: 0.020" and 0.030": 16" x 16" (406 mm x 406 mm) Individual die-cut shapes can be supplied.  
 Pressure sensitive adhesive: Request no adhesive with "AO" suffix. Request adhesive on one side with "A1" suffix. Double-sided adhesive is not available.  
 Reinforcement: Tgard<sup>™</sup> 200 sheets are fiberglass reinforced.

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

#### THR-DS-Tgard-200 0313

Any information furnished by Laird Technologies, Inc. and its agents is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird Technologies materials rests with the end user, since Laird Technologies and its agents cannot be aware of all potential uses. Laird Technologies makes no warranties as to the fitness, merchantability or suitability of any Laird Technologies materials or products for any specific or general uses. Laird Technologies shall not be liable for incidental or consequential damages of any kind. All Laird Technologies products are sold pursuant to the Laird Technologies' Terms and Conditions of sale in effect from time to time, a copy of which will be furnished upon request. © Copyright 2010 Laird Technologies, Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Technologies Logo, and other marks are trade marks or registered trade marks of Laird Technologies, Inc. or an affiliate company thereof. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird Technologies or any third party intellectual property rights. A13514-00 Rev 1

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Thermal Interface Products](#) category:*

*Click to view products by [Laird Connectivity](#) manufacturer:*

Other Similar products are found below :

[7721-9PPS](#) [FGN80-2](#) [PFM-172-60](#) [A-40](#) [174-9-230P](#) [9601-7](#) [5300AC](#) [1.500G](#) [08133](#) [V6622C](#) [TVQF-1225-07S](#) [TP0001](#) [4860](#) [SC80-W2](#)  
[V6516C](#) [A17536-04](#) [A17713-06](#) [A17713-05](#) [A17653-05](#) [A17690-06](#) [A17689-04](#) [A17775-03](#) [A17690-05](#) [A17653-02](#) [A17689-02](#) [A17690-04](#) [A17775-05](#) [A17775-06](#) [A17690-08](#) [A17690-02](#) [A17689-06](#) [A17653-06](#) [A17690-12](#) [A17653-03](#) [A17536-02](#) [A17689-03](#) [A17536-10](#)  
[A17752-13](#) [A17752-04](#) [A17752-07](#) [A17634-12](#) [19-36565-0001-1](#) [A17752-09](#) [22000-001A](#) [A17752-20](#) [A17752-16](#) [A17752-12](#) [A17653-04](#)  
[A17634-10](#) [A17634-09](#) [A17634-07](#)