

Tflex™ HD90000 Series Thermal Gap Filler



PRODUCT DESCRIPTION

Laird's Tflex™ HD90000 is the latest product in our High Deflection series. Tflex™ HD90000 combines 7.5 W/mK thermal conductivity with superior pressure versus deflection characteristics. The combination will allow minimal stress on components while also yielding low thermal resistance. As a result, less mechanical and thermal stresses will be experienced within your device.

TflexTM HD90000 is available in thickness from 0.020" (500 μ m) to 0.200" (5000 μ m). Laird can provide material to meet your production needs in any region through our local production facilities. Please contact your local Laird sales or field engineering contact for samples or questions.

FEATURES AND BENEFITS

- 7.5 W/mK thermal conductivity
- Low pressure versus deflection
- Excellent surface wetting for low contact resistance
- Minimizes board and component stress
- Low Outgassing
- Low D3-D20 (< 20ppm)
- Large tolerance applications
- Environmentally friendly solution that meets regulatory requirements including RoHS and REACH

SPECIFICATIONS

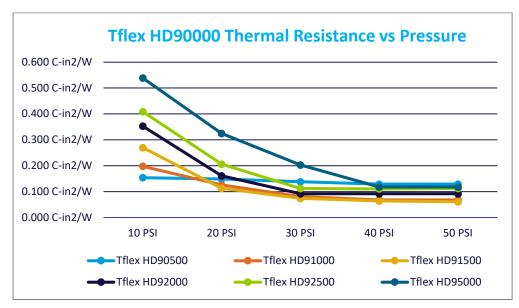
Construction & CompositionCeramic filled silicone sheetN/AColorGreyVisualThickness Range0.020" (500 μm) - 0.20" (5000 μm)N/AThermal Conductivity (W/mK)7.5Hot DiskDensity (g/cc)3.5Helium PycnometerHardness (Shore 00)500 and 750 μm: 45 1000 μm and up: 32ASTM D2240Outgassing TML (weight %)0.17ASTM E595Outgassing CVCM (weight %)0.01ASTM E595Temperature Range-65°C to 125°CLaird Test MethodRth at 40 mils, 10 psi, 50°C0.198°C-in2/WASTM D5470Dielectric Constant at 1 MHz8.14ASTM D150UL Flammability RatingV-0UL 94Volume Resistivity8.73×10¹³ ohm-cmASTM D257	TYPICAL PROPERTIES	VALUE	TEST METHOD
Thickness Range 0.020" (500 μm) - 0.20" (5000 μm) N/A Thermal Conductivity (W/mK) 7.5 Hot Disk Density (g/cc) 3.5 Helium Pycnometer Hardness (Shore 00) 500 and 750 μm: 45 ASTM D2240 1000 μm and up: 32 Outgassing TML (weight %) 0.17 ASTM E595 Outgassing CVCM (weight %) 0.01 ASTM E595 Temperature Range -65°C to 125°C Laird Test Method Rth at 40 mils, 10 psi, 50° C 0.198°C—in2/W ASTM D5470 Dielectric Constant at 1 MHz 8.14 ASTM D150 UL Flammability Rating V-0 UL 94	Construction & Composition	Ceramic filled silicone sheet	N/A
Thermal Conductivity (W/mK) 7.5 Hot Disk Density (g/cc) 3.5 Helium Pycnometer Hardness (Shore 00) 500 and 750 μm: 45 ASTM D2240 Outgassing TML (weight %) 0.17 ASTM E595 Outgassing CVCM (weight %) 0.01 ASTM E595 Temperature Range -65°C to 125°C Laird Test Method Rth at 40 mils, 10 psi, 50° C 0.198°C-in2/W ASTM D5470 Dielectric Constant at 1 MHz 8.14 ASTM D150 UL Flammability Rating V-0 UL 94	Color	Grey	Visual
Density (g/cc) 3.5 Helium Pycnometer Hardness (Shore 00) 500 and 750 μm: 45 ASTM D2240 1000 μm and up: 32 ASTM E595 Outgassing TML (weight %) 0.17 ASTM E595 Outgassing CVCM (weight %) 0.01 ASTM E595 Temperature Range -65°C to 125°C Laird Test Method Rth at 40 mils, 10 psi, 50° C 0.198°C-in2/W ASTM D5470 Dielectric Constant at 1 MHz 8.14 ASTM D150 UL Flammability Rating V-0 UL 94	Thickness Range	0.020" (500 μm) - 0.20" (5000 μm)	N/A
Hardness (Shore 00) 500 and 750 μm: 45 1000 μm and up: 32 ASTM D2240 Outgassing TML (weight %) 0.17 ASTM E595 Outgassing CVCM (weight %) 0.01 ASTM E595 Temperature Range -65°C to 125°C Laird Test Method Rth at 40 mils, 10 psi, 50° C 0.198°C-in2/W ASTM D5470 Dielectric Constant at 1 MHz 8.14 ASTM D150 UL Flammability Rating V-0 UL 94	Thermal Conductivity (W/mK)	7.5	Hot Disk
1000 μm and up: 32 Outgassing TML (weight %) 0.17 ASTM E595 Outgassing CVCM (weight %) 0.01 ASTM E595 Temperature Range -65°C to 125°C Laird Test Method Rth at 40 mils, 10 psi, 50° C 0.198°C-in2/W ASTM D5470 Dielectric Constant at 1 MHz 8.14 ASTM D150 UL Flammability Rating V-0 UL 94	Density (g/cc)	3.5	Helium Pycnometer
Outgassing TML (weight %) 0.17 ASTM E595 Outgassing CVCM (weight %) 0.01 ASTM E595 Temperature Range -65°C to 125°C Laird Test Method Rth at 40 mils, 10 psi, 50°C 0.198°C-in2/W ASTM D5470 Dielectric Constant at 1 MHz 8.14 ASTM D150 UL Flammability Rating V-0 UL 94	Hardness (Shore 00)	500 and 750 μm: 45	ASTM D2240
Outgassing CVCM (weight %) 0.01 ASTM E595 Temperature Range -65°C to 125°C Laird Test Method Rth at 40 mils, 10 psi, 50°C 0.198°C-in2/W ASTM D5470 Dielectric Constant at 1 MHz 8.14 ASTM D150 UL Flammability Rating V-0 UL 94		1000 μm and up: 32	
Temperature Range -65°C to 125°C Laird Test Method Rth at 40 mils, 10 psi, 50° C 0.198°C–in2/W ASTM D5470 Dielectric Constant at 1 MHz 8.14 ASTM D150 UL Flammability Rating V-0 UL 94	Outgassing TML (weight %)	0.17	ASTM E595
Rth at 40 mils, 10 psi, 50° C 0.198°C-in2/W ASTM D5470 Dielectric Constant at 1 MHz 8.14 ASTM D150 UL Flammability Rating V-0 UL 94	Outgassing CVCM (weight %)	0.01	ASTM E595
Dielectric Constant at 1 MHz 8.14 ASTM D150 UL Flammability Rating V-0 UL 94	Temperature Range	-65°C to 125°C	Laird Test Method
UL Flammability Rating V-0 UL 94	Rth at 40 mils, 10 psi, 50° C	0.198°C–in2/W	ASTM D5470
Welling Decision.	Dielectric Constant at 1 MHz	8.14	ASTM D150
Volume Resistivity 8.73×10 ¹³ ohm-cm ASTM D257	UL Flammability Rating	V-0	UL 94
	Volume Resistivity	8.73×10 ¹³ ohm-cm	ASTM D257

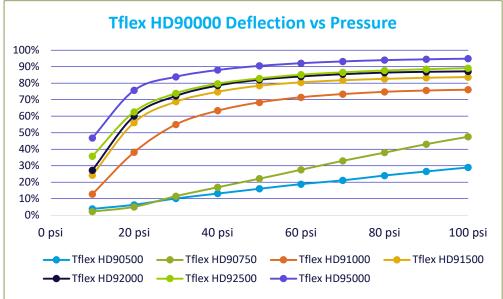
Americas: +1.866.928.8181 Europe: +49.(0).8031.2460.0 Asia: +86.755.2714.1166



Tflex™ HD90000 Series

Thermal Gap Filler





AVAILABILITY

STANDARD THICKNESSES

- 0.020" (500 μ m) up to 0.200" (5000 μ m) thick material available in 250 μ m increments
- Available in standard sheet sizes of 18" x 18" (1000 μm and up only) and 9" x 9" or custom die cut parts.

PART NUMBER SYSTEM

Tflex™ indicates Laird elastomeric thermal gap filler product line. HD90000 indicates Tflex™ HD90000 product line with thickness in microns EXAMPLES:

- Tflex™ HD91000= 1000 µm (0.040") thick Tflex™ HD90000 material
- Tflex™ HD95000= 5000 µm (0.200") thick Tflex™ HD90000 material

A17807-00 Tflex™ HD90000 DS 11102022

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. Laird Technologies makes no warranties as to the fitness, merchantability, suitability or non-infringement 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 2013 Laird Technologies, Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Technologies, and other marks are trademarks or registered trademarks 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.