

## HITHERM™ HT-C3200 Thermal Interface Material

Technical Data Sheet 319

### Product Overview

eGRAF® HITHERM™ HT-C3200 thermal interface materials are designed for use in applications requiring large surface, high contact pressure, high performance, low contact resistance and high thermal conductivity. The flexible graphite materials can be die-cut to ensure exact fit while the compressibility of the material improves surface contact for high in-plane thermal conductivity and compensates for up to 100µ of flatness (no thickness recovery after compression).

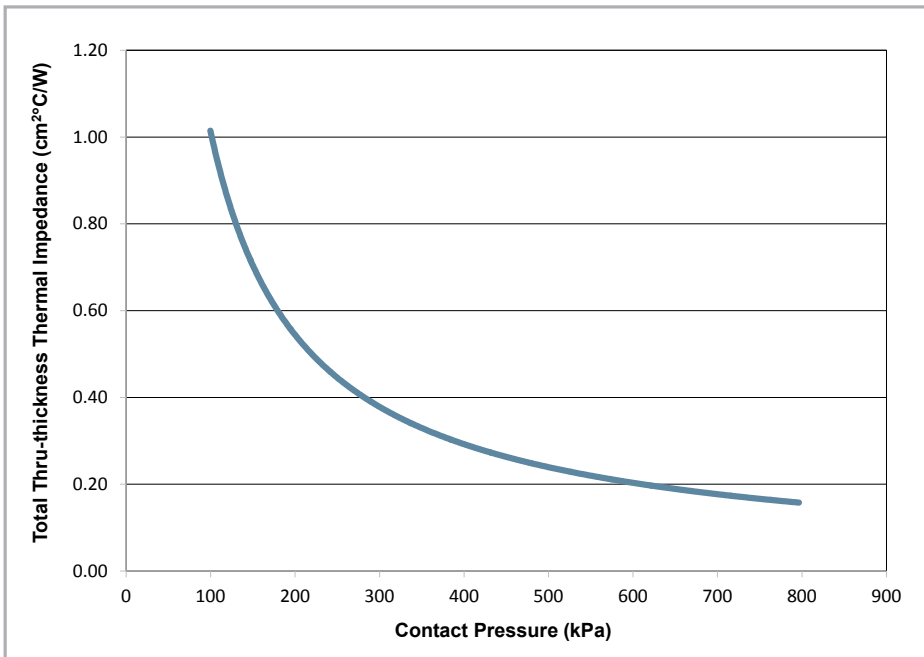
### Applications

- Power modules such as IGBT, RF devices used in:
  - UPS and inverters
  - Motor drives
  - Base stations
  - Power supply modules, rectifiers and chargers

### Typical Properties at Room Temperature<sup>[1]</sup>

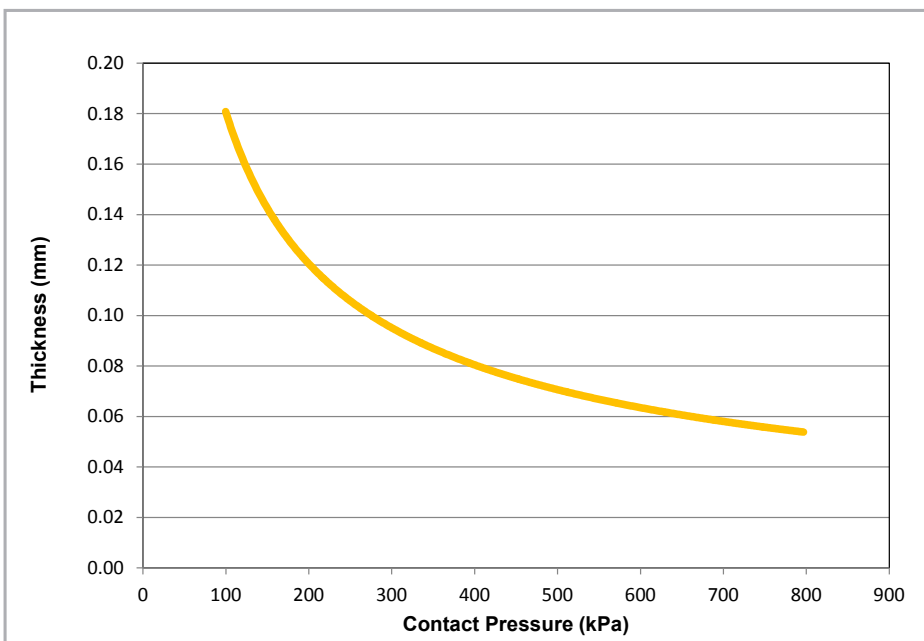
Characteristic	Unit	Typical Value
Thermal Impedance @ 200 kPa (K-cm <sup>2</sup> /W)	K-cm <sup>2</sup> /W	0.49
Thermal Impedance @ 700 kPa (K-cm <sup>2</sup> /W)	K-cm <sup>2</sup> /W	0.18
Typical Thermal Conductivity <sup>[2]</sup> @ 700 kPa Through-Thickness • In-Plane	W/mK	7 • 800
Typical Starting Thickness	µm inches	200 ± 20 0.008 ± 0.001
Coefficient of Thermal Expansion Through-Thickness • In-Plane	ppm/°C	27 • -0.4
Electrical Conductivity Through-Thickness • In-Plane	S/cm	5 • 19,000
Flammability Rating (UL)	-	Compliant
Operating Temperature	°C	-40 to +400
Specific Heat @ 25°C	J/g-°C	0.80
RoHS Compliant	-	Yes
Halogen Free	-	Yes

## Thermal Impedance vs Pressure



Thermal impedance reduces significantly with pressure

## Thickness Under Compression



Material compressibility improves contact and performance

Notes:

[1] Properties listed are typical and cannot be used as accept/reject specifications.

[2] In-Plane conductivity at ambient temperature determined using Angstrom's Method.

Thru-thickness conductivity determined using ASTM D5470 Modified Method.

+1 (800) 253-8003 (Toll-Free in USA)

+1 (216) 529-3777 (International)

[www.graftechAET.com](http://www.graftechAET.com) | [info@graftechAET.com](mailto:info@graftechAET.com)

© 2017 Advanced Energy Technologies LLC. This information is based on data believed to be reliable but AET makes no warranties, express or implied, as to its accuracy and assumes no liability arising out of its use. The data listed falls within the normal range of product properties but should not be used to establish specification limits or used alone as the basis of design. AET's liability to purchasers is expressly limited to the terms and conditions of sale. eGRAF, GRAFGUARD® and GRAFOIL® are registered trademarks of Advanced Energy Technologies LLC. eGRAF, GRAFGUARD® and GRAFOIL® products, materials, and processes are covered by several US patents. For patent information visit [www.graftechAET.com](http://www.graftechAET.com).

4.19.2017