

GrafTech eGRAF[®] HITHERM[™],ç HT-1220 Graphite

Category : Carbon , Graphite

Material Notes:

Made from natural graphite, eGRAF[®] HITHERM[™],ç thermal interface materials are designed for use in applications requiring low contact resistance and high thermal conductivity. HITHERM[™],ç material is offered in a variety of through thickness thermal conductivities, available in roll or die-cut form and can be laminated with plastics and adhesives. An economical thermal interface material, HITHERM[™],ç products will not dry out and no outgassing occurs under vacuum conditions. The conformability of HITHERM[™],ç materials optimizes thermal properties, ensures excellent contact, and is maintained for the life of the assembly. Typical applications include thermal interfaces, chip burn-in, chip testing fixtures, DC-to-DC converters, CPU modules, microprocessors, and hot and cold plates.

Order this product through the following link:

http://www.lookpolymers.com/polymer_GrafTech-eGRAF-HITHERM-HT-1220-Graphite.php

Physical Properties	Metric	English	Comments
Thickness	508 microns	20.0 mil	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	3.20 MPa	464 psi	ASTM-F152

Thermal Properties	Metric	English	Comments
CTE, linear	-0.400 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	-0.222 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	In-Plane
	27.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	15.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	Through Thickness
Specific Heat Capacity	0.711 J/g $\cdot\text{Å}^\circ\text{C}$	0.170 BTU/lb $\cdot\text{Å}^\circ\text{F}$	
Thermal Conductivity	10.0 W/m-K	69.4 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	Through Thickness; ASTM-D5470 Modified (at 110kPa/16 psi/1.1 bar)
	150 W/m-K	1040 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	In-Plane; Angstrom's Method
Maximum Service Temperature, Air	400 $\text{Å}^\circ\text{C}$	752 $\text{Å}^\circ\text{F}$	
Minimum Service Temperature, Air	-40.0 $\text{Å}^\circ\text{C}$	-40.0 $\text{Å}^\circ\text{F}$	
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00100 ohm-cm	0.00100 ohm-cm	In-Plane
	1.50 ohm-cm	1.50 ohm-cm	Through Thickness

Descriptive Properties	Value	Comments
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Permeance - Per Side ($\text{Å}^3 \cdot \text{cm} / \text{m}^2 \cdot \text{s} \cdot \text{bar}$)	0.98	100 psi/6.9 bar at 100 kPa/14.5 psi/1 bar

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