



## Electronic Thermal Management Products

### eGraf™ Class 1200 Thermal Interface

eGraf™ Class 1200 Thermal Interface Materials are manufactured entirely from highly conductive natural graphite. Class 1200 products have a minimum thermal conductivity of 12 W/m°C through the thickness and a thermal conductivity of approximately 200 W/m°C along the length and width. These directional properties, or anisotropy, make Class 1200 products excellent heat conductors and heat spreaders. Class 1200 products conform to mounting surfaces under extremely low loads (10~50 psi), and so exhibit low contact resistance even when used with surfaces that are out of flat or with high surface roughness. By combining high conductivity with low contact resistance, Class 1200 products are excellent replacements for thermal greases and phase change materials. Class 1200 products are also able to provide effective heat transfer in systems with lower die junction temperatures - conditions where phase change materials are ineffective. The performance of Class 1200 products does not degrade due to heat or pressure (per ASTM F-38), and will not separate, migrate, pump out or dry out. Excellent contact is maintained for the life of the assembly, reducing the chance for heat related failures.

<u>Typical Properties</u>	<u>Grade 1210</u>	<u>Grade 1220</u>
Thickness, mil (thousandths of an inch)	10	20
Thermal Conductivity, W/m°C (minimum)		
along length and width	200	200
through thickness	12	12
Specific Thermal Resistance, °C-in <sup>2</sup> /W	0.03	0.07
Continuous Use Temperature, °C	-50 to 200	-50 to 200
Tensile Strength, psi	750	750
Pressure Sensitive Adhesive	optional	optional
Color	gray	gray

### Applications

Board Mount Power  
CPU modules  
DC/DC converters  
Mobile computing devices  
Communications devices  
EMI Shielding

### Product Performance

Unparalleled low thermal resistance  
Easily conforms to surfaces, eliminating air gaps  
Thermally and mechanical stable between -50°C  
and 200°C  
Can be cut to any size or shape  
Easily installed during component assembly

### Product Availability

Available with a pressure sensitive adhesive on one side (1210A & 1220A) or without (1210 & 1220)  
Available in 10 mil and 20 mil thickness  
Available in finished parts made to your drawing  
Standard roll is 24 inches wide x 100 feet long

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Graftech Inc. Phone 1-800-253-8003, In Ohio, 1-216-529-3777 FAX 1-216-529-3888