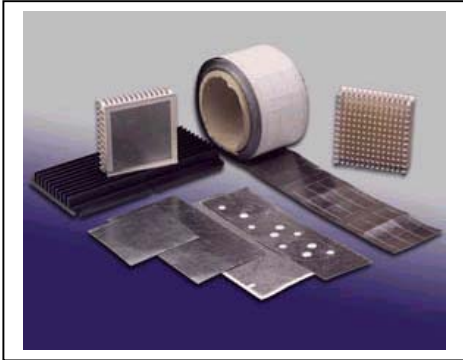


eGRAF™ eGraf™ 1200 Electronic Thermal Management *Products*

The eGraf™ 1200 class of Thermal Interface Materials are designed for use in applications requiring low contact resistance and high thermal conductivity.



eGraf 1200 materials are manufactured entirely from natural graphite with no fillers or binders. eGraf 1200 will not dry out and no outgassing occurs under vacuum conditions. eGraf 1200 materials are useable at temperatures up to 400°C.

eGraf 1200 is an economical thermal interface material. The conformable nature of eGraf 1200 materials optimizes thermal properties. Excellent contact is maintained for the life of the assembly.

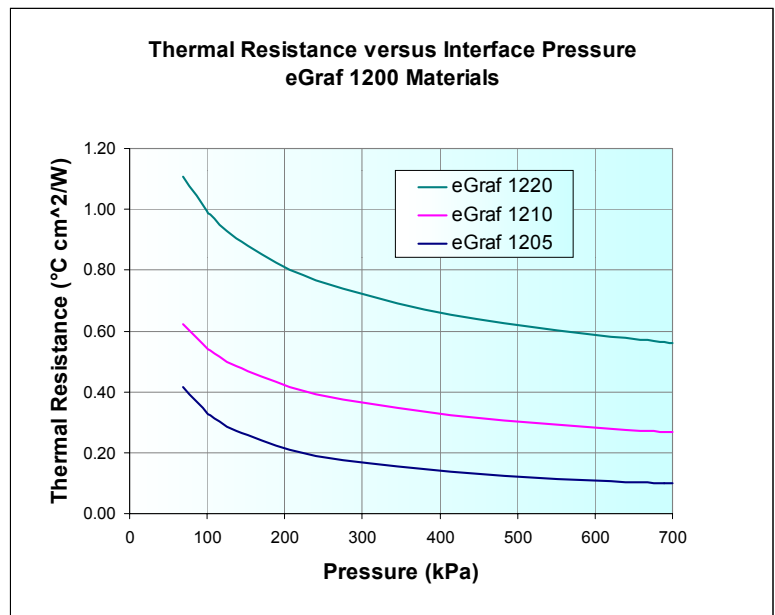
The graph on the right shows the thermal resistance of eGraf 1200 materials as a function of contact pressure.

Typical applications include chip burn-in and chip testing fixtures, DC to DC converters, CPU modules, microprocessors, and hot and cold plates.

All eGraf 1200 materials are available with or without a pressure sensitive adhesive (PSA), in sheet, roll or die cut form. eGraf 1200 can be easily cut to any size or shape.

Typical Properties of eGraf 1200 Materials

Property	eGraf 1205	eGraf 1210	eGraf 1220	Test Method
<i>Physical</i>				
Color	Dark Grey	Dark Grey	Dark Grey	
Thickness	0.13 mm	0.25 mm	0.51 mm	
Tensile Strength	1800 kPa	3100 kPa	3100 kPa	ASTM F-152
<i>Thermal</i>				
Operating Temperature	-40 to 400 °C	-40 to 400 °C	-40 to 400 °C	
Thermal Impedance @100 kPa	0.32 cm ² °C/W	0.54 cm ² °C/W	0.98 cm ² °C/W	ASTM D 5470 Modified
Thermal Impedance @700 kPa	0.10 cm ² °C/W	0.27 cm ² °C/W	0.56 cm ² °C/W	ASTM D 5470 Modified
Thermal Conductivity				
Thru-thickness	10 W/m•K	10 W/m•K	10 W/m•K	ASTM D 5470 Modified
In-plane	120 W/m•K	120 W/m•K	120 W/m•K	Angstrom's Method
<i>Electrical - typical</i>				
Electrical Resistivity				
Thru-thickness	>100 µohm m	>100 µohm m	>100 µohm m	ASTM C611
In-plane	10 µohm m	10 µohm m	10 µohm m	ASTM C611
<i>Note: Dielectric coatings can be applied to eGraf 1200 materials to increase Thru-thickness Electrical Resistivity</i>				



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