





SPREADERSHIELD™ Heat Spreaders

TECHNICAL DATA SHEET 321

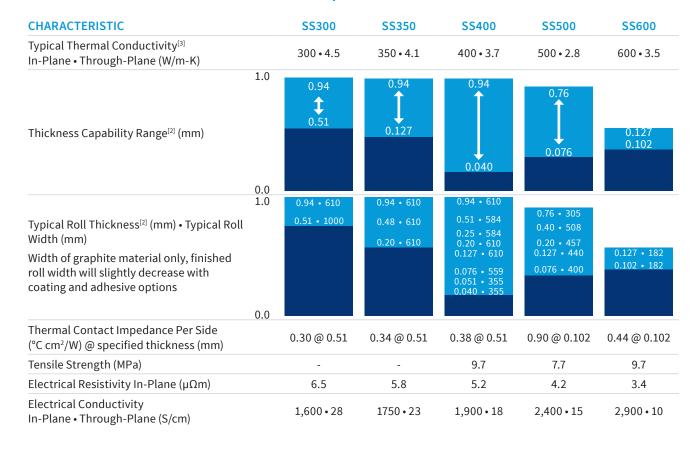
Product Overview

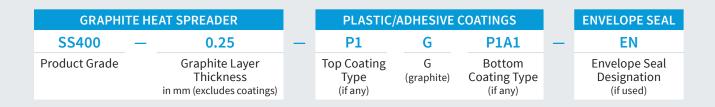
eGRAF" SPREADERSHIELD" flexible graphite products function as both a passive heat spreader and heat shield. These products offer a variety of in-plane thermal conductivity solutions. The flexible graphite materials can be die-cut, or laminated with plastics and/or adhesives.

Part Designation

Every eGRAF® SPREADERSHIELD™ flexible graphite heat spreader part number defines the grade and coating options of the material. It is constructed based on the example below. For additional coating information, please reference Technical Data Sheet 322 - SPREADERSHIELD™ Design Options.

Product Series Characteristics: [1] **Natural Graphite Products**





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eGRAF® SPREADERSHIELD™ HEAT SPREADERS

Product Grade Characteristics^[1]: Natural Graphite Products

CHARACTERISTIC	SS300	SS350	SS400	SS500	SS600			
Coefficient of Thermal Expansion (ppm/°C) In-Plane • Through-Plane	-0.4 • 27.0							
Specific Heat ^[4] (J/g°C) @ 50°C	0.81							
Operating Temperature (°C)	-40 to +400							
UL Flammability Rating	94V-0							
RoHS Compliant	Yes							
Lead / Halogen Free	Yes							

Product Grade Characteristics^[1]: Synthetic Graphite Products

CHARACTERISTIC		TG-826ACR	TG-827CR	TG-828CR	TG-829CR	TG-818		
Thickness (mm)		0.017 ±0.003	0.025 ±0.005	0.032 ±0.005	0.040 ±0.005	0.050 ±0.010		
Typical Roll Dimensions	Width (mm)	200	200 240	200 240	200	248mm x 390mm		
Typical Thermal Cond In-Plane • Through-Pl		1600 • 3.4	1500 • 3.4	1400 • 3.4	1350 • 3.4	1400 • 3.4		
Electrical Conductivit In-Plane • Through-Pl	• • • •		19,000 • 5					
Coefficient of Therma In-Plane • Through-Pl			-0.4 • 27					
Operating Temperatu	re (°C)		-40 to +400					
UL Flammability Ratir	ng		94V-0					
RoHS Compliant			Yes					
Lead / Halogen Free			Yes					

Notes:

- [1] Properties listed are typical and cannot be used as acceptance or rejection criteria. Product characteristics exclude coatings and adhesives.
- [2] Thickness tolerance on Natural Graphite Products up to and including 0.127mm nominal thickness: ±0.013mm; thickness tolerance on material nominal thickness greater than 0.127mm: ±0.025mm.
- [3] In-plane thermal conductivity determined by 'Neograf Standard Method for Determination of Thermal Conductivity'; through-plane thermal conductivity determined using ASTM D5470 Modified method.
- [4] Specific Heat determined by Quasi-Isothermal Modulated Differential Scanning Calorimetry Method.

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