

# GRAFSTAR™ SL Grade Graphite

#### **Technical Data Sheet**

## **Product Overview**

Densified prior to graphitization, GRAFSTAR<sup>TM</sup> SL graphite is for applications requiring higher densities and good mechanical strength. And with its higher coefficient of thermal expansion (C.T.E.), it is a very attractive match for Si / SiC application environments.

# **Applications**

- CZ silicon crystal growth
- Quartz processing
- Polysilicon seed chucks
- Casting molds and furnace parts for hot metal

### Sizes\*

Standard Sizes						
English	Metric					
20-26 dia x 72 in rounds	500-660 mm dia x 1828 mm rounds					

# Typical Properties at Room Temperature\*\*

Characteristic	English Units	WG	AG	Metric Units	WG	AG	SI Units	WG	AG
Bulk Density	lbs/ft³	110		g/cm³	1.76		g/cm³	1.76	
Maximum Particle Size	inches	0.03		mm	0.76		mm	0.76	
Specific Resistance	10 <sup>-4</sup> Ω-in	2.9	3.4	μΩm	7.4	8.6	μΩm	7.4	8.6
Flexural Strength	psi	2900	2465	kg/cm²	204	173	MPa	20	17
Young's Modulus	10 <sup>6</sup> psi	1.5	1.2	kg/mm²	1019	864	GPa	10.0	8.5
Tensile Strength	psi	2030	1740	kg/cm²	143	122	MPa	14	12
Compressive Strength	psi	8000	8000	kg/cm²	562	562	MPa	55	55
Permeability	Darcy	0.02	0.02	Darcy	0.02	0.02	Darcy	0.02	0.02
Hardness	Rockwell "R"	93		Rockwell "R"	93		Rockwell "R"	93	
C.T.E. (to 100 °C)	10 <sup>-6</sup> / °F	1.8	2.1	10 <sup>-6</sup> / °C	3.2	3.8	10 <sup>-6</sup> / K	3.2	3.8
Thermal Conductivity	BTU/hr-ft-°F	90	81	W/m-K	156	140	W/m-K	156	140
Ash Content	%	0.15		%	0.15		%	0.15	

#### Notes:



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<sup>\*</sup> Other sizes available upon request. Rectangles can be made available on a made-to-order basis.

<sup>\*\*</sup> Properties listed are typical and cannot be used as accept/reject specifications