

# SL™ Graphite

Technical Data Sheet 5030

## Product Overview

Densified prior to graphitization, GrafTech's GRAFSTAR SL graphite is for applications requiring higher densities and good mechanical strength.

## Applications

- CZ silicon crystal growth
- Quartz
- Casting molds and furnace parts for hot metal

## Sizes\*

- 20" & 22" diameter rounds
- 500 mm & 550 mm diameter rounds
- 20" and 22" cross-section rounds
- 500 and 550 mm cross-section rounds

## Typical Properties at Room Temperature\*\*

Characteristic	Unit	WG	AG	Unit	WG	AG	Unit	WG	AG
Density	lbs/ft <sup>3</sup>	110		g/cm <sup>3</sup>	1.76		g/cm <sup>3</sup>	1.76	
Maximum Particle Size	inches	0.030		mm	0.76		mm	0.76	
Specific Resistance	10 <sup>-4</sup> Ωin	2.9	3.4	μΩm	7.4	8.5	μΩm	7.4	8.5
Flexural Strength	psi	2900	2465	kg/cm <sup>2</sup>	204	173	MPa	20	17
Young's Modulus	10 <sup>6</sup> psi	1.45	1.23	kg/mm <sup>2</sup>	1019	866	GPa	10.0	8.5
Tensile Strength	psi	2030	1740	kg/cm <sup>2</sup>	143	122	MPa	14	12
Compressive Strength	psi	8000	8000	kg/cm <sup>2</sup>	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> /°K	3.2	3.8	10 <sup>-6</sup> /°K	3.2	3.8
Thermal Conductivity	BTU-ft/hr ft <sup>2</sup> °F	90	81	W/mK	156	140	W/mK	156	140
Ash Content	ppm	1500		ppm	1500		ppm	1500	

Notes:

\* Other sizes available upon request

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

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**Redefining limits**