

SL Graphite

Technical Data Sheet 5030

Product Overview

Densified prior to graphitization, 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 ³	110		g/cm ³	1.76		g/cm ³	1.76	
Maximum Particle Size	inches	0.030		mm	0.76		mm	0.76	
Specific Resistance	10 ⁻⁴ Ωin	2.9	3.4	μΩm	7.4	8.5	μΩm	7.4	8.5
Flexural Strength	psi	2900	2465	kg/cm ²	204	173	MPa	20	17
Young's Modulus	10 ⁶ psi	1.45	1.23	kg/mm ²	1019	866	GPa	10.0	8.5
Tensile Strength	psi	2030	1740	kg/cm ²	143	122	MPa	14	12
Compressive Strength	psi	8000	8000	kg/cm ²	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 ⁻⁶ /°F	1.8	2.1	10 ⁻⁶ /°K	3.2	3.8	10 ⁻⁶ /°K	3.2	3.8
Thermal Conductivity	BTU-ft/hr ft ² °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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