



GRAFSTAR® CGC™ GRADE GRAPHITE

Technical Data Sheet

Product Overview

Isostatically molded grade CGC™ graphite is an ATC™ based material that has been processed to higher density and strength. Grade CGC™ is produced to handle the most demanding quality standards, and can be machined to very precise tolerances with a fine polished surface finish. This grade graphite has been specifically manufactured for continuous casting mold and die applications requiring lower thermal conductivity for improved metal solidification/performance.

Applications

- Continuous casting dies
- Hot pressing dies and molds

Sizes*

Standard Sizes	
English	Metric
16 x 16 x 72 in	406 x 406 x 1828 mm
12 x 25 x 80 in	305 x 635 x 2032 mm

Typical Properties at Room Temperature**

Characteristic	English Units	WG	Metric Units	WG	SI Units	WG
Bulk Density	lbs/ft ³	112	g/cm ³	1.80	g/cm ³	1.80
Average Particle Size	inches	0.001	mm	0.03	mm	0.03
Specific Resistance	10 ⁻⁴ Ω-in	5.43	μΩm	13.8	μΩm	13.8
Flexural Strength	psi	5150	kg/cm ²	362	MPa	36
Young's Modulus	10 ⁶ psi	1.65	kg/mm ²	1159	GPa	11.4
Tensile Strength	psi	4950	kg/cm ²	348	MPa	34
Compressive Strength	psi	12500	kg/cm ²	878	MPa	86
Permeability	Darcy	0.0005	Darcy	0.0005	Darcy	0.0005
Hardness	Rockwell "L"	80	Rockwell "L"	80	Rockwell "L"	80
C.T.E. (to 100 °C)	10 ⁻⁶ /°F	1.8	10 ⁻⁶ /°C	3.2	10 ⁻⁶ /K	3.2
Thermal Conductivity	BTU/hr-ft-°F	58	W/m-K	100	W/m-K	100
Ash Content	%	0.11	%	0.11	%	0.11

Notes:

* Other sizes available upon request

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

