



GRAFSTAR® BGC™ GRADE GRAPHITE

Product Overview

Isostatically molded BGC™ grade graphite is an ATC™ based material that has been processed to higher density and strength. BGC™ grade graphite is characterized by very low permeability, erosion resistance and excellent surface hardness.

Applications

- Ablatives
- Solid rocket motor nozzles/parts
- Starter rods

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 (AG)	10 ⁻⁴ Ω-in	5.43	μΩm	13.8	μΩm	13.8
Flexural Strength	psi	5500	kg/cm ²	386	MPa	38
Young's Modulus	10 ⁶ psi	1.65	kg/mm ²	1159	GPa	11.4
Tensile Strength	psi	4900	kg/cm ²	344	MPa	34
Compressive Strength	psi	12000	kg/cm ²	8843	MPa	83
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) (AG)	10 ⁻⁶ / °F	1.7	10 ⁻⁶ / °C	3.1	10 ⁻⁶ / K	3.1
Thermal Conductivity	BTU/hr-ft-°F	58	W/m-K	100	W/m-K	100
Ash Content	%	0.10	%	0.10	%	0.10

Notes:

* Other sizes available upon request

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

WG = With-the-Grain AG = Against-the-Grain

