

GRAFSTAR™ BGC™ GRADE GRAPHITE

Product Overview

Isostatically molded BGC^{TM} grade graphite is an ATC^{TM} based material that has been processed to higher density and strength. BGC^{TM} 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/ft³	112	g/cm³	1.80	g/cm³	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/cm²	386	MPa	38
Young's Modulus	10 ⁶ psi	1.65	kg/mm²	1159	GPa	11.4
Tensile Strength	psi	4900	kg/cm²	344	MPa	34
Compressive Strength	psi	12000	kg/cm²	8843	MPa	83
Permeability	Darcy	0.0005	Darcy	0.0005	Darcy	0.0005
Hardness	Rockwell "L"	100	Rockwell "L"	100	Rockwell "L"	100
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



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^{*} 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