

GRAFSTAR™ BGN™ Grade Graphite

Product Overview

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

Applications

- Ablatives
- · Solid rocket motor nozzles/parts

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	113	g/cm³	1.81	g/cm³	1.81
Average Particle Size	inches	0.001	mm	0.03	mm	0.03
Specific Resistance (AG)	10 ⁻⁴ Ω-in	4.41	μΩm	11.2	μΩm	11.2
Flexural Strength	psi	5200	kg/cm ²	363	MPa	36
Young's Modulus	10 ⁶ psi	1.55	kg/mm²	1089	GPa	10.7
Tensile Strength	psi	4500	kg/cm ²	316	MPa	31
Compressive Strength	psi	11500	kg/cm ²	808	MPa	79
Permeability	Darcy	0.0005	Darcy	0.0005	Darcy	0.0005
Hardness	Rockwell "L"	90	Rockwell "L"	90	Rockwell "L"	90
C.T.E. (to 100 °C) (AG)	10 ⁻⁶ / °F	1.5	10 ⁻⁶ / °C	2.7	10 ⁻⁶ / K	2.7
Thermal Conductivity	BTU/hr-ft-°F	72	W/m-K	125	W/m-K	125
Ash Content	%	0.09	%	0.09	%	0.09

Notes:



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^{*} Other sizes may be made available upon request.

^{**} Properties listed are typical and cannot be used as accept/reject specifications WG = With-the-Grain AG = Against-the-Grain