



GRAFSTAR™ BGN™ Grade Graphite

Product Overview

Isostatically molded BGN™ grade graphite is an ATJ™ based material that has been processed to higher density and strength. BGN™ 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/ft ³	113	g/cm ³	1.81	g/cm ³	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/mm ²	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:

* 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

