GRAFSTAR™
BGN Grade Graphite

Product Overview

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

Applications

- Ablative Plates
- 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	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)	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	%	0.07	%	0.07	%	0.07

Notes:

* Other sizes may be made available upon request.

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

AG = Against-the-Grain