

# GRAFSTAR™ BGN Grade Graphite

### **Product Overview**

Isostatically molded grade  $BGN^{TM}$  is an  $ATJ^{TM}$  based material that has been processed to higher density and strength. Grade  $BGN^{TM}$  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/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 <sup>-4</sup> Ω-in	4.41	μΩm	11.2	μΩm	11.2
Flexural Strength	psi	5200	kg/cm²	363	MPa	36
Young's Modulus	10 <sup>6</sup> psi	1.55	kg/mm²	1089	GPa	10.7
Tensile Strength	psi	4500	kg/cm²	316	MPa	31
Compressive Strength	psi	11500	kg/cm²	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 <sup>-6</sup> / °F	1.5	10 <sup>-6</sup> / °C	2.7	10 <sup>-6</sup> / 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:**

AG = Against-the-Grain



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<sup>\*</sup> Other sizes may be made available upon request.

<sup>\*\*</sup> Properties listed are typical and cannot be used as accept/reject specifications