



# GRAFSTAR™ ATJX™ GRADE GRAPHITE

## Product Overview

ATJX™ grade graphite is a fine grain, higher density, higher strength material that can be machined to precise tolerances and a fine surface finish. ATJX™ grade graphite has unique thermal shock resistance due to the combination of low thermal expansion, high thermal conductivity and low elastic modulus.

## Applications

- Ablatives
- Electronics components
- Solid rocket motor nozzles
- Continuous casting dies
- Semiconductor furnace parts

## Sizes\*

Standard Sizes	
English	Metric
16 x 16 x 72 in	406 x 406 x 1828 mm
12 x 25 x 40 in	305 x 635 x 1016 mm
12 x 25 x 48 in	305 x 635 x 1220 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 <sup>3</sup>	112	g/cm <sup>3</sup>	1.80	g/cm <sup>3</sup>	1.80
Average Particle Size	inches	0.001	mm	0.03	mm	0.03
Specific Resistance (AG)	10 <sup>-4</sup> Ω-in	3.94	μΩm	10.0	μΩm	10.0
Flexural Strength	psi	5500	kg/cm <sup>2</sup>	386	MPa	38
Young's Modulus	10 <sup>6</sup> psi	1.7	kg/mm <sup>2</sup>	1194	GPa	11.7
Tensile Strength	psi	4000	kg/cm <sup>2</sup>	281	MPa	28
Compressive Strength	psi	10500	kg/cm <sup>2</sup>	738	MPa	72
Permeability	Darcy	0.0005	Darcy	0.0005	Darcy	0.0005
Hardness	Rockwell "L"	75	Rockwell "L"	75	Rockwell "L"	75
C.T.E. (to 100 °C) (AG)	10 <sup>-6</sup> / °F	1.6	10 <sup>-6</sup> / °C	2.9	10 <sup>-6</sup> / K	2.9
Thermal Conductivity	BTU/hr-ft-°F	78	W/m-K	135	W/m-K	135
Ash Content	%	0.09	%	0.09	%	0.09

### Notes:

\* 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

