

GRAFSTAR™ ATJX™ GRADE GRAPHITE

Product Overview

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

Applications

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

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/ft³	112	g/cm³	1.80	g/cm³	1.80
Average Particle Size	inches	0.001	mm	0.03	mm	0.03
Specific Resistance (AG)	10 ⁻⁴ Ω-in	3.94	μΩm	10.0	μΩm	10.0
Flexural Strength	psi	5500	kg/cm²	386	MPa	38
Young's Modulus	10 ⁶ psi	1.7	kg/mm²	1194	GPa	11.7
Tensile Strength	psi	4000	kg/cm²	281	MPa	28
Compressive Strength	psi	10500	kg/cm ²	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 ⁻⁶ / °F	1.6	10 ⁻⁶ / °C	2.9	10 ⁻⁶ / 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:

WG = With-the-Grain AG = Against-the-Grain

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^{*} Other sizes available upon request

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