

XTE70 Fine Grain Graphite

Technical Data Sheet 6008

Product Overview

GRAFSTAR XTE70 ultra fine grain graphite is suitable for a broad range of applications that require fine machined detail and superior wear resistance in a variety of service conditions.

Applications

- Semiconductor packaging brazing jigs and fixtures
- Glass-to-metal sealing fixtures
- Substrate for SiC coated artifacts
- High-temperature bearings, bushings and seals

Sizes

- 165 x 318 x 635 mm (6.5" x 12.5" x 25") billets

Typical Properties at Room Temperature*

Characteristic	Unit	Value	Unit	Value
Particle Size	inches	<0.00032	µm	<8
Bulk Density	lbs/ft ³	112	g/cm ³	1.79
Specific Resistance	10 ⁻⁴ Ωin	6.0	µΩm	15.3
Thermal Conductivity	Btu/ft-hr-°F	42.8	W/m°K	74
CTE (to 100°C)	10 ⁻⁶ /°F	2.63	10 ⁻⁶ /°C	4.74
Flexural Strength (4-Point)	psi	9,000	MPa	62
Compressive Strength	psi	21,800	MPa	150
Tensile Strength	psi	8,000	MPa	55
Sonic Modulus	10 ⁶ psi	1.78	GPa	12.3
Hardness	Shore	70	Rockwell "L"	114
Purity (Ash)**	ppm	1600	ppm	1600
Gas Permeability	Darcy	0.0016	Darcy	0.0016

Notes:

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

** For applications requiring low ash, a purified version of this grade is available

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Redefining limits