



GRAFSTAR™ CS Grade Graphite

Product Overview

Densified prior to graphitization, GRAFSTAR™ CS graphite is 25-30% higher in strength than our general purpose grade CBY graphite. Grade CS graphite is also low in ash for superior oxidation performance. It is the material of choice for difficult applications requiring higher densities, better mechanical strength, or less porosity for performance. Grade CS graphite is one of the most popular multi-purpose graphite grades available.

Applications

- Heat treatment boats and trays
- Sintering applications
- Induction furnace susceptors
- Furnace parts & fixtures
- Crucibles for melting and alloying
- Resistance heaters

Sizes

Standard Sizes	
English	Metric
3-30 in dia x 72 in rounds	75-to-762 mm dia x 1829 mm rounds
12x12x72 in rectangles	304x304x1829 mm rectangles
15x30x72-to-108 in rects	381x762x1829-to-2743 mm rects
17x17x72-to-108 in rects	432x432x1829-to-2743 mm
20x20x72-to-108 in rects	508x508x1829-to-2743 mm
24x24x72-to-88 in rects	609x609x1829-to-2235 mm

Typical Properties at Room Temperature*

Characteristic	English Units	WG		Metric Units	WG		SI Units	WG	
		WG	AG		WG	AG		WG	AG
Bulk Density	lbs/ft ³	108		g/cm ³	1.73		g/cm ³	1.73	
Maximum Particle Size	inches	0.03		mm	0.76		mm	0.76	
Specific Resistance	10 ⁻⁴ Ω-in	2.8	3.7	μΩm	7.1	9.4	μΩm	7.1	9.4
Flexural Strength	psi	3050	2250	kg/cm ²	214	158	MPa	21	16
Young's Modulus	10 ⁶ psi	1.59	1.20	kg/mm ²	1117	843	GPa	11.0	8.3
Tensile Strength	psi	2150	1600	kg/cm ²	151	112	MPa	15	11
Compressive Strength	psi	6600	6600	kg/cm ²	464	464	MPa	46	46
Permeability	Darcy	0.05	0.04	Darcy	0.05	0.04	Darcy	0.05	0.04
Hardness	Rockwell "R"	83		Rockwell "R"	83		Rockwell "R"	83	
C.T.E. (to 100 °C)	10 ⁻⁶ /°F	1.4	2.0	10 ⁻⁶ /°C	2.5	3.6	10 ⁻⁶ /K	2.5	3.6
Thermal Conductivity	BTU/hr-ft-°F	92	81	W/m-K	160	140	W/m-K	160	140
Ash Content	%	0.09		%	0.09		%	0.09	

Notes:

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

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