

CHV™ Graphite

Technical Data Sheet 5076

Product Overview

GrafTech's GRAFSTAR CHV graphite is an extension of CS™ graphite in a 22" x 48" (559 x 1200 mm) cross section. CHV graphite has excellent thermal shock resistance, based on thermal expansion and thermal conductivity characteristics. CHV graphite is ideal in high temperature applications requiring larger sizes.

Applications

- Induction and vacuum furnace parts
- Pressure casting molds
- Composite tooling and carbon/carbon parts

Sizes

- 559 x 1200 x 3000 mm rectangles
- 22" x 48" x 120" rectangles

Typical Properties at Room Temperature*

Characteristic	Unit	WG	AG	Unit	WG	AG	Unit	WG	AG
Density	lbs/ft ³	110		g/cm ³	1.76		g/cm ³	1.76	
Maximum Particle Size	inches	0.060		mm	1.52		mm	1.52	
Specific Resistance	10 ⁻⁴ Ωin	3.6	5.2	μΩm	9.1	13.2	μΩm	9.1	13.2
Flexural Strength	psi	1900	1500	kg/cm ²	133	105	MPa	13	10
Young's Modulus	10 ⁶ psi	1.46	0.97	kg/mm ²	1024	682	GPa	10.1	6.7
Tensile Strength	psi	1100	1050	kg/cm ²	77	74	MPa	8	7
Compressive Strength	psi	3850	4200	kg/cm ²	270	294	MPa	27	29
Permeability	Darcy	0.17	0.09	Darcy	0.17	0.09	Darcy	0.17	0.09
Hardness	Rockwell "R"	22		Rockwell "R"	22		Rockwell "R"	22	
C.T.E. (to 100 °C)	10 ⁻⁶ /°F	0.8	1.5	10 ⁻⁶ /°K	1.4	2.7	10 ⁻⁶ /°K	1.4	2.7
Thermal Conductivity	BTU-ft/hr ft ² °F	80	60	W/mK	139	104	W/mK	139	104
Ash Content	%	1.3		%	1.3		%	1.3	

Notes:

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

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