

# GRAFTech International

## CHV™ Graphite

GrafTech International is a global leader in graphite and carbon products. We enable customer leadership better and faster than our competition, through the creation, innovation and manufacture of carbon and graphite material science based solutions.

### Grade CHV™ Graphite

Grade 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.

### Typical 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

	<u>ENGLISH</u>	<u>WG</u>	<u>AG</u>	<u>METRIC</u>	<u>WG</u>	<u>AG</u>	<u>SI</u>	<u>WG</u>	<u>AG</u>
Density	lbs/ft <sup>3</sup>	110		g/cm <sup>3</sup>	1.76		g/cm <sup>3</sup>	1.76	
Maximum Particle Size	Inches	0.060		mm	1.52		mm	1.52	
Specific Resistance	10 <sup>-4</sup> Ω in.	3.6	5.2	μΩm	9.1	13.2	μΩm	9.1	13.2
Flexural Strength	psi	1900	1500	kg/cm <sup>2</sup>	133	105	MPa	13	10
Young's Modulus	10 <sup>6</sup> psi	1.46	0.97	kg/mm <sup>2</sup>	1024	682	GPa	10.1	6.7
Tensile Strength	psi	1100	1050	kg/cm <sup>2</sup>	77	74	MPa	8	7
Compressive Strength	psi	3850	4200	kg/cm <sup>2</sup>	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 <sup>-6</sup> /°F	0.8	1.5	10 <sup>-6</sup> /°K	1.4	2.7	10 <sup>-6</sup> /°K	1.4	2.7
Thermal Conductivity	BTU-ft/hr ft <sup>2</sup> °F	80	60	W/mK	139	104	W/mK	139	104
Ash Content	%	1.3		%	1.3		%	1.3	

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