

# PGW™ Graphite

Technical Data Sheet 5072

## Product Overview

An economical low ash material with excellent thermal shock resistance, GrafTech's GRAFSTAR PGW graphite is well suited for the fine machining detail required in molds for casting metal shapes. Grade PGW graphite is a molded version of grade CBY™ graphite with excellent internal structure.

## Applications

- Pressure casting molds
- Centrifugal casting molds
- Large diameter susceptors

## Sizes

Standard Sizes	
44" x 15"	1118 x 381 mm
44" x 23"	1118 x 584 mm
50" x 15"	1270 x 381 mm
50" x 23"	1270 x 584 mm
52" x 23"	1321 x 584 mm

## Typical Properties at Room Temperature\*

Characteristic	Unit	AG	Unit	AG	Unit	AG
Density	lbs/ft <sup>3</sup>	102	g/cm <sup>3</sup>	1.63	g/cm <sup>3</sup>	1.63
Maximum Particle Size	inches	0.03	mm	0.76	mm	0.76
Specific Resistance	10 <sup>-4</sup> Ωin	3.66	μΩm	9.3	μΩm	9.3
Flexural Strength	psi	1960	kg/cm <sup>2</sup>	137	MPa	14
Young's Modulus	10 <sup>6</sup> psi	1.0	kg/mm <sup>2</sup>	701	GPa	6.9
Tensile Strength	psi	1255	kg/cm <sup>2</sup>	88	MPa	9
Compressive Strength	psi	4960	kg/cm <sup>2</sup>	348	MPa	34
Permeability	Darcy	0.5	Darcy	0.5	Darcy	0.5
Hardness	Rockwell "R"	32	Rockwell "R"	32	Rockwell "R"	32
C.T.E. (RT to 100 °C)	10 <sup>-6</sup> /°F	2.0	10 <sup>-6</sup> /°K	3.6	10 <sup>-6</sup> /°K	3.6
Thermal Conductivity	BTU-ft/hr ft <sup>2</sup> °F	75	W/mK	130	W/mK	130
Ash Content	%	0.12	%	0.12	%	0.12

Notes:

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

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**Redefining limits**