GRAFSTAR™
PGW Grade Graphite

Product Overview

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

Applications

- Pressure casting molds
- Large diameter susceptors & furnace parts
- Centrifugal casting molds

Sizes

Standard Sizes	
English	Metric
44 x 15 in	1118 x 381 mm
44 x 23 in	1118 x 584 mm
50 x 15 in	1270 x 381 mm
50 x 23 in	1270 x 584 mm
52 x 23 in	1321 x 584 mm

Typical Properties at Room Temperature*

Characteristic	English Units	WG	AG	Metric Units	WG	AG	SI Units	WG	AG
Bulk Density	lbs/ft^3	102		g/cm^3	1.63		g/cm^3	1.63	
Maximum Particle Size	inches	0.03		mm	0.76		mm	0.76	
Specific Resistance	10^{-4} Ω-in	3.6	4.0	μΩm	9.1	10.2	μΩm	9.1	10.2
Flexural Strength	psi		1960	kg/cm^2		138	MPa		14
Young's Modulus	10^6 psi		1.00	kg/mm^2		703	GPa		6.9
Tensile Strength	psi		1255	kg/cm^2		88	MPa		9
Compressive Strength	psi		4960	kg/cm^2		349	MPa		34
Permeability	AFS		0.50	Darcy		0.16	Darcy		0.16
Hardness	Rockwell "R"	32		Rockwell "R"	32		Rockwell "R"	32	
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	81	75	W/m-K	140	130	W/m-K	140	130
Ash Content	%	0.10		%	0.10		%	0.10	

Notes:

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