



GRAFSTAR™ PGWX Grade Graphite

Technical Data Sheet 6033

Product Overview

GRAFSTAR™ PGWX graphite is a low ash material with excellent thermal shock resistance and is well suited for fine machining detail. It is a higher density, higher strength version of our PGW graphite material.

Applications

- Large diameter molds and crucibles
- Induction fce susceptors
- Heat exchangers
- Chemical processing equipment

Sizes

Standard Sizes	
English	Metric
36 x 48 in	914 x 1220 mm
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	106			g/cm ³	1.70			g/cm ³	1.70		
Maximum Particle Size	inches	0.03			mm	0.76			mm	0.76		
Specific Resistance	10-4 Ω-in	3.0	3.6		μΩm	7.6	9.1		μΩm	7.6	9.1	
Flexural Strength	psi	2700	2500		kg/cm ²	190	176		MPa	19	17	
Young's Modulus	106 psi	1.3	1.0		kg/mm ²	913	703		GPa	9.0	6.9	
Tensile Strength	psi	1900	1700		kg/cm ²	134	119		MPa	13	12	
Compressive Strength	psi	6400	6200		kg/cm ²	450	436		MPa	44	43	
Permeability	AFS	0.32	0.32		Darcy	0.10	0.10		Darcy	0.10	0.10	
Hardness	Rockwell "R"	70			Rockwell "R"	70			Rockwell "R"	70		
C.T.E. (to 100 °C)	10 ⁻⁶ / °F	1.7	1.9		10 ⁻⁶ / °C	3.1	3.4		10 ⁻⁶ / K	3.1	3.4	
Thermal Conductivity	BTU/hr-ft-°F	81	72		W/m-K	140	125		W/m-K	140	125	
Ash Content	%	0.10			%	0.1			%	0.1		

Notes:

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

