



GRAFSTAR™ PXP Grade Graphite

Product Overview

GRAFSTAR™ PXP graphite is a very 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 grade PGX and PGWX graphite materials. Its higher Coefficient of Thermal Expansion (C.T.E.) property also makes it an excellent choice for working with Silicon Carbide applications.

Applications

- Large diameter molds and crucibles
- Induction furnace susceptors
- Fluidized bed reactors
- Heat exchangers
- Chemical Processing Equipment
- Centrifugal casting molds

Sizes

Standard Sizes	
English	Metric
36 x 48 in	914 x 1220 mm
44 x 15 in	1118 x 584 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	109			g/cm ³	1.75			g/cm ³	1.75		
Maximum Particle Size	inches	0.03			mm	0.76			mm	0.76		
Specific Resistance	10 ⁻⁴ Ω-in	3.6	3.8		μΩm	9.2	9.6		μΩm	9.2	9.6	
Flexural Strength	psi	2610	2415		kg/cm ²	183	170		MPa	18	17	
Young's Modulus	10 ⁶ psi	1.34	1.30		kg/mm ²	942	913		GPa	9.2	9.0	
Tensile Strength	psi	1840	1780		kg/cm ²	129	125		MPa	13	12	
Compressive Strength	psi	7610	6880		kg/cm ²	535	483		MPa	52	47	
Permeability	AFS	0.34	0.44		Darcy	0.11	0.14		Darcy	0.11	0.14	
Hardness	Rockwell "R"	80			Rockwell "R"	80			Rockwell "R"	80		
C.T.E. (to 100 °C)	10 ⁻⁶ / °F	2.5	2.6		10 ⁻⁶ / °C	4.6	4.7		10 ⁻⁶ / K	4.6	4.7	
Thermal Conductivity	BTU/hr-ft-°F	81	72		W/m-K	140	125		W/m-K	140	125	
Ash Content	%	0.06			%	0.06			%	0.06		

Notes:

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

