

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/ft³	109		g/cm³	1.75		g/cm³	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

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