

PGX™ Graphite

Technical Data Sheet 5087

Product Overview

Available in low ash monolithic sizes as large as 73” diameter, GrafTech’s GRAFSTAR PGX graphite has excellent erosion resistance and thermal properties.

Applications

- Fluidized bed reactors
- Centrifugal casting molds
- Large diameter molds and crucibles
- Monolithic composite tooling parts
- Induction and vacuum furnace parts
- Heat exchangers chemical process equipment

Sizes

- 36 to 73” diameter x 72” long rounds
- (36 to 55” diameter also in 42” lengths)
- 914 to 1854 mm x 1829 long rounds
- (914 to 1397 mm diameter also in 1067 mm lengths)

Typical Properties at Room Temperature*

Characteristic	Unit	WG	AG	Unit	WG	AG	Unit	WG	AG
Density	lbs/ft ³	108		g/cm ³	1.73		g/cm ³	1.73	
Maximum Particle Size	inches	0.03		mm	0.76		mm	0.76	
Specific Resistance	10 ⁻⁶ Ωin	4.0	5.4	μΩm	10.2	13.7	μΩm	10.2	13.7
Flexural Strength	psi	1600	1300	kg/cm ²	112	91	MPa	11	9
Young’s Modulus	10 ⁶ psi	1.0	0.7	kg/mm ²	701	492	GPa	6.9	4.8
Tensile Strength	psi	1200	1000	kg/cm ²	84	70	MPa	8	7
Compressive Strength	psi	4000	4100	kg/cm ²	280	287	MPa	28	28
Permeability	Darcy	0.04	0.05	Darcy	0.04	0.05	Darcy	0.04	0.05
Hardness	Rockwell “R”	-		Rockwell “R”	-		Rockwell “R”	-	
C.T.E. (to 100 °C)	10 ⁻⁶ /°F	1.2	1.4	10 ⁻⁶ /°K	2.2	2.5	10 ⁻⁶ /°K	2.2	2.5
Thermal Conductivity	BTU-ft/hr ft ² °F	72	60	W/mK	125	104	W/mK	125	104
Ash Content	ppm	0.07		ppm	0.07		ppm	0.07	

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

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Redefining limits