

# GRAFTech International

## PGX™ Graphite

GrafTech International is a global leader in graphite and carbon products. We enable customer leadership better and faster than our competition, through the creation, innovation and manufacture of carbon and graphite material science based solutions.

### Grade PGX™ Graphite

Available in low ash monolithic sizes as large as 73" diameter, grade PGX™ graphite has excellent erosion resistance and thermal properties.

### Typical 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

	<u>ENGLISH</u>	<u>WG</u>	<u>AG</u>	<u>METRIC</u>	<u>WG</u>	<u>AG</u>	<u>SI</u>	<u>WG</u>	<u>AG</u>
Density	lbs/ft <sup>3</sup>	108		g/cm <sup>3</sup>	1.73		g/cm <sup>3</sup>	1.73	
Maximum Particle Size	Inches	0.03		mm	0.76		mm	0.76	
Specific Resistance	10 <sup>-4</sup> Ω in.	4.0	5.4	μΩm	10.2	13.7	μΩm	10.2	13.7
Flexural Strength	psi	1600	1300	kg/cm <sup>2</sup>	112	91	MPa	11	9
Young's Modulus	10 <sup>6</sup> psi	1.0	0.7	kg/mm <sup>2</sup>	701	492	GPa	6.9	4.8
Tensile Strength	psi	1200	1000	kg/cm <sup>2</sup>	84	70	MPa	8	7
Compressive Strength	psi	4000	4100	kg/cm <sup>2</sup>	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 <sup>-6</sup> /°F	1.2	1.4	10 <sup>-6</sup> /°K	2.2	2.5	10 <sup>-6</sup> /°K	2.2	2.5
Thermal Conductivity	BTU-ft/hr ft <sup>2</sup> °F	72	60	W/mK	125	104	W/mK	125	104
Ash Content	ppm	0.07		ppm	0.07		ppm	0.07	

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