



# GRAFSTAR™ PGX Grade Graphite

## Technical Data Sheet

### Product Overview

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

### Applications

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

### Sizes

Standard Sizes	
English	Metric
36-73 dia x 72 in lengths*	914-1854 mm dia x 1829 mm length*
36-55 dia x 42 in lengths	914-1397 mm dia x 1067 mm lengths

### Typical Properties at Room Temperature\*\*

Characteristic	English Units	WG		Metric Units	WG		SI Units	WG	
		WG	AG		WG	AG		WG	AG
Bulk 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>	703	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>	281	288	MPa	28	28
Permeability	Darcy	0.04	0.05	Darcy	0.04	0.05	Darcy	0.04	0.05
Hardness	Rockwell "R"	29		Rockwell "R"	29		Rockwell "R"	29	
C.T.E. (to 100 °C)	10 <sup>-6</sup> / °F	1.2	1.4	10 <sup>-6</sup> / °C	2.2	2.5	10 <sup>-6</sup> / K	2.2	2.5
Thermal Conductivity	BTU/hr-ft-°F	72	60	W/m-K	125	104	W/m-K	125	104
Ash Content	%	0.07		%	0.07		%	0.07	

#### Notes:

\* PGX sizes >55” dia and 72” lengths are available on a limited basis only until existing inventory is consumed.

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

