

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	AG	Metric Units	WG	AG	SI Units	WG	AG
Bulk Density	lbs/ft³	108		g/cm³	1.73		g/cm³	1.73	
Maximum Particle Size	inches	0.03		mm	0.76		mm	0.76	
Specific Resistance	10 ⁻⁴ Ω-in	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/mm²	703	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	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 ⁻⁶ / °F	1.2	1.4	10 ⁻⁶ / °C	2.2	2.5	10 ⁻⁶ / 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	



© 2021 Amsted Graphite Materials LLC. This information is based on data believed to be reliable but Amsted Graphite Materials LLC makes no warranties, express or implied, as to its accuracy and assumes no liability arising out of its use. The data listed falls within the normal range of product properties but should not be used to establish specification limits or used alone as the basis of design. Amsted Graphite Materials LLC's liability to purchasers is expressly limited to the terms and conditions of sale. GRAFSTAR is a trademark of Amsted Graphite Materials LLC.

^{*} 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