GRAFSTAR™
PGX Grade Graphite

Product Overview

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

Applications

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

Sizes

Standard Sizes	
English	**Metric**
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/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^{-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/mm^2	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	

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