

GRAFOAM® Carbon Foam FPH10G

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GRAFOAM® carbon foam Grade FPH10G is a rigid carbon foam material that enhances the high temperature insulating ability of GRAFOAM® insulation with the unique material properties of GRAFOIL® flexible graphite sheet.

The GRAFOIL® flexible graphite layer is a reflector of thermal radiation, with electrical and thermal anisotropic properties. It rapidly dissipates heat from the hottest zones to colder ones, providing temperature uniformity and the elimination of hot and cold spots. Durable GRAFOIL® flexible graphite products prevent erosion and contamination from material dusting without giving up chemical resistance and high temperature stability.

GRAFOAM® Carbon Foam Grade FPH 10G provides low thermal conductivity and vapor pressure with excellent insulating characteristics to reduce heat loss. It can withstand furnace temperatures up to 4500 °F (2500 °C) and virtually eliminates voids or hotspots found with other materials. FPH 10G products are easy to handle, easy to install, machine freely and are able to hold fine detail, with significant compressive strength properties making it useful as a high temperature structural material in furnace design.

Typical Applications

- Vacuum furnace insulation
- Inert gas furnace insulation
- Inert gas atmosphere process equipment insulation

Sizes

Board stock 6" X 36" X 72"; 15 cm X 90 cm X 180 cm

Additional sizes and shapes available upon request.

Typical Properties at Room Temperature

GRAFOAM®	ENGLISH	WR	AR	METRIC	WR	AR	SI	WR	AR
Density	lbs/ft ³	10		g/cm ³	0.16		g/cm ³	0.16	
Apparent Porosity	%	90		%	90		%	90	
Specific Resistance	Ω-in	0.04	0.05	μΩm	940	1250	μΩm	940	1250
Flexural Strength	PSI	326	182	kg/cm ²	23	13	MPa	2.2	1.2
Compressive Strength	PSI	646	410	kg/cm ²	45	29	MPa	4.4	2.8
Thermal Conductivity 25°C	BTU-ft/hr ft ² °F	0.12	0.14	W/mK	0.21	0.24	W/mK	0.21	0.24
Thermal Conductivity 800°C in Helium	BTU-ft/hr ft ² °F	0.39		W/mK	0.67		W/mK	0.67	
Carbon content	%	99.5		%	99.5		%	99.5	
Ash	%	0.7		%	0.7		%	0.7	

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