

## Hf

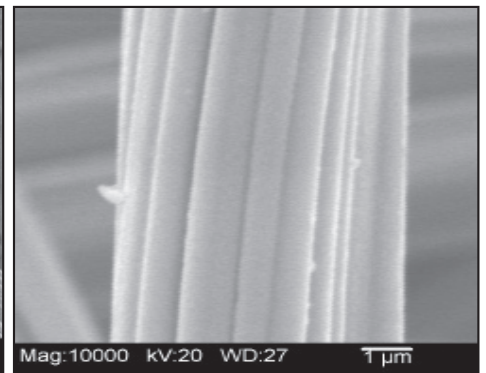
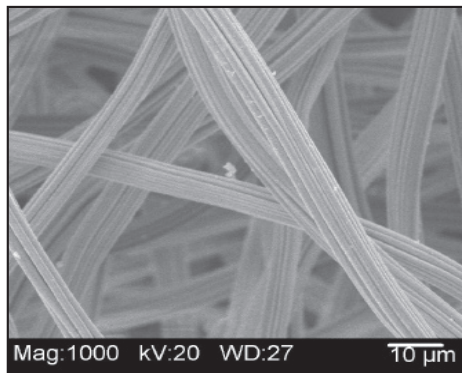
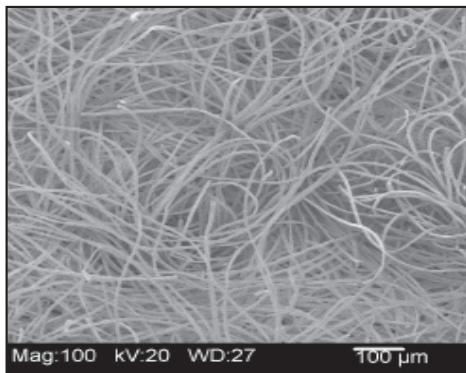
# High Temperature Hafnia Felt, Cloth and Bulk Fiber

**Zircar** Hafnia fibers and textiles are made by the same unique Zircar process used for manufacturing yttria-stabilized zirconia cloths and felts. High purity hafnia fiber and textiles are offered in different standard product forms; HfBF bulk fiber, two thicknesses of felt, HfF-50 and HfF-100 and two types of weave cloth patterns, square weave HfW-15 and satin weave HfW-30.

Hafnia fibers and textiles are 99+% pure, with no organic binders to outgas when firing. The low thermal conductivity materials have excellent shock resistance and can be used in multiple atmospheres, and the most corrosive, high temperature conditions.

Hafnia is extremely refractory, and has a high melting point, 2758°C (4996°F).

### Product Micrographs



### Properties and Characteristics

HF Properties	HfF-100
Bulk Density, g/cc (pcf)	0.5 (31)
Bulk Porosity %	95
Melting Point °F (°C)	4996 (2758)
Tensile Strength, g/cm width (lb/in width)	55 (0.31)
Loss on Ignition, 1 hr at 1742°F (950°C)	0.1
% Shrinkage 1 hr. @ 3002°F (1650°C)	5
Outgassing	Nil
Chemical Composition (Nominal)	
Oxide	Wt%
HfO <sub>2</sub>	99+
ZrO <sub>2</sub>	0.026
Fe <sub>2</sub> O <sub>3</sub>	0.012
SiO <sub>2</sub>	<0.01

### To Place an Order

Call: 845-651-3040

email: [sales@zircarzirconia.com](mailto:sales@zircarzirconia.com)

store: [www.zircarzirconia.com/store](http://www.zircarzirconia.com/store)

Size	Item Number				
	HfF-50	HfF-100	HfW-15	HfW-30	HfBF
12" x 12"	E03A01	E03B01	E03D01	E03E01	
1 LB					E05F01

### Applications

- Hafnia is a high dielectric insulator in advanced semiconductor manufacturing
- Due to its neutron absorbing capability, it is used in nuclear reactors
- Hafnia is used in coating material for near-UV laser mirrors and optics
- Used as refractory material for lining furnaces and in high temperature aerospace applications