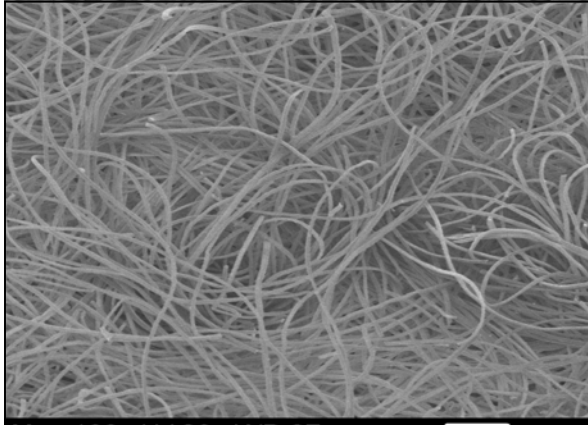




Zircar Zirconia, Inc.
"Manufacturer of the original ZIRCAR products" ©

HAFNIA FIBERS and TEXTILES TYPE HF



Mag:100 kV:20 WD:27 100 μm

Hafnia Felt, Type HfF-100 at 100X.

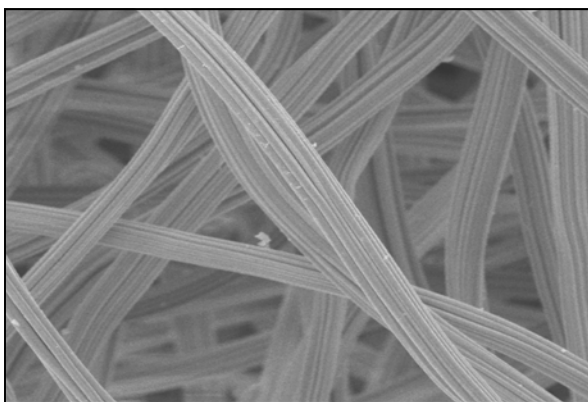
FEATURES

- High Purity
- High Temperature Stability
- Low Thermal Conductivity
- Excellent Thermal Shock Resistance
- No Outgassing
- Six Different Product Formats Offered
- Available 'Off the Shelf'

Our hafnia (HfO_2) fibers and textiles are made by the same unique Zircar process used for manufacturing yttria-stabilized zirconia cloths and felts. Our high purity hafnia fiber and textiles are offered in six different standard product forms; bulk fiber Type **HfBF**, two felts Types **HfF-50** and **HfF-100** and three types of knit cloth Types **HfK-15**, **HfW-15** and **HfW-30**.

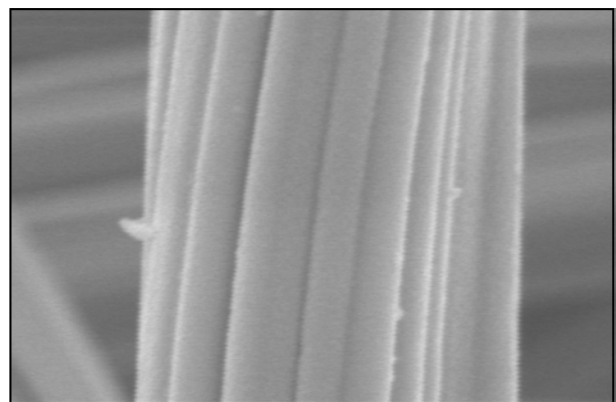
APPLICATION INFORMATION

Hafnia is used as ultra high temperature insulation for nuclear meltdown experiments.



Mag:1000 kV:20 WD:27 10 μm

Hafnia Felt, Type HfF-50, originally at 1,000X



Mag:10000 kV:20 WD:27 1 μm

Hafnia Felt, Type HfF-50, originally at 10,000X

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Product Data
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HAFNIA FIBERS and TEXTILES TYPE HF

PROPERTIES & CHARACTERISTICS

	HfF-100	HfK-15
Nominal Composition, Wt%		
HfO ₂	99+	99+
ZrO ₂	0.026	0.026
Fe ₂ O ₃	0.012	0.012
SiO ₂	<0.01	<0.01
Melting Point, °C (°F)	2758 (4996)	2758 (4996)
Bulk Porosity, %	95	89
Bulk Density, g/cc (pcf)	0.5 (31)	1.1 (67)
Tensile Strength, g/cm width (lb/inch width)	55 (0.31)	100 (0.56)
Loss on Ignition, 1 hr at 950°C (1742°F), Wt%	0.1	0.0
Outgassing	Nil	Nil
% Shrinkage, 1 hour at 1650°C (3002°F)	5	6

ORDERING INFORMATION

Type **Hf** Fibers and Textiles are available in six standard product forms, which are listed in the table below with their ordering item number. Please contact our Sales Department for pricing and availability.

Standard Sizes	Item Number
HfF-50, FELT, 12" X 12" X ~0.05"	E03A01
HfF-100, FELT, 12" X 12" X ~0.1"	E03B01
HfK-15, TRICOT KNIT CLOTH, 12" X 12" X ~0.015"	E03C01
HfW-15, SQUARE WEAVE CLOTH, 12" X 12" X ~0.015"	E03D01
HfW-30, SATIN WEAVE CLOTH, 12" X 12" X ~0.03"	E03E01
HfBF, BULK FIBER, 1 pound	E03F01

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