

CE

Ceria Felt, Cloth & Bulk Fiber

The Only Source for Fibrous Ceria Materials Made With the ZIRCAR Process

Different Product Formats Offered

- Thin and Thick Felt
- Tricot Knit Cloth
- Square Weave Cloth
- Satin Weave Cloth
- Bulk Fiber

CE Features

- 99+% Pure Ceria
- 100% Inorganic - No Binders
- Excellent Thermal Shock Resistance
- Designed for Uses in Extremely Corrosive, High Temperature Environments
- Extreme High Temperature Stability
- No Outgassing

The Zircar Fibrous Ceramics Advantage

Low Mass,
Low Heat Storage &
Low Thermoconductivity
means
High Thermal Shock Resistance,
High Insulation Performance,
Higher System Efficiency &
Lower Energy Costs



High Purity... Extremely High Use Temperatures... Oxygen Catalyst...

Fibrous ceria felts, cloths, and bulk fiber can withstand temperatures to 2500 °C.

Product Information

Zircar Ceria fibers and textiles are made by the same unique ZIRCAR process used for manufacturing yttria-stabilized zirconia textiles at our plant in Florida, NY, USA.

Zircar has provided ceria in several formats for use in solar redox cycle research for syngas production.

Ceria is incompatible with silica at high temperatures.

Our high purity ceria fiber and textiles are offered in several different standard product forms:

- CeBF** bulk fiber
- CeF** felt in two thicknesses
- CeK-15** tricot knit cloth
- CeW-15** square weave cloth
- CeW-30** satin weave cloth

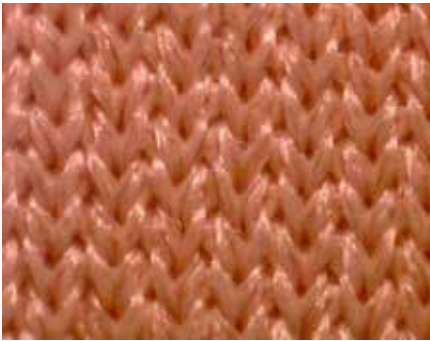
For more information,
phone: (845) 651-3040
email: sales@zircarzirconia.com
website: www.zircarzirconia.com

Properties & Characteristics

Properties (Nominal)	CeF-50	CeF-100	CeW-30	CeW-15	CeK-15	CeBF
Bulk Density, lb/ft ³ (g/cm ³)	17 (0.27)	17 (0.27)	42 (0.67)	42 (0.67)	43 (0.69)	25 (0.40)
Bulk Porosity, %	96	96	91	91	90	94
Melting Point, °C (°F) ⁽¹⁾	2590 (4694)	2590 (4694)	2590 (4694)	2590 (4694)	2590 (4694)	2590 (4694)
Tensile Strength, g/cm width (lb/in width)	89(0.5)	179 (1.0)	34 (0.19)	23 (0.13)	54 (0.30)	N/A
Loss on Ignition, Wt% 1 hr at 950 °C (1742 °F)	0.3	0.3	0.3	0.3	0.3	Nil
Linear Shrinkage, % 1 hr. @ 1650 °C (3002 °F)	10	10	9	7	7	5
Outgassing	Nil	Nil	Nil	Nil	Nil	Nil
Composition Wt% (Nominal)						
CeO ₂	99+	99+	99+	99+	99+	99+
Al ₂ O ₃	0.05	0.05	0.05	0.05	0.05	0.05
SiO ₂	0.04	0.04	0.04	0.04	0.04	0.04
Fe ₂ O ₃	0.03	0.03	0.03	0.03	0.03	0.03

⁽¹⁾ Melting point is dependent on variables such as the chemical environment and stresses; both thermal and mechanical.

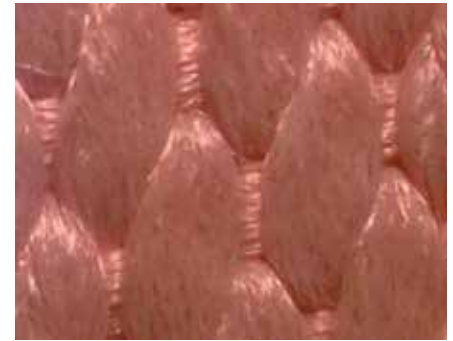
Product Micrographs



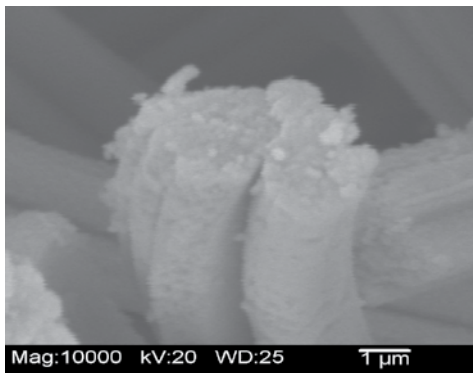
Face of Tricot Knit Cloth,
CeK-15, at 60X.



Square Weave Cloth,
CeW-15, at 60X.

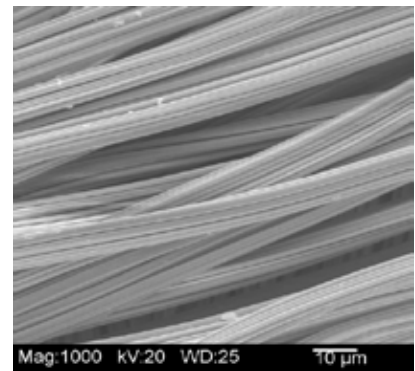


Satin Weave Cloth,
CeW-30, at 60X.



Ceria tricot knit cloth CeK-15 at 10000x magnification shows a solid fiber.

The micrograph on the right shows individual fibers arranged mostly parallel to each other in a CeK-15 thread. These filaments show the serrated nature of the fibers.



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Product Samples

FREE SAMPLES

Call: 845-651-3040

email: sales@zircarzirconia.com

Product Type	Item #
CeF-50	SAMPLE-E05A
CeF-100	SAMPLE-E05B
CeK-15	SAMPLE-E05C
CeW-15	SAMPLE-E05D
CeW-30	SAMPLE-E05E
CeBF	SAMPLE-E05F



Custom Design Quotations

Contact Us For A Quotation For Your Custom Part

Call: 845-651-3040

email: sales@zircarzirconia.com

Zircar machines custom shapes to your design specifications.
Our capabilities include:

- 3D CNC Machining
- Layered Configurations
- Lap Joined Boards and Cylinders
- Diamond Wire Splitting of Cylinders



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Standard Product Sizes & Ordering

Ceria Products are available in the standard sizes shown below. Please contact our Sales Department for pricing and availability.

To Place an Order

Call: 845-651-3040

email: sales@zircarzirconia.com

CE

Size	Item Number					
	CeF-50	CeF-100	CeK-15	CeW-15	CeW-30	CeBF
12" x 12"	E05A01	E05B01	E02C01	E05D01	E05E01	
1 LB						E05F01

Other Interesting Products



Zircar has made its strongest, highest density, highest temperature rated product type FBD, now available in a new larger size, 9" x 18", and up to 3" thick.



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