

## Zircar Zirconia ZYK-15 Zirconia Cloth Insulation

Category : Ceramic , Machinable Ceramic , Oxide , Zirconium Oxide

### Material Notes:

Zirconia Cloth Type ZYK-15 is a tricot knit cloth nominally 0.012" thick composed of yttria stabilized zirconia fibers. This material offers extreme temperature and chemical resistance in a flexible form and provides the lowest thermal conductivity of any commercially available refractory fiber material. ZYK-15 cloth is ideal for temperatures up to 2200°C. The melting temperature is 2590°C. It is suitable for applications such as high energy battery separators, thermal insulation in crystal growing furnaces, and for the filtration of hot gases. ZYK-15 is a true textile constructed of essentially continuous individual filaments fabricated in a tricot knit form. It requires neither binders nor supporting wires in its construction and will comply somewhat to both tensile and compressive forces due to the mechanical interlocking of their fibers. Elongation of 4 to 8% before breaking allows ZYK-15 to conform to irregular surfaces. ZYK-15 can be compressed up to two-thirds of its normal thickness and still recover a major fraction of its original dimension with little fiber damage. The fine capillary and pore structure of ZYK-15, in combination with the hydrophilic nature of zirconia and the serrated surface of the individual fibers in the knit threads, impart excellent wetting solution retention and wicking characteristics to this material. Features: Low Thermal Conductivity High Purity Extreme High Temperature Stability Fibers Stabilized with ~ 10 wt% Yttria Can be Cemented with Zircar Zirconia Cement Type ZR-CEM Can be Rigidized with Zircar Zirconia Rigidizer Type ZR-RIGE Easily Cut to Size Available 'off the shelf' Information provided by Zircar Zirconia.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Zircar-Zirconia-ZYK-15-Zirconia-Cloth-Insulation.php](http://www.lookpolymers.com/polymer_Zircar-Zirconia-ZYK-15-Zirconia-Cloth-Insulation.php)

Physical Properties	Metric	English	Comments
Bulk Density	0.680 g/cc	0.0246 lb/in <sup>3</sup>	
Porosity	85 %	85 %	Bulk
Thickness	305 microns	12.0 mil	
Vapor Pressure	1.07e-14 bar @Temperature 1370 °C	8.00e-12 torr @Temperature 2500 °F	

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	0.544 J/g-°C @Temperature 93.3 °C	0.130 BTU/lb-°F @Temperature 200 °F	
	0.753 J/g-°C @Temperature 2370 °C	0.180 BTU/lb-°F @Temperature 4298 °F	
Melting Point	2590 °C	4690 °F	
Maximum Service Temperature, Air	2200 °C	3990 °F	Continuous
Shrinkage	4.30 % @Temperature 899 °C,	4.30 % @Temperature 1650 °F,	1 hour isothermal soak at 1650°F

Thermal Properties	Time 3600 sec Metric	Time 1.00 hour English	Comments
Component Elements Properties	Metric	English	Comments
HfO2	1.0 - 2.0 %	1.0 - 2.0 %	
Y2O3	10 %	10 %	
ZrO2	88 - 89 %	88 - 89 %	

Descriptive Properties	Value	Comments
Tensile Strength per Unit Width	166 gram/cm width	
Trace Impurities	<0.25%	
Weight Per Area	207 g/m2	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China