

## Zircar Zirconia ZYF-S.75G Zirconia Felt Insulation

Category : Ceramic , Machinable Ceramic , Oxide , Zirconium Oxide

### Material Notes:

Zirconia Felt is a true ceramic textile formed by the unique ZIRCAR process for replicating organic structures in inorganic materials. The zirconia felt structure is a 'needled felt' which retains its fibrous nature to 2480°C. The stabilized zirconia composition permits the advantages of fibrous insulations to be extended into temperature regions well above the melting temperatures of siliceous and alumina insulation materials. Zirconia Felt Type ZYF-S.75G is ZYF-100 which has been physically filled with 0.75 grams silica per gram ZYF. This filled product retains some flexibility. Features: Low Thermal Conductivity High Porosity High Purity Extreme High Temperature Stability Fibers Stabilized with ~10 wt% Yttria Custom Fillers and Coatings Available Can be Cemented with Zircar Zirconia Cement Type ZR-CEM Can be Rigidized with Zircar Zirconia Rigidizer Type ZIR-RIGE Easily Cut to Size Available "Off the Shelf" Application Information: This heavy, silica loaded felt is used as a gasket material in molten carbonate fuel cells. When compressed between the sealing surfaces of the fuel cell container ZYF-S.75G forms a barrier that resists attack from the molten carbonate electrolyte. Information provided by Zircar Zirconia.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Zircar-Zirconia-ZYF-S75G-Zirconia-Felt-Insulation.php](http://www.lookpolymers.com/polymer_Zircar-Zirconia-ZYF-S75G-Zirconia-Felt-Insulation.php)

Physical Properties	Metric	English	Comments
Bulk Density	0.4806 g/cc	0.01736 lb/in <sup>3</sup>	
Porosity	88 %	88 %	Bulk
Thickness	1780 - 3300 microns	70.0 - 130 mil	

Mechanical Properties	Metric	English	Comments
Compressive Yield Strength	0.0896 MPa	13.0 psi	At 10% compression

Thermal Properties	Metric	English	Comments
Shrinkage	5.00 % @Temperature 1650 °C, Time 3600 sec	5.00 % @Temperature 3000 °F, Time 1.00 hour	1 hour isothermal soak at 3000°F

Component Elements Properties	Metric	English	Comments
Al <sub>2</sub> O <sub>3</sub>	<= 0.010 %	<= 0.010 %	
HfO <sub>2</sub>	1.0 - 2.0 %	1.0 - 2.0 %	
SiO <sub>2</sub>	43 %	43 %	
ZrO <sub>2</sub> +Y <sub>2</sub> O <sub>3</sub>	>= 56 %	>= 56 %	

Descriptive Properties	Value	Comments
Tensile Strength per Unit Width	1.7 lb/in width	
Weight Per Area	.22 lb/ft2	
Wrapping Diameter Before Breaking	>2 in	

## Contact Songhan Plastic Technology Co.,Ltd.

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