

## Zircar Refractory Composites RS-99-45 Refractory Sheet

Category : Ceramic , Oxide , Aluminum Oxide

### Material Notes:

ZRCI Refractory Sheet Type RS-99-45 is comprised of 99% alumina. This "All-Alumina" material is strong, uniform, rigid, refractory structure composed of alpha alumina fibers and high purity inorganic binders. Type RS-99-45 has a high purity alumina bond making it well suited for use in high vacuum and reducing environments where silica cannot be tolerated, such as power metal and MIM furnaces with H2 atmospheres. It also has high electrical resistivity at elevated temperatures allowing it to be used in direct contact with resistance heating elements. It exhibits superior hot strength and dimensional stability to 1650°C (3000°F). Information provided by ZIRCAR Refractory Composites, Inc. (ZRCI)

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Zircar-Refractory-Composites-RS-99-45-Refractory-Sheet.php](http://www.lookpolymers.com/polymer_Zircar-Refractory-Composites-RS-99-45-Refractory-Sheet.php)

Physical Properties	Metric	English	Comments
Density	0.720 g/cc	0.0260 lb/in <sup>3</sup>	
Porosity	85 %	85 %	

Mechanical Properties	Metric	English	Comments
Modulus of Rupture	0.00207 GPa	0.300 ksi	parallel to thickness
Compressive Yield Strength	1.31 MPa	190 psi	at 10% compression, parallel to thickness

Thermal Properties	Metric	English	Comments
CTE, linear	4.00 μm/m-°C	2.22 μin/in-°F	
	@Temperature 20.0 - 400 °C	@Temperature 68.0 - 752 °F	
Thermal Conductivity	0.120 W/m-K	0.833 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 427 °C	@Temperature 801 °F	
	0.160 W/m-K	1.11 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 900 °C	@Temperature 1650 °F	
	0.220 W/m-K	1.53 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 1200 °C	@Temperature 2190 °F	
	0.290 W/m-K	2.01 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 1650 °C	@Temperature 3000 °F	
Maximum Service Temperature, Air	1650 °C	3000 °F	
	1.00 %	1.00 %	

Thermal Properties	Metric	English	Comments
	@ Temperature 1200 °C, Time 14400 sec	@ Temperature 2190 °F, Time 4.00 hour	

Component Elements Properties	Metric	English	Comments
Al2O3	99 %	99 %	
SiO2	1.0 %	1.0 %	

## Contact Songhan Plastic Technology Co.,Ltd.

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