

## Zircar Ceramics ZAL-15AA Alumina Insulation

Category : Ceramic , Oxide , Aluminum Oxide

### Material Notes:

ZAL-15 is a low thermal conductivity uniformly bound fiber board. It is ideal for machining into precision thermal insulators. Information provided by Zircar Ceramics.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Zircar-Ceramics-ZAL-15AA-Alumina-Insulation.php](http://www.lookpolymers.com/polymer_Zircar-Ceramics-ZAL-15AA-Alumina-Insulation.php)

Physical Properties	Metric	English	Comments
Density	0.240 g/cc	0.00867 lb/in <sup>3</sup>	
Open Porosity	93 %	93 %	

Mechanical Properties	Metric	English	Comments
Flexural Strength	6.55 MPa	950 psi	Load applied normal to fiber plane, strain = load deformation in mils; Three Point Bending, Sample 0.5"*0.5"*4"
	@Strain 15.0 %	@Strain 15.0 %	
	6.55 MPa	950 psi	Load applied parallel to fiber plane, strain = load deformation in mils; Three Point Bending, Sample 0.5"*0.5"*4"
	@Strain 7.00 %	@Strain 7.00 %	
Compressive Yield Strength	0.0689 MPa	10.0 psi	Load applied normal to fiber plane
	@Strain 3.00 %	@Strain 3.00 %	
	0.103 MPa	15.0 psi	Load applied normal to fiber plane
	@Strain 5.00 %	@Strain 5.00 %	
	0.172 MPa	25.0 psi	Load applied parallel to fiber plane
	@Strain 3.00 %	@Strain 3.00 %	
	0.345 MPa	50.0 psi	Load applied parallel to fiber plane
	@Strain 8.00 %	@Strain 8.00 %	

Thermal Properties	Metric	English	Comments
CTE, linear	7.50 $\mu\text{m}/\text{m}\cdot\text{°C}$	4.17 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 20.0 - 1000 °C	@Temperature 68.0 - 1830 °F	
Specific Heat Capacity	1.05 J/g-°C	0.250 BTU/lb-°F	
Thermal Conductivity	0.0600 W/m-K	0.416 BTU-in/hr-ft <sup>2</sup> -°F	parallel to thickness; ASTM C177-76
	@Temperature 250 °C	@Temperature 482 °F	

Thermal Properties	Metric W/m-K	English TU-in/hr-ft <sup>2</sup> -°F	Comments
	@Temperature 525 °C	@Temperature 977 °F	Parallel to Thickness; ASTM C177-76
	0.120 W/m-K	0.833 BTU-in/hr-ft <sup>2</sup> -°F	Parallel to Thickness; ASTM C177-76
	@Temperature 800 °C	@Temperature 1470 °F	
	0.160 W/m-K	1.11 BTU-in/hr-ft <sup>2</sup> -°F	Parallel to Thickness; ASTM C177-76
	@Temperature 1075 °C	@Temperature 1967 °F	
	0.220 W/m-K	1.53 BTU-in/hr-ft <sup>2</sup> -°F	Parallel to Thickness; ASTM C177-76
	@Temperature 1250 °C	@Temperature 2280 °F	
	0.250 W/m-K	1.74 BTU-in/hr-ft <sup>2</sup> -°F	Parallel to Thickness; ASTM C177-76
	@Temperature 1350 °C	@Temperature 2460 °F	
<b>Melting Point</b>	<b>1870 °C</b>	<b>3400 °F</b>	
<b>Maximum Service Temperature, Air</b>	<b>1500 °C</b>	<b>2730 °F</b>	<b>Continuous</b>
	<b>1600 °C</b>	<b>2910 °F</b>	<b>Intermittent</b>
<b>Shrinkage</b>	<b>2.00 %</b>	<b>2.00 %</b>	<b>Perpendicular to Thickness</b>
	@Temperature 1550 °C, Time 3600 sec	@Temperature 2820 °F, Time 1.00 hour	
	<b>6.00 %</b>	<b>6.00 %</b>	<b>Perpendicular to Thickness</b>
	@Temperature 1650 °C, Time 3600 sec	@Temperature 3000 °F, Time 1.00 hour	

Component Elements Properties	Metric	English	Comments
Al2O3	97 %	97 %	
SiO2	3.0 %	3.0 %	

Descriptive Properties	Value	Comments
Color	White	

## 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