Zircar Zirconia ZYZ-6 Zirconia Boards and Discs Insulation

Category : Ceramic , Machinable Ceramic , Oxide , Zirconium Oxide

Material Notes:

Type ZYZ Boards and Discs are rigid, refractory structures composed of yttria-stabilized zirconia fibers that are bonded with silica. This unique composition provides Type ZYZ insulation with the low thermal conductivity of zirconia fibers combined with the strength and machinability of a silica bonded material. ZYZ is evenly bonded, allowing it to be machined to tight tolerances and intricate shapes. ZYZ has a lower coefficient of thermal expansion than our Type ZYFB materials. Type ZYZ is ideally suited for thermal insulation and protection applications under conditions of ultra-high temperatures and in a variety of severe environments. ZYZ is fired at a high temperature to impart good dimensional stability up to 1650°C. ZYZ has good hot strength up to 1400°C and can be used as a self supporting setter for loads equal to twice its own weight up to this temperature. ZYZ produces no smoke or odor and undergoes no physically disruptive phase transitions when heated. ZYZ is available in two forms. ZYZ-3 has a bulk density of 30 pcf and possesses extremely low thermal conductivity. ZYZ-6 has a bulk density of 60 pcf and is stronger than ZYZ-3. Zirconia loses a small amount of oxygen at very high temperatures in vacuum and inert or reducing atmospheres. Although this reaction results in a color change from white to gray, other properties remain essentially unchanged and insulation effectiveness is not impaired.Features: Rigid and MachinableSilica Bond for Thermal Shock ResistanceAvailable in Two Densities; 30 & 60 pcfExtreme High Temperature StabilityFibers Stabilized with ~10 wt% YttriaLow Thermal ConductivityCan be Cemented with Zircar Zirconia Cement Type ZR-CECan be Surface Hardened with Zircar Zirconia Rigidizer Type ZR-RIGPre-fired and Organic FreeInformation provided by Zircar Zirconia.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Zircar-Zirconia-ZYZ-6-Zirconia-Boards-and-Discs-Insulation.php

Physical Properties	Metric	English	Comments
Bulk Density	0.960 g/cc	0.0347 lb/in ³	
Porosity	85 %	85 %	
Outgassing - Total Mass Loss	0.00 %	0.00 %	In vacuum

Mechanical Properties	Metric	English	Comments
Flexural Strength	1.74 MPa	252 psi	Parallel to thickness
Compressive Yield Strength	0.920 MPa	133 psi	Parallel to thickness @ 10% compression

Thermal Properties	Metric	English	Comments
CTE, linear	9.00 µm/m-°C	5.00 µin/in-°F	
	@Temperature 20.0 - 1250 °C	@Temperature 68.0 - 2280 °F	
Thermal Conductivity	0.160 W/m-K	1.11 BTU-in/hr-ft²-°F	
	@Temperature 400 °C	@Temperature 752 °F	
	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	



Thermal Properties	Metric Metricperature 800 °C	English Beinperature 1470 °F	Comments
	0.230 W/m-K	1.60 BTU-in/hr-ft²-°F	
	@Temperature 1100 °C	@Temperature 2010 °F	
	0.250 W/m-K	1.74 BTU-in/hr-ft ² -°F	
	@Temperature 1400 °C	@Temperature 2550 °F	
	0.270 W/m-K	1.87 BTU-in/hr-ft²-°F	
	@Temperature 1650 °C	@Temperature 3000 °F	
Melting Point	2200 °C	3990 °F	
Maximum Service Temperature, Air	1650 °C	3000 °F	Continuous
	1700 °C	3090 °F	Intermittent
Softening Point	1275 °C	2327 °F	Dilatometric @ 10psi
	1.60 %	1.60 %	
Shrinkage	@Temperature 1650 °C, Time 3600 sec	@Temperature 3000 °F, Time 1.00 hour	perpendicular to thickness
	2.60 %	2.60 %	
	@Temperature 1650 °C, Time 86400 sec	@Temperature 3000 °F, Time 24.0 hour	perpendicular to thickness

Component Elements Properties	Metric	English	Comments
Hf02	1.0 - 2.0 %	1.0 - 2.0 %	
Y203	10 %	10 %	
Zr02	83 - 84 %	83 - 84 %	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com Email : sales@lookpolymers.com Tel : +86 021-51131842 Mobile : +86 13061808058 Skype : lookpolymers Address : United North Road 215,Fengxian District, Shanghai City,China