

Zircar Ceramics MICROSIL Microporous Insulation

Category : Ceramic , Oxide , Silicon Oxide

Material Notes:

MICROSIL Microporous Insulation is an insulation material. Having thermal conductivity an order of magnitude lower than ceramic fiber materials Microsil Microporous Insulation can be an integral part of thousands of thermal management applications with temperatures as high as 950C (1742F). MICROSIL is a combination of ultra-fine silica powders, specially processed refractory oxides and glass reinforcing fibers. Compacted under tons of force to form a light weight yet rigid structure MICROSIL offers maximum insulation in a minimum amount of space, saving weight and energy. Unique to MICROSIL's microporous structure is its low density which minimizes conductive heat transfer and its billions of nano-pockets which block convection and reflect heat energy – like mirrors – back to its source. MICROSIL is nearly immune to thermal shock. It is completely non-combustible in accordance with standard DIN 4102 Class A1 and can be stored indefinitely in dry conditions. MICROSIL's microporous structure is adversely effected by water, oil, alcohol and other liquids. Information provided by Zircar.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Zircar-Ceramics-MICROSIL-Microporous-Insulation.php

Physical Properties	Metric	English	Comments
Density	0.230 g/cc	0.00831 lb/in ³	

Mechanical Properties	Metric	English	Comments
Compressive Strength	1.10 MPa	160 psi	Cold Crushing Strength
Compression Set	2.9 %	2.9 %	Compression at 14 psi

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	0.795 J/g-°C	0.190 BTU/lb-°F	
	@Temperature 20.0 - 800 °C	@Temperature 68.0 - 1470 °F	
Thermal Conductivity	0.0190 W/m-K	0.132 BTU-in/hr-ft ² -°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	0.0230 W/m-K	0.160 BTU-in/hr-ft ² -°F	
	@Temperature 200 °C	@Temperature 392 °F	
	0.0280 W/m-K	0.194 BTU-in/hr-ft ² -°F	
	@Temperature 400 °C	@Temperature 752 °F	
	0.0300 W/m-K	0.208 BTU-in/hr-ft ² -°F	
	@Temperature 600 °C	@Temperature 1110 °F	
	0.0380 W/m-K	0.264 BTU-in/hr-ft ² -°F	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	950 °C @ Temperature 800 °C	1740 °F @ Temperature 1470 °F	
Shrinkage	1.00 % @ Temperature 800 °C, Time 86400 sec	1.00 % @ Temperature 1470 °F, Time 24.0 hour	
	4.80 % @ Temperature 1000 °C, Time 86400 sec	4.80 % @ Temperature 1830 °F, Time 24.0 hour	

Optical Properties	Metric	English	Comments
Emissivity (0-1)	0.95	0.95	

Component Elements Properties	Metric	English	Comments
Other	5.0 %	5.0 %	Oxides
SiC	15 %	15 %	
SiO2	80 %	80 %	

Descriptive Properties	Value	Comments
Color	Grey	

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