

China-Yixing Longly Refractories Cordierite Ceramics (Heat Resistance Ceramics)

Category : Ceramic , Oxide , Aluminum Oxide , Magnesium Oxide , Silicon Oxide

Material Notes:

LONGLY's cordierite ceramics' main crystal phrase is $2\text{MgO} \cdot 2\text{Al}_2\text{O}_3 \cdot 5\text{SiO}_2$, this composition has low thermal expansion coefficient and excellent thermal shock resistance. Maximum service temperature is 1200°C . Within this temperature range, it is probably the most economical electrical insulating material commercially available. It could be used in the manufacturing of the heater bottom plate, thermocouple insulation porcelain and kiln furniture, in which high thermal shock resistance is needed. It also serves as coil skeleton, electric insulation material with arc resistance function, parent metal of compound materials, and burner nozzle of electric heating insulated device and so on. Information Provided by China Yixing Longly Refractories Co. Ltd

Order this product through the following link:

http://www.lookpolymers.com/polymer_China-Yixing-Longly-Refractories-Cordierite-Ceramics-Heat-Resistance-Ceramics.php

Physical Properties	Metric	English	Comments
Bulk Density	2.10 - 2.30 g/cc	0.0759 - 0.0831 lb/in ³	
Water Absorption	<= 0.0060 %	<= 0.0060 %	

Mechanical Properties	Metric	English	Comments
Hardness, Mohs	8.0	8.0	
Flexural Strength	>= 220 MPa	>= 31900 psi	cold bending
Compressive Strength	>= 230 MPa	>= 33400 psi	Ambient

Thermal Properties	Metric	English	Comments
CTE, linear	0.800 - 1.90 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	0.444 - 1.06 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
	@Temperature 20.0 - 1000 $^\circ\text{C}$	@Temperature 68.0 - 1830 $^\circ\text{F}$	
Thermal Conductivity	1.10 - 1.50 W/m-K	7.63 - 10.4 BTU-in/hr-ft ² - $^\circ\text{F}$	
	@Temperature 25.0 - 300 $^\circ\text{C}$	@Temperature 77.0 - 572 $^\circ\text{F}$	
Maximum Service Temperature, Air	>= 1200 $^\circ\text{C}$	>= 2190 $^\circ\text{F}$	

Component Elements Properties	Metric	English	Comments
Al ₂ O ₃	60 - 80 %	60 - 80 %	

Electrical Properties	Metric	English	Comments
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Electrical Properties	1e+05 - 1.00e+6 ohm-cm Metric	1e+05 - 1.00e+6 ohm-cm English	Comments
Volume Resistance	@Temperature 100 °C	@Temperature 212 °F	
	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	
	@Temperature 1000 °C	@Temperature 1830 °F	
Dielectric Strength	>= 15.0 kV/mm	>= 381 kV/in	
	16.0 kV/mm	406 kV/in	DC Breakdown Strength
	18.0 kV/mm	457 kV/in	Insulating Strength
Dielectric Loss Index	5.0 - 8.0	5.0 - 8.0	
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Descriptive Properties	Value	Comments
Heat-resisting Impulse T(°C)	260	
MgO-SiO2 (%)	12-35	
Refractoriness (°C)	>1720	

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