

Pyrotek ISOMAG® 175 Structural Insulation Board

Category : Ceramic , Oxide , Magnesium Oxide , Silicon Oxide

Material Notes:

Isomag® 70 is a high strength insulating board suitable as an electrical insulator or a thermal barrier material in a variety of industrial applications. Its magnesia silicate based formulation provides a product with an outstanding combination of high compressive strength and low thermal conductivity. Incombustible, Isomag® 175 is totally free of asbestos and may be cut or machined with readily available tools. Applications Platen press insulation Arc chutes Resistor grids Induction furnaces Pot pads Buss support insulation Foundry bottom boards Blow boards Advantages Low heat loss at higher temperatures Low shrinkage at temperature use limit High temperature rating Asbestos and ceramic fiber free Information provided by Pyrotek.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Pyrotek-ISOMAG-175-Structural-Insulation-Board.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.55 g/cc	1.55 g/cc	
Density	1.54 g/cc	0.0556 lb/in ³	
Water Absorption	<= 0.50 %	<= 0.50 %	with silicone treatment
	25 %	25 %	
Open Porosity	44.1 %	44.1 %	

Mechanical Properties	Metric	English	Comments
Flexural Strength	27.6 MPa	4000 psi	
Compressive Strength	37.9 MPa	5500 psi	
	27.0 MPa	3920 psi	
	@Strain 5.00 %, Temperature 500 °C	@Strain 5.00 %, Temperature 932 °F	
Izod Impact, Notched	0.481 J/cm	0.900 ft-lb/in	

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.270 W/m-K	1.87 BTU-in/hr-ft ² -°F	
	@Temperature 195 °C	@Temperature 383 °F	
	0.280 W/m-K	1.94 BTU-in/hr-ft ² -°F	
	@Temperature 315 °C	@Temperature 599 °F	
	0.340 W/m-K	2.36 BTU-in/hr-ft ² -°F	
	@Temperature 600 °C	@Temperature 1110 °F	

Thermal Properties	Metric	English	Comments
Thermal Coefficient of Expansion, Air	1050 °C	1920 °F	
Flammability, UL94	V-0	V-0	V-0
Shrinkage	1.50 %	1.50 %	Linear
	@Temperature 1000 °C	@Temperature 1830 °F	
	4.30 %	4.30 %	Thickness
	@Temperature 1000 °C	@Temperature 1830 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	6.90e+14 ohm-cm	6.90e+14 ohm-cm	
Dielectric Constant	4.1	4.1	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	9.80 kV/mm	249 kV/in	
Dielectric Breakdown	28100 V	28100 V	
Dissipation Factor	0.050	0.050	
Arc Resistance	292 sec	292 sec	

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