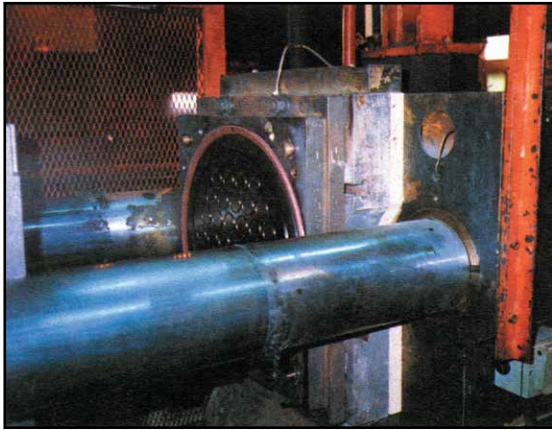


STRUCTURAL INSULATION BOARD



ISOMAG[®] 175 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 at temperatures to 1830°F (1000°C). Incombustible,

ISOMAG 175 may be cut or machined with readily available tools. Full sheets or custom machined components are available to your specification.

APPLICATIONS

- Platen press insulation
- Arc chutes
- Resistor grids
- Induction furnaces
- Pot superstructure insulation
- Foundry bottom boards
- Blow boards

ADVANTAGES

- Low heat loss at higher temperatures
- Low shrinkage at temperatures use limit
- High temperature rating

MACHINED COMPONENTS

Our machine shops are equipped with numerically controlled machine tools to produce complex components to customer specifications.

PHYSICAL PROPERTIES

Available Forms	Sheets: 38 x 50 in (965 x 1270 mm)		
Density (2792)†	96 ± 7% lb/ft ³ (1540 ± 7% kg/m ³)		
Maximum Service Temperature	1920°F (1050°C)		
Continuous Service Temperature	1830°F (1000°C)		
Cold Crushing Strength (D651/D695)†	5500 psi (37.9 MPa)		
Hot Compressive Strength at 5% Strain (R100)††	3900 psi at 932°F (27 MPa at 500°C)		
Dielectric Strength (D149)†	249 V/mil (9.8 KV/mm)		
Dry Arc Resistance (D495)†	292 sec		
Volume Resistivity (D257)†	2.7 x 10 ¹⁴ Ω - in (6.9 x 10 ¹⁴ Ω - cm)		
Available Thickness	0.25–1.5 in (6–38 mm)		
Apparent Porosity (C-830-88)†	44.1%		
Flexural Strength (D790)†	4000 psi (27.6 MPa)		
Dielectric Constant (D150)†	4.1 (1000 H)		
Dissipation Factor (D924)†	0.05		
Dielectric Breakdown (D877)†	28.1 KV		
Thermal Conductivity (BS 1902 sec. 5.5:1991)†††	1.87 BTU·in/ft ² ·hr·°F at 383°F (0.27 W/m·K at 195°C) 1.94 BTU·in/ft ² ·hr·°F at 600°F (0.28 W/m·K at 315°C) 2.36 BTU·in/ft ² ·hr·°F at 1110°F (0.34 W/m·K at 600°C)		
Permanent Shrinkage (C113-87)†	Temperature	Linear (%)	Thickness (%)
	572°F (300°C)	0.00	0.03
	932°F (500°C)	0.05	0.18
	1380°F (750°C)	0.10	0.32
	1650°F (900°C)	0.55	1.02
	1830°F (1000°C)	1.50	4.30

† Based on ASTM standards †† Based on CERAM Research test methods ††† Based on British Standard test methods

Note: ISOMAG 175 has been heat treated to 750°F (400°C) so mechanical properties will not be reduced when board is subjected to this temperature. The physical and chemical properties of ISOMAG 175 represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice.

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Product Type: 122

Commodity Code: 15001

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