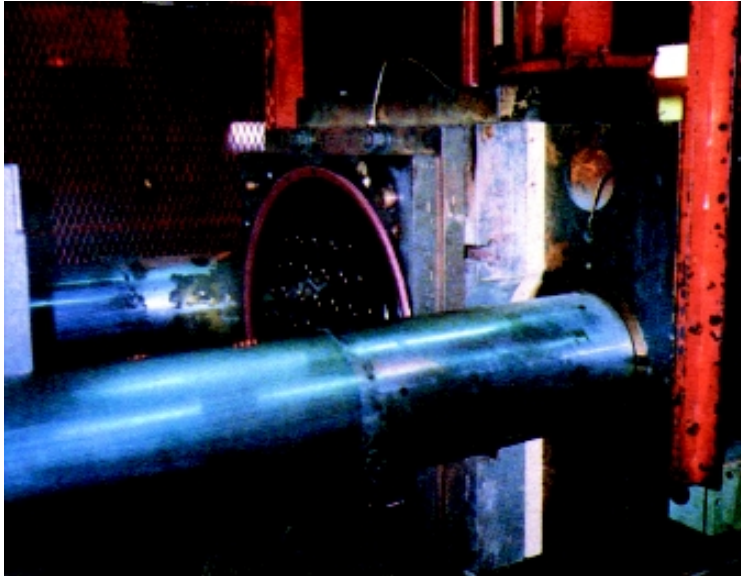


ISOMAG[®] 175

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 1000°C (1830°F). Incombustible, Isomag[®] 175 is totally free of asbestos and 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 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 fibre free

MACHINED COMPONENTS:

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

Pyrotek's worldwide locations provide fast reliable service. Please contact us for additional information.

Pyrotek

ISOMAG® 175 TECHNICAL DATA:

Available forms

Sheets: 965 mm x 1270 mm
38 in x 50 in

Available thickness

6 mm - 38 mm
0.25 in - 1.5 in

Physical Properties

Density (2792)[†]

1540 ± 7% kg/m³
96 ± 7% lb/ft³

Apparent porosity (C-830-88)[†]

44.1%

Maximum service temperature

1050°C
1920°F

Flexural strength (D790)[†]

27.6 MPa
4000 lbs/in²

Continuous service temperature

1000°C
1830°F

Thermal conductivity (BS 1902 sec. 5.5:1991)^{†††}

°C	°F	W/(m·K)	BTU-in/ft ² /hr°F
195	383	0.27	1.87
315	600	0.28	1.94
600	1110	0.34	2.36

Cold crushing strength (D651/D695)[†]

37.9 MPa
5500 lbs/in²

Permanent shrinkage (C113-87)[†]

°C	°F	Linear(%)	Thickness(%)
300	572	0.00	0.03
500	932	0.05	0.18
750	1380	0.10	0.32
900	1650	0.55	1.02
1000/1830	1500	4.30	

Hot compressive strength at 5% strain (R100)^{††}

27 MPa at 500°C
3900 lbs/in² at 932°F

Electrical Properties

Dielectric strength (D149)[†]

9.8 KV/mm
249 V/mil

Dielectric constant (D150)[†]

4.1 (1000 Hz)

Dry arc resistance (D495)[†]

292 sec

Dissipation factor (D924)[†]

0.05

Volume resistivity (D257)[†]

6.9 × 10¹⁴ Ohm/cm

Dielectric breakdown (D877)[†]

28.1 KV

Advanced Metals Processing Technology



[†] Based on ASTM standards ^{††} Based on CERAM Research test methods ^{†††} Based on British Standard test methods

Note: Isomag® 175 has been heat treated to 400°C (750°F) 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. Isomag® is a registered trademark of Pyrotek, Inc.