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ISOMAG 70 XCO

STRUCTURAL INSULATION

ISOMAG[®] 70 XCO is a magnesium silicate-based structural insulating board. The board provides excellent strength and dimensional stability up to 1000°C (1830°F).

At operating temperatures, ISOMAG's high strength and excellent insulating properties improve the thermomechanical stability of refractory systems. This provides lining tightness and better resistance to metal penetration. ISOMAG insulating board reduces thermal shock and skull buildup, increasing productivity and efficiency.

BENEFITS

- Low heat loss at high temperatures
- High mechanical strength at high temperatures
- High temperature rating

APPLICATIONS

- Torpedo cars
- BF-Main runners
- Converters
- Ladles
- Tundishes
- Vacuum degassers
- RH degassers



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ISOMAG 70 XCO

PHYSICAL PROPERTIES

| Density (D792) [†] -kg/m ³ (lb/ft ³) | 1202 ± 7% (75 ± 7%) | |
|--|---|--------------------------------------|
| Apparent Porosity (C-830-88) [†] | 53.5% | |
| Maximum Service Temperature | 1050°C (1922°F) | |
| Continuous Service Temperature | 1000°C (1830°F) | |
| Cold Crushing Strength (D651/D695) ⁺ –MPa (psi) | 15.1 (2200) | |
| Hot Compressive Strength at 5% Strain (R100) ⁺⁺ –MPa (psi) at 300°C (572°F) at 500°C (932°F) | 18 (2610) 17 (2470) | |
| Compressive Strain-at 500°C (932°F) and 6.90 MPa (1000 psi) | 1.5% | |
| Flexural Strength (D790) ⁺ –MPa (psi) | 13.1 (1900) | |
| Thermal Conductivity–W/m·K (BTU·in/ft ² ·hr·°F) at 195°C (383°F) at 315°C (600°F) at 600°C (1100°F) (BS1902 sec. 5.5:1991) ⁺⁺⁺ | 0.23 (1.60) 0.24 (1.67) 0.31 (2.15) | |
| Permanent Shrinkage (C113-87) ⁺ | Linear (%) | Thickness (%) |
| at 300°C (572°F) at 500°C (932°F) at 750°C (1382°F) at 900°C (1652°F) at 1000°C (1832°F) | 0.02 0.07 0.13 0.64 1.64 | 0.08 0.18 0.42 1.03 4.00 |
| Available Forms-mm (in) | Sheets: 965 x 1270 (38 x 50) | |
| Available Thickness-mm (in) | 10–51 (0.40–2.0) | |

⁺ Based on ASTM standards

⁺⁺Based on CERAM Research test methods

*** Based on British Standard test methods

Note: ISOMAG® 70 XCO 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 70 XCO 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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