



HOME of MAGNUM BOARD®

“The New Generation **GREEN** Building Material”

“**Install It for Health-Install It for Life**”

Providing a Complete Line of Fiberglass
Reinforced MgO Building Materials

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Subject:	Magnum® Fiber Reinforced MgO Building Materials and Chlorides
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It's a known fact that Denmark experienced significant issues with chloride bleeding and subsequent corrosion of framing components and structural issues due to the use of poor-quality Magnesium Oxychloride (MgO) building materials. These problems are primarily linked to products manufactured with excessive Magnesium Chloride ($MgCl_2$) content—far above what is required to produce a stable, high-quality board. Other issues such as using the wrong materials for certain applications and incorrect fasteners also contributed to these issues.

This engineering design failure has created a concern over using Magnesium OxyChloride building materials. Lets look at the facts to determine what led to these failures. Good MgO board performance is all about using the correct MgO / $MgCl_2$ ratio and tried and proven installation instructions. Magnum Board Products® LLC (MBP) has spent years perfecting its chemistry to ensure our Magnum fiber reinforced MgO building materials are fully developed ensuring strong Cementous bonding, high mechanical strength, good surface quality and excellent dimensional stability.

Many manufacturers contributing to failures such as those experienced in Denmark lack rigorous quality control practices and incorrect formulation. Common deficiencies include inadequate prequalification of raw material suppliers, insufficient inspection of incoming materials, and failure to verify the potency and consistency of raw materials during batching. These shortcomings often result in lower-density boards with elevated chloride levels, incomplete curing, inadequate cementous bonding, and a low mechanical strength increasing the likelihood of weak building materials and increased chloride migration, particularly in high-humidity environments.

When properly manufactured, fiber-reinforced MgO building materials represent one of the safest and most durable construction solutions available today. They are highly resistant to fire, water, insects, mold, and mildew, and are non-toxic. Additionally, Magnum® fiber-reinforced MgO products are CO_2 negative as delivered, contributing to environmentally responsible construction. MBP processes are environmentally friendly from the mining of raw materials to the disposal of waste building materials.

As the global MgO building materials industry continues to grow rapidly, it is essential for buyers to ensure they are sourcing products from reputable manufacturers with verified quality standards. Third-party certification is a critical indicator of product reliability. MBP maintains multiple certifications, with its manufacturing facilities undergoing quarterly, semiannual, and annual audits to ensure strict adherence to approved chemistry, production methods, and inspection protocols.

MBP is certified to IAPMO, UL, and CCMC standards in the United States and Canada, and holds certifications throughout Oceania, and Africa. Additionally, MBP products have received special approval in Maui, Hawaii, where they are being utilized as preferred building materials in post-wildfire reconstruction efforts. MBP CALFIRE certification is pending. Through the APLAC Mutual Recognition Arrangement (MRA), our product testing is recognized in most countries worldwide.

As part of MBP's final quality assurance program, MBP conducts testing to measure free chloride ion content, ensuring compliance with internal standards and preventing the types of failures observed in Denmark and other affected regions.

Magnum® fiber-reinforced MgO building materials have been manufactured and used worldwide for over 20 years with zero reported performance issues. MBP has established itself as a trusted global supplier, supported by comprehensive product warranties.

MBP offers a full range of fiber-reinforced MgO building materials designed to meet the needs of builders, contractors, and homeowners across a wide variety of applications:

- ✓ Thicknesses ranging from 3mm (1/8" nominal) to 20mm (25/32" nominal)
- ✓ Widths up to 4'
- ✓ Lengths up to 12'
- ✓ Special orders: Any dimension with the 4' X 12' envelope.
- ✓ Edge profiles including:
 - Square
 - Tapered
 - Bevelled
 - Tongue and Groove
 - Ship Lap

When installed and finished according to MBP guidelines, these materials provide multi-generational safe and reliable performance.

For more information, please visit our website, www.magnumbp.com, or contact:

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Please give us a call. We would welcome an opportunity to participate with you on all your projects.



“GOTTA GO GREEN”