What are MgO Structural Panels?

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Magnesium oxide (MgO) is a naturally occurring mineral with applications ranging from food additives to construction materials. MgO is a fire-resistant mineral that remains physically stable when exposed to heat or fire. Due to its natural fire-resistant and structural properties, the construction industry's demand for MgO structural panels continues to grow.

To serve as a building material, MgO is mixed with other ingredients to create a cementitious slurry. This slurry is then embedded with layers of mesh, formed into panels and cured. During curing, the panels undergo an exothermic reaction resulting in slightly elevated temperatures over a period of days. The result is a dimensionally stable MgO panel with structural and fire-resistant properties. These panels are then used as underlayment and sheathing in applications that call for the use of fire-resistant materials.

EXACOR® Panels

Huber Engineered Woods is excited to offer the EXACOR® brand of magnesium oxide cement panels in underlayment and sheathing applications. EXACOR® products are high-density magnesium oxide cement panels that include embedded layers of fiberglass mat to increase the strength of the panel. Due to the makeup, EXACOR panels remain dimensionally stable when exposed to moisture and resistant to mold and mildew.

Applications

EXACOR® panels can be used in construction Types III, IV-C, IV-HT & V as sheathing and floor underlayment. EXACOR panels are intended for interior applications and can be used in various fire-resistance rated floor assemblies that have been tested to ASTM E119/ ANSI UL 263. In addition, these panels can be used to satisfy STC and IIC requirements for acoustical ratings when used as part of a floor/ceiling assembly and can replace the need for gypsum underlayments. As an underlayment, EXACOR panels are installed over a wood structural panel subfloor before installing the wall framing. Please refer to the applicable installation manual for more information on proper usage and installation of EXACOR panels in underlayment and wall sheathing applications.

Recognition

Evaluation report ICC-ES ESR-4635 Recognizes EXACOR wall sheathing and underlayment panels as fire resistant[1] cementitious structural panels. Wall sheathing and underlayment panels are available in a 1/2 in. (12mm) and 5/8 in. (16mm) nominal thicknesses. When tested in accordance with ASTM E84[1], EXACOR panels have a flame spread index of zero and smoke developed index of zero. EXACOR panels have an average growth rating of 0 when tested in accordance with ASTM G21[2] for mold growth.

EXACOR magnesium oxide panels provide property owners, designers and general contractors with alternative options for projects that require fire resistance and sound attenuation from their floor/ceiling assemblies. Please refer to published installation manuals and documents available at huberwood.com for more information on EXACOR panels.

1. Follow published fire-resistance rated assembly requirements and consult local building codes and designer of record for fire-resistant design requirements. E84 Standard Test Method for Surface Burning Characteristics of Building Materials conducted on 1/2-in. (12mm) and 3/4-in. (20mm) EXACOR panel thicknesses.

2. ASTM G21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi conducted on 1/2-in. (12mm) EXACOR panels.

Technical Inquiries:

Please visit huberwood.com or contact our technical department at: 800-933-9220 Ext 2716 or techquestions@huber.com with any questions or comments.