

Specifier: The purpose of this guide specification is to assist the specifier in correctly specifying EXACOR exterior wall sheathing and its installation. The specifier needs to edit the guide specifications to fit the needs of specific projects. Contact Huber Engineered Woods to assist in appropriate product selections. Throughout the guide specification, there are Specifier Notes to assist in the editing of the file. Red text in brackets indicates a selection needs to be made by the design professional.

EXACOR sheathing panels can replace fire-retardant treated plywood; OSB; and gypsum sheathing panels. EXACOR can be used in fire resistant assemblies. Wall assemblies that are not required to be fire-resistant rated and or load bearing need to be installed in accordance with the published ESL.

SECTION 06 16 00

SHEATHING

(Huber Engineered Woods – EXACOR Sheathing)

1.1 SECTION INCLUDES

- A. Magnesium Oxide (MgO) Panels for use as Exterior Wall Sheathing in wood framed applications.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of sheathing product. Include manufacturer's technical data indicating performance properties.
- B. Shop Drawings: Indicating location and extent of sheathing, **[and assemblies]**. Include details of joints, corners, and penetrations.

1.3 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: From ICC NTA for sheathing products.
- B. Product Certifications: From manufacturer, indicating that sheathing products comply with indicated Performance Criteria.

Specifier: Include Delegated Design requirement when project includes load bearing assemblies utilizing the MgO panels.

- C. **[Delegated Design for load bearing assembly, including calculations and details signed and sealed by the properly licensed professional responsible for their design.]**
- D. Warranty: Sample unexecuted copy of manufacturer warranty.

1.4 CLOSEOUT SUBMITTALS

- A. Warranty: Executed copy of manufacturer warranty.

1.5 QUALITY ASSURANCE

Specifier: Sheathing should be included as a component of an Integrated Envelope Mockup. Refer to the Project Division 01 section relating to mockups.

- A. **[Integrated Envelope Mockup – Include Sheathing as a component of an integrated envelope mockup.]**

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with manufacturer's written instructions for storage prior to installation.
1. Store panels horizontally and fully supported.
 2. Project site should be kept clean. Frequently blow off floors, walls, tools and other areas that may collect dust residue from cutting EXACOR panels.
- B. Maintain a clean project site, blow off floors, walls, tools and other items that collect dust residue from cutting MgO panels.

1.7 WARRANTY

- A. Manufacturer's Warranty: Manufacturer's standard form in which sheathing manufacturer agrees to repair or replace sheathing products that demonstrate deterioration or failure under normal use due to manufacturing defects within warranty period, when installed according to manufacturer's instructions.
1. Warranty Period for Sheathing Products: Up to 10-years from date of manufacture.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

Specifier: EXACOR sheathing panels, as a product, are Fire-Resistant and can be used as a component of a tested Fire-Resistant Assembly.

Fire-Resistant Assembly information is for example only, coordinate project specific requirements, and coordinate with other specification sections to include each assembly component. Include graphic assembly in drawings. ICC Design No are for EXACOR.

- A. Component of Fire-Resistant Assembly in accordance with the following standards: “*UL-263, Standard for Fire Tests of Building Construction and Materials*” and “*ASTM E119, Standard Test Methods for Building Construction and Materials.*”
1. **[1-hour fire-resistance-rated load bearing assembly (ICC Design No. MOS-1290-04)]**
 2. **[2-hour fire-resistance-rated load bearing assembly (ICC Design No. MOS-1290-03)]**
- B. Structural Design Values for Lateral Force Resisting Systems

Specifier: Sheathing and tested fasteners must be used to achieve the maximum allowable uniform shear loading. Select the appropriate combination for specific project. Coordinate selection in Fastener article.

Shear wall designs are limited to designs controlled by wind or seismic design categories A, B, and C.

1. **[EXACOR 1/2 inch panels, nail attached: Maximum 230 plf shear loading]**
2. **[EXACOR 5/8 inch panels, nail attached: Maximum 220 plf shear loading]**

2.2 BASIS OF DESIGN

- A. EXACOR Sheathing by Huber Engineered Woods LLC, Charlotte NC; Phone: (800) 933-9220; Website: www.EXACOR.com

2.3 MAGNESIUM OXIDE EXTERIOR SHEATHING PANELS

A. Physical Characteristics

1. Thickness: **[1/2 inch (12 mm)] [5/8 inch (16 mm)]**
2. Panel Size: 48 by 96 inches (1220 by 2440mm)
3. Edge profile: Straight (square)

B. Panels identified with stamp or label including report holder, manufacturing facility, production date, and ICC-ES report number.

Specifier: Surface burning characteristics tested in accordance with ASTM E84 *Standard Test Method for Surface Burning Characteristics of Building Materials*, conducted on ½ inch and ¾ inch EXACOR panel thicknesses. Both panels exceed the minimum requirements. First options (0) are the EXACOR test result, second options (25/450) is the maximum allowable to be classified as Fire-Resistant. Select the desired value for specific project.

1. Flame Spread: **[0] [25 maximum]**
2. Smoke Developed: **[0] [450 maximum]**

C. Water Vapor Permeable:

Specifier: Tested in accordance with ASTM E96 for both Method B and Method A for Vapor Permeance and both exceed the minimum requirements. Select the desired value or test method for specific project.

1. ASTM E96 – Standard Test Methods for Water Vapor Transmission
 - a. **[Greater than or equal to 13 perms according to ASTM E96 Method B]**
 - b. **[Greater than or equal to 5 perms accord to ASTM E96 Method A]**

D. Mold Resistance: No mold growth observed in accordance with ASTM G21 – Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.

E. Weather Exposure: Resists weathering when left exposed for up to 200 days.

2.4 FASTENERS

Specifier: Review local building code requirements for fastener size and spacing.

A. Fasteners, General: Size and type complying with manufacturer's written instructions for project conditions and requirements of authorities having jurisdiction.

B. Nails:

1. Annular Ring shank nails with shank diameter of 0.113 inches

Specifier: Coordinate minimum fastener length with panel thickness and assembly requirements.

2. Minimum **[2-3/8 inch (60.3 mm)] [2-1/2 inch (63.5 mm)]** length.

Specifier: Fasteners for attaching the MgO panels must be corrosion resistant – of the 3 options provided – Hot-Dipped Galvanized meets the minimum requirement and Stainless Steel is the best option, with yellow zinc powder coating being the mid-range option. SELECT the desired corrosion resistance and delete the other options.

3. Corrosion Resistant: **[Stainless Steel] [Powder coated (yellow zinc)] [Hot-Dipped Galvanized]**
4. Conform with *ICC-ES AC116 - Acceptance Criteria for Nails and Spikes* and *ICC-ES AC201 Acceptance Criteria for Staples*

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine framing spacing and alignment to determine work is ready to receive sheathing. Proceed with sheathing work once conditions meet requirements.

3.2 MAGNESIUM OXIDE SHEATHING INSTALLATION

- A. Sheathing Installation, General:
 - 1. Install sheathing in accordance with manufacturer's written instructions, requirements of applicable **[Evaluation Reports;]** **[Fire-Resistant Assembly;]** and requirements of authorities having jurisdiction.
 - 2. Panel edges to be backed with framing or blocking]
 - 3. Coordinate termite and decay protection when EXACOR sheathing to be installed within 8 inches of exposed earth.
- B. Sheathing Panel Installation – Wood Framing
 - 1. Panels installed parallel or perpendicular to framing.
 - 2. Butt panel edges together.
 - 3. Stagger panel seams from one side of the assembly to the opposite as required by manufacturer.
 - 4. Fasten panels to wood framing members in accordance with published installation instructions **[and delegated design calculations]**.

Specifier: Coordinate fastener spacing with requirements of assembly. Indicated spacing **MUST** be adjusted accordingly to meet shear and/or fire requirements.

- 5. Space fasteners **[6 inches (152 mm) on centers in the field and along the perimeter]**.
 - C. Patch small gaps (less than 2 sq. inches) and divots in sheathing with elastomeric patching compound that is intended to be used over concrete/masonry substrates.
 - D. Where large repairs are required, cut out damaged area and replace with piece of sheathing, installing in same manner as initial installation. Replacement panels to be no less than 24 inches in width and cover a minimum of 2 spans (3 wall studs). Support patch panel edges with nominal 2x blocking.
- ### 3.3 PREPARATION OF EXTERIOR CLADDING
- A. Apply a code compliant water resistive barrier to exposed face of EXACOR sheathing prior to installation of exterior cladding
 - 1. **[Utilize plastic-capped corrosion resistant fasteners to mechanically fasten sheet membranes.]**
 - 2. **[Prior to the application of a self-adhering or fluid applied membrane remove dust, dirt and debris from sheathing surface. Ensure panel surface is free from water, oil, grease and other contaminants.]**

END OF SECTION

DISCLAIMER:

This Specification have been written as an aid to the professionally qualified Specifier and Design Professional. The use of this Guide requires the sole professional judgment and expertise of the qualified Specifier and Design Professional to adapt the information to the specific needs for the Building Owner and the Project, to coordinate with their Construction Document Process, and to meet all the applicable building codes, regulations, and laws. HUBER ENGINEERED WOODS EXPRESSLY DISCLAIMS ANY WARRANTY, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OF THIS PRODUCT FOR THE PROJECT.