



HOME of FRAMING

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

“Install It for Health-Install It for Life”

Providing a Complete Line of Fiber Reinforced MgO Building Materials

INSTALLATION GUIDELINES	051617.1343
PRODUCE LINE:	Installation Guide for Magnum Roofing and Flooring Substrate
ISSUE DATE	May 21, 2019
REV NO. / DATE	7: 073026

1.0 PURPOSE

- 1.1 To provide guidelines for installing Magnum® Fiber Reinforced MgO Roofing and Flooring Substrate.

2.0 GENERAL

- 2.1 Magnum Board® Products, LLC (hereinafter, MBP).
- 2.2 MBP is third party certified by IAPMO, reference ER986 and UEL5068, and Underwriters Laboratories (UL) for specific fire ratings.
- 2.3 MBP is product approved by Florida and California.
- 2.4 MBP is CALFIRE listed (Pending).
- 2.5 MBP is Underwriters Laboratories (UL) listed
- 2.6 For additional technical information, visit MBP's website: www.magnumbp.com.
 - 2.6.1 Professional Engineer (PE) Certified Test Summary which includes most testing conducted on our fiber reinforced MgO building materials.
 - 2.6.2 Magnum® engineering specifications

3.0 INSTALLATION SAFETY, MATERIAL STORAGE, AND HANDLING REQUIREMENTS

- 3.1 Personal protective equipment (PPE) must always be worn when handling or working with Magnum® Roofing and Flooring substrate.
 - 3.1.1 Gloves for hand protection
 - 3.1.2 Safety glasses for eye protection
 - 3.1.3 Steel toed boots or shoes for toe protection
 - 3.1.4 Dust mask to avoid inhalation of airborne particles when cutting sheathing.
 - 3.1.5 Always follow OSHA rules and regulations
- 3.2 Even though Magnum Board® is virtually impervious to Fire, Water, Insects and Chemicals; does not feed Mold or Mildew; is Non-Toxic, Non-Flammable and Non-Combustible and extremely Durable, for best results we recommend that you always follow good construction practices when taking care, custody and control of materials:

- 3.2.1 Stack flat on dunnage – do not allow material to bow, or to sit directly on the ground.
- 3.2.2 Keep material dry prior to and during installation
- 3.2.3 Do not stack other materials on top of Magnum Board®.
- 3.2.4 Protect Magnum Board® from jobsite dirt.
- 3.2.5 Protect edges, ends and faces of Magnum Board® during storage and installation.
- 3.2.6 Store Magnum Board® inside and protected from damage by weather and direct sunlight and in an environment of relative humidity of ≤55% replicating your finished room operating temperature and humidity conditions is ideal.
- 3.2.7 Marshal materials as close to the point of installation as possible.

4.0 OSHA STANDARDS

- 4.1 OSHA Standard 1926.21: Employees
- 4.2 OSHA Standard 1926.251: Guidelines for rigging and handling materials.
- 4.3 OSHA Standard 1926.501: Fall protection for working with materials at elevated surfaces.
- 4.4 It is the responsibility of the General Contractor to ensure all employees follow all applicable OSHA Standards.

5.0 MATERIAL AND TOOL REQUIREMENTS

- 5.1 Screw or pin installation equipment
- 5.2 Sawhorses
- 5.3 Square
- 5.4 Circular Saw, preferably equipped with cement board blades.
- 5.5 Pencils for marking
- 5.6 Adhesives – premium – grade high performance, moisture cured, 1-component, polyurethane based non-sag elastomeric sealant / adhesive such as “Sika PRO Select Construction Adhesive
- 5.7 Proper fasteners

6.0 FRAMER RESPONSIBILITY

It is the responsibility of the installer to ensure the framing to which Magnum® Roofing and Flooring Substrate is affixed is square. If using wood framing, ensure wood is dry, preferably kiln dried, before installing framing

7.0 INSTALLATION GUIDE

7.1 CUTTING

- 7.1.1 Cut flooring with a circular saw or equal
- 7.1.2 Make circular cuts and irregular angle cuts with a Jig Saw, Oscillating Tool, or equivalent type tool.

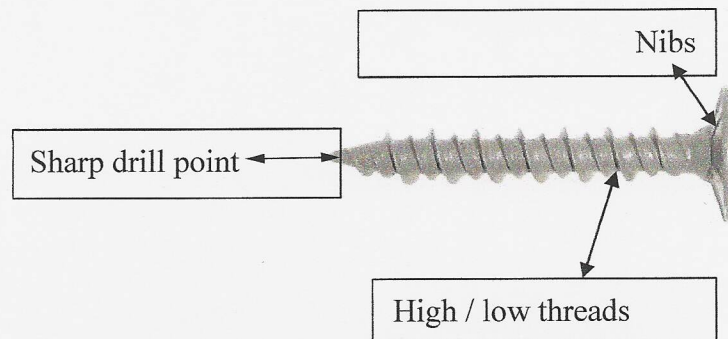
7.2 INSTALLATION

- 7.2.1 Start with proper framing - straight and square - to allow for adequate fastening surface at butt joints. If framing is not square or is damp, notify the owner / general contractor prior to beginning installation and insist on corrective action to ensure a quality finish.
- 7.2.2 Lay out Magnum® substrate, minimizing the number of cuts, before fastening to framing. For flooring substrate, Plan the layout so that the cut edges are against the perimeter of the room, if possible, and make sure the sheets are spaced evenly and butted together tightly.
- 7.2.3 Ensure relative humidity is $\leq 55\%$ before and during installation process. For flooring substrate, to minimize board expansion or contraction, before installing, remove from packaging and allow Magnum® Substrate to acclimate to room temperature and humidity for 48 hours. Replicating your finished room operating temperature and humidity conditions is ideal.
- 7.2.4 Always support Magnum® Roofing and Flooring Substrate edges over framing.
- 7.2.5 Slightly countersink each fastener to accommodate finishing.
- 7.2.6 Specific for Flooring Substrate Installation:
 - 7.2.6.1 Floor sheathing shall be butt jointed.
 - 7.2.6.2 After installing the initial sheet of flooring, and if stalling on wood framing, apply a generous amount of "Sika PRO Select Construction Adhesive", or equal, to the exposed edge of the installed flooring. Refer to Material Requirements section above.
 - 7.2.6.3 Install the next sheet of flooring, offset and butting joints together tightly. A small amount of "Sika PRO Select Construction Adhesive", or equal, should squeeze to the surface along the entire seam.
 - 7.2.6.4 Using a putty knife, remove excess "Sika PRO Select Construction Adhesive" from the butt joint.

8.0 FASTENING

- 8.1 Fastener Materials of Construction: (Screws & Pins):

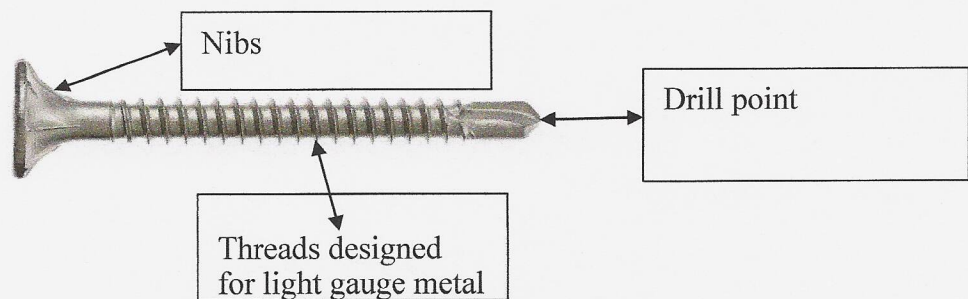
- 8.1.1 Best: Stainless steel fasteners, especially when building in salt air and high humidity environments.
- 8.1.2 Good: Ceramic coated fasteners such as GrabberGard 1500 or equal.
- 8.1.3 Good (Pins): Aerosmith (2359NG) with PT2000 corrosion coating and tested to 2,000-hour saltwater test, or equal.
- 8.2 Fastening with screws to kiln dried wood:
 - 8.2.1 Utilize a #8 shank, flat star head fastener, with nibs under the heads for counter sinking.



- 8.2.2 Minimum fastener penetration is 1" unless otherwise specified by local codes.

8.4 Fastening with screws to light gauge steel, 18 gauge or heavier,

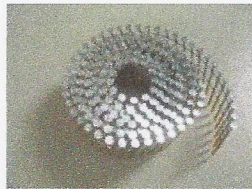
- 8.4.1 Utilize a #8 flat star head screw with nibs under the head for countersinking into the framing, and a self-drilling point for penetrating the light gauge metal.



- 8.4.2 Minimum fastener penetration is 3/8" or as otherwise specified by local codes.
- 8.5 Fastening with screws to light gauge materials lighter than 18 gauge, it may be necessary to utilize pneumatic fastening. Screws may strip out of lighter gauge studding prior to countersinking the head of the fastener into the framing.
 - 8.5.1 Minimum fastener penetration is 3/8" or as otherwise specified by local codes.

8.6 Fastening Pneumatically

- 8.6.1 Use hardened pins. Refer to 8.1 above for proper fastener materials of construction.
- 8.6.2 Pneumatic pressures vary. Always set pressure based on countersinking needs. MBP recommends testing pressure prior to beginning installation. MBP suggests beginning testing at 130 PSI and adjusting accordingly to achieve the appropriate counter sink.



8.7 **ALWAYS INSTALL FASTENERS STRAIGHT. ANGLES MAY DAMAGE SHEATHING.**

- 8.8 Reference MBP drawing number 51617.1343, Rev 5 Roofing and Flooring Substrate for span data, fastening profile and load information, a copy of which is attached hereto.

9.0 IMPORTANT NOTES / PRECAUTIONS

- 9.1 Always begin fastening at one side and proceed to fasten across the board to the other side to avoid stress.
- 9.2 Flooring contains no carcinogenic material; however, a dust mask is always recommended during routing, cutting and / or sanding operations.
- 9.3 Installation must comply with all applicable local, state and federal codes and should also follow good installation practices.
- 9.4 IF Magnum® sheathing is to be the final finish, ensure surface is clean and apply a clear cement sealant coat. Always follow cement sealant manufacturers application instructions.

10 AVAILABLE SHEATHING DIMENSIONS

- 10.1 Widths: 4' (1.2M)
- 10.2 Lengths: 8' (2.4M), 9' (2.7M), 10' (3.0M) AND 12' (3.6M)
- 10.3 Thickness: 3MM to 19MM
- 10.4 Specialty fiber reinforced MgO building materials include
 - 10.4.1 Lap siding
 - 10.4.2 Mag-111 siding

10.4.3 Batten strips

10.4.4 Other - Call for pricing and delivery information on special sizes within the above envelope dimensions, and other specialty building materials

11.0 From time to time, MBP may update their installation instructions. It is the responsibility of the Architect, General Contractor, Installer, and / or Owner to ensure they are using the latest installation instructions. Contact MBP to obtain a copy of the latest issue of installation instructions.

CAUTION:

- Because materials expand and contract at different rates and under different conditions Magnum Board® Products does not guarantee crack free joints.
- Please visit our website at www.Magnumbp.com to view more information about Magnum's Fiber Reinforced MgO "**GREEN**" Building Materials.



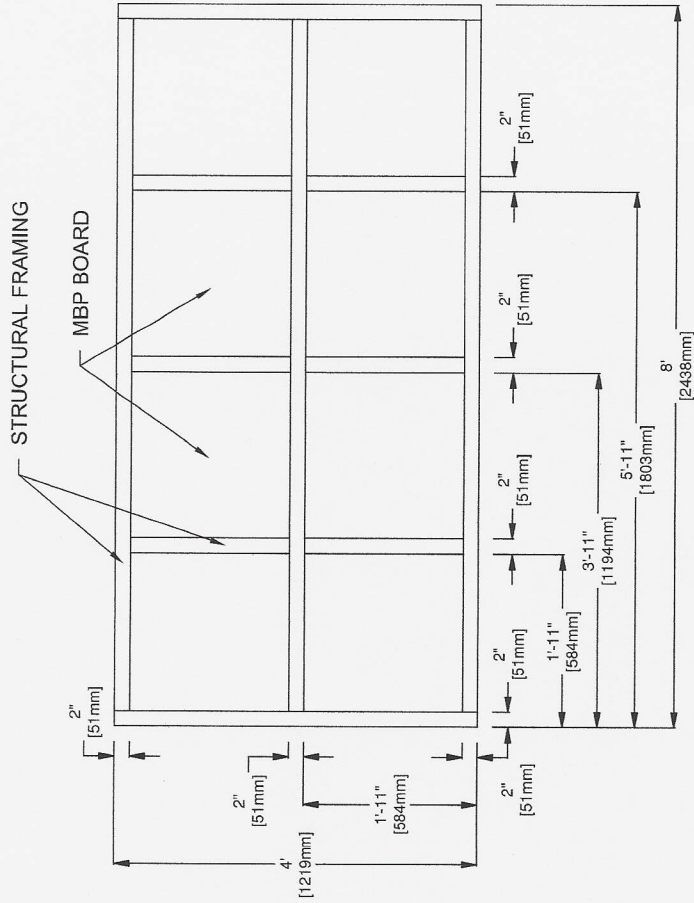
On Behalf of
Mother - Nature
THANK YOU



"GOTTA GO GREEN"

GENERAL NOTES

1. FASTENER TYPE AND PENETRATION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 7.0 OF THE INSTALLATION GUIDE, ISSUE 7.
2. FASTENER LOCATIONS SHALL MAINTAIN THE FOLLOWING MINIMUM CLEARANCES:
 - 2.1. 4" MINIMUM FROM CORNERS.
 - 2.2. 9/16" MINIMUM FROM ROOF AND FLOOR PANEL EDGES.
 - 2.3. 12" MAXIMUM SPACING ALONG PERIMETER EDGES AND JOIST LINES.
3. DESIGN LOAD: 600 PSF (ALLOWABLE).
4. STRUCTURAL FRAMING SHALL CONSIST OF DIMENSIONAL LUMBER OR GALVANIZED LIGHT-GAUGE STEEL (20 GAUGE MINIMUM THICKNESS).
5. WHEN LIGHT-GAUGE STEEL FRAMING IS USED, COPED CHANNELS SHALL BE INSTALLED AT ALL JOINTS.



NOTES:

DRAWN	NAME	DATE
DESIGNED	DA	05/23/19
APPROVED	DH	05/23/19
COMMENTS		



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REV #	DESCRIPTION
4	UPDATED DRAWING
5	UPDATED NOTES

DATE	BY
07/23/2022	DH
07/30/2026	DH

MAGNUM BOARD PRODUCTS	
18MM ROOFING & FLOORING SUBSTRATE	PLAN DRAWING
(FASTENING PROFILE LOAD DRAWING)	
DWG NO: 51611-1343	SHEET OF 1
REV	5