

**MAGNUM BOARD® PRODUCTS LLC****P.O. Box 90****Seffner, Florida 33584****585.820.7625**<https://www.magnumbp.com>**MAGNUM BOARD® SHEATHING****CSI Section:**

- 05 41 00 Structural Metal Stud Framing**
- 06 00 00 Wood, Plastics, and Composites**
- 06 11 00 Wood Framing**
- 06 16 00 Sheathing**
- 06 16 23 Subflooring**
- 06 16 63 Cementitious Sheathing**
- 09 28 13 Cementitious Backing Boards**
- 09 28 15 Magnesium Oxide Backing Panels**

1.0 RECOGNITION

Magnum Fiber Reinforced MgO Building Materials, recognized in this report, have been evaluated for use as wall and floor sheathing. The structural performance properties of the Magnum Fiber Reinforced MgO Building Materials comply with the intent of the provisions of the following standards and regulations:

- ASCE/SEI 7-22, Minimum Design Loads and Associated Criteria for Buildings and Other Structures.
- ASTM E72-22, Standard Test Methods of Conducting Strength Tests of Panels for Building Construction, Sections 14, 17, 18, 20, and 21.
- ASTM E2322-15, Standard Test Method for Conducting Transverse and Concentrated Load Tests on Panels used in Floor and Roof Construction, Sections 10 and 11.
- IAPMO UES EC-003-25, The Testing and Analysis of Steel Sheathing for Wood and Cold-Formed Steel Light-Framed Structure Shear Walls.
- US DOC Voluntary Product Standard PS 2-18, Performance Standard for Wood Structural Panels.

2.0 LIMITATIONS

Use of the Magnum Fiber Reinforced MgO Building Materials recognized in this report is subject to the following limitations:

2.1 Magnum Fiber Reinforced MgO Building Materials are manufactured, identified, and installed in accordance with this report.

2.2 The Magnum Fiber Reinforced MgO Building Materials recognized in this report is produced in Jiangsu, People's Republic of China.

3.0 PRODUCT USE

3.1 General: Magnum Fiber Reinforced MgO Building Materials are boards attached to the walls or floors of steel or wood framing.

3.2 Design:

3.2.1 Transverse Load: The following details document the Magnum Fiber Reinforced MgO Building Materials transverse load performance, based on single-span tests under dry conditions in accordance with Section 10 of ASTM E2322 and the provisions of US DOC PS 2:

Thickness: 18 mm (0.71 inch)
Span: 600 mm (23.62 inches)
Allowable Load: 60 psf
Deflection: Maximum 1/360 of the span.
Support width: 1 inch (25.4 mm)

The panels were not fastened during the test.

3.2.2 Transverse Load: The following details document the Magnum Fiber Reinforced MgO Building Materials transverse load performance, smooth side up, based on single-span tests under dry conditions in accordance with Section 10 of ASTM E2322 and the provisions of US DOC PS 2:

Thickness: 12 mm (0.47 inch)
Span: 600 mm (23.62 inches)
Allowable Load: 40 psf
Deflection: Maximum 1/240 of the span.
Support width: 1 inch (25.4 mm)

The panels were not fastened during the test. PSCL panel clips are placed mid-span where edges are not supported by framing.

3.2.3 Transverse Load: The following details document the Magnum Fiber Reinforced MgO Building Materials transverse load performance, rough side up, based on single-span tests under dry conditions in accordance with Section 10 of ASTM E2322 and the provisions of US DOC PS 2:

Thickness: 12 mm (0.47 inch)
Span: 600 mm (23.62 inches)
Allowable Load: 40 psf
Deflection: Maximum 1/240 of the span.
Support width: 1 inch (25.4 mm)



The panels were not fastened during the test. PSCL panel clips are placed mid-span where edges are not supported by framing.

3.2.4 Concentrated Load: The following details document the Magnum Fiber Reinforced MgO Building Materials concentrated static load performance, based on tests under dry conditions in accordance with Section 11 of ASTM E2322:

Thickness: 18 mm (0.71 inch)
Concentrated Load diameter: 1 inch (25.4 mm)
Maximum Load: 1,000 pounds (4.45 kN)
Location of Load: Center of sheathing, away from the edges.
Deflection under maximum load: 0.024 inch (0.63 mm)
Indentation after load removal: 0.012 inch (0.31 mm)

3.2.5 Concentrated Load: The following details document the Magnum Fiber Reinforced MgO Building Materials concentrated static load performance, smooth side up, based on tests under dry conditions in accordance with Section 11 of ASTM E2322:

Thickness: 12 mm (0.47 inch)
Concentrated Load diameter: 1 inch (25.4 mm)
Maximum Load: 1,000 pounds (4.45 kN)
Location of Load: Center of sheathing, away from the edges, and Center of sheathing, near the edges.
Deflection under maximum load: 0.010 inch (0.26 mm)
Indentation after load removal: 0.012 inch (0.31 mm)

3.2.6 Concentrated Load: The following details document the Magnum Fiber Reinforced MgO Building Materials concentrated static load performance, rough side up, based on tests under dry conditions in accordance with Section 11 of ASTM E2322:

Thickness: 12 mm (0.47 inch)
Concentrated Load diameter: 1 inch (25.4 mm)
Maximum Load: 1,000 pounds (4.45 kN)
Location of Load: Center of sheathing, away from the edges.
Deflection under maximum load: 0.009 inch (0.23 mm)
Indentation after load removal: 0.003 inch (0.08 mm)

Location of Load: Center of sheathing, near the edges.
Deflection under maximum load: 0.009 inch (0.22 mm)
Indentation after load removal: 0.002 inch (0.06 mm)

3.2.7 Racking Shear: Based on tests under dry conditions in accordance with Section 14 of ASTM E72, and the provisions of ASCE/SEI 7 and IAMPO UES EC-003, Magnum Fiber Reinforced MgO Building Materials comply as the shear panel for Seismic Force-Resisting System A.18 in Table 12.2-1 of ASCE/SEI 7-22. The Seismic Design Category Limitations are:

- A. Seismic Design Categories A, B, and C: No limit on structural height, h_n .

- B. Seismic Design Category D: The maximum structural height, h_n , is 35 feet.
- C. Seismic Design Categories E and F: Outside the scope of this report.

Additional details on the shear walls are provided in Table 1 of this report.

3.2.8 Racking Shear: Based on tests under wet conditions in accordance with Section 15 of ASTM E72, and the provisions of ASCE/SEI 7 and IAMPO UES EC-003, Magnum Fiber Reinforced MgO Building Materials comply as the shear panel for Seismic Force-Resisting System A.18 in Table 12.2-1 of ASCE/SEI 7-22. The Seismic Design Category Limitations are:

- A. Seismic Design Categories A, B, and C: No limit on structural height, h_n .
- B. Seismic Design Category D: The maximum structural height, h_n , is 35 feet.
- C. Seismic Design Categories E and F: Outside the scope of this report.

Additional details on the shear walls are provided in Table 2 of this report.

3.3 Installation: Installation shall be in accordance with the manufacturer's instructions and the applicable information in Section 3.2 of this report. Where there is a conflict, the most restrictive requirements shall govern.

4.0 PRODUCT DESCRIPTION

Magnum Fiber Reinforced MgO Building Materials fiber-reinforced magnesium oxide (MgO) cement board is available with a smooth or rough, flat finish in 12 mm (0.47 inch), 16 mm (0.63 inch), and 18 mm (0.71 inch) thicknesses. Edge configurations are either square, tapered, ship-lap, or tongue and groove. Board sizes include 4 feet (1219 mm) by 8 feet (2438 mm), 4 feet (1219 mm) by 9 feet (2743 mm), 4 feet (1219 mm) by 10 feet (3048 mm), and 4 feet (1219 mm) by 12 feet (3658 mm).

5.0 IDENTIFICATION

Magnum Fiber Reinforced MgO Building Materials are identified by the Magnum Board® Products name and trademark, product name, lot number, and listing report number (IAMPO UES UEL-5068). The Uniform Evaluation Service Mark of Conformity may also be used as shown below:



IAMPO UES UEL-5068



LISTING REPORT

Number: **UEL-5068**

Originally Issued: **08/04/2026**

Valid Through: **08/31/2027**

6.0 SUBSTANTIATING DATA

6.1 Reports of Racking Shear Tests in accordance with Section 14 of ASTM E72.

6.2 Evaluation of racking shear performance using IAPMO UES EC 003-2025, The Testing and Analysis of Steel Sheathing for Wood and Cold Formed Steel Light Framed Structure Shear Walls.

6.3 Reports of Transverse Load and Concentrated Load Tests in accordance with ASTM E2322.

6.4 Evaluation of Transverse Load performance using US DOC PS 2-18, Performance Standard for Wood Structural Panels.

6.5 Quality control manual.

6.6 The test reports are from laboratories in compliance with ISO/IEC 17025.

7.0 STATEMENT OF RECOGNITION

This listing report describes the results of research carried out by IAPMO Uniform Evaluation Service on Magnum Fiber Reinforced MgO Building Materials to assess conformance to the standards shown in Section 1.0 of this report and serves as documentation of the product certification. Products are manufactured at the location noted in Section 2.2 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

TABLE 1 — ASD SHEAR RESISTANCE TO WIND OR EARTHQUAKE FORCES (POUNDS PER FOOT) AND DISPLACEMENTS (INCHES) FOR BLOCKED SHEAR WALLS WITH MAGNUM FIBER REINFORCED MGO BUILDING MATERIALS NOT SUBJECT TO WETTING WITH WOOD SCREWS TO SOUTHERN PINE FRAMING SPACED AT 16 INCHES O.C. MAXIMUM^{1,2,3}

BOARD THICKNESS (mm) AND EDGE TYPE	FRAMING ⁴	0.165 INCH DIAMETER BY 1.77-INCH-LONG SCREW SPACING AT PANEL EDGES/INTERMEDIATE FRAMING, INCHES ON CENTER ^{5,6}		
16 Square Edge	Stud: 2 by 4	6/12		
	End post: Double 2 by 4	$V_{0.2}$ ⁷ (plf)	V_{asd} ⁸ (plf)	ΔV_{asd} ⁹ (inch)
	Sill and top plate: 2 by 4	150	251	0.38
18 Square Edge	Stud: 2 by 4	6/6		
	End post: Double 2 by 4	$V_{0.2}$ ⁷ (plf)	V_{asd} ⁸ (plf)	ΔV_{asd} ⁹ (inch)
	Sill and top plate: 2 by 4	74	161	0.50

For SI: 1 inch = 25.4 mm, 1 plf = 0.0146 N/mm.

¹ These values are for short-term loads due to wind or earthquake. The tabulated values apply to locations where the Magnum Board® Sheathing will not be subjected to wetting during construction.

² The tested conditions include 8-foot by 8-foot walls with an aspect ratio of 1:1 and vertical board joints.

³ Tabulated values listed are for boards applied to one side or two sides of a wall.

⁴ The moisture content of the framing shall be no greater than 19 percent in service.

⁵ The screws are installed with a 0.55 inch edge distance at perimeters and joints.

⁶ All board edges shall be blocked and fastened. Boards shall be installed vertically with the long dimension parallel to the framing.

⁷ $V_{0.2}$ = The strength at a horizontal deformation of 0.2 inch (5.1 mm)

⁸ V_{asd} = Allowable Stress Design (ASD) Strength.

⁹ ΔV_{asd} = Deflection at V_{asd} design load.



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TABLE 2 — ASD SHEAR RESISTANCE TO WIND OR EARTHQUAKE FORCES (POUNDS PER FOOT) AND DISPLACEMENTS (INCHES) FOR BLOCKED SHEAR WALLS WITH MAGNUM FIBER REINFORCED MGO BUILDING MATERIALS SUBJECT TO WETTING WITH WOOD SCREWS TO DOUGLAS FIR FRAMING SPACED AT 16 INCHES O.C. MAXIMUM^{1,2,3}

BOARD THICKNESS (mm) AND EDGE TYPE	FRAMING ⁴	0.165 INCH DIAMETER BY 1.5-INCH-LONG SCREW SPACING AT PANEL EDGES/INTERMEDIATE FRAMING, INCHES ON CENTER ^{5,6}		
12 Square Edge	Stud: 2 by 4	6/12		
	End post: Double 2 by 4	$V_{0.2}$ ⁷ (plf)	V_{asd} ⁸ (plf)	ΔV_{asd} ⁹ (inch)
	Sill and top plate: 2 by 4	235	158	0.13

For SI: 1 inch = 25.4 mm, 1 plf = 0.0146 N/mm.

¹ These values are for short-term loads due to wind or earthquake. The tabulated values apply to locations where the Magnum Board® Sheathing will be either dry or subjected to wetting during construction.

² The tested conditions include 8-foot by 8-foot walls with an aspect ratio of 1:1 and vertical board joints.

³ Tabulated values listed are for boards applied to one side or two sides of a wall.

⁴ The moisture content of the framing shall be no greater than 19 percent in service.

⁵ The screws are installed with a 0.55 inch edge distance at perimeters and joints.

⁶ All board edges shall be blocked and fastened. Boards shall be installed vertically with the long dimension parallel to the framing.

⁷ $V_{0.2}$ = The strength at a horizontal deformation of 0.2 inch (5.1 mm)

⁸ V_{asd} = Allowable Stress Design (ASD) Strength.

⁹ ΔV_{asd} = Deflection at V_{asd} design load.