

ICC-ES Listing Report



ESL-1610

Issued July 2024
This listing is subject to renewal July 2025.

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A Subsidiary of the International Code Council®

CSI: DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

Section: 06 16 00—Sheathing

DIVISION: 09 00 00—FINISHES

Section: 09 28 15—Magnesium Oxide Backing Panels

Product Certification System:

The ICC-ES product-certification system includes evaluating evidence in support of test data provided by the listee to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

Product: INNOVATION MGO WALL PANELS

Listee: US MGO COMPANY, LLC

Evaluation: INNOVATION MgO Wall Panels are nominally 1/2-inch

INNOVATION MgO Wall Panels are nominally 1/2-inch (12 mm actual) thick fiberglass-reinforced magnesium oxide sheets used as sheathing in walls. The panels have a smooth-side and a rough-side. The panels are available 4-feet (1.22 m) wide and 8-feet (2.44 m) in length.

INNOVATION MgO Wall Panels were evaluated based on tested load bearing wall assemblies consisting of building-material components described in the Design listings, tested in accordance with the following standards:

- ASTM E119-20 and ASTM E119-18B, Standard Test Methods for Fire Tests of Building Construction and Materials, ASTM International.
- UL 263-11 (with revisions through August 2021) and UL 263-11 (with revisions through March 2018), Standard for Fire Tests of Building Construction and Materials, Underwriters Laboratories, Inc.

Findings:

Evaluation of INNOVATION MgO Wall Panels, as components of the assembly, is based on testing in accordance with the applicable test method as referenced in each ICC Design No., and as referenced in the applicable sections of the following code editions:

- 2024 and 2021 International Building Code® (IBC) Applicable Section: 703.2
- 2024 and 2021 International Residential Code® (IRC) Applicable Section: R302

Identification:

- The ICC-ES mark of conformity, electronic labeling, or the listing report (ICC-ES <u>ESL-1610</u>) and when applicable the ICC-ES listing mark, along with the name, registered trademark, or registered logo of the listee must be included in the product label.
- In addition, each INNOVATION MgO Wall Panel shall be identified by a stamp or label on the panel bearing the name of the report holder, the product name, and the panel thickness.
- 3. The report holder's contact information is the following:

US MGO COMPANY, LLC 9600 PLOOF ROAD SE, BUILDING 16 LELAND, NC 28451 (855) 646-4968 www.usmgo.co



Installation:

INNOVATION MgO Wall Panels must be installed in accordance with the US MgO Company, LLC published installation instructions and applicable codes.

Conditions of Listing:

- 1. The listing addresses only conformance with the standards and code sections noted above.
- 2. Approval of the product's use is the sole responsibility of the local code official.
- 3. The listing applies only to the materials tested and as submitted for review by ICC-ES.
- 4. The design loads (ASD) used in testing for the load-bearing wood-framed walls are based on the allowable axial load of the wall framing studs and support bracing (if applicable), assuming the sheathing provides full lateral bracing to the wall framing in the weak-axis throughout the wall height, in accordance with the NDS (National Design Specification for Wood Construction), unless noted otherwise.
- 5. The design loads (ASD) used in testing for the load-bearing cold-formed steel-framed walls are based on the allowable axial load of the wall framing studs and support bracing (if applicable) in accordance with AISI S100 (North American Specification for the Design of Cold-Formed Steel Structural Members), unless noted otherwise. Sheathing was not considered in the calculation of the design loads.
- 6. For an assembly tested in accordance with ASTM E119, the Assembly Rating shall apply to both sides of the assembly (fire from either face of the wall), unless noted otherwise.
- INNOVATION MgO Wall Sheathing panels are manufactured under a quality control program with inspections by ICC-ES.



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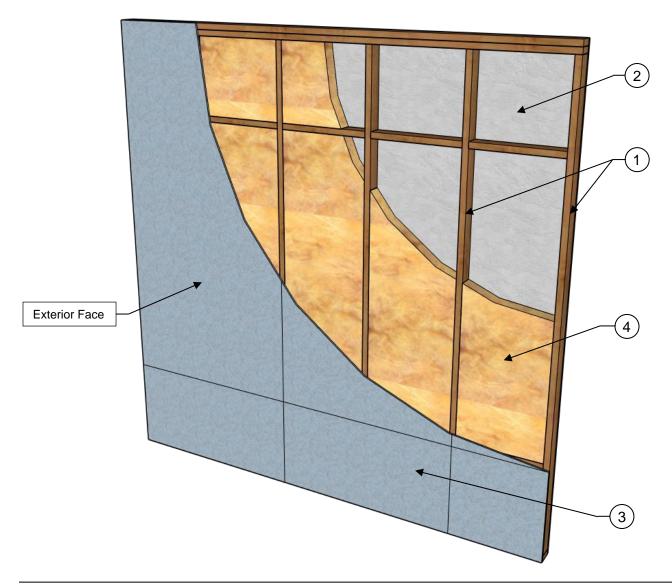
Product: INNOVATION MGO WALL PANELS

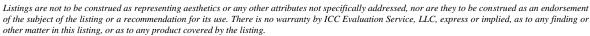
Standard: ASTM E119 (UL 263)

Assembly

Rating: 1-Hour

Load: Load Bearing (100% Design Load) – See Conditions of Listing Item #4







| ITEM NO. | COMPONENTS | MATERIALS |
|-------------|---|---|
| 1 | Wood Framing— | Minimum 2-inch by 4-inch (50.8 mm by 101.6 mm) wood studs, with a governing slenderness ratio (l _e /d) of 33, spaced maximum 24 inches (609.6 mm) on center, with blocking installed in the weak-axis direction, are secured to top and bottom plates with 3-inch (76.2 mm) long x 0.131-inch (3.33 mm) diameter smooth shank framing nails. A double top plate is secured to the first top plate with 3-inch (76.2 mm) long x 0.131-inch (3.33 mm) diameter nails spaced 16 inches (406.4 mm) on center. Full-depth blocking is installed between each stud 24 inches (609.6 mm) from the top of the wall assembly and 24 inches (609.6 mm) from the bottom of the wall assembly and secured with 3-inch (76.2 mm) long x 0.131-inch (3.33 mm) diameter nails. Note: See Condition of Listing Item 4 of ESL-1610. |
| 2 | Interior Sheathing— | One layer of minimum ⁵ / ₈ -inch (15.9 mm) Type X or Type C gypsum wallboard, complying with ASTM C1396, must be secured directly to the framing, on the interior side of the wall assembly, using minimum 1 ⁵ / ₈ -inch (41.3 mm) long Type W bugle-head steel screws (minimum 1-inch (25.4 mm) fastener penetration into framing members) spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the gypsum board. Gypsum wallboard must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly. All sheathing joints must be treated with two coats of joint compound with nominal 2-inch (50.8 mm) wide paper tape embedded in the first layer of compound over all joints. All fastener heads must be covered with one layer of joint compound. |
| 3 | Exterior Sheathing— | One layer of nominal ½-inch (12 mm actual) thick INNOVATION MgO Wall Panels must be secured directly to the framing, on the exterior side of the wall assembly, using minimum 1 ½-inch (41.3 mm) long No. 8 coarse thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. INNOVATION MgO Wall Panels may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All horizontal seams must be backed by blocking and staggered from one side of the assembly to the opposite sides of the assembly by a minimum of 12 inches (304.8 mm). INNOVATION MgO Wall Panel edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed. |
| 4 | Cavity Insulation— Use either A or B | A — Minimum R-13 fiberglass batt insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with nominal thickness of 3 ¹/₂-inch (88.9 mm) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. B — Minimum R-13 mineral wool insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with a nominal thickness of 3 ¹/₂-inch (88.9 mm) and a minimum density of 2.0 lbs./ft³ (32 kg/m³) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. |
| 5 | Exterior Facing Assembly (Not Shown)— | Where the assembly is used as an exterior wall, any exterior facing may be included, as authorized by the authority having jurisdiction, and must be installed in accordance with the manufacturer's installation instructions. |



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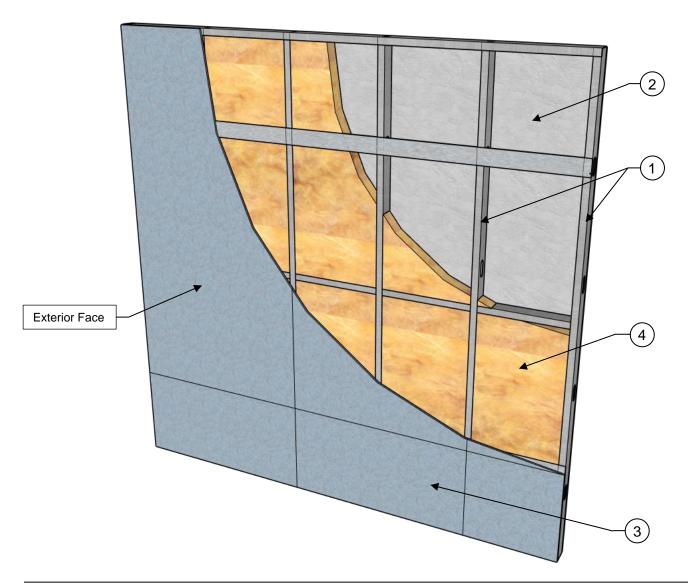
Product: INNOVATION MGO WALL PANELS

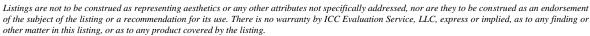
Standard: ASTM E119 (UL 263)

Assembly

Rating: 1-Hour

Load: Load Bearing (100% Design Load) – See Conditions of Listing Item #5







| ITEM NO. | COMPONENTS | MATERIALS |
|-------------|---|---|
| 1 | Cold-Formed Steel Structural Members— | Minimum 3 ⁵ / ₈ -inch (92 mm) deep, minimum 20 gauge (37.5 mils), corrosion-protected or galvanized steel channel-shaped studs with a governing slenderness ratio (l _e /d) of 37, spaced maximum 24 inches (609.6 mm) on center, with bracing at mid-height in the weak-axis direction, are secured to top and bottom track members (with same gauge thickness as studs) with ¹ / ₂ -inch (12.7 mm) long No. 8 wafer head self-drill screws. Steel studs must have minimum 1 ⁵ / ₈ -inch (41.3 mm) flanges and ¹ / ₂ -inch (12.7 mm) return. Minimum 16-gauge (62.5 mils) galvanized steel channel bracing, with 1 ¹ / ₂ -inch (38.1 mm) flanges and ¹ / ₂ -inch (12.7 mm) legs, is installed between each stud at mid-height of the wall assembly and attached with 16 gauge (62.5 mils) thick 1 ¹ / ₂ -inch by 1 ¹ / ₂ -inch (38.1 mm) y 38.1 mm) galvanized steel angles at each end with two ¹ / ₂ -inch (12.7 mm) long No. 8 pan head self-drilling screws. Minimum 4 inch (101.6 mm) wide, minimum 20 gauge (37.5 mils) thick steel flat strapping plate, used as blocking at sheathing horizontal seams, is installed between each stud 24 inches (609.6 mm) from the top of the wall assembly and 24 inches (609.6 mm) from the bottom of the wall assembly and secured with two ¹ / ₂ -inch (12.7 mm) Type S-12 low profile panhead screws. |
| 2 | Interior Sheathing— | One layer of minimum ⁵ / ₈ -inch (15.9 mm) Type X or Type C gypsum wallboard, complying with ASTM C1396, must be secured directly to the framing, on the interior side of the wall assembly, using minimum 1 ⁵ / ₈ -inch (41.3 mm) long Type S bugle-head steel screws (minimum 1-inch (25.4 mm) fastener penetration into framing members) spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the gypsum board. Gypsum wallboard must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly. All sheathing joints must be treated with two coats of joint compound with nominal 2-inch (50.8 mm) wide paper tape embedded in the first layer of compound over all joints. All fastener heads must be covered with one layer of joint compound. |
| 3 | Exterior Sheathing— | One layer of nominal ½-inch (12 mm actual) thick INNOVATION MgO Wall Panels must be secured directly to the framing, on the exterior side of the wall assembly, using minimum 1 ½-inch (41.3 mm) long No. 8 fine thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. INNOVATION MgO Wall Panels may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All horizontal seams must be backed by blocking and staggered from one side of the assembly to the opposite sides of the assembly by a minimum of 12 inches (304.8 mm). INNOVATION MgO Wall Panel edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed. |
| 4 | Cavity Insulation— Use either A or B | A — Minimum R-13 fiberglass batt insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with nominal thickness of 3 ⁵/₈-inch (92.1 mm) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. B — Minimum R-13 mineral wool insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with a nominal thickness of 3 ⁵/₈-inch (92.1 mm) and a minimum density of 2.0 lbs./ft³ (32 kg/m³) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. |
| 5 | Exterior Facing Assembly (Not Shown)— | Where the assembly is used as an exterior wall, any exterior facing may be included, as authorized by the authority having jurisdiction, and must be installed in accordance with the manufacturer's installation instructions. |



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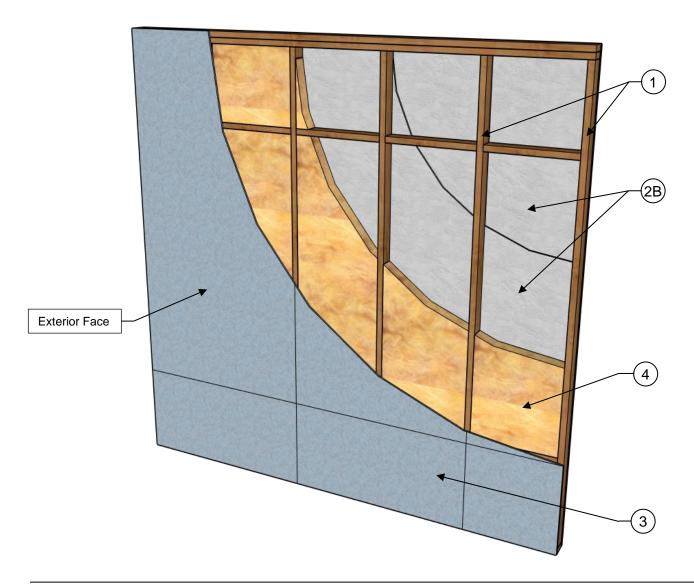
Product: INNOVATION MGO WALL PANELS

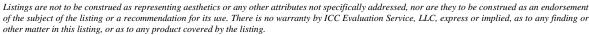
Standard: ASTM E119 (UL 263)

Assembly

Rating: 2-Hour from the Interior Face, 1-Hour from the Exterior Face

Load: Load Bearing (100% Design Load) – See Conditions of Listing Item #4







| ITEM NO. | COMPONENTS | MATERIALS |
|-------------|---|---|
| 1 | Wood Framing— | Minimum 2-inch by 4-inch (50.8 mm by 101.6 mm) wood studs, with a governing slenderness ratio (l_e /d) of 33, spaced maximum 24 inches (609.6 mm) on center, with blocking installed in the weak-axis direction, are secured to top and bottom plates with 3-inch (76.2 mm) long x 0.131-inch (3.33 mm) diameter smooth shank framing nails. A double top plate is secured to the first top plate with 3-inch (76.2 mm) long x 0.131-inch (3.33 mm) diameter nails spaced 16 inches (406.4 mm) on center. Full-depth blocking is installed between each stud 24 inches (609.6 mm) from the top of the wall assembly and 24 inches (609.6 mm) from the bottom of the wall assembly and secured with 3-inch (76.2 mm) long x 0.131-inch (3.33 mm) diameter nails. |
| | | Note: See Condition of Listing Item 4 of <u>ESL-1610</u> . |
| 2 | Interior Sheathing— | A — Interior Sheathing (MgO) – Two layers of nominal ½-inch (12 mm actual) thick INNOVATION MgO Wall Panels are secured directly to the base wall system framing, on the interior side of the wall assembly. |
| | Use either A or B | The base layer must be secured to the framing using minimum 1 \(^1/4\)-inch (31.8 mm) long No. 8 coarse thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. Base layer may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All horizontal seams must be backed by blocking and staggered from one side of the assembly to the opposite sides of the assembly by a minimum of 12 inches (304.8 mm). |
| | | The face layer, with vertical and horizontal panel joints staggered from the base layer, must be secured to the framing using 1 ⁵ / ₈ -inch (41.3 mm) long No. 8 coarse thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field, with the face layer screws staggered 4 inches (101.6 mm) from the base layer screws. Face layer may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. INNOVATION MgO Wall Panel edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed. |
| | | B — Interior Sheathing (GWB) – Two layers of minimum ⁵ / ₈ -inch (15.9 mm) Type X or Type C gypsum wallboard, complying with ASTM C1396, are secured directly to the base wall system framing, on the interior side of the wall assembly. |
| | | The base layer must be secured to the framing using minimum 1 $^3/_8$ -inch (34.9 mm) long Type W screws (minimum $^3/_4$ -inch (19.1 mm) fastener penetration into framing members) spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. Gypsum wallboard must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly. |
| | | The face layer, with vertical panel joints staggered from the base layer, must be secured to the framing using 1 7 / ₈ -inch (47.6 mm) long Type W screws (minimum 5 / ₈ -inch (15.9 mm) fastener penetration into framing members) spaced at 8 inches (203.2 mm) on center along the perimeter and in the field, with the face layer screws staggered 4 inches (101.6 mm) from the base layer screws. Face layer must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All face layer sheathing joints edge joints must be treated with two coats of joint compound with nominal 2-inch wide paper tape embedded in first layer of compound over all joints. All fastener heads must be covered with one layer of joint compound. |
| 3 | Exterior Sheathing— | One layer of nominal $^{1}/_{2}$ -inch (12 mm actual) thick INNOVATION MgO Wall Panels must be secured directly to the framing, on the exterior side of the wall assembly, using minimum 1 $^{5}/_{8}$ -inch (41.3 mm) long No. 8 coarse thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. INNOVATION MgO Wall Panels may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All horizontal seams must be backed by blocking and staggered from one side of the assembly to the opposite sides of the assembly by a minimum of 12 inches (304.8 mm). INNOVATION MgO Wall Panel edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed. |
| 4 | Cavity Insulation— Use either A or B | A — Minimum R-13 fiberglass batt insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with nominal thickness of 3 ½-inch (88.9 mm) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. B — Minimum R-13 mineral wool insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with a nominal thickness of 3 ½-inch (88.9 mm) and a minimum density of 2.0 lbs./ft³ (32 kg/m³) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. |
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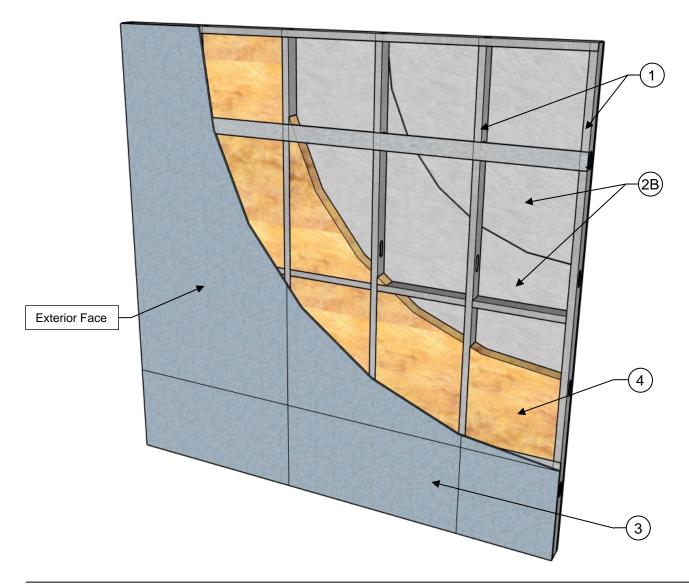
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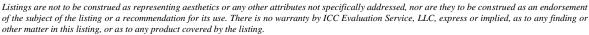
Standard: ASTM E119 (UL 263)

Assembly

Rating: 2-Hour from the Interior Face, 1-Hour from the Exterior Face

Load: Load Bearing (100% Design Load) – See Conditions of Listing Item #5







| ITEM NO. | COMPONENTS | MATERIALS |
|-------------|---|---|
| 1 | Cold-Formed Steel Structural Members— | Minimum 3 $^5/_8$ -inch (92 mm) deep, minimum 20 gauge (37.5 mils), corrosion-protected or galvanized steel channel-shaped studs with a governing slenderness ratio (l_e/d) of 37, spaced maximum 24 inches (609.6 mm) on center, with bracing at mid-height in the weak-axis direction, are secured to top and bottom track members (with same gauge thickness as studs) with $^1/_2$ -inch (12.7 mm) long No. 8 wafer head self-drill screws. Steel studs must have minimum 1 $^5/_8$ -inch (41.3 mm) flanges and $^1/_2$ -inch (12.7 mm) return. Minimum 16-gauge (62.5 mils) galvanized steel channel bracing, with 1 $^1/_2$ -inch (38.1 mm) flanges and $^1/_2$ -inch (12.7 mm) legs, is installed between each stud at mid-height of the wall assembly and attached with 16 gauge (62.5 mils) thick 1 $^1/_2$ -inch by 1 $^1/_2$ -inch (38.1 mm by 38.1 mm) galvanized steel angles at each end with two $^1/_2$ -inch (12.7 mm) long No. 8 pan head self-drilling screws. Minimum 4 inch (101.6 mm) wide, minimum 20 gauge (37.5 mils) thick steel flat strapping plate, used as blocking at sheathing horizontal seams, is installed between each stud 24 inches (609.6 mm) from the top of the wall assembly and 24 inches (609.6 mm) from the bottom of the wall assembly and secured with two $^1/_2$ -inch (12.7 mm) Type S-12 low profile panhead screws. |
| | | Note: See Condition of Listing Item 5 of ESL-1610. |
| 2 | Interior Sheathing— | A — Interior Sheathing (MgO) – Two layers of nominal ½-inch (12 mm actual) thick INNOVATION MgO Wall Panels are secured directly to the base wall system framing, on the interior side of the wall assembly. |
| | Use either A or B | The base layer must be secured to the framing using minimum 1 1 / $_{4}$ -inch (31.8 mm) long No. 8 fine thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. Base layer may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All horizontal seams must be backed by blocking and staggered from one side of the assembly to the opposite sides of the assembly by a minimum of 12 inches (304.8 mm). |
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| | | B — Interior Sheathing (GWB) – Two layers of minimum ⁵ / ₈ -inch (15.9 mm) Type X or Type C gypsum wallboard, complying with ASTM C1396, are secured directly to the base wall system framing, on the interior side of the wall assembly. |
| | | The base layer must be secured to the framing using minimum 1 $^3/_8$ -inch (34.9 mm) long Type S screws (minimum $^3/_4$ -inch (19.1 mm) fastener penetration into framing members) spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. Gypsum wallboard must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly. |
| | | The face layer, with vertical panel joints staggered from the base layer, must be secured to the framing using 1 7 / ₈ -inch (47.6 mm) long Type S screws (minimum 5 / ₈ -inch (15.9 mm) fastener penetration into framing members) spaced at 8 inches (203.2 mm) on center along the perimeter and in the field, with the face layer screws staggered 4 inches (101.6 mm) from the base layer screws. Face layer must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All face layer sheathing joints edge joints must be treated with two coats of joint compound with nominal 2-inch wide paper tape embedded in first layer of compound over all joints. All fastener heads must be covered with one layer of joint compound. |
| 3 | Exterior Sheathing— | One layer of nominal $^{1}/_{2}$ -inch (12 mm actual) thick INNOVATION MgO Wall Panels must be secured directly to the framing, on the exterior side of the wall assembly, using minimum 1 $^{5}/_{8}$ -inch (41.3 mm) long No. 8 fine thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. INNOVATION MgO Wall Panels may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All horizontal seams must be backed by blocking and staggered from one side of the assembly to the opposite sides of the assembly by a minimum of 12 inches (304.8 mm). INNOVATION MgO Wall Panel edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed. |
| 4 | Cavity Insulation— Use either A or B | A — Minimum R-13 fiberglass batt insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with nominal thickness of 3 ⁵/₈-inch (92.1 mm) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. B — Minimum R-13 mineral wool insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with a nominal thickness of 3 ⁵/₈-inch (92.1 mm) and a minimum density of 2.0 lbs./ft³ (32 kg/m³) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. |
| 5 | Exterior Facing Assembly (Not Shown)— | Where the assembly is used as an exterior wall, any exterior facing may be included, as authorized by the authority having jurisdiction, and must be installed in accordance with the manufacturer's installation instructions. |
| Eor Cl. | ` ' | 1 foot = 204.9 mm, 1 lbs //t3 = 46.04 kg/m3 |



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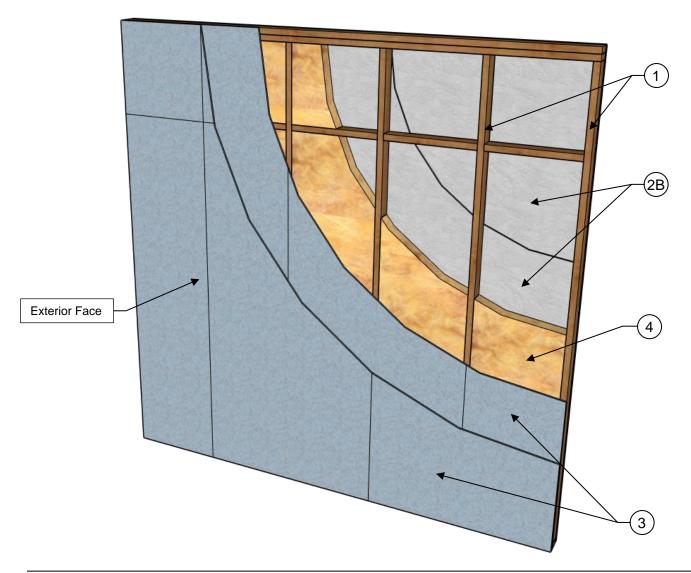
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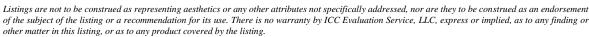
Standard: ASTM E119 (UL 263)

Assembly

Rating: 2-Hour

Load: Load Bearing (100% Design Load) – See Conditions of Listing Item #4







| ITEM NO. | COMPONENTS | MATERIALS |
|-------------|------------------------|--|
| 1 | Wood Framing— | Minimum 2-inch by 4-inch (50.8 mm by 101.6 mm) wood studs, with a governing slenderness ratio (I _e /d) of 33, spaced maximum 24 inches (609.6 mm) on center, with blocking installed in the weak-axis direction, are secured to top and bottom plates with 3-inch (76.2 mm) long x 0.131-inch (3.33 mm) diameter smooth shank framing nails. A double top plate is secured to the first top plate with 3-inch (76.2 mm) long x 0.131-inch (3.33 mm) diameter nails spaced 16 inches (406.4 mm) on center. Full-depth blocking is installed between each stud 24 inches (609.6 mm) from the top of the wall assembly and 24 inches (609.6 mm) from the bottom of the wall assembly and secured with 3-inch (76.2 mm) long x 0.131-inch (3.33 mm) diameter nails. Note: See Condition of Listing Item 4 of ESL-1610. |
| 2 | Interior Sheathing— | A — Interior Sheathing (MgO) – Two layers of nominal ½-inch (12 mm actual) thick INNOVATION MgO Wall Panels are secured directly to the base wall system framing, on the interior side of the wall assembly. |
| | Use either A or B | The base layer must be secured to the framing using minimum 1 1 / ₄ -inch (31.8 mm) long No. 8 coarse thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. Base layer may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All horizontal seams must be backed by blocking and staggered from one side of the assembly to the opposite sides of the assembly by a minimum of 12 inches (304.8 mm). |
| | | The face layer, with vertical and horizontal panel joints staggered from the base layer, must be secured to the framing using 1 ⁵ / ₈ -inch (41.3 mm) long No. 8 coarse thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field, with the face layer screws staggered 4 inches (101.6 mm) from the base layer screws. Face layer may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. INNOVATION MgO Wall Panel edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed. |
| | | B — Interior Sheathing (GWB) – Two layers of minimum $\frac{5}{8}$ -inch (15.9 mm) Type X or Type C gypsum wallboard, complying with ASTM C1396, are secured directly to the base wall system framing, on the interior side of the wall assembly. |
| | | The base layer must be secured to the framing using minimum 1 $^3/_8$ -inch (34.9 mm) long Type W screws (minimum $^3/_4$ -inch (19.1 mm) fastener penetration into framing members) spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. Gypsum wallboard must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly. |
| | | The face layer, with vertical panel joints staggered from the base layer, must be secured to the framing using 1 7 / ₈ -inch (47.6 mm) long Type W screws (minimum 5 / ₈ -inch (15.9 mm) fastener penetration into framing members) spaced at 8 inches (203.2 mm) on center along the perimeter and in the field, with the face layer screws staggered 4 inches (101.6 mm) from the base layer screws. Face layer must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All face layer sheathing joints edge joints must be treated with two coats of joint compound with nominal 2-inch wide paper tape embedded in first layer of compound over all joints. All fastener heads must be covered with one layer of joint compound. |
| 3 | Exterior Sheathing— | Two layers of nominal $^{1}/_{2}$ -inch (12 mm actual) thick INNOVATION MgO Wall Panels are secured directly to the base wall system framing, on the interior side of the wall assembly. |
| | | The base layer must be secured to the framing using minimum 1 1 / ₄ -inch (31.8 mm) long No. 8 coarse thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. Base layer must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All horizontal seams must be backed by blocking and staggered from one side of the assembly to the opposite sides of the assembly by a minimum of 12 inches (304.8 mm). The face layer, with vertical and horizontal panel joints staggered from the base layer, must be secured to the framing using 1 5 / ₈ -inch (41.3 mm) long No. 8 coarse thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field, with the face layer screws staggered 4 inches (101.6 mm) from the base layer screws. Face layer must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. INNOVATION MgO Wall Panel edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed. |

| ITEM NO. | COMPONENTS | MATERIALS |
|-------------|---|---|
| 4 | Cavity Insulation— Use either A or B | A — Minimum R-13 fiberglass batt insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with nominal thickness of 3 ½-inch (88.9 mm) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. B — Minimum R-13 mineral wool insulation, bearing the UL Classification Marking for surface burning and/or |
| | | fire resistance, with a nominal thickness of 3 ½-inch (88.9 mm) and a minimum density of 2.0 lbs./ft³ (32 kg/m³) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. |
| 5 | Exterior Facing Assembly (Not Shown)— | Where the assembly is used as an exterior wall, any exterior facing may be included, as authorized by the authority having jurisdiction, and must be installed in accordance with the manufacturer's installation instructions. |



ESL-1610

Issued July 2024

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Applicant: US MGO COMPANY, LLC

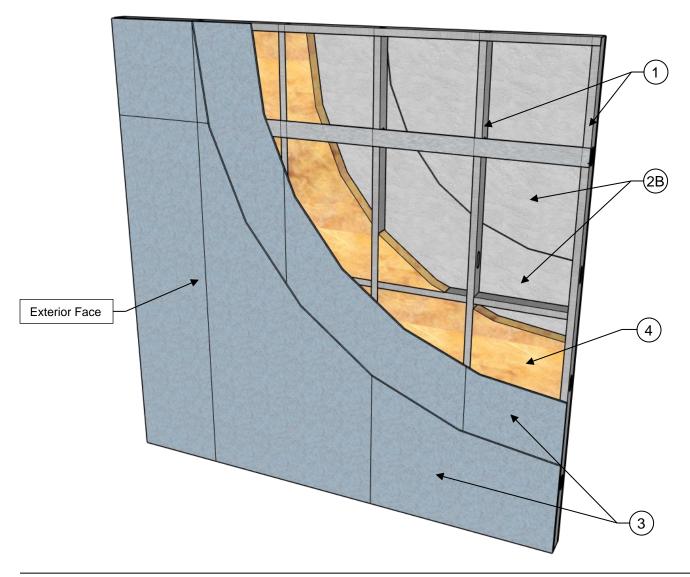
Product: INNOVATION MGO WALL PANELS

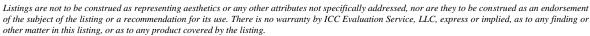
Standard: ASTM E119 (UL 263)

Assembly

Rating: 2-Hour

Load: Load Bearing (100% Design Load) – See Conditions of Listing Item #5







| ITEM NO. | COMPONENTS | MATERIALS |
|-------------|---|---|
| 1 | Cold-Formed Steel Structural Members— | Minimum 3 ⁵ / ₈ -inch (92 mm) deep, minimum 20 gauge (37.5 mils), corrosion-protected or galvanized steel channel-shaped studs with a governing slenderness ratio (l ₈ /d) of 37, spaced maximum 24 inches (609.6 mm) on center, with bracing at mid-height in the weak-axis direction, are secured to top and bottom track members (with same gauge thickness as studs) with ¹ / ₂ -inch (12.7 mm) long No. 8 wafer head self-drill screws. Steel studs must have minimum 1 ⁵ / ₈ -inch (41.3 mm) flanges and ¹ / ₂ -inch (12.7 mm) return. Minimum 16-gauge (62.5 mils) galvanized steel channel bracing, with 1 ¹ / ₂ -inch (38.1 mm) flanges and ¹ / ₂ -inch (12.7 mm) legs, is installed between each stud at mid-height of the wall assembly and attached with 16 gauge (62.5 mils) thick 1 ¹ / ₂ -inch by 1 ¹ / ₂ -inch (38.1 mm by 38.1 mm) galvanized steel angles at each end with two ¹ / ₂ -inch (12.7 mm) long No. 8 pan head self-drilling screws. Minimum 4 inch (101.6 mm) wide, minimum 20 gauge (37.5 mils) thick steel flat strapping plate, used as blocking at sheathing horizontal seams, is installed between each stud 24 inches (609.6 mm) from the top of the wall assembly and 24 inches (609.6 mm) from the bottom of the wall assembly and secured with two ¹ / ₂ -inch (12.7 mm) Type S-12 low profile panhead screws. |
| 2 | Interior Sheathing— | A — Interior Sheathing (MgO) – Two layers of nominal ½-inch (12 mm actual) thick INNOVATION MgO Wall Panels are secured directly to the base wall system framing, on the interior side of the wall assembly. |
| | Use either A or B | The base layer must be secured to the framing using minimum 1 ½-inch (31.8 mm) long No. 8 fine thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. Base layer may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All horizontal seams must be backed by blocking and staggered from one side of the assembly to the opposite sides of the assembly by a minimum of 12 inches (304.8 mm). |
| | | The face layer, with vertical and horizontal panel joints staggered from the base layer, must be secured to the framing using 1 \$^1/8\$-inch (41.3 mm) long No. 8 fine thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field, with the face layer screws staggered 4 inches (101.6 mm) from the base layer screws. Face layer may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. INNOVATION MgO Wall Panel edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed. |
| | | B — Interior Sheathing (GWB) – Two layers of minimum ⁵ / ₈ -inch (15.9 mm) Type X or Type C gypsum wallboard, complying with ASTM C1396, are secured directly to the base wall system framing, on the interior side of the wall assembly. |
| | | The base layer must be secured to the framing using minimum 1 $^3/_8$ -inch (34.9 mm) long Type S screws (minimum $^3/_4$ -inch (19.1 mm) fastener penetration into framing members) spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. Gypsum wallboard must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly. |
| | | The face layer, with vertical panel joints staggered from the base layer, must be secured to the framing using 1 7 / ₈ -inch (47.6 mm) long Type S screws (minimum 5 / ₈ -inch (15.9 mm) fastener penetration into framing members) spaced at 8 inches (203.2 mm) on center along the perimeter and in the field, with the face layer screws staggered 4 inches (101.6 mm) from the base layer screws. Face layer must be installed vertically to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All face layer sheathing joints edge joints must be treated with two coats of joint compound with nominal 2-inch wide paper tape embedded in first layer of compound over all joints. All fastener heads must be covered with one layer of joint compound. |
| 3 | Exterior Sheathing— | Two layers of nominal ½-inch (12 mm actual) thick INNOVATION MgO Wall Panels are secured directly to the base wall system framing, on the interior side of the wall assembly. |
| | | The base layer must be secured to the framing using minimum 1 1 / ₄ -inch (31.8 mm) long No. 8 fine thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field of the panel. Base layer may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. All horizontal seams must be backed by blocking and staggered from one side of the assembly to the opposite sides of the assembly by a minimum of 12 inches (304.8 mm). |
| | | The face layer, with vertical and horizontal panel joints staggered from the base layer, must be secured to the framing using 1 ⁵ / ₈ -inch (41.3 mm) long No. 8 fine thread, flat wafer head cement board screws spaced at 8 inches (203.2 mm) on center along the perimeter and in the field, with the face layer screws staggered 4 inches (101.6 mm) from the base layer screws. Face layer may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. INNOVATION MgO Wall Panel edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed. |

| ITEM NO. | COMPONENTS | MATERIALS |
|-------------|---|--|
| 4 | Cavity Insulation— Use either A or B | A — Minimum R-13 fiberglass batt insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with nominal thickness of 3 ⁵/₈-inch (92.1 mm) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. B — Minimum R-13 mineral wool insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with a nominal thickness of 3 ⁵/₈-inch (92.1 mm) and a minimum density of 2.0 lbs./ft³ (32 kg/m³) is friction-fit into each stud cavity. The insulation thickness must match the stud cavity depth. |
| 5 | Exterior Facing Assembly (Not Shown)— | Where the assembly is used as an exterior wall, any exterior facing may be included, as authorized by the authority having jurisdiction, and must be installed in accordance with the manufacturer's installation instructions. |