

# ICC-ES Evaluation Report

**ESR-5001**


*Reissued January 2025*

*Revised April 2025*

*Subject to renewal January 2026*

*ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.*

Copyright © 2025 ICC Evaluation Service, LLC. All rights reserved.

<b>DIVISION: 09 00 00— FINISHES</b>  <b>Section: 09 28 15— Magnesium Oxide Backing Panels</b>	<b>REPORT HOLDER:</b>  <b>BOXABL, INC.</b>	<b>EVALUATION SUBJECT:</b>  <b>BOXABL BOARD MAGNESIUM OXIDE BOARD</b>	
---	--	---	---

## 1.0 EVALUATION SCOPE

**Compliance with the following codes:**

- 2021 and 2018 [International Building Code® \(IBC\)](#)
- 2021 and 2018 [International Residential Code® \(IRC\)](#)

**Property evaluated:**

- Physical properties
- Non-combustibility
- Surface-burning characteristics

## 2.0 USES

BOXABL Board magnesium oxide boards are used on interior surfaces as defined in IBC Section 2502, as substrate sheets suitable for decoration with paint, wallpaper, ceramic tile, natural stone or dimensional stone on walls in interior dry areas. The boards may be used as interior and exterior facers for sandwich panels.

## 3.0 DESCRIPTION

BOXABL Board magnesium oxide boards are magnesium oxide sheets, reinforced with fiberglass mesh on both faces. The boards are available in nominally 0.236-inch-thick (6mm), 4 foot (1220 mm) wide and 10 ft (3048 mm) long.

## 4.0 DESIGN AND INSTALLATION

The flexural strength of BOXABL Board exceeds the minimum average flexural strength of 580 psi (4000 kPa), when tested in accordance with ASTM C1185.

BOXABL Boards exhibited less than 1/8 inch (3.2 mm) humidified deflection when tested in accordance with ASTM C473.

BOXABL Board's change in length due to moisture is less than 0.16% in both machine direction and cross machine direction based on a relative humidity change from 30 to 90 percent when tested in accordance with ASTM C1185.

BOXABL Board nail head pull through capacity exceeds 125 lbs (56.7 kg) when tested in accordance with ASTM D1037 using a roofing nail with an 0.375 inch (9.5 mm) diameter head and a 0.121 inch (3 mm) diameter shank.

BOXABL Board is classified as a noncombustible material when tested in accordance with ASTM E136 and Class A interior finish material when tested in accordance with ASTM E84.

## 5.0 CONDITIONS OF USE:

- 5.1 BOXABL Board magnesium oxide boards described in this report complies with, or are a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:
- 5.2 BOXABL magnesium oxide boards must be installed in accordance with this report and the manufacturer's published installation instructions. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.
- 5.3 Use of the boards as structural wall sheathing panels to resist uniform transverse loads and racking shear load has not been evaluated and is outside of the scope of this evaluation report.
- 5.4 Use of the boards as floor sheathing and underlayment is outside of the scope of this report.
- 5.5 Use of the boards in horizontal diaphragms is outside of the scope of this report.
- 5.6 Installation on the exterior side of a framed exterior wall sheathing with the boards is outside of the scope of this report.
- 5.7 BOXABL Boards must not be exposed to the weather and must not be used in wet areas as defined in IBC Section 2509. Under the IRC, the boards must not be used in showers.
- 5.8 BOXABL Boards are manufactured under a quality control program with inspections by ICC-ES.

## 6.0 EVIDENCE SUBMITTED

- 6.1 Data of physical properties in accordance with the [ICC-ES Acceptance Criteria for Fiber-Reinforced Magnesium-Oxide-Based Sheets AC308 \(24\) 3<sup>rd</sup> Edition](#), published April 2025.
- 6.2 Data in accordance with ASTM E136

## IDENTIFICATION

- 6.3 Each BOXABL Board Magnesium Oxide Board shall include a label showing, the name of the report holder or listee, and the ICC-ES mark of conformity.
- 6.4 The listing or evaluation report number (ESR-5001) may be used in lieu of the mark of conformity.
- 6.5 The report holder's contact information is the following:

**BOXABL, INC.**  
**5345 EAST NORTH BELT ROAD**  
**NORTH LAS VEGAS, NEVADA 89115**  
**(702) 500-9000**  
[www.boxabl.com](http://www.boxabl.com)