

ICC-ES Evaluation Report

ESR-4855

Reissued December 2024

This report also contains:


Revised April 2025

- [CA Supplement](#)

Subject to renewal December 2025

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DIVISION: 09 00 00— Finishes Section: 09 28 15 – Magnesium Oxide Backing Panels	REPORT HOLDER: VANTEM GLOBAL, INC.	EVALUATION SUBJECT: VANTEM BOARD MAGNESIUM OXIDE PANELS	
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1.0 EVALUATION SCOPE

Compliance with the following codes:

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

Property evaluated:

- Physical properties
- Non-combustibility
- Surface burning characteristics

2.0 USES

Vantem Board magnesium oxide panels 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 dimension stone on walls in interior dry areas and exterior facers for sandwich panels.

3.0 DESCRIPTION

Vantem Board magnesium oxide panels are magnesium oxide sheets, reinforced with fiberglass mesh on both faces. The boards are available in nominally 12mm thickness, 48 inch (1220 mm) width and 8 feet (2440 mm) to 12 feet (3660 mm) lengths.

4.0 DESIGN

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

The boards exhibit no humidified deflection when tested in accordance with ASTM C473.

The change in length due to moisture is less than 0.05% 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.

The board nail head pull through capacity exceeds 125 lbs when tested in accordance with ASTM D1037 when using a #10 Type AB Screw with a 0.308 head diameter a 0.109 root diameter and a 0.158 major diameter.

The boards are classified as noncombustible materials when tested in accordance with ASTM E136 and Class A interior finish materials when tested in accordance with ASTM E84.

5.0 CONDITIONS OF USE:

Vantem Board described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Vantem Board magnesium oxide panels 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.
- 5.2 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.
- 5.3 Use of the boards as floor sheathing and underlayment is outside of the scope of this report.
- 5.4 Use of the boards in horizontal diaphragms is outside of the scope of this report.
- 5.5 Installation on the exterior side of a framed exterior wall sheathed with the boards is outside of the scope of this report.
- 5.6 The 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.
- 5.7 Vantem 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 \(24\) 3rd Edition](#), published April 2025, excluding Appendix A regarding the corrosion effects in contact with common metals requirements.
- 6.2 Data in accordance with ASTM E136.

7.0 IDENTIFICATION

- 7.1 Product labeling shall include, the name of the report holder or listee, and the ICC-ES mark of conformity. The listing or evaluation report number (ICC-ES ESR-4855) may be used in lieu of the mark of conformity. Each Vantem Board shall be identified by a stamp or label on the board bearing the name and address of the report holder, the board name, the thickness and the ICC-ES evaluation report number (ESR-4855).
- 7.2 The report holder's contact information is the following:

Vantem Global, Inc.
806 GREEN VALLEY ROAD, SUITE 200
GREENSBORO, NORTH CAROLINA 27408
(336) 210-5800
www.vantemglobal.com

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DIVISION: 09 00 00—Finishes

Section: 09 28 15—Magnesium Oxide Backing Panels

REPORT HOLDER:

VANTEM GLOBAL, INC.

EVALUATION SUBJECT:

VANTEM BOARD MAGNESIUM OXIDE PANELS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Vantem Board Magnesium Oxide Panels, described in ICC-ES evaluation report ESR-4855, have also been evaluated for compliance with the code(s) noted below.

Applicable code edition(s):

- 2022 California Building Code (CBC)

For evaluation of applicable Chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2022 California Residential Code (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Vantem Board Magnesium Oxide Panels, described in Sections 2.0 through 7.0 of the evaluation report ESR-4855, comply with CBC Chapter 25, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapter 25, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Vantem Board Magnesium Oxide Panels, described in Sections 2.0 through 7.0 of the evaluation report ESR-4855, comply with CRC Section R702, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Chapter R702, as applicable.

This supplement expires concurrently with the evaluation report, reissued December 2024 and revised April 2025.