



ICC-ES Evaluation Report

ESR-5193

Issued June 2023

This report is subject to renewal June 2024.

DIVISION: 09 00 00—Finishes
Section: 09 28 15—Magnesium Oxide Backing Panels

REPORT HOLDER:

NEXGEN BUILDING PRODUCTS LLC

EVALUATION SUBJECT:

MAXTERRA™ 12 MM THICK MAGNESIUM OXIDE PANEL

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018 and 2015 *International Building Code*® (IBC)
- 2021, 2018 and 2015 *International Residential Code*® (IRC)

For evaluation of compliance with codes adopted by the Los Angeles Department of Building and Safety (LADBS), see [ESR-5193 LABC and LARC Supplement](#).

Properties evaluated:

- Durability
- Surface Burning Characteristics

2.0 USES

Maxterra™ panels are 12mm (0.472 inch) thick magnesium-oxide panels are intended for use in the construction of structural insulated panels (SIPs) in Type V-B construction and all construction types under the IRC.

3.0 DESCRIPTION

3.1 General:

Maxterra™ panels are 12mm (0.472 inch) thick magnesium oxide panels reinforced with multiple embedded fiberglass mesh sheets. The panels are available in nominal 4-foot (1.22 m) widths at a nominal length of 8, 10 or 12 feet (2.44 m, 3.05 m, or 3.66 m)

3.2 Surface Burning Characteristics:

Maxterra™ panels have a flame spread index of 25 or less and a smoke developed index of 450 or less when tested in accordance with ASTM E84. The panels exhibit a Class A interior finish in accordance with Section 803.1.2 of the 2021 and 2018 IBC (Section 803.1.1 of the 2015 IBC)

4.0 DESIGN AND INSTALLATION

The panels are intended be used in the construction of SIPs panels. The use, structural performance, design, and installation requirements of the SIPs panels is outside of the

scope of this report. The scope of this report is limited to the durability and surface burning characteristics of the panels.

5.0 CONDITIONS OF USE

The Maxterra™ magnesium-oxide panels 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** The use, structural performance, design, and installation requirements of the SIPs panels is outside of the scope of this report.
- 5.2** Use of Maxterra™ magnesium-oxide panels as structural floor sheathing, structural roof sheathing, wall sheathing or as a substrate in interior areas is outside of the scope of this report.
- 5.3** Use of Maxterra™ magnesium-oxide panels in fire-resistance rated construction is outside of the scope of this report.
- 5.4** Maxterra™ magnesium-oxide panels are limited to use on interior surfaces as defined in 2021 and 2018 IBC Section 202 (2015 IBC Section 2502). The panels must not be used in wet areas as defined in IBC Section 2509; under the IRC, the panels must not be used in showers.
- 5.5** Maxterra™ magnesium-oxide panels are manufactured under a quality-control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with Section 3.1 of the ICC-ES Acceptance Criteria for Fiber-reinforced Magnesium-oxide-based Sheets (AC386), dated February 2023 (Editorially revised April 2023).

7.0 IDENTIFICATION

- 7.1** The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-5193) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2** The report holder’s contact information is the following:

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Section: 09 28 15—Magnesium Oxide Backing Panels

REPORT HOLDER:

NEXGEN BUILDING PRODUCTS LLC

EVALUATION SUBJECT:

MAXTERRA™ 12 MM THICK MAGNESIUM OXIDE PANEL

1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that Maxterra™ 12 mm thick magnesium oxide panels, described in ICC-ES evaluation report [ESR-5193](#), have also been evaluated for compliance with the Chicago Construction Codes (Title 14 of the Chicago Municipal Code) as noted below.

Applicable code editions:

- 2019 *Chicago Building Code* (Title 14B)

2.0 CONCLUSIONS

The Maxterra™ 12 mm thick magnesium oxide panels, described in Sections 2.0 through 7.0 of the evaluation report [ESR-5193](#), comply with Title 14B, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Maxterra™ 12 mm thick magnesium oxide panels described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-5193](#).

This supplement expires concurrently with the evaluation report, dated June 2023.

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Section: 09 28 15—Magnesium Oxide Backing Panels

REPORT HOLDER:

NEXGEN BUILDING PRODUCTS LLC

EVALUATION SUBJECT:

MAXTERRA™ 12 MM THICK MAGNESIUM OXIDE PANEL

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Maxterra™ 12 mm thick magnesium oxide panels, described in ICC-ES evaluation report [ESR-5193](#), have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2023 *City of Los Angeles Building Code* (LABC)
- 2023 *City of Los Angeles Residential Code* (LARC)

2.0 CONCLUSIONS

The Maxterra™ 12 mm thick magnesium oxide panels, described in Sections 2.0 through 7.0 of the evaluation report [ESR-5193](#), comply with the LABC Chapter 8 and the LARC Chapter 3, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Maxterra™ 12 mm thick magnesium oxide panels described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-5193](#).
- The design, installation, conditions of use and identification are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report [ESR-5193](#).

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1.0 REPORT PURPOSE AND SCOPE

Purpose:

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Applicable code editions:

- 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 Maxterra™ 12 mm thick magnesium oxide panels, described in Sections 2.0 through 7.0 of the evaluation report ESR-5193, comply with CBC Chapter 8, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report.

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 Maxterra™ 12 mm thick magnesium oxide panels, described in Sections 2.0 through 7.0 of the evaluation report ESR-5193, comply with CRC Chapter 3, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report.

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1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Maxterra™ 12 mm thick magnesium oxide panels, described in ICC-ES evaluation report ESR-5193, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2020 Florida Building Code—Building
- 2020 Florida Building Code—Residential

2.0 CONCLUSIONS

The Maxterra™ 12 mm thick magnesium oxide panels, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-5193, comply with the 2020 Florida Building Code—Building and the 2020 Florida Building Code—Residential, as applicable. The design requirements must be determined in accordance with the Florida Building Code—Building or the Florida Building Code—Residential, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-5193 for the 2018 International Building Code® meet the requirements of the Florida Building Code—Building or the Florida Building Code—Residential, as applicable.

Use of the Maxterra™ 12 mm thick magnesium oxide panels for compliance with the High-Velocity Hurricane Zone provisions of the Florida Building Code—Building or the Florida Building Code—Residential has not been evaluated and is outside the scope of this supplemental report.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

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