



ENVIRONMENTAL MATERIALS LLC, DBA ENVIRONMENTAL STONWORKS

CLIPSTONE MORTARLESS STONE VENEER

CSI Section:

- 04 73 00 Manufactured Stone Masonry
- 04 20 00 Unit Masonry

1.0 RECOGNITION

Environmental StoneWorks Clipstone Mortarless Stone Veneer recognized in this report has been evaluated for use as a nonstructural mechanically fastened exterior wall covering. The strength, durability and transverse wind load resistance properties of the Clipstone Mortarless Stone Veneer complies with the intent of the provisions of the following codes and regulations:

- 2012 and 2009 International Building Code® (IBC)
- 2012 and 2009 International Residential Code® (IRC)

2.0 LIMITATIONS

Use of the Clipstone Mortarless Stone Veneer recognized in this report is subject to the following limitations:

2.1 The veneer shall be installed in accordance with this evaluation report, the applicable code, and the manufacturer’s published installation instructions. If there are any conflicts between the manufacturer’s published installation instructions and this report, the most restrictive governs.

2.2 Installation is limited to use on exterior walls of buildings of Type V-B construction in accordance with the IBC, and to construction permitted by the IRC, as applicable.

2.3. Installation is limited to walls with wood framing and solid wood-based structural panel sheathing capable of supporting the imposed loads. Sheathing shall be covered with a water-resistive barrier, as required by the applicable code.

2.4 The supporting wall shall be designed to support the installed weight of the veneer system. In jurisdictions adopting the IBC the supporting horizontal members shall be designed to limit deflection to $1/600$ of the span of the supporting members at wall openings.

2.5 Where the seismic provisions of IRC Section R301.2.2 apply, the average weight of the wall supporting the veneer system shall be determined. An engineered design of the wall construction shall be performed in accordance with IRC Sections R301.1.3 when the weight exceeds the applicable limits of IRC Section R301.2.2.2.1.

3.0 PRODUCT USE

3.1 General: Environmental StoneWorks Clipstone Mortarless Stone Veneer is used as a nonstructural mechanically fastened exterior wall covering on non-fire-resistance-rated wood-framed walls. The veneer is an alternative to anchored masonry veneer described in IBC Section 1405.6 and IRC Section R703.7.

3.2 Design: Clipstone Mortarless Stone Veneer is limited to installations where the maximum transverse wind load, positive or negative, does not exceed 35 psf (1.67 kPa).

3.3 Installation: The Clipstone Mortarless Stone Veneer units shall be installed over solid wood-based sheathing (plywood or OSB) attached to wood stud framing. Sheathing shall be minimum $7/16$ -inch-thick (11.1 mm) Exposure 1 OSB complying with DOC PS-2 or $15/32$ -inch-thick (12 mm) exterior-grade plywood complying with DOC PS-1. Sheathing shall be covered with a water-resistive barrier as required by IBC Section 1404.2 or IRC Section R7403.2, as applicable. The manufacturer’s published installation instructions shall be available on the jobsite and strictly adhered to at all times during installation.

Clipstone units are installed using two minimum No. 8 x $1\frac{1}{4}$ inch long (31.7 mm) Philips head lath screws per embedded mounting clip. Screws are installed through the formed eyelets at the top of each mounting clip. The bottom of each mounting clip is installed, ‘tucked’, behind the veneer unit below.

4.0 PRODUCT DESCRIPTION

The Clipstone Mortarless Stone Veneer is a precast concrete product manufactured to resemble natural stone in both texture and color, in ProStack and Ledgestone patterns. Each veneer unit has metal mounting clips embedded into the stone. The composition of the product includes cement, aggregate, water, admixtures, and color, placed in molds and cured at the plant. The installed product average weight when saturated shall not exceed 15 pounds per square foot (73.2 kg/m^2). The veneer unit thicknesses range from $1\frac{1}{2}$ inch (38.1 mm) to $2\frac{5}{8}$ inches (66.7 mm). Individual veneer pieces are $1\frac{1}{2}$ or $3\frac{1}{2}$ inches (38.1 or 88.9 mm) wide and

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.



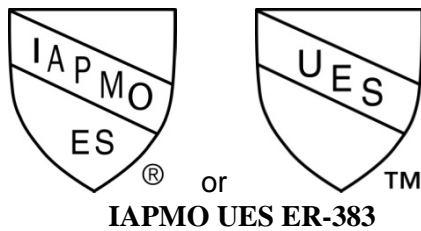


between 6½ inches and 19 inches (165 to 483 mm) long. Veneer units up to 16 inches (406 mm) in length have one embedded mounting clip. Veneer units longer than 16 inches (406 mm) have two embedded mounting clips. Metal mounting clips are formed from 0.120-inch (3.04 mm) diameter steel wire complying with ASTM A641 steel and has a G90 galvanized coating. Use of the veneer units is limited to Type V-B non-fire-resistance-rated building construction under the IBC and one- and two-family dwelling construction in accordance with the IRC.

5.0 IDENTIFICATION

Boxes of Clipstone Mortarless Stone Veneer units are identified with the manufacturer’s name (Environmental Stoneworks) and address, the product name, the IAPMO Uniform ES Mark of Conformity and the evaluation report number (ER-383).

Either Mark of Conformity may be used as shown below:



8.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research carried out by IAPMO Uniform Evaluation Service on Environmental StoneWorks Clipstone Mortarless Stone Veneer to assess conformance to the codes shown in Section 1.0 of this report, and serves as documentation of the product certification.

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

6.0 SUBSTANTIATING DATA

Data in accordance with the ICC-ES Acceptance Criteria for Precast Stone Veneer (AC51), dated June 2013, editorially revised September 2014; manufacturer’s descriptive literature and installation instructions; reports of Transverse Load tests in accordance with ASTM E330; reports of Concentrated Load tests in accordance with ASTM E72 Section 13; reports of Mechanical Fasteners in Wood tests in accordance with ASTM D1761. Testing was performed by laboratories in compliance with ISO/IEC 17025.

7.0 CONTACT INFORMATION

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