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PLY GEM STONE MANUFACTURED STONE AND BRICK VENEER

CSI Section:

- 04 71 00 Manufactured Brick Masonry
- 04 73 00 Manufactured Stone Masonry

1.0 RECOGNITION

Ply Gem Stone (and Canyon Stone) Manufactured Stone and Brick Veneer has been evaluated for use as a wall covering in compliance with Section 1405.2 of the IBC and Section R703.7 of the IRC over exterior or interior walls of wood studs, cold-formed steel framing or concrete masonry. The composition, strength, durability, surface burning characteristics, thermal resistance and installation properties of the Manufactured Stone and Brick Veneer complies with the intent of the provisions of the following codes and regulations:

- 2012, 2009 and 2006 International Building Code® (IBC)
- 2012, 2009 and 2006 International Residential Code® (IRC)

2.0 LIMITATIONS

Use of Ply Gem Stone (and Canyon Stone) Manufactured Stone and Brick Veneer recognized in this report is subject to the following limitations:

- 2.1** “Expansion or control joints used to limit the effect of differential movement of precast stone veneer supports must be specified by the architect, designer or veneer manufacturer, in that order. Consideration must be given to movement caused by temperature changes, shrinkage, creep and deflection.” [AC51]
- 2.2** “For installation in accordance with the IBC, supporting wall construction must be designed to support the weight of the veneer system. Horizontal framing members, such as

lintels and headers, which support precast stone veneer, must be designed to limit deflection to $1/600$ of the span.” [AC51]

2.3 “In jurisdictions adopting the IRC, where the seismic provisions of Section R301.2.2 apply, the average weight of the wall supporting the precast stone veneer, including the weight of the veneer system, must be determined. When this weight exceeds the applicable limits of IRC Section 301.2.2.2.1, an engineered design of the wall construction must be performed in accordance with IRC Section R301.1.3.” [AC51]

2.4 “When installed on exterior stud walls, the veneer units shall be installed a minimum of 4 inches (102 mm) above the earth, or a minimum of 2 inches (51 mm) above paved areas, or a minimum of 1/2 inch (12 mm) above exterior walking surfaces which are supported by the same foundation that supports the exterior wall” in accordance with 2012 IBC Section 1405.10.1.3 or 2012 IRC Section R703.12.1.

3.0 PRODUCT USE

3.1 The backing for the Ply Gem Stone (and Canyon Stone) Manufactured Stone and Brick Veneer “adhered veneer shall be of concrete, masonry, steel framing or wood framing.” [Section 1404.4 of the IBC] The veneer units shall be adhered to cement plaster, concrete or concrete masonry backings when installed in accordance with the manufacturer’s installation instructions, this report and the applicable code. Lath, lath accessories and fasteners shall be corrosion-resistant, as applicable. The manufacturer’s installation instructions shall be strictly adhered to and be available at the jobsite during application.

3.2 The Manufactured Stone and Brick Veneer shall be installed in accordance with Section 1405.10.1 of the IBC, Section R703.12 of the IRC, as applicable, ASTM C1780 and the report holder’s published installation instructions, whichever is most severe.

3.3 The Manufactured Stone and Brick Veneer units may be applied over the assemblies described in Table 1 of this report when installed in accordance with the referenced code sections and this report.

4.0 PRODUCT DESCRIPTION

4.1 Ply Gem Stone (and Canyon Stone) Manufactured Stone and Brick Veneer are manufactured concrete products formed to resemble natural stone or brick in both texture and color. The individual masonry veneer units shall be a minimum of 5/8 inch (15.9 mm) thick and a maximum of 2 5/8 inch (67 mm) thick with an average minimum compressive strength of 1,800 psi (12.4 MPa). The installed products “average saturated weight must not exceed 15 pounds per square foot (73 kg/m²)” [AC51]. The recognized veneer styles are shown in Table 2 of this report.

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.





Table 2 – Recognized Veneer Style Names

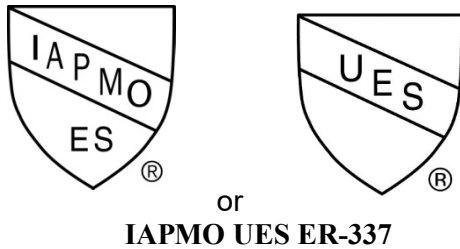
Canyon Ledge, Castle, Cathedral, Classic, Southern Ledge, Country Ledge, Fieldstone, Lime Stone, River Rock, Timber Ledge, Tuscan Field Stone, Strip Ledge, Thin Brick

4.2 The veneer has a Class A finish rating in accordance with Section 803.1.1 of the IBC (Section 803.1 of the 2006 IBC) and has a flame spread index and smoke-developed index that conforms to Section R302.9 of the IRC (Section R315 of the 2006 IRC) when tested in accordance with ASTM E84.

4.3 The veneer, at an average thickness of 0.952 inches (24.2 mm), has an average thermal resistance (R-value) of 0.20 hr.ft²F/Btu when tested in accordance with ASTM C518.

5.0 IDENTIFICATION

Boxes of Ply Gem Stone and Canyon Stone Manufactured Stone and Brick Veneer are identified with the manufacturer’s name, the pattern/style name, manufacturing date, manufacturing location, and evaluation report number (ER-337). Either Mark of Conformity may be used as shown below:



7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research carried out by IAPMO Uniform Evaluation Service on Ply Gem Stone Manufactured Stone and Brick Veneer to assess its conformance to the codes and standards shown in Section 1.0 of this report and documents the product’s 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

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Precast Stone Veneer (AC51), dated February 2008 (editorially revised April 2012). Test results are from laboratories in compliance with ISO/IEC 17025.

6.2 Manufacturer’s descriptive literature and installation instructions.

6.3 Reports of Thermal Transmission Properties testing in accordance with ASTM C518.

6.4 Reports of Surface Burning Characteristics testing in accordance with ASTM E84.



Table 1 – Application of Masonry Veneer Units		
Item	Code Section	Notes
1. Cement Plaster	IBC Sections 1404.2 and 2510.6; IRC Sections R703.2 and 703.6.3	½-inch thick scratch coat of Type S mortar complying with ASTM C270, scored horizontally in accordance with IBC Section 2512.6.
2. Water Resistive Barrier	IBC Section 1405.10.1.1; IRC Section R703.2	
3. Flashing	IBC Section 1405.4 (2006 IBC Section 1405.3) and Section 1405.10.1.2; IRC Sections R703.8 and R703.12.2 (2006 IRC Section R703.8)	
4. Weep Screed	IBC Section 1405.10.1.2; IRC Section R703.12.1 (2009 IRC Section R703.6.2.1); and TMS 402-11 Section 6.1.6.2 (ACI 530 Section 6.1.5.2)	
5. Lath and Fasteners	IBC Section 2510.3 (ASTM C926 and ASTM C1063); IRC Section R703.6.1	For proprietary fasteners, shear and pull out capacities shall be justified to the satisfaction of the authority having jurisdiction (AHJ).
6. Over Wood Based or Gypsum Sheathing Supported by Steel or Wood Framing	See Items 1, 2, 3, 4 and 5 and Notes	Items 1, 2, 3, 4 and 5 with framing spaced at 16 inches on-center maximum, lath shall be 2.5 lb/yd ² self-furring diamond metal lath complying with ASTM C847 fastened in accordance with the requirements of ASTM C1063, Section 7.10.2, and Section R703.6.1 of the IRC with fasteners spaced a maximum of 6 inches on-center.
7. Open Studs	See Items 1, 2, 3, 4, 5 and 6 and Notes	Items 1, 2, 3, 4, 5 and 6 except with 3.4 lb/yd ² , ⅜" rib lath complying with ASTM C847.
8. Over concrete or concrete masonry	Surfaces shall be prepared in accordance with IBC Section 2510.7 and Section 5.2 of ASTM C926.	Items 1, 3, 4, 5 and 6 except with metal lath complying with ASTM C847; or 1.4 lb/yd ² woven wire plaster base complying with ASTM C1032. The veneer may also be adhered to backings of clean concrete masonry without lath, in accordance with Section 2510.7 of the IBC and Section 5.2 of the ASTM C926.
9. Application of Veneer Units	IBC Section 2103.9 (2006 IBC Section 2103.8)	Nominal ½-inch thick setting bed of Type S mortar applied to the back of the veneer units in accordance with Ply Gem Stone's installation instructions.

SI conversions: 1 inch = 25.4 mm, 1 lb/yd² = 0.54 kg/m²