Number: 462

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PROVIA LLC 1550 County Road 140 Sugarcreek, Ohio 44681 (877) 389-0834 www.provia.com

PROVIA MANUFACTURED STONE

CSI Sections:

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

1.0 RECOGNITION

ProVia Manufactured Stone has been evaluated for use as a wall covering over exterior walls of wood studs, cold-formed steel framing, or concrete masonry. The composition, strength, durability, and thermal resistance of the ProVia Manufactured Stone was evaluated for compliance with the following codes:

- 2015, 2012, 2009, and 2006 International Building Code® (IBC)
- 2015, 2012, 2009, and 2006 International Residential Code® (IRC)
- 2017 Florida Building Code, Building (FBC) attached Supplement
- 2017 Florida Building Code, Residential (FRC) attached Supplement

2.0 LIMITATIONS

Use of ProVia Manufactured Stone as 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 $\frac{1}{600}$ 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 framed walls, "the veneer must be installed with the clearances required by IBC Section 1405.10.1.3 or IRC Section R703.12.1, as applicable." [AC51]
- **2.5** Provia Manufactured Stone recognized in this report is produced by Provia LLC, in Sugarcreek, Ohio.

3.0 PRODUCT USE

- **3.1** ProVia Manufactured Stone complies with Section 1405.10 of the IBC and Section R703.7 of the IRC as an exterior wall covering. The backing for ProVia Manufactured Stone "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 specified installation instructions (Installation Guide for Adhered Manufactured Stone Veneer, 4th Edition, published by the Masonry Veneer Manufactures' Association), ASTM C1780, this report, and the applicable code. Lath, lath accessories, and fasteners shall be corrosion-resistant. The installation instructions shall be strictly adhered to and be available at the jobsite during application.
- **3.2** ProVia Manufactured Stone shall be installed in accordance with Section 1405.10.1 of the IBC or Section R703.12 of the IRC, as applicable, ASTM C1780, and the installation instructions. In the event of a conflict, the more restrictive requirement governs.
- **3.3** ProVia Manufactured Stone units may be applied over the assemblies described in <u>Table 1</u> of this report when installed in accordance with the referenced code sections and this report.

4.0 PRODUCT DESCRIPTION

- **4.1** ProVia Manufactured Stone is manufactured concrete products formed to resemble natural stone in both texture and color. The individual masonry veneer units shall be a minimum of ³/₄-inch (19 mm) thick and a maximum of ²/₂-inches (63.5 mm) thick with a 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 <u>Table 2</u> of this report.
- **4.2** The veneer, at an average thickness of 1.037 inches (26.3 mm), has an average thermal resistance (R-value) of 2.06 hr. ft² °F/Btu when tested in accordance with ASTM C518.

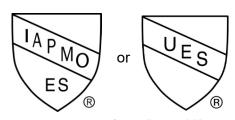


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5.0 IDENTIFICATION

Boxes of ProVia Manufactured Stone are identified with the manufacturer's name, the pattern/style name, manufacturing date, manufacturing location, and evaluation report number (ER-462). Either IAPMO UES Mark of Conformity may also be used as shown below:



IAPMO UES ER-462

6.0 SUBSTANTIATING DATA

- **6.1** Data in accordance with ICC-ES Acceptance Criteria for Precast Stone Veneer (AC51), approved January 2016.
- **6.2** Reports of Thermal Transmission Properties testing in accordance with ASTM C518.
- **6.3** Test reports are from laboratories in compliance with ISO/IEC 17025.
- **6.4** Manufacturer's descriptive literature and installation instructions.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on ProVia Manufactured Stone to assess its conformance to the codes and standards shown in Section 1.0 of this report and documents the product's certification. Products are manufactured at locations noted in Section 2.5 of this report under a quality control program with periodic inspections under the supervision of IAPMO UES.

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

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TABLE 1 – Application of Masonry Veneer Units		
Item	Code Section	Notes
1. Mortar Scratch Coat	IBC Sections 1404.2 and 2510.6; IRC Sections R703.2 and 703.6.3	Minimum ³ / ₈ inch (9.5 mm) thick, maximum of ⁵ / ₈ inch (15.9 mm) thick scratch coat of Type S or N 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	As given in Items 1, 2, 3, 4 and 5 and Notes	Items 1, 2, 3, 4 and 5 with framing spaced at 16 inches oncenter maximum, lath shall be 2.5 lb/yd² 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. Over Open Studs	As given in Items 1, 2, 3, 4, 5 and 6 and Notes	Items 1, 2, 3, 4, 5 and 6 except with 2.5 lb/yd ² galvanized expanded diamond mesh metal lath complying with ASTM C847.
8. Over concrete or concrete masonry	Prepare surfaces in accordance with IBC Section 2510.7 and Section 5.2 of ASTM C926.	The veneer may 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. Or Items 1, 3, 4 and 5 except with metal lath complying with ASTM C847; or 1.4 lb/yd² woven wire plaster base complying with ASTM C1032.
9. Application of Veneer Units	IBC Section 2103.9 (2006 IBC Section 2103.8)	Nominal ½-inch thick setting bed of Type S or N mortar applied to the back of the veneer units in accordance with instructions as noted in Section 3.2 of this report.

SI conversions: 1 inch = 25.4 mm, 1 $lb/yd^2 = 0.54 kg/m^2$

TABLE 2 – Recognized Veneer Style Names

Dry Stack, Fieldstone, Ledgestone, Limestone, Natural CutTM, PrecisionFitTM, River Rock, Terra CutTM, Chisel CutTM, Ridge CutTM, Edge CutTM

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FLORIDA SUPPLEMENT

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PROVIA MANUFACTURED STONE

CSI Sections:

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

1.0 RECOGNITION

ProVia Manufactured Stone evaluated in IAPMO UES ER-462 is a satisfactory alternative exterior wall covering in accordance with the following codes and regulations:

- 2017 Florida Building Code, Building (FBC, Building)
- 2017 Florida Building Code, Residential (FBC, Residential)

2.0 LIMITATIONS

The ProVia Manufactured Stone described in IAPMO UES ER-462 complies with or is suitable alternatives to what is specified in the codes listed in Section 1.0 of this supplement, subject to the following limitations:

- **2.1** Installation of ProVia Manufactured Stone shall provide for a clear inspection space in accordance with FBC, Building Sections 1403.8, 2114.2 and 2603.8 or FBC, Residential Section R318.4, as applicable; except, where the masonry veneer extends below grade, a termite protective treatment shall be applied in accordance with FBC, Building Section 2114.2.
- **2.2** Use of ProVia Manufactured Stone in Florida High-Velocity Hurricane Zones (HVHZ) is beyond the scope of this report.

- **2.3** Verification that the report holder's quality assurance program is audited by a quality assurance entity, approved by the Florida Building Commission (or the building official when the report holder does not possess an approval by the Commission), to provide oversight and determine that the products are being manufactured as described in this evaluation report to establish continual product performance shall be provided for products falling under Section (5)(d) of Florida Rule 61G20-3.008.
- **2.4** This supplement expires concurrently with ER-462.

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