



National Evaluation Service, Inc.

5203 Leesburg Pike, Suite 600, Falls Church, Virginia 22041-3401

Phone: 703/931-2187 Fax: 703/931-6505

website: www.nateval.org



NATIONAL EVALUATION REPORT

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Report No. **NER-358**

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CULTURED STONE® AND SACRAMENTO STONE™

CULTURED STONE, A DIVISION OF OWENS CORNING

POST OFFICE BOX 270

NAPA, CALIFORNIA 94559

www.culturedstone.com

e-mail: cltrdstn@culturedstone.com

To attach the stone, the mortar bed shall be 1/2 inch (12.7 mm) thick and of Type N or S mortar, complying with ASTM C270. Mortar shall be mixed to a firm, moist consistency and spread on the wall. Mortar is also permitted to be applied to the entire back of the stone. Mortar shall not be spread more than 5 to 10 ft² (0.5 to 0.9m²) of area ahead of applying the stone.

1.0 SUBJECT

Cultured Stone® and Sacramento Stone™

5.0 IDENTIFICATION

The Cultured Stone and Sacramento Stone shall be identified by the product name, manufacturer's name, the initials "C.S.V." cast into the side of each piece of stone, and the National Evaluation Service, Inc. report number.

2.0 PROPERTIES FOR WHICH EVALUATION IS SOUGHT

- 2.1 Interior finish and trim classification
- 2.2 Thermal resistance
- 2.3 Adhered exterior veneer

6.0 EVIDENCE SUBMITTED

- 6.1 Manufacturer's descriptive literature and installation instructions.
- 6.2 Report on Fire Hazard Classification of Mineral Composition Units, Project No. 76sc4006, dated November 3, 1976, by Underwriters Laboratories Inc. The test was conducted in accordance with ASTM E84, using 1 7/8 inch (48 mm) thick samples of hearth stones.
- 6.3 Report on Thermal Conductivity, Laboratory Report No. 8058, dated December 2, 1994, by Geoscience, Ltd. The test was conducted in accordance with ASTM C177.
- 6.4 Report on Unit Weight Determination of Cultured Stone Materials, prepared by TEI Consulting Engineers, Work Request No. 88128.4, dated January 16, 1989, signed by Vijay Jain.
- 6.5 Report on Freeze-Thaw Test on Cultured Stone Material, prepared by TEI Consulting Engineers, Work Request No. 88128.2, dated January 16, 1989, signed by Vijay Jain.
- 6.6 Report on Compressive Strength Test of Cultured Stone Material, prepared by TEI Consulting Engineers, Work Request No. 88128.12, dated April 18, 1989, signed by Vijay Jain.
- 6.7 Report on Flexural Strength Test of Cultured Stone Material, prepared by TEI Consulting Engineers, Work Request No. 88128.11, dated April 18, 1989, signed by Vijay Jain.
- 6.8 Report on Tensile Strength Test of Cultured Stone Material, prepared by TEI Consulting Engineers, Work Request No. 88128.3, dated April 15, 1989, signed by Vijay Jain.

3.0 DESCRIPTION

The stone products are manufactured, precast, artificial stone similar in color and texture to natural stone. The products are made from Portland cement, aggregate and mineral oxide colors, which are then cured. The stones have an average thickness of 1 3/4 inches (45 mm) and an oven-dry weight of 74 lb/ft³ (1186 kg/m³). The stones are used as a non-bearing exterior veneer or an interior finish and trim on concrete or masonry walls, stud walls and metal buildings. Sacramento Stone is identical to Cultured Stone except for color.

The stone products have a Class I (Class A) finish rating when tested in accordance with ASTM E84. Additionally, the stone products have an R value of 0.355 when tested in a thickness of 1 inch (25 mm), in accordance with ASTM C177.

4.0 INSTALLATION

The stone shall be installed in accordance with this report and the manufacturer's installation instructions, copyrighted January 2000. When the exterior or interior masonry surfaces are unsealed and unpainted, the stone mortar is permitted to be applied directly to the surface. Painted, sealed or dirty surfaces shall be sandblasted and cleaned, and dust shall be removed by washing thoroughly before applying mortar. Where the substrate is a material other than concrete or masonry, the substrate shall be covered with a minimum of one layer of a water-resistive barrier complying with the requirements of Chapter 14 of the applicable building code.

This report is limited to the specific product and data and test reports submitted by the applicant in its application requesting this report. No independent tests were performed by the National Evaluation Service, Inc. (NES), and NES specifically does not make any warranty, either expressed or implied, as to any finding or other matter in this report or as to any product covered by this report. This disclaimer includes, but is not limited to, merchantability. This report is also subject to the limitation listed herein.

- 6.9** Report on Water Absorption Test of Precast Cultured Material, prepared by TEI Consulting Engineers, Work Request No. 88128.3, dated April 25, 1989, signed by Vijay Jain.
- 6.10** Report on Shear Bond Test Between Scratch Coat and Type S Mortar, prepared by TEI Consulting Engineers, Work Request No. 88128, dated April 25, 1989, signed by Vijay Jain.
- 6.11** Report on Shear Bond Test of Precast Cultured Stone Veneer from a Concrete Masonry Unit (CMU) and Concrete Wall, prepared by TEI Consulting Engineers, Work Request No. 88128.9, dated April 25, 1989, signed by Vijay Jain.
- 6.12** Report on Shear Bond Test Between Mortar and Metal Lath, prepared by TEI Consulting Engineers, Work Request No. 88128.13, dated April 18, 1989, signed by Vijay Jain.
- 6.13** Report on Floor Protections and Wall Shields, prepared by Underwriters Laboratories Inc., File MH-11019, dated June 24, 1980, revised October 1987, signed by Kusum Vidanage and Alex A. Briber.
- 6.14** Report on Transverse Load Test on Stucco Panel, prepared by TEI Consulting Engineers, Work Request No. 90035, dated August 22, 1990, signed by Vijay Jain.
- 7.1** The stone veneer shall be limited to 30 ft (9144 mm) in height above the noncombustible foundation when used as an exterior veneer attached to wood-framed construction. Installation above the 30 ft (9144 mm) height are outside the scope of this report. Special designs shall be approved by the code official.
- 7.2** Each stone shall not exceed 36 in. (914 mm) in the largest dimension, shall be no more than 720 in² (0.46 m²) in area, and shall weigh no more than 15 lb/ft² (718 Pa).
- 7.3** The stone veneer shall be installed in accordance with the manufacturer's installation instructions, subject to the conditions of this report.
- 7.4** All exterior wall substrates shall be covered with a minimum of one layer of a water-resistive barrier complying with the requirements of the applicable building code, except where the substrate is of concrete or masonry construction.
- 7.5** To maintain the weather-resistance of the exterior wall on which the stone products are installed, rigid, corrosion-resistant flashing and a means of drainage shall be installed at all penetrations and terminations of the stone cladding. Flashing type and locations shall be in accordance with the requirements of the applicable code.
- 7.6** The stone veneer shall not be used as a component of a fire resistance rated assembly.
- 7.7** This report is subject to re-examination on a periodic basis. For information on the current status of this report, consult the evaluation report listing or contact the NES.

7.0 CONDITIONS OF USE

The National Evaluation Service Committee finds that Cultured Stone and Sacramento Stone are acceptable alternative materials, products or methods of construction to those specified in the 2000 *International Building Code*, 2000 *International Residential Code*, *BOCA National Building Code/1999*, 1999 *Standard Building Code*, and 1997 *Uniform Building Code* subject to the following conditions: