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Legacy report on the BOCA® National Building Code/1999, the 1999 Standard Building Code® and the 1997 Uniform Building Code™

DIVISION: 04—MASONRY
Section: 04730—Simulated Stone

REPORT HOLDER:

CENTURION PRODUCTS INC.
50 VAN BUREN STREET
NASHVILLE, TENNESSEE 37208

REPORT SUBJECT:

CENTURION™ STONE

1.0 SUBJECT

Centurion™ Stone

2.0 PROPERTIES FOR WHICH EVALUATION IS SOUGHT

- 2.1 Adhered Exterior Stone Veneer
2.2 Transverse Wind Load

3.0 DESCRIPTION

Centurion Stone is a manufactured, precast, artificial stone veneer similar in color and texture to natural stone. Centurion Stone Veneer is made from Portland cement, expanded aggregate, expanded perlite, mineral iron oxide color and concrete chemical additives. The stones have a nominal thickness of 1 1/2 inches (38 mm) up to 3 inches (76 mm) and an average weight of 7.5 pounds per square foot (36.6 kg/m²). The stones are produced in different patterns and colors to simulate natural stone. The stones are used as non-load bearing exterior veneer and trim. The individual precast stones are adhesively applied on concrete or masonry walls, wood and steel stud walls and metal buildings.

Centurion Stone Veneer is classified as a noncombustible building material when tested under ASTM E 136.

4.0 INSTALLATION

4.1 General

Centurion Stone Veneer is installed in accordance with this report and the manufacturer's installation instructions, Copyright© 1996. Frame construction wall surface shall be covered with a weather-resistive barrier such as Type 15 felt building paper complying with ASTM D 226, Type 1 or

other Code approved product. A "Scratch Coat" is applied when using metal lath or stucco mesh. The scratch coat is either Portland Cement or Type S mortar and is allowed to dry before attaching stones. The stones are attached to surfaces using a 1/2-inch (12.7 mm) thick bed of mortar applied to the back of the stones, so that it cones up in the center. The mortar is Type S or N, meeting the specifications of ASTM C 270. The stones are pressed firmly against the wall and wiggle from side to side. This will set the stones. If the cement is the right consistency, the stone will stay in place. Adjust the mix as necessary. As stones are installed a 3/4-inch (19.1 mm) space is maintained between adjacent stones. The joints are filled with grout and finished and sealed in accordance with the manufacturer's instructions. Application to various surfaces is listed in section 4.2 of this report. Wind resistant assemblies are given in section 4.3 of this report.

Expansion or control joints designed to limit the effect of differential movement of supports may be specified by the architect, designer or veneer manufacturer, in that order. Consideration must be given to movement caused by temperature change, shrinkage, creep and deflection.

The manufacturer's published installation instructions and this report shall be strictly adhered to and a copy of these instructions shall be available at all times on the job site during installation.

The instructions within this report govern if there are any conflicts between the manufacturer's instructions and this report.

4.2 Application

4.2.1 Existing Wood Frame Construction: Centurion Stone Veneer is applied to existing wall surfaces of plaster, painted exterior stucco or wood siding which provides a firm base for the veneer. The wall surfaces are covered with one layer of Type 15 felt complying with ASTM D 226, Type 1 with overlaps of 2 inches (51 mm) horizontal and 6 inches (152 mm) vertical. Metal lath shall be diamond type, 27 inches (686 mm) wide by 96 inches (2438 mm) long, 18 gage (0.478-inch) (1.214 mm), or 1-inch (25 mm) woven wire stucco mesh, 3.4 or 2.5 pounds per yard, corrosion resistant. The lath is installed horizontally across wall and secured with 1 3/4-inch (44 mm) galvanized roofing nails driven into wood studs a minimum of 1-inch (25 mm). The studs are spaced 16 inches (406 mm) on center maximum and nails are spaced 6 inches (152 mm) on center along the studs. The stones are adhered as described in section 4.1 of this report.

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4.2.2 New Wood Frame Construction: Centurion Stone Veneer is applied to open frame wood stud walls spaced 16 inches (406 mm) on center using 18 gage (0.478-inch) (1.214 mm), 1-inch (25 mm) woven wire mesh backed with No. 15 felt complying with ASTM D 226, Type 1 with 2-inch (51 mm) horizontal laps and 6-inch (152 mm) vertical laps. The mesh is attached to studs using $1\frac{3}{4}$ -inch (44 mm) galvanized roofing nails driven into the wood studs a minimum of 1-inch (25 mm). The nails are spaced 6 inches (152 mm) on center along the studs. The stones are adhered as described in section 4.1 of this report.

4.2.3 Masonry: Centurion Stone Veneer is applied directly to masonry walls without metal lath provide the wall's surface is clean. Painted or sealed masonry walls must be cleaned by sand blasting or covered with metal lath using 1-inch (25.4 mm) masonry nails. The stones are adhered as described in section 4.1 of this report.

4.2.4 Metal Studs: Centurion Stone Veneer is applied to metal stud, 18 gage (0.0478-inch) (1.214 mm) minimum using Diamond type metal lath 18 gage (0.478-inch) (1.214 mm) backed with No. 15 felt complying with ASTM D 226, Type 1 with 2-inch (51 mm) horizontal laps and 6-inch (152 mm) vertical laps. The mesh is attached to studs using No. 8 self-tapping screws spaced 6 inches (152 mm) on center along studs. The screws shall penetrate the studs minimum $\frac{1}{4}$ -inch (6.35 mm). The stones are adhered as described in section 4.1 of this report.

4.3 Wind Resistant Assembly - Maximum Design Wind Load = 75 psf (3600 Pa) positive and negative

Wood stud wall minimum 2 × 4 SP, G = 0.55 spaced 16 inches (406 mm) on center. The exterior face of the wall is covered with minimum $\frac{1}{2}$ -inch (12.7 mm) CDX plywood sheathing installed vertically, attached to wood studs with #6 ring shank nails, spaced 8 inches (203 mm) on center perimeter and in the field of the board, and covered with No. 15 felt complying with ASTM D 226, Type 1 and Diamond Type 18 gage (0.478-inch) (1.214 mm) metal lath installed horizontally on the wall. The Centurion Stone Veneer is applied as noted in sections 4.1 and 4.2.2 of this report.

5.0 IDENTIFICATION

Each pallet of Centurion™ Stone described in this report is identified by a label bearing the manufacturer's name, product name and this ICC-ES Legacy report number for field identification.

6.0 EVIDENCE SUBMITTED

- 6.1 Manufacturer's descriptive literature and installation instructions.
- 6.2 Test report on noncombustibility under ASTM E 136, Intertek Testing Services NA Inc., Report No. J98018995-001, July 10, 1998, signed by Nick Baldassarre and Amy Rice.
- 6.3 Test report on transverse wall loadings under ASTM E 72, Intertek Testing Services NA Inc., Report No. J98022043, August 13, 1998, signed by Mickey G. Workman and Martin T. Finn, P.E. Letter report on wall construction with wall assembly drawing, September 22, 1998, signed by Mickey G. Workman.
- 6.4 Test reports, PSI Professional Services Industries, Inc., June 12, 1998:

6.4.1 Compression Test under ASTM C 39, Report NO. 357-80222-2.

6.4.2 Flexural third point loadings under ASTM C 78, Report No. 357-80222-1.

6.5 Test reports, Intertek Testing Services NA Inc. ITS Project NO. J98022043, signed by Mickey G. Workman and Chuck Coletta, P.E.:

6.5.1 Absorption under ASTM C 140 and Density under ASTM C 567, August 14, 1998

6.5.2 Tensile strength ASTM C 190, August 14, 1998.

6.5.3 Bond strength under ASTM C 482, August 21, 1998.

6.6 Test report freeze-thaw testing under ASTM C 1262, ITS Intertek Testing Services, ITS Project No. J98022043, January 20, 1999, signed by Merthella H. Wright and Charles Coletta, P.E.

7.0 CONDITIONS OF USE

The ICC-ES Subcommittee for the National Evaluation Service finds that the Centurion™ Stone Veneer as described in this report complies with or is a suitable alternative to that specified in the BOCA® *National Building Code/1999*, the 1999 Standard Building Code® and the 1997 *Uniform Building Code*™, subject to the following conditions:

- 7.1 The stone veneer shall be installed in accordance with this report and the manufacturer's installation instructions.
- 7.2 The stone veneer is limited to 30 feet (9 m) in height above grade when used as an exterior veneer attached to wood-framed construction. Installation above 30 feet (9 m) limit is beyond the scope of this report. Special designs shall be approved by the building official.
- 7.3 Each stone is limited to 36 inches (914 mm) in its greatest dimension and less than 720 square inches (0.5 m²) in area.
- 7.4 The stone veneer shall not be used as a component of a fire-resistance rated wall assembly.
- 7.5 This report is subject to re-examination on a periodic basis. For information on the current status of this report, contact the ICC-ES.