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NATIONAL EVALUATION REPORT

Report No. NER-584

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FABRILOCK™ CURTAIN BOARD AND DRAFTSTOPPING

SMOKE & FIRE PREVENTION SYSTEMS

110 9TH STREET
CLARKSVILLE, VIRGINIA 23927
www.smokeandfireprevention.com

1.0 SUBJECT

FabriLock™

PROPERTIES FOR WHICH EVALUATION IS SOUGHT

- 2.1 Curtain board material
- 2.2 Draftstopping material
- 2.3 Resistance to passage of smoke

3.0 DESCRIPTION

General

The FabriLock™ smoke containment system is a coated woven fiberglass fabric curtain board that divides the ceiling area of a building into smoke containment cells by a process of suspended and interconnected fabric curtains mounted on an EMT conduit frame. The fabric is hemmed over the frame using thread of the same material as the fabric. The fabric panels are joined with fiberglass tape and sealed in place using fabric tape or acrylic caulk.

3.1.1 Curtain Boards: FabriLock™ smoke containment systems are used as curtain boards in conjunction with Code approved smoke and heat vents.

3.1.2 Draftstopping: FabriLock™ fabric is used as draftstopping material.

3.2 Materials

3.2.1 Fabric for FabriLock: woven fiberglass fabric Style 7721, standard white color with a breaking strength warp - 250 lbs/in minimum and Fill - 200 lbs/in minimum, elmendorf tear strength warp - 14 lbs minimum, Fill - 14 lbs minimum. Weight uncoated 8.0 +/- 0.3 OSY, coated 9.5 +/- 0.7 OSY.

3.2.2 Thread: the thread used to hem the FabriLock fabric shall be woven from the same material as the FabriLock fabric.

3.2.3 FabriLock Tape shall be manufactured using a slightly lighter weight fabric, with a heat resistant adhesive that will not penetrate the fabric. The tape shall be the same color as the fabric.

3.2.4 FabriLock Frame: ½ inch (12.7 mm) EMT electrical metallic tubing galvanized steel painted to match fabric color. Tubing shall be continuous at the top and bottom of the curtain board with vertical tubing at 10 feet (3 m) intervals to stabilize the curtain board. The frame is connected with steel tees using set screws.

3.2.5 FabriLock Fasteners: fabricated from tempered spring steel with steel teeth that are driven onto the steel structural supports. Fasteners are located at 24 inches or 36 inches (609.6 mm or 914.4 mm) on center per engineering drawings. The spring fasteners are made from spheroidized annealed high carbon cold rolled steel conforming to, ASTM A 648 and ANSI 1055.

3.2.6 Thermafiber Caulk: smoke seal caulking used to seal the fabric gasket to flutes in the steel roof deck. Smoke Seal compound, an elastomeric acrylic caulking material, shall have a FSI of zero and a SDI of zero when tested in accordance ASTM E 84.

4.0 INSTALLATION

4.1 General

FabriLock™ is installed in accordance with the manufacturer's published installation instructions, engineering drawings, and this report.

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 Curtain Boards

Spacing and height of the FabriLock™ system used as curtain boards shall be in accordance with:

Table 910.3	<i>International Building Code</i> ®
Table 910.3	<i>International Fire Code</i> ®
Table 1004.1.6	<i>Standard Building Code</i> ®
Table 3607	<i>Standard Fire Prevention Code</i> ®
Section 906	<i>Uniform Building Code</i> ™
Table 81-B	<i>Uniform Fire Prevention Code</i> ™
Table 923.2	<i>BOCA National Building Code</i> ®

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.

Draftstopping

Spacing and location of the FabriLock™ system used as draftstopping shall be in accordance with:

Section 716.3	<i>International Building Code</i> ®
Section 716.4	<i>International Building Code</i> ®
Section 2305.2	<i>Standard Building Code</i> ®
Section 721.7	<i>BOCA National Building Code</i> ®
Section 708.3	<i>Uniform Building Code</i> ®
Section R502.12	<i>International Residential Code</i> ®
Section 502.10	<i>International One and Two Family Dwelling Code</i> ®

IDENTIFICATION

Each package containing components of the FabriLock™ system covered by this report shall be labeled with the manufacturer's name/and or trademark, address, the product name, and this National Evaluation Service evaluation report number, NER-584.

EVIDENCE SUBMITTED

- 6.1 Manufacturer's descriptive literature, specifications, engineering drawings, and installation instructions.
- 6.2 Test reports on FabriLock fiberglass cloth, United States Testing Company, Inc.:
- 6.2.1 Surface burning characteristics under ASTM E 84, assembly consists of fabric sewn to ½ inch EMT frame connected with 3-way tees and steel set screws, Number 113105, November 29, 1994, signed by Steve Caldarola and John Lomash.

Optical density of smoke generated by solid materials under ASTM E 662, Report #112923-2, 11/14/94, signed by Trish Arias and Dominick A. Martucci.

Noncombustibility under ASTM E 136, Number 112759-R, October 26, 1994, signed by Steve Caldarola and John Lomash.

Flame resistant textile fire test, small scale under NFPA 701, Report #112923-3, 11/14/94, signed by Trish Aria and Dominick A. Martucci.

Flame resistant textile fire test, large scale, NFPA 701, Number 112923-1, November 22, 1994, signed by Steve Caldarola and John Lomash

Test report on surface burning characteristics of coated fiberglass fabric 972B, under ASTM E 84, Factory Mutual Research, J.I. 3Y7Q1.AM, Class 4820, January 31, 1995, signed by J. E. Beauregard and G. A. Smith.

Test report on surface burning characteristics of coated fiberglass fabric S/7721 972B, under ASTM E 84, Underwriters Laboratories Inc., File R15022, Project 94RT8058, November 4, 1994, signed by Thomas Plens and M.T. Cunningham.

Test report, air permeability of fabric, resistance to passage of smoke, SGS U.S. Testing Company, Inc., Report No. 119190, February 8, 1999, signed by Eric Hundley and Dale E. Holloway.

- 6.6 Letter report on surface burning characteristics of Thermafiber Caulk FSI of 0 and SDI of 0, Underwriters Laboratories Inc., File R11821, January 11, 1999, signed by James F. Smith and R. K. Laymon.

- 6.7 Test report on surface burring characteristics of frame, joint and clip connections, test performed for 10 minutes for FSI and SDI and then continued for 15 minutes, SGS U.S. Testing Company Inc., Report Number 121331, March 9, 1999, signed by Arthur D. Fiorino and Hiten Pandya.

7.0 CONDITIONS OF USE

The National Evaluation Service Committee finds that the FabriLock™ System described in this report complies with the *BOCA National Building Code/1999*, the *1999 Standard Building Code*®, the *1999 Standard Fire Prevention Code*®, the *1997 Uniform Building Code*™, *1997 Uniform Fire Prevention Code*™, *BOCA National Fire Prevention Code/1999* the *2000 International Building Code*®, *2000 International Fire Code*®, *2000 International Residential Code*®, and the *International One and Two Family Dwelling Code*® 1998 subject to the following conditions:

- 7.1 This Evaluation Report and the installation instructions, when required by the building official, shall be submitted at the time of permit application.
- 7.2 FabriLock™ Smoke Containment System shall be installed in accordance with the manufacturer's published installation instructions, engineering drawings, this evaluation report, and the applicable Code.
- 7.3 FabriLock™ shall comply with the spacing, height, and location requirements of the applicable Code for curtain boards and draftstopping, see sections 4.2 and 4.3 of this report.
- 7.4 Engineering drawings and shop drawings shall be submitted to the building official for approval.
- 7.5 Installations utilizing FabriLock™ as draftstopping in concealed locations shall be inspected in accordance with the applicable Code prior to enclosing the space.
- 7.6 This report is subject to re-examination on a periodic basis. For information on the current status of this report, consult the NES Product Evaluation Listing or contact the NES.