

# ICC-ES Evaluation Report

**ESR-2017**

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**DIVISION: 09 00 00—FINISHES**
**Section: 09 22 36—Lath**
**REPORT HOLDER:**

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**EVALUATION SUBJECT:**

**STRUCTALATH NO. 17 SFCR II AND NO. 17 SFCR TWIN TRAC, STRUCTA MEGA LATH, V-TRUSS WALLS AND CEILINGS, LATH, AND STRUCTA-CORNERS REINFORCEMENTS**

**1.0 EVALUATION SCOPE**
**Compliance with the following codes:**

- 2009 *International Building Code*® (2009 IBC)
- 2009 *International Residential Code*® (2009 IRC)
- 2006 *International Building Code*® (2006 IBC)
- 2006 *International Residential Code*® (2006 IRC)
- 1997 *Uniform Building Code*™ (UBC)

**Properties evaluated:**

Physical properties

**2.0 USES**

Structa Wire Corp. products are for use as alternatives to laths used as reinforcement of exterior plaster complying with IBC Section 2507, IRC Section R703.6.1 or UBC Section 2508.

**3.0 DESCRIPTION**
**3.1 Structalath No. 17 SFCR II:**

The lath is a self-furring, welded wire lath for use as an alternative to the 1.14 lb/yd<sup>2</sup> (0.618 kg/m<sup>2</sup>) welded wire lath specified in ASTM C 933. The lath is formed from cold-rolled longitudinal wires with coated thickness dimensions of 0.028 inch (0.71 mm) by 0.087 inch (2.20 mm), and cross wires having a coated diameter of 0.050 inch (1.27 mm). The lath has 1½-inch-by-1½-inch (38 mm by 38 mm) openings formed by longitudinal and cross wires that are resistance welded at the wire intersections. The wire has a Class 1 galvanized coating complying with ASTM A 641, or a Structa-Chrom-EX™ corrosion-resistant coating. The lath has minimum ¼-inch (6.4 mm) furring

crimps spaced at 3 inches (76 mm) on center on each cross wire. The nominal weight of the lath is 1.0 pound per square yard (0.54 kg/m<sup>2</sup>). The lath is packaged in rolls 38⅜, 48 or 54 inches (974, 1220, or 1370 mm) wide and 100, 112.5, or 150 feet (45 720, 34 370, or 30 500 mm) long.

**3.2 Structalath No. 17 SFCR Twin Trac:**

The lath is a self-furring, welded wire lath for use as an alternative to the 2.5 lb/yd<sup>2</sup> (1.4 kg/m<sup>2</sup>) diamond mesh metal lath specified in ASTM C 847 and for use as an alternative to the 1.14 lb/yd<sup>2</sup> (0.618 kg/m<sup>2</sup>) welded wire lath specified in ASTM C 933. The lath is similar to Structalath No.17 SFCR II with the addition of eight secondary cold-rolled longitudinal wires with coated thickness dimensions of 0.028 inch (0.71 mm) by 0.087 inch (2.20 mm), that are resistance welded to the cross wires. The nominal weight of the lath is 1.14 pound per square yard (0.62 kg/m<sup>2</sup>). The lath is packaged in rolls 38⅜ inches (974 mm) wide and 150 feet (45 720 mm) long.

**3.3 Structa Mega Lath:**

The lath is a self-furring welded wire lath for use as an alternative to the 3.4 lb/yd<sup>2</sup> (1.8 kg/m<sup>2</sup>) diamond mesh metal lath specified in ASTM C 847 and for use as an alternative to the 1.4 lb/yd<sup>2</sup> (0.8 kg/m<sup>2</sup>) woven wire lath specified in ASTM C 1032. The lath is formed from cold-rolled rectangular longitudinal wires with coated thickness dimensions of 0.0330 inch (0.83 mm) by 0.0675 inch (1.71 mm), and round cross wires having a coated diameter of 0.050 inch (1.27 mm). The lath has 0.7-inch-by-1.5-inch (17.78 by 38.1 mm) rectangular-shaped openings formed by longitudinal and cross wires that are resistance-welded at the wire intersections. Five additional cold-rolled rectangular longitudinal wires, with coated thickness dimensions of 0.0330 inch (0.83 mm) by 0.0675 inch (1.71 mm), are resistance-welded to the cross wires. The secondary longitudinal wires are spaced every 5 inches (127 mm) across the width. The wire has a Class 1 galvanized coating complying with ASTM A 641, or a Structa-Chrom-EX™ corrosion-resistant coating. The lath has minimum ¼-inch (6.4 mm) furring crimps spaced at 1.9 inches (48 mm) on center on each cross wire. The nominal weight of the lath is 1.8 pounds per square yard (0.97 kg/m<sup>2</sup>). The lath is packaged in rolls 28⅝ inches (727 mm) wide and 113 feet (34 442 mm) long.

**3.4 V-Truss Walls and Ceilings Lath:**

The lath is a self-furring welded wire lath for use as an alternative to the ⅜-inch (9.6 mm), 3.4 lb/yd<sup>2</sup> (1.8 kg/m<sup>2</sup>) rib metal lath specified in ASTM C 847 for use in three-coat

exterior plaster and as an alternative to the 1.4 lb/yd<sup>2</sup> (0.8 kg/m<sup>2</sup>) woven wire lath specified in ASTM C 1032. The lath is formed from cold-rolled rectangular longitudinal wires, having coated thickness dimensions of 0.0335 inch (0.85 mm) by 0.064 inch (1.62 mm), and round cross wires with a coated diameter of 0.05 inch (1.27 mm). The wire has a Class 1 galvanized coating complying with ASTM A 641. The lath has 0.7-inch-by-1.5-inch (17.8 by 38 mm) rectangular-shaped openings formed by longitudinal and cross wires that are resistance-welded at the wire intersections. The lath has minimum  $\frac{3}{8}$ -inch (9.5 mm) furring crimps spaced at 1.9 inches (48 mm) on center on each cross wire. Backing wires having a coated diameter of 0.050 inch (1.27 mm) are resistance-welded in a longitudinal direction to the furring crimps. The lath has a perforated kraft paper attached between the primary wires and the backing wires.

The paper is cut back 2 inches (51 mm) on each end, and each side is wrapped and glued around the outermost backing wire. The nominal weight of the lath is 2.2 pounds per square yard (1.2 kg/m<sup>2</sup>). The lath is produced in sheets 28 inches (711 mm) wide by 97 $\frac{1}{2}$  inches (2475 mm) long.

### 3.5 Structa-Corners Exterior Corner Reinforcement:

**3.5.1 Structa-Corners:** Structa-Corners are welded wire exterior corner reinforcements for use with plaster in accordance with ASTM C 1063. They are manufactured from 0.050-inch- (1.27 mm) or 0.045 inch-diameter (1.14 mm) wire. The wires may be round or have a shaped profile with equivalent cross-sectional area. The corners are formed from Class 1, hot dipped galvanized, low carbon, cold drawn steel wire complying with ASTM A 641, or have a Structa-Chrom-EX™ corrosion-resistant coating. Except where noted otherwise in this report, five convoluted and seven longitudinal wires are resistance-welded together and then formed to a right-angled section having 2 $\frac{1}{2}$ -inch (64 mm) legs. The minimum weight is 1.7 lb/yd<sup>2</sup> (0.93 kg/m<sup>2</sup>). Structa-Corners are available in the following styles:

**3.5.1.1 Structa-Corner – 3-Coat Straight:** Structa-Corner – 3-Coat Straight, for straight corners, is available in 8-, 9- and 10-foot (2438, 2743, and 3048 mm) lengths.

**3.5.1.2 Structa-Corner – 3-Coat Arch:** Structa-Corner – 3-Coat Arch, for forming arches, is available in 8-foot (2438 mm) lengths and has five convoluted wires and four longitudinal wires.

**3.5.1.3 Structa-Corner – 3-Coat Bullnose:** Structa-Corner – 3-Coat Bullnose has convoluted and longitudinal wires and a rounded nose having either a  $\frac{7}{16}$ - or a  $\frac{7}{8}$ -inch (11.1 or 22.2 mm) radius, and is available in 10-foot (3048 mm) lengths.

**3.5.1.4 Structa-Corner – 3-Coat Bullnose Arch:** Structa-Corner – 3-Coat Bullnose Arch has five convoluted wires and five longitudinal wires with a rounded nose having a  $\frac{7}{8}$ -inch (22.2 mm) radius, and is available in 10-foot (3050 mm) lengths.

**3.5.2 V-Truss Corners Exterior Corner Reinforcement:** V-Truss Corners are welded wire exterior corner reinforcements for plaster in accordance with ASTM C 1063. They are manufactured from 0.050-inch (1.27 mm) or 0.045-inch (1.14 mm) wire. The wires may be round or have a shaped profile with equivalent area. The corners are formed from Class 1, hot dipped galvanized, low carbon, cold drawn steel wire complying with ASTM A 641, or have a Structa-Chrom EX™ corrosion-resistant coating. Except where noted otherwise in this report, three convoluted and nine longitudinal wires are resistance-welded together and then formed to a right-angled section

having 2 $\frac{1}{2}$ -inch (64 mm) legs. The minimum weight is 1.7 lb/yd<sup>2</sup> (0.93 kg/m<sup>2</sup>). V-Truss Corners are available in the following styles:

**3.5.2.1 V-Truss Corners - 3-Coat Straight:** V-Truss Corners - 3-Coat Straight, for straight corners, are available in 8-, 9-, and 10-foot (2438, 2743, and 3048 mm) lengths.

**3.5.2.2 V-Truss Corners - 3-Coat Bullnose:** V-Truss Corners - 3-Coat Bullnose has convoluted and longitudinal wires and a rounded nose with either a  $\frac{7}{16}$ - or a  $\frac{7}{8}$ -inch (11.1 or 22.2 mm) radius, and is available in 10-foot (3048 mm) lengths.

**3.5.2.3 V-Truss Corners - One Coat Straight:** V-Truss Corners - One Coat Straight are designed for use with insulating foam board and cementitious exterior wall coating systems. V-Truss Corners - One Coat Straight are similar to V-Truss Corners - 3 Coat Straight, except the angle of formation is a nominal 80 degrees. V-Truss Corners - One Coat Straight are available in 8- and 10-foot (2438 and 3048 mm) lengths.

## 4.0 INSTALLATION

### 4.1 General:

The Structa Wire Corp. products must be installed in accordance with IBC Sections 2510.3 and 2511.1.1 and IRC Section R703.6, with the long dimension perpendicular to supports, except that at gable walls on exterior installations, the lath may be installed with the long dimension parallel to the roof slope.

### 4.2 Structalath No. 17 SFCR II:

The lath may be applied to vertical surfaces having wood or metal supports and to horizontal supports having wood, metal or concrete supports. The maximum spacing of supports must be 16 inches (406 mm) center to center. Fastener type and spacing must comply with ASTM C 1063 for welded wire lath, except that the fasteners must attach the lath to the framing supports either at the furring crimps on the vertical cross wires, at the intersection of the longitudinal wire and cross wire, or at any point along the longitudinal wire. The lath must be lapped a minimum of one mesh at sides. End laps must be a minimum of one mesh and must occur over supports.

### 4.3 Structalath No. 17 SFCR Twin Trac:

The lath may be applied to vertical surfaces having wood or metal supports and to horizontal supports having wood, metal or concrete supports.

When installation is for use as an alternate to the 2.5 lb/yd<sup>2</sup> (1.4 kg/m<sup>2</sup>) diamond mesh metal lath, the maximum spacing of supports must be in accordance with Table 3 of ASTM C 1063 for 2.5 lb/yd<sup>2</sup> (1.4 kg/m<sup>2</sup>) diamond mesh metal lath. The fastener type and spacing must comply with ASTM C 1063 for diamond mesh metal lath, except that the fasteners must attach the lath to the framing supports either at the furring crimps on the vertical cross wires, or at the intersection of the longitudinal wire and cross wire; or the lath may be installed by placing a nail or screw fastener between the two Twin Trac longitudinal wires, or a staple over any longitudinal wire.

When installation is for use as an alternate to the 1.14 lb/yd<sup>2</sup> (0.618 kg/m<sup>2</sup>) welded wire lath, the maximum spacing of supports must be in accordance with Table 3 of ASTM C 1063 for 1.14 lb/yd<sup>2</sup> (0.618 kg/m<sup>2</sup>) welded wire lath. The fastener type and spacing must comply with ASTM C 1063 for welded wire lath, except that the fasteners must attach the lath to the framing supports either at the furring crimps on the vertical cross wires, or at the intersection of the longitudinal wire and cross wire; or

the lath may be installed by placing a nail or screw fastener between the two Twin Trac longitudinal wires, or a staple over any longitudinal wire.

#### 4.4 V-Truss Walls and Ceilings Lath:

The lath may be applied to vertical surfaces having wood or metal supports and to horizontal supports having wood, metal, or concrete supports.

When installation is for use as an alternate to the  $\frac{3}{8}$ -inch (9.6 mm), 3.4 lb/yd<sup>2</sup> (1.8 kg/m<sup>2</sup>) rib metal lath, the maximum spacing of supports must be in accordance with Table 3 of ASTM C 1063 for  $\frac{3}{8}$ -inch (9.6 mm), 3.4 lb/yd<sup>2</sup> (1.8 kg/m<sup>2</sup>) rib metal lath. Fastener type and spacing must comply with ASTM C 1063 for rib metal lath, except that the fasteners must attach the lath to the framing supports at every second rib, either at the furring crimps on the vertical cross wires, at the intersection of the longitudinal wire and cross wire, or at any point along the longitudinal wire that is welded to the furring crimp. The lath must be lapped a minimum of one mesh at sides. End laps must be a minimum of one mesh and must occur over supports. The ends of sheets must be staggered between courses.

When installation is for use as an alternate to 1.4 lb/yd<sup>2</sup> (0.8 kg/m<sup>2</sup>) woven wire lath, the maximum spacing of supports must be in accordance with Table 3 of ASTM C 1063 for 1.4 lb/yd<sup>2</sup> (0.8 kg/m<sup>2</sup>) woven wire lath. Fastener type and spacing must comply with ASTM C 1063 for woven wire lath, except that the fasteners must attach the lath to the framing supports at every second rib, either at the furring crimps on the vertical cross wires, at the intersection of the longitudinal wire and cross wire, or at any point along the longitudinal wire that is welded to the furring crimp. The lath must be lapped a minimum of one mesh at sides. End laps must be a minimum of one mesh and must occur over supports. The ends of sheets must be staggered between courses.

#### 4.5 Structa Mega Lath:

The lath may be applied to vertical surfaces having metal or wood supports and to horizontal wood or concrete supports. When installation is as an alternate to the 1.4 lb/yd<sup>2</sup> (0.8 kg/m<sup>2</sup>) woven wire lath, the maximum spacing of supports must be in accordance with Table 3 of ASTM C 1063 for 1.4 lb/yd<sup>2</sup> (0.8 kg/m<sup>2</sup>) woven wire lath. Fastener type and spacing must be as specified in ASTM C 1063 for woven wire lath, except that the fasteners must attach the lath to the framing supports either between the primary and secondary longitudinal wires, or there must be a staple over any longitudinal wire. The lath must be lapped a minimum of one mesh at sides. End laps must be a minimum of one mesh and must occur over supports.

When installation is as an alternate to the 3.4 lb/yd<sup>2</sup> (1.8 kg/m<sup>2</sup>) diamond mesh metal lath, the maximum spacing of supports must be in accordance with Table 3 of ASTM C 1063 for 3.4 lb/yd<sup>2</sup> (1.8 kg/m<sup>2</sup>) diamond mesh metal lath. Fastener type and spacing must be as specified in ASTM C 1063 for diamond mesh metal lath, except that the fasteners must attach the lath to the framing supports either between the primary and secondary longitudinal wires, or there must be a staple over any longitudinal wire.

The lath must be lapped a minimum of one mesh at sides. End laps must be a minimum of one mesh and must occur over supports

#### 4.6 Structa-Corners and V-Truss Corners Exterior Corner Reinforcement:

Structa-Corners and V-Truss Corners are installed in accordance with ASTM C 1063. The plaster finish coat is applied so that the nose wire is covered a minimum of  $\frac{1}{8}$  inch (3.2 mm).

#### 4.7 V-Truss Corners - One Coat Straight:

The V-Truss Corners - One Coat Straight exterior corner reinforcement must be installed in accordance with the requirements noted in a current ICC-ES evaluation report on the cementitious exterior coating, and with the requirements of the applicable code.

### 5.0 CONDITIONS OF USE

The Structa Wire Corp. welded-wire fabric lath and the Structa-Corners described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation complies with this report, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.
- 5.2 Wall bracing is provided in accordance with Section 2308.9.3 or 2308.12 of the 2009 and 2006 IBC, Section R602.10 of the 2009 and 2006 IRC, Section R602.11.1 of the 2009 IRC, Section R602.11 of the 2006 IRC, or Section 2320.11.3 or 2320.11.4 of the UBC.

### 6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Metal Plaster Bases (Lath) (AC191), dated May 2008 (editorially revised January 2011).

### 7.0 IDENTIFICATION

Each roll of Structalath No.17 SFCR II and Structalath No.17 SFCR Twin Trac is identified by a label bearing the name and address of Structa Wire Corp., the product name, the evaluation report number (ESR-2017), and a description of the product (wire gage, lath opening size, product width and roll length).

Each roll of Structa Mega Lath and each sheet of V-Truss Walls & Ceilings is identified by a label bearing the name and address of Structa Wire Corp., the product name, the evaluation report number (ESR-2017), and a description of the product (wire gage, lath opening size, roll width and roll or sheet length).

Structa-Corner and V-Truss Corners products are packaged in cartons. Each carton is identified by the product name, the Structa Wire Corp. company name and address, and the evaluation report number (ESR-2017).