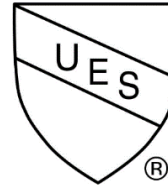




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IAPMO UES ER-2017

Scope of Evaluation Report – IAPMO UES ER-2017

STRUCTALATH NO. 17 III SFCR, NO. 17 SFCR TWIN TRACK 2.5, STRUCTA MEGA LATH, STRUCTA STAINLESS STEEL MEGA LATH, V-TRUSS WALLS AND CEILINGS LATH, V-TRUSS WALLS AND CEILINGS LATH II, STRUCTALATH III 316 SFCR, STRUCTA FUSION ONE COAT LATH

**CSI Categories:
 09 22 36 Lathing
 09 22 36.23 Metal Lath
 09 2400 Portland Cement Plaster (Stucco)**

Codes or Standards	Versions	Evaluated Characteristics	Evaluated Uses
International Building Code® (IBC)	2021, 2018, 2015, 2012, and 2009	Quality Strength Effectiveness Durability Safety	Plaster support and reinforcement
International Residential Code® (IRC)	2021, 2018, 2015, 2012, and 2009		
California Building Code (CBC) – Supplement attached	2022		
California Residential Code (CRC) – Supplement attached	2022		
Florida Building Code, Building (FBC, Building)	2023		
Florida Building Code, Residential (FBC, Residential)	2023		
Code Referenced Sections	IBC: 104.11, 721, 2306, 2308, 2507, 2510, 2511, 2512 IRC: R104.11, R602, R703		

1.0 RECOGNITION

This report describes the results of research completed by IAPMO Uniform Evaluation Service on Structa Wire exterior finishing metal laths to assess conformance to the codes shown at the beginning of this report and serves as documentation of the product certification. Products are manufactured under a quality control program with periodic inspection under the supervision of IAPMO UES. The Structa Wire exterior finishing metal laths recognized in this report are manufactured in Vancouver, B.C., Canada.

2.0 PRODUCT DESCRIPTION AND FIELD IDENTIFICATION OF STRUCTA WIRE EXTERIOR FINISHING METAL LATHS

All laths described in this report are identified with the following: the product description; the name of the manufacturer (Structa Wire Corp.), country of origin (Canada); contact information; the brand name; and the IAPMO UES Mark of Conformity and Report Number (IAPMO UES ER-2017). The identification may occur on the backing, tags, or wrapping.

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provisions of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.





2.1 Structalath III (SL-3) welded wire lath, is a self-furring, metal plaster base for portland cement plaster and stucco. Qualified to substitute for welded wire lath (1.14 lb/yd²) in ASTM C933, this lath features 0.030-inch by 0.068-inch rectangular longitudinal wires that are cold-rolled (flattened) to reduce curvature memory, as well as 0.047-inch diameter round cross wires. The ¼-inch hat channel-shaped furring crimps are spaced at 3 inches on center on each cross wire. The lath has an additional six secondary cold-rolled longitudinal wires that are resistance-welded to cross wires, forming an attaching track.

Material: Class 1 galvanized steel wire (per ASTM A641)

Thickness and Openings: No. 17 gauge galvanized steel wire with 1.5-inch by 1.5-inch openings

Width of Furring Leg: ⅜ inch

Furring Height: ¼ inch

Furring Spacing: 3 inches on center

Weight per Square Yard: 1.0 lbs.

Roll Size: 38⅞ inches Wide by 142 feet long

2.2 Structalath III 316 welded wire lath, is a self-furring, metal plaster base for portland cement plaster and stucco. Qualified to substitute for welded wire lath (1.14 lb/yd²) in ASTM C933, this lath features 0.030-inch by 0.068-inch rectangular longitudinal wires that are cold rolled (flattened) to reduce curvature memory, as well as 0.047-inch diameter round cross wires. This modified version of Structalath III features a reduced ⅜-inch furring crimp spaced at 3 inches on center on each cross wire for use with ½-inch thick stucco systems with or without foam plastic insulation. Structalath III 316 has six secondary cold-rolled longitudinal wires that are resistance welded to cross wires, forming an attaching track.

Material: Class 1 galvanized steel wire (per ASTM A641)

Thickness and Openings: No. 17 gauge galvanized steel wire with 1.5-inch by 1.5-inch openings

Width of Furring Leg: ⅜ inch

Furring Height: ⅜ inch

Furring Spacing: 3 inches on center

Weight per Square Yard: 1.0 lbs.

Roll Size: 38⅞ inches wide by 142 feet long

2.3 Structa Twin Trac 2.5 welded wire lath is a self-furring, metal plaster base for portland cement plaster and stucco. Qualified to substitute for the diamond mesh metal lath (2.5 lb/yd²) specified in ASTM C847 and the welded wire lath (1.14 lb/yd²) specified in ASTM C933, the lath features 0.026-inch by 0.064-inch rectangular longitudinal wires that are cold-rolled (flattened) to reduce curvature memory, as well as 0.047-inch diameter round cross wires. The hat channel furr with a ¼ inch height provides for stucco embedment, and each wire is securely furred. The six secondary cold-rolled longitudinal wires form a Twin Trac to guide attachment. The Twin Trac spacing allows for the attachment of screws and nails.

Material: Class 1 galvanized steel wire (per ASTM A641)

Wire Type & Thickness: Cold rolled rectangular longitudinal wires of 0.026-inch by 0.064-inch coated thickness and cross wires of 0.047-inch thickness

Openings: 1-inch by 1.5-inch openings

Width of Furring Leg: ¼ inch

Furring Height: ¼ inch

Furring Spacing: 4 inches on center at edges and 3 inches on center at the middle

Weight per Square Yard: 1.14 lbs.

Roll Size: 38⅞ inches wide by 142 feet long

2.4 Structa Mega Lath welded wire lath is a self-furring, metal plaster base for portland cement plaster and stucco. Qualified to substitute for metal lath (3.4 lb/yd²) specified in ASTM C847, woven wire plaster base (1.4 lb/yd²) specified in ASTM C1032, and welded wire lath (1.95 lb/yd²) specified in ASTM C933, the lath is manufactured using flat lengthwise wires with a coated thickness of 0.0330 inch by 0.075 inch and round cross wires with a coated thickness of 0.056 inch. Mega Lath has six additional lengthwise wires resistance-welded to the cross wires and spaced 5⅜ inches on center, creating a series of twin tracks. The lengthwise flat wires reduce curvature memory.

Material: Class 1 galvanized steel wire (per ASTM A641)

Wire Type & Thickness: No. 16 gauge and No. 17 gauge galvanized steel wire

Openings: 1⅛ inch by 1.5-inch openings except at the furring crimps, where openings are at ¾ inch by 1.5 inch

Width of Furring Leg: ¼ inch

Furring Height: ¼ inch

Furring Spacing: 2¾ inches on center

Weight per Square Yard: 1.95 lbs.

Roll Size: 30 inches Wide x 108 feet Long



2.5 Structa Stainless Steel Mega Lath welded wire lath is a self-furring, metal plaster base for portland cement plaster and stucco. Qualified to substitute for rib metal lath (3.4 lb/yd²) specified in ASTM C 847, woven wire plaster base (1.4 lb/yd²) specified in ASTM C1032, and welded wire lath (1.95 lb/yd²) specified in ASTM C933, the lath is manufactured using flat lengthwise wires with a thickness of 0.0330 inch by 0.075 inch and round cross wires with a thickness of 0.056 inch. Mega Lath has six additional lengthwise wires resistance-welded to the cross wires, spaced 5³/₈ inches on center, creating a series of twin tracks. The lengthwise flat wires reduce curvature memory.

Material: T304 or T316 stainless steel complying with ASTM A580

Wire Type and Thickness: No. 16 gauge and No. 17 gauge stainless steel

Openings: ¹¹/₁₆-inch by 1.5-inch openings except at the furring crimps, where openings are ³/₄-inch by 1.5-inch

Width of Furring Leg: ¹/₄ inch

Furring Height: ¹/₄ inch

Furring Spacing: 2³/₄ inches on center

Weight per Square Yard: 1.95 lbs.

Roll Size: 30 inches Wide x 108 feet Long

2.6 Structa V-TRUSS Walls & Ceilings welded wire lath is a self-furring, metal plaster base for portland cement plaster and stucco. Qualified to substitute for ³/₈ inch rib metal lath (3.4 lb/yd²) specified in ASTM C847, for use in one and three-coat stucco, and woven wire lath (1.4 lb/yd²) specified in ASTM C1032, the lath sheets are manufactured from flat lengthwise wires with a coated thickness of 0.033 inch by 0.064 inch and 0.050-inch diameter coated thickness round cross wires. The lath has a perforated barrier kraft paper (cut back 2 inches on each end, wrapped at each side, and adhered to the outermost backing wire). The kraft paper is located between the primary wires and the 0.050-inch diameter longitudinal backing wires that are resistance-welded to the bottom of the furring crimp.

Material: Class 1 galvanized steel wire (per ASTM A641)

Wire Type and Thickness: No. 17.5 gauge galvanized wire

Openings: 0.7 inch by 1.5 inches

Furring Height: ³/₈ inch

Furring Spacing: 1.9 inches on center

Weight per Square Yard: 2.2 lbs.

Sheet Size: 28³/₈ inches Wide by 97¹/₂ inches Long

2.7 Structa V-TRUSS Walls & Ceilings II welded wire lath is a self-furring, metal plaster base for portland cement plaster and stucco. Qualified to substitute for ³/₈ inch rib metal lath (3.4 lb/yd²) specified in ASTM C847, for use in one and three-coat stucco, and , woven wire lath (1.4 lb/yd²) specified in ASTM C1032, the lath sheets are manufactured from flat lengthwise wires with a coated thickness of 0.033 inch by 0.064 inch and 0.050-inch diameter coated thickness round cross wires. The lath has a perforated barrier kraft paper (cut back 2 inches on each end, wrapped at each side, and adhered to the outermost backing wire). The kraft paper is located between the primary wires and the 0.050-inch-diameter longitudinal backing wires that are resistance-welded to the bottom of the furring crimps.

Material: Class 1 galvanized steel wire (per ASTM A641)

Wire Type and Thickness: No. 17.5 gauge galvanized wire

Openings: 0.7 inch by 1.5 inches

Furring Height: ¹/₄ inch

Furring Spacing: 1.9 inches on center

Weight per Square Yard: 2.2 lbs.

Sheet Size: 28³/₈ inches Wide by 97¹/₂ inches Long

2.8 Structa Fusion expanded metal lath, self-furring, is a metal plaster base for portland cement plaster and stucco. Qualified to substitute for No. 20 gauge woven wire lath for one coat stucco applications specified in ASTM C1032, this metal lath is recognized for use as reinforcement in ³/₈-inch-thick and up to ¹/₂-inch-thick proprietary one-coat exterior cementitious plaster systems. Fusion blends expanded metal with seven corrugated longitudinal wires that are resistance-welded to the expanded metal lath and are spaced to provide an attachment template. There are seven rows of longitudinal self-furring crimps.

Material: Galvanized Metal Sheet with G 60 coating and No. 18 gauge Class 1 galvanized wire (per ASTM A641)

Sheet and Wire Type and Thickness: Expanded metal strands flattened to 0.020 inch and cold-rolled longitudinal rectangular wires with coated thicknesses of 0.026 inch by 0.04 inch.

Width of Furring Leg: ¹/₄ inch

Furring Height: ¹/₈ inch

Weight per Square Yard: 0.64

Roll Size: 38 inches Wide by 142 feet Long



3.0 EVALUATION OF STRUCTA WIRE EXTERIOR FINISHING METAL LATHS TO REFERENCED CODES AND STANDARDS

3.1 Introduction: The strength, and weather resistance, properties of the Structa Wire exterior finishing metal laths comply with the intent of the provisions of the codes and regulations defined in this report. Structa Wire exterior finishing metal laths, when used as a metal lath or wire lath cement plaster reinforcement, conform to the standards listed in Table 2507.2 of the IBC or Section R702.2.2 and R703.7.1 of the IRC.

3.2 Installation Requirements and Limitations: Structa Wire exterior finishing welded wire metal laths shall be installed in accordance with the manufacturer’s installation instructions, this evaluation report, and the applicable code (IBC or IRC). Where conflicts occur between these provisions, the code shall apply in accordance with Section 102.4.1 of the IBC. Lathing and furring use and installation shall comply with IBC Section 2510, ASTM C926, and ASTM C1063. Technical Bulletin 101 has additional information on wire tying at side laps and is available at www.structawire.com. Furring nails and furring accessories are not required as all Structa Wire laths qualify as self-furring in accordance with ASTM C1063. When the lath products are used with exterior cementitious wall coating systems, the installation shall also satisfy the coating manufacturer’s requirements including research (evaluation) reports issued by an approved agency. All stored materials shall comply with IBC Section 2510.2 and be kept dry and stacked off the ground, supported on a level platform, and protected from weather and surface contamination. Galvanized steel and stainless-steel products shall not be used with magnesium oxychloride cement stucco or Portland cement plaster containing calcium chloride additives.

3.2.1 Manufacturer’s Instructions: Installers of Structa Wire Products shall review and observe the detailed manufacturer’s recommended installation instructions that are available on the website: www.structawire.com.

3.2.2 Structalath III (SL-3), Structalath III 316, Structa Twin Trac 2.5, Structa Mega Lath, and Structa Stainless Steel Mega Lath Installation: Laths may be applied to vertical surfaces having wood or metal supports or to horizontal wood, metal, or concrete supports. The support spacing for Structalath III and Structalath 316 shall be up to 16 inches on center. For all Structa Laths, the support spacing shall comply with Table 1 of ASTM C1063. The fastener type shall comply with ASTM C1861 and fastener spacing shall comply with ASTM C1063. The furring points are to be oriented against the wall.

Structa Mega Lath and Structa Stainless Steel Mega Lath may be installed over walls and other vertical elements using minimum No. 20 gauge metal furring channels placed horizontally. The furring channel spacing shall comply with Table 1 of ASTM C1063. The lath shall be oriented vertically and attached in accordance with ASTM C1063 by positioning the fasteners between the twin track wires. The fastener type, size, and length shall comply with ASTM C1861. At least ¾ of the fasteners shall be located below the crosswires. The furring channels shall be designed in accordance with IBC or IRC to support the weight of the stucco system and withstand the effects of wind and earthquake.

There are no limits on maximum overlap distance in either direction. All Structa Wire Laths are to be installed with the long dimension perpendicular to supports, except at gable walls where the lath may be installed with the long dimension parallel to the roof slope. The minimum allowable side and end laps are listed in Table 1 of this report.

TABLE 1 – Side Laps and End Laps - Minimum

Lath ^{1,2}	Side Laps (inches)	End Laps (inches) ²
Structalath III (SL-3) and Structalath III 316 ³	1½	1½
Structa Twin Trac 2.5 ⁴	1½	1½
Structa Mega Lath and Structa Stainless Steel Mega Lath ⁴	¾	1½
Fusion One Coat Lath	1	1

¹ The laths may be fastened:

- On the furring point located on the vertical wire, or
- At the intersection of the vertical and horizontal wires, or
- At any point along the horizontal wire, or
- At any point between the parallel wires.

² The end laps shall occur over a framing member.

³ Fasteners shall be positioned at the framing member, or

⁴ Fasteners may be located at the location of the longitudinal Twin Track wires. If staples are used, then the staples shall capture both parallel wires. Fasteners shall be positioned at framing members. Fastener types, sizes, and lathing accessories shall be in accordance with ASTM C1861 and be appropriate for the framing type and orientation. Staples shall be oriented parallel to the framing member to minimize the risk of missing the framing and puncturing the Water Resistive Barrier.



3.2.3 Structa V-TRUSS Walls and Ceilings and Structa V-TRUSS Walls & Ceilings II Installation: The fastener type is to comply with ASTM C1063 as applicable for rib metal lath, except that the fasteners may be 1½ inch long No. 16 gauge galvanized roofing nails, driven flush with the plaster base at every second rib at the framing support member. Attachment may be at the furring crimps on the cross wire, or the applicator may place a nail or screw fastener between the two twin track longitudinal wires or a staple over any longitudinal wire. The overlaps shall be a minimum of one mesh and shall occur over supports. The ends of the sheets are to be staggered between courses. Fastener types and sizes, and lathing accessories shall be in accordance with ASTM C1861 and be appropriate for the framing type and orientation. The maximum support spacing is to be in according to ASTM C1063 for either Hi Rib or 1.4 lb/yd² woven wire lath.

3.2.4 Structa Fusion One coat Lath Installation: Structa Fusion One coat Lath for ⅜ inch or ½ inch exterior cementitious coating systems is to be installed on vertical surfaces having wood or metal supports. The support spacing shall be up to 16 inches on center. The fastener type is to reflect the requirements stated in ASTM C1861, and the fastener spacing is to comply with ASTM C1063 as applicable to expanded metal laths. For Fusion One coat Lath, the fasteners shall attach to the framing support along the corrugated line wires. Requirements as set forth in an evaluation report and the manufacturer's installation instructions for the one coat system may apply.

3.3 Design Requirements and Limitations: Structa Wire exterior finishing metal laths have been evaluated to meet the design requirements of IBC and IRC. The design shall consider the application (wall or ceiling), dimensions, framing type, framing spacing, and plaster thickness. Use of the laths as components of wood-framed shear walls or braced walls shall be as permitted in IBC Sections 2306.3 or 2308.6, or IRC Section R602.10.

3.3.1 Strength, Durability, and Effectiveness: Structa Wire exterior finishing metal laths comply with ASTM C847, ASTM C933, ASTM C1032, and ASTM C1063 as required by Section 2512 of the IBC and IRC Sections R702.2.2 and R703.7.1. The metal materials are corrosion resistant as specified in IBC Section 2510.3 and IRC Section R703.7.1.

3.3.2 Fire Resistance and Safety: Structa Wire exterior finishing metal laths are permitted as components of fire-resistance-rated wall assemblies complying with IBC Section 721.1. The usage shall be limited to fire-resistance-rated wall assemblies specifying metal lath and cement plaster.

4.0 REFERENCES

Data in accordance with ICC-ES AC191, manufacturer's descriptive literature, and installation instructions. Test reports are from laboratories in compliance with ISO/IEC 17025.

5.0 CONCLUSIONS

The result of the research conducted by IAPMO UES concludes that the Structa Wire exterior finishing metal laths, within the limitations defined in this report, meet the intent of the provisions of the code when approved by the building official.

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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LATH,
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V-TRUSS WALLS AND CEILINGS LATH II,
STRUCTALATH III 316 SFCR,
STRUCTA FUSION ONE COAT LATH

CSI Sections:

- 09 22 36 Lathing
- 09 22 36.23 Metal Lath

1.0 RECOGNITION

The Structalath exterior finishing metal laths, as evaluated in IAPMO UES ER-2017, and with changes as noted in this supplement, are satisfactory alternatives for use in buildings built under the following codes and regulations:

- 2022 California Building Code (CBC)
- 2022 California Residential Code (CRC)

2.0 LIMITATIONS

Use of the Structalath exterior finishing metal laths recognized in this report is subject to the following limitations:

2.1 For use under 2022 CBC and 2022 CRC, the Structalath self-furring, welded wire laths shall comply with the provisions applicable to the 2021 IBC or 2021 IRC in IAPMO UES ER-2017.

2.2 For work under the DSA and HCAi (formerly OSHPD), additional requirements for load resistance, and where applicable, wood furring strips shall be observed.

2.3 In accordance with CBC Section 2505.3, for work under the DSA and HCAi (formerly OSHPD), shear wall construction with lath and plaster in CBC Sections 2505.1 and 2505.2 is prohibited, except where used in single-story Type V skilled nursing or intermediate care facilities utilizing wood-frame or light-steel-frame construction.

2.4 For work under the DSA and HCAi (formerly OSHPD), lath attachment to horizontal wood supports shall comply with CBC Section 2507.3.

2.5 This supplement expires concurrently with IAPMO UES ER-2017.

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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STRUCTALATH III 316 SFCR,
STRUCTA FUSION ONE-COAT LATH

CSI Sections:

09 22 36 Lathing
09 22 36.23 Metal Lath

1.0 RECOGNITION

The Structalath exterior finishing metal laths, as evaluated in IAPMO UES ER-2017, and with changes as noted in this supplement, are satisfactory alternatives for use in buildings built under the following codes and regulations:

- 2023 Florida Building Code, Building (FBC, Building)
- 2023 Florida Building Code, Residential (FBC, Residential)

2.0 LIMITATIONS

Use of Structa Wire Corp. exterior finishing metal laths described in this report supplement is subject to the following limitations:

2.1 For use under 2023 FBC, Building, and 2023 FBC, Residential, the Structalath exterior finishing metal laths shall comply with the provisions applicable to the 2021 IBC or 2021 IRC in IAPMO UES ER-2017.

2.2 Verification shall be provided that a quality assurance agency audits the manufacturer's quality assurance program and audits the production quality of products, in accordance with Section (5)(d) of Florida Rule 61G20-3.008. The quality assurance agency shall be approved by the Commission (or the building official when the report holder does not possess an approval by the Commission).

2.3 The scope of the review includes the requirements for High-velocity Hurricane Zones (HVHZ) in the Florida Building Code, Building, and the Florida Building Code, Residential.

2.4 Structalath exterior finishing metal laths may be used in exterior walls to comply with the HVHZ impact test provisions when the construction of the wall assembly complies with FBC, Building, Section 1626.4.2.

2.5 Structalath exterior finishing metal laths may be used as a component of HVHZ exterior wall cladding when the cladding construction complies with FBC, Building, Section 2322.4.1.

2.6 This supplement expires concurrently with IAPMO UES ER-2017.

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