



## **PRI Construction Materials Technologies LLC**

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### **Laboratory Test Report**

Table T-3

# **ASTM E 330 WIND RESISTANCE EVALUATION OF SEALED CLADDING SYSTEM ON A WOOD FRAMED WALL WITH LATH ATTACHED WITH SCREWS (PROJECT NO. 1809T0001)**

For

**KONING CONSTRUCTION CONSULTANTS**  
8301 JOLIET STREET  
HUDSON, FL 34667

**OCTOBER 8, 2019**

**Purpose:** Evaluate the exterior finish assembly described herein for wind resistance in accordance with **ASTM E 330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.**

**Test Methods:** Testing was conducted in accordance with ASTM E 330-02(2010): *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.* Specimens were tested in accordance with Procedure A. The selected test load was  $\pm 50$  psf, which equates to a  $\pm 75$  psf proof load when the typical 1.5 factor of safety is applied to the test result. The following sequence was used to evaluate the specimen:

1. +75 psf was applied for 10 seconds
2. Specimen was recovered for 1-5 minutes
3. +150 psf was applied for 10 seconds
4. Specimen was recovered for 1-5 minutes
5. -75 psf was applied for 10 seconds
6. Specimen was recovered for 1-5 minutes
7. -150 psf was applied for 10 seconds
8. Specimen was recovered for 1-5 minutes

**Sampling:** All products applied to the wood studs were provided by Koning Construction Consultants. Below is an itemized list of products that are used in the Sealed Cladding System.

<u>Product Identification</u>	<u>Manufacturer</u>
TYPAR® BuildingWrap	Fiberweb, Inc.
TYPAR® Construction Tape	Fiberweb, Inc.
StructaLath No. 17 SFRC Twin Trac 2.5	Structa Wire Corp.
DRYLOK® Extreme Masonry Waterproofer	United Gilsonite Laboratories
Vinyl Corp E-Flange Casing Beads	ClarkDietrich
MasterSeal NP150	BASF
Florida Super Stucco	Argos Cement LLC

**Specimen:** A 4-ft x 8-ft mock-up was constructed from No.2 2x6 dimensional lumber with studs located 16-inch o.c. and sheathed with CAT 7/16 PS 2-10 OSB sheathing attached 6" o.c. with #8 x 2" bugle head wood screws. The OSB was installed with a single horizontal and single vertical joint. TYPAR® BuildingWrap was installed with a T-Joint, having a minimum 6" overlap. All joints were taped with 1-7/8" wide TYPAR® Construction Tape. The building wrap was tacked in place with 3/8" crown x 1/4" leg staple placed randomly to hold in place. Vinyl Corp 3/4" E-Flange Casing Beads was attached along the perimeter of the water with #8 x 1" lath screws spaced 24" o.c. The casing was sealed on the exterior to the wall with MasterSeal NP150. StructaLath No. 17 SFRC Twin Trac 2.5 was installed with #8 x 1" truss-head, K-lath screws spaced maximum 16" o.c. along the horizontal dimension on the twin track. The attachment rows were spaced vertically a maximum 6" o.c. and offset 8" o.c. from the preceding row. The stucco finish was prepared by mixing Florida Super Stucco and sand at a 1:4 ratio and applied in two (2) 3/8" coats for a total thickness of 3/4". The final coat was densified with a green

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wet float. The walls were coated with DRYLOK® Extreme Masonry Waterproofing at a rate of 100 ft<sup>2</sup>/gal applied in two coats (13-21 wet mils per coat).

**Results:** The specimen was tested September 11, 2019. Results of testing are shown below.

**Table 1. Results from ASTM E 330, Procedure A for ±75 psf Test Load**

Pressure (psf)	Duration (s)	Result (Pass/Fail)
+75	10	Pass
0	60	Pass
+150	10	Pass
0	60	Pass
-75	10	Pass
0	60	Pass
-150	10	Pass
0	60	Pass

Note(s): Deflection measurements were not evaluated.

Specimen failure was determined by the presence of visible cracks in the stucco finish.

**Statement of Attestation:**

The performance evaluation of the Sealed Cladding System was conducted in accordance with ASTM E 330-02(2010): *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference* as described herein. The laboratory test results presented in this report are representative of the material supplied.

Signed:   
 \_\_\_\_\_  
 Zachary Priest, P.E.  
 Director

**Report Issue History:**

Issue #	Date	Pages	Revision Description (if applicable)
Original	10/08/2019	8	NA
Rev 1	10/28/2019	8	Editorially revised

**APPENDIX FOLLOWS**

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Specimen #1 Construction Photos



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# STRUCTA WIRE CORP

## STRUCTALATH TWIN TRAC

### SPECIFICATION SHEET

IAPMO UES 2017 US Patent # 6,305,424, B1 7,287,356, B2



**Structalath Twin** is a self furring welded wire lath for use as an alternative to the 2.5 lb/yd<sup>2</sup> diamond mesh metal lath as specified in ASTM C 847 and for use as an alternative to the 1.14 lb/yd<sup>2</sup> welded wire lath specified in ASTM C 933. Structalath Twin Trac is similar to Structalath No. 17 ga. with an addition of eight secondary cold-rolled longitudinal wires. Excellent for commercial construction, Twin Trac has been designed to simplify the attachment of wire lath to wood and steel studs.

#### FEATURES

- Designed to simplify attachment for both steel and wood stud construction
- 17 ga. galvanized steel wire is precision welded to form 1 1/2" x 1 1/2" openings
- Eight additional secondary cold rolled longitudinal wires form a twin trac that simplifies attachment
- The 3/16" Twin Trac spacing allows the easy penetration of screws, nails, and a wide base for automatic staples
- Rolls are 38 3/8" wide by 150 ft. long (50 square yards)
- Weight of roll is 1.14 lb/yd<sup>2</sup>
- Design promotes uniform plaster thickness
- Provides superior reinforcement and crack resistance
- Each and every cross wire is securely furred
- Hat channel furr provides for superior stucco embedment
- Longitudinal wires are cold rolled (flattened) to eliminate curvature memory

- Cold rolled (CR) process increases tensile and breaking load of wire
- Rolls out flat and stays flat
- Easy to fold around corners with clean bending lines

#### DETAILS

- A. Width of furring leg 3/8"
- B. Furring height 1/4" to the underside of the cross wire
- C. Furring rows every 3" on centre
- D. Every cross wire is furred
- E. Tabs are aligned with edge wire and extend 1/4" beyond edge wires
- F. Overall width is 38 3/8". Designed for full coverage of 9' - 3" wall heights including code required overlaps
- G. Twin Trac for ease of attachment

#### PACKAGING

- 32 rolls per pallet
- Each roll is banded with poly strapping indicating manufacturer and IAPMO UES 2017
- English/Spanish installation instructions available

#### GREEN ATTRIBUTES

- Made from 80% recycled steel – recycling conserves natural and energy resources
- Conservation of steel without reducing strength
- Less metal with no loss of performance
- Compact packaging means further reduction in total carbon footprint

#### ALSO AVAILABLE:

- Twin Trac - Stainless Steel T-304/ANSI Special Order Only

Fully conforms to the requirements for stucco reinforcing as defined in UBC, IBC and IRC building codes

STRUCTA WIRE CORP. 1395 NORTH GRANDVIEW HWY, VANCOUVER, BC V5N 1N2 T 604-254-9868 E INFO@STRUCTAWIRE.COM

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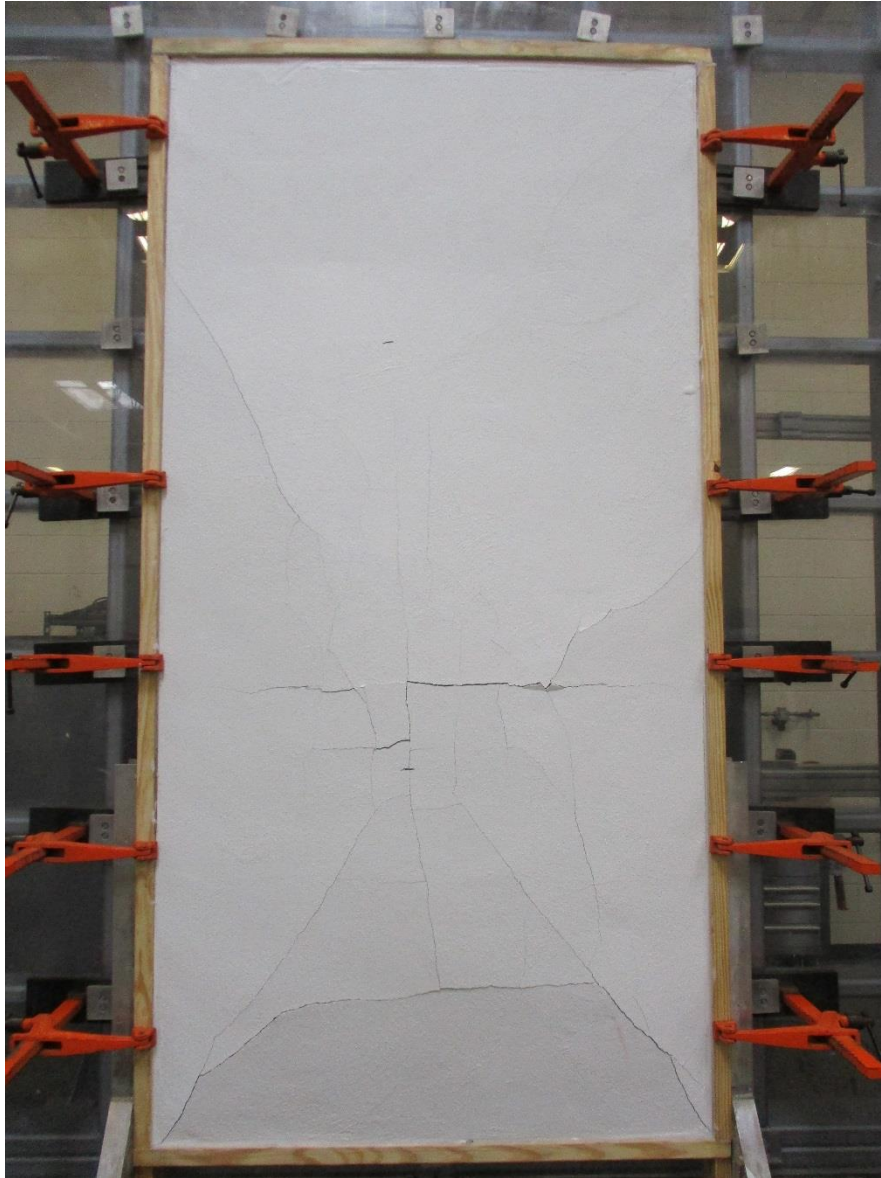


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Specimen #1 Failure Photo



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