



**Architectural
Testing**

DATE: September 1, 2014

PROJECT NO. D9812.01-122-34 SHEET 1 OF 7

BY: GH/MJT

PROJECT NAME: Special-Lite Side-Hinged Doors

Product Evaluation

Special-Lite SL Side-Hinged Doors

Report D9812.01-122-34

Rendered to:

SPECIAL-LITE, INC.
860 South Williams Street, P.O. Box 6
Decatur, Michigan 49045

Prepared by:

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September 1, 2014
Revision 7: October 19, 2017

Gary Hartman, P.E.
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Senior Project Engineer



Subject: Special-Lite Series SL-XX Aluminum Out-Swing Door
Special-Lite, Inc.
860 South Williams Street, P.O. Box 6
Decatur, Michigan 49045

Scope: Product Evaluation per Chapter 61G20-3.005(1)(d) Florida Administrative Code, Evaluation report from a Florida Registered Architect or a licensed Florida Professional Engineer.

Building Code Compliance: This product has demonstrated compliance with the 2017 Florida Building Code, Building:
§1626 *High-velocity Hurricane Zones – Impact Tests for Wind-borne Debris*
§1709.5 *Exterior window and door assemblies*
§2411 *High-velocity Hurricane Zones – Windows, Doors, Glass and Glazing*
§2615 *High-Velocity Hurricane Zones-Plastics*

Performance Standards: ASTM D635-10
ASTM D638-03
ASTM D1929-12
ASTM E84-13a
ASTM G155-05a
TAS 201-94
TAS 202-94
TAS 203-94

Product Description: Door Panel Urethane foam filled
Face Sheet options:
6063-T5 Aluminum
FRP, Sandstone, Pebble Grain texture
Stainless Steel
Stiles, rails, and face sheets are held together with 3/8" diameter steel tie rod.

Door Frame 6063-T5 Aluminum
Horizontal and Vertical members secured together with aluminum frame clip
Fastened with #10-16 x 3/4" screws

Anchorage
Various anchorages (see *Installation*)



Installation:

Substrates

Wood:

Minimum 2x S-P-F (G = 0.42)
#12 Wood Screws (Shall conform to ANSI/ASME
B18.6.1 and be corrosion resistant)

Concrete:

Minimum $f'_c = 3,000$ psi
1/4" Powers Tapper+ Screw Anchor for Concrete
and Masonry (NOA 15-0629.06)
1/4" Tapcon Concrete and Masonry Anchors with
Advanced Threadform Technology (NOA 16-1222.06)

Steel Stud:

Minimum 18 gauge 33 ksi Cold-formed Steel Studs
1/4-20 TEKS anchor (ESR 1976)

Grout-filled CMU:

Minimum $f_m = 1,500$ psi
1/4" Powers Tapper+ Screw Anchor for Concrete
and Masonry (NOA 15-0629.06)
1/4" ITW Tapcon with Advanced Threadform
Technology Concrete and Masonry Anchors
(NOA 16-1222.06)

Install anchors per manufacturer's recommended instructions, product approvals and the attached drawings.



Limitations of Use:

Product	Maximum Design Pressure	Maximum Overall Size	Maximum Glazing Size	Maximum Door Panel Size
Single Door	+70 psf/-90 psf	42" x 92"	22" x 32"	37-9/16" x 89-1/2"
Double Door	+65 psf/-65 psf	80" x 92"		

Products have been tested for large missile resistance and are approved for use in wind-borne debris region without the use of protective devices (i.e. shutters).

As-Tested Hardware Required for Impact Resistance:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Von Duprin 9957 Surface Vertical Rod Exit Device	2	Exit push bar located 40" from the sill with latches at the head and sill and on the mullion.
4954 Von Duprin removable mullion	1	The mullion was 2" x 3" x 1/4" steel tube. The top cast bracket was secured to the header with three 1/4" x 1-5/8" machine screws and to the rough opening sill with a cast bottom bracket mounted with two 1/4" x 1-1/2" flat head screws.
Continuous hinge by Select Products	1	In the door rabbet, attached to the door leaf and frame with #10-24 flat head screws located 1" and 3" from each end and 12" on center
568 Zero threshold or THRS-4 Special-Lite threshold	1	Sill; secured atop a 1/2" thick by 6" wide aluminum shim. The sill was secured with 1/4" x 2" long screws spaced 4" from each end and 12" on center.

Design of the substrate and substrate support structure shall be in accordance with 2017 Florida Building Code, Building.



**Supporting
Evidence:**

Test Report 74375.01-201-18 (TAS 201-94, 202-94 and 203 -94)
Revision -, 08/27/07.
Architectural Testing, Inc., St. Paul, Minnesota.
Joseph A. Reed (FL PE 58920)

Test report 0132-0523-00, 0132-0805-00 (TAS 201-94, 202-94 and 203 -94)
Revision -, 02/28/02.
Hurricane Test Laboratory, LLC, Lithia Springs, Georgia.
Vinu J. Abraham (FL PE 53820)

Test Report 0132-1008-00, 0132-1109-99 (TAS 201-94, 202-94 and 203 -94)
Revision -, 02/28/02.
Hurricane Test Laboratory, LLC, Lithia Springs, Georgia.
Vinu J. Abraham (FL PE 53820)

Test Report E0248.01-106-18 (ASTM D1929-96(2000)e01, FRP Skin)
Revision -, 08/22/14.
Architectural Testing, Inc. York, Pennsylvania.

Test Report 101339604MID-001b (ASTM D635-10, FRP Skin)
Revision -, 09/12/13
Intertek, Middleton, Wisconsin.

Test Report 01.13536.01.026b (ASTM E84-06, FRP Skin)
Revision -, 02/12/2008
Southwest Research Institute. San Antonio, Texas.

Test Report 101658492SAT-003A (ASTM E84-13a, Foam Core)
Revision -, 07/10/14
Intertek Testing Services NA, Inc. Elmendorf, Texas

Test Report 16-6758 (ASTM D638-14 and G155-13, Sandstone FRP Skin)
05/04/17
Fenestration Testing Laboratory, Inc. Medley, Florida
Idalmis Ortega, PE (FL PE 76905)

Florida Product Approval # FL9875-R3
Approved 06/11/2012

Calculation Report D9812.02-122-34-R1
Revision 1, August 17, 2017
Gary Hartman, PE (FL PE 73227)



**Architectural
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DATE: September 1, 2014

PROJECT NO. D9812.01-122-34 SHEET 6 OF 7

BY: GH/MJT

PROJECT NAME: Special-Lite Side-Hinged Doors

**Certification of
Independence:**

In accordance with Chapter 61G20-3 Florida Administrative Code:

1. Architectural Testing, Inc. does not have, nor will acquire, a financial interest in any company manufacturing or distributing products for which this report is being issued.
2. Architectural Testing, Inc. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the products for which this report is being issued.

Attachments:

SL-XX Aluminum Outswing Entrance Door FBC Product Approval Drawings. Special-Lite, Inc. Revision 3, 08/17/17. (5 pages)



Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	09/01/14	N/A	Original report issue
1	12/11/14	4	Revised test method versions
		5	Added Revision Log
2	12/16/14	4	Corrected single door size. Added hardware requirements. Report now has 6 pages total.
3	11/05/16	2	Clarified that FRP is Pebble Grain texture.
4	11/07/16	2	Clarified that FRP is Pebble Grain texture and Sandstone.
5	08/17/17	2,4	Updated to 2017 FBC
5	08/17/17	3	Referenced current NOAs
5	08/17/17	5,6	Referenced revised calculation report and drawings per 2017 FBC
6	08/25/17	5	Added signature engineer for referenced TAS test reports
7	10/19/17	2	Added performance standards for weathering and material details for FRP facing
7	10/19/17	5	Added report of tests results for outdoor weathering to supporting evidence