

MCY ENGINEERING, INC.
GLAZING CONSULTANT

12781 Miramar Parkway, Suite 301
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PRODUCT APPROVAL EVALUATION REPORT

<u>Product Manufacturer:</u> E.S. WINDOWS, Inc. 10653 NE Quaybridge Ct. Miami, FL 33138	<u>Product Name/Model & Description:</u> ES V400 VINYL sliding glass door NI
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Scope: This product has been evaluated by the below-signed Florida Professional Engineer for compliance with the Code noted herein and is, for the purpose intended, at least equivalent to that required by the Code, in accordance with section 553.842 F.S. & chapter 61G20-3.005 F.A.C. Re-evaluation of this product shall be required following applicable Code modifications or revisions.

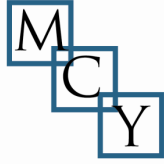
Code: 7th Edition Florida Building Code (2020)/ 8th Edition Florida Building Code (2023), inclusive of all Supplements effective as of this report date.

Compliance Method: 61G20-3.005 (1)(d) – Evaluation Report from a licensed Professional Engineer

Product Description: Product Approval **Drawing #AD23-41**, prepared by MCY Engineering, signed and sealed by the Yiping Wang P.E., is an integral part of this Evaluation Report.

Limitations & Conditions of Use:

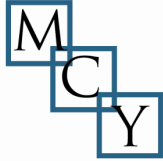
- This product has been evaluated for use **outside of the HVHZ** (High Velocity Hurricane Zone)
- Impact Resistance: **NON Impact**
- Refer to Product Approval Drawing noted above for:
 - Maximum allowable wind loads at related maximum allowable size(s).
 - Other load limitations applicable to the product, if any.
 - Overall dimensions and material/grade of main product components, accessories, etc.
 - Illustrated diagrams of the attachment of the product to the structure.
 - Anchor type(s), size(s), substrate(s), embedment, edge distance, and spacing/locations.



Test Reports:

Mandatory Tests (Tested in accordance with ASTM)

Test Lab	Report Number	Test Report Date	Test Standard & Description
Architectural testing 1140 Lincoln Avenue Springdale, PA 15144	A1719.01-501-47 <i>signed and sealed by Ramesh C Patel, P.E.</i>	11/10/2010	ASTM E2068 (operating force) ASTM E283 (air infiltration) ASTM E330 (uniform structural load) ASTM F842 (forced entry resistance) ASTM E987 (Deglazing) ASTM E547 (water infiltration)
Element Material Technology 115 south 84 th ave Wausau, WI 54401, USA	ESP009160P-2 ESP009160P-3 <i>signed and sealed by Ramesh C Patel, P.E.</i>	04/23/2012	ASTM E2068 (operating force) ASTM E283 (air infiltration) ASTM E547 (water infiltration) ASTM E330 (uniform structural load) ASTM F842 (forced entry resistance) ASTM D618 (Welded corner test) ASTM E987 (Deglazing)
Element Material Technology 115 south 84 th ave Wausau, WI 54401, USA	ESP009160P-5 <i>signed and sealed by Ramesh C Patel, P.E.</i>	04/23/2012	ASTM E330 (uniform structural load) ASTM E2068 (operating force) ASTM E283 (air infiltration) ASTM E547 (water infiltration) ASTM F842 (forced entry resistance) ASTM D618 (Welded corner test) ASTM E987 (Deglazing)
Element Material Technology 115 south 84 th ave Wausau, WI 54401, USA	ESP009160P-6 <i>signed and sealed by Ramesh C Patel, P.E.</i>	04/23/2012	ASTM E330 (uniform structural load) ASTM E2068 (operating force) ASTM E283 (air infiltration) ASTM E547 (water infiltration) ASTM F842 (forced entry resistance) ASTM D618 (Welded corner test) ASTM E987 (Deglazing)
Element Material Technology 115 south 84 th ave Wausau, WI 54401, USA	ESP009160P-7 <i>signed and sealed by Ramesh C Patel, P.E.</i>	04/23/2012	ASTM E330 (uniform structural load) ASTM E2068 (operating force) ASTM E283 (air infiltration) ASTM E547 (water infiltration) ASTM F842 (forced entry resistance) ASTM D618 (Welded corner test) ASTM E987 (Deglazing)
Element Material Technology 115 south 84 th ave Wausau, WI 54401, USA	ESP009160P-8 <i>signed and sealed by Ramesh C Patel, P.E.</i>	04/23/2012	ASTM E330 (uniform structural load) ASTM E2068 (operating force) ASTM E283 (air infiltration) ASTM E547 (water infiltration) ASTM F842 (forced entry resistance) ASTM D618 (Welded corner test) ASTM E987 (Deglazing)



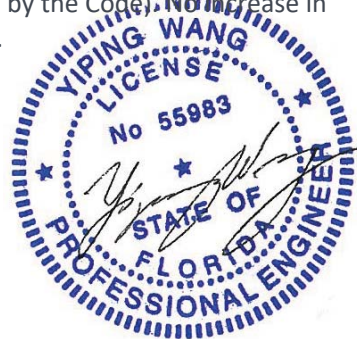
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ETC laboratories 40 Ajax Road Rochester, NY 14624-3102	ETC-97-264-4091.0 <i>Signed and sealed by Joseph L.Doldan, P.E.</i>	04/21/1998	ASTM D635 (RATE OF BURNING) ASTM D1929 (self-ignition temperature) ASTM D2843 (average smoke density rating) ASTM E84 (flame spread index) ASTM G26(Xenon arch light exposure) ASTM D638 (tensile strength)
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Engineering Analysis: The following engineering analyses and/or calculations have been performed:

- No comparative analysis has been performed for conditions other than those tested.
- Rational analysis has been performed per Code requirements and acceptable standards of engineering principles (but not in lieu of standard tests required by the Code). No increase in allowable stress has been used in the evaluation of this product.



January 24th, 2024