



MolimoTM
Architectural Product Testing

PRODUCT EVALUATION

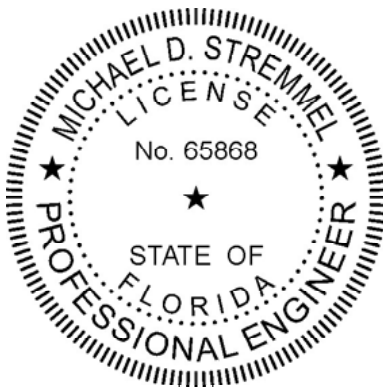
Endure 602 Horizontal Sliding Window

REPORT TO:

**PROVIA LLC
2150 STATE ROUTE 39
SUGARCREEK, OHIO 44681**

REPORT NUMBER: 29498.01-107-16-B

REPORT DATE: 12/5/2024



2024.12.05 06:38:50 -05'00'

Michael D. Stremmel, PE
FL PE 65868
FL REG 37122

This item has been digitally signed and sealed by Michael D. Stremmel, PE on the date adjacent to the seal.

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Subject: Endure Horizontal Slider
ProVia LLC
2150 State Route 39
Sugarcreek, Ohio 44681

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 Florida Building Code, Building, 8th Edition (2023):
§1709.5 Exterior window and door assemblies
§2404 Wind, Snow, Seismic and Dead Loads on Glass

Performance Standards: AAMA/WDMA/CSA 101/I.S.2/A440-17
ASTM E1300-12ae1

Product Description: Window Frame: Extruded Rigid Poly (Vinyl Chloride) (PVC)
Miter-cut corners and thermally welded.

Window Sash: Extruded Rigid Poly (Vinyl Chloride) (PVC)
Miter-cut corners and thermally welded.

Glazing: Validated per ASTM E1300

Glazing Type	Glazing Construction
G1 (Insulating Glass)	1/8" Annealed to Exterior 1/8" Annealed to Interior
G2 (Insulating Glass)	3/32" Annealed to Exterior 3/32" Annealed to Interior

Exterior glazed against double-sided adhesive tape and secured with rigid vinyl glazing bead. 1/2" bite.

Anchorage Various anchorages (see *Installation*)

For additional product information see Appendix A.

- Installation:**
- Wood: Minimum Spruce-Pine-Fir 2x (G = 0.42).
#8 Wood Screw (Shall conform to ANSI/ASME B18.6.1 and be corrosion resistant).
 - Steel Stud: Minimum 18 gauge (0.043" thick) 33 KSI steel stud.
#10-16 TEKS screw (see ICC ESR 1976).
 - Aluminum: Minimum 0.093" thick 6063-T5 aluminum.
#10-16 TEKS screw (see ICC ESR 1976).
 - Concrete: Minimum $f'_c = 3,000$ psi.
3/16" ITW Tapcon with Advanced Threadform Technology
Concrete and Masonry Anchors (see NOA 24-0102.06).
 - Concrete
Masonry: ASTM C90, minimum $f'_m = 1,500$ psi.
3/16" ITW Tapcon with Advanced Threadform Technology
Concrete and Masonry Anchors (see NOA 24-0102.06).
- Installation shall follow manufacturer's instructions, product approvals and the referenced installation drawings.

Limitations of Use:

Product	Maximum Design Pressures	Impact Resistance	Maximum Overall Size	Maximum Glazing Size
Endure 602 (Glazing Type G1)	+25/-25 psf	N/A	72" x 60" (Nail Fin)	32" x 53"
Endure 602 (Glazing Type G1)	+25/-25 psf	N/A	72" x 60" (Thru-Frame)	32" x 53"
Endure 602 (Glazing Type G2)	+25/-25 psf	N/A	72" x 48" (Nail Fin)	32" x 41"
Endure 602 (Glazing Type G2)	+30/-30 psf	N/A	72" x 48" (Thru-Frame)	32" x 41"

Products have not been tested for windborne debris resistance and will require protective devices (i.e. shutters) if installed in a windborne debris region.

Products are not approved for use in High Velocity Hurricane Zone (HVHZ).

Supporting Evidence: Test Report 28882.01-109-12 (AAMA/WDMA/CSA 101/I.S.2/A440-17)
Revision 0, 9/5/2024
Molimo, LLC. Springdale, Pennsylvania (TST15431)

Calculation Report 29498.01-107-16-A by Molimo
Revision 0, 12/5/2024
Michael D. Stremmel, PE (FL PE 65868)

Certification of Independence: In accordance with Rule 61G20-3 Florida Administrative Code,
Molimo, LLC hereby certifies the following:

1. Molimo, LLC does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products tested or labeled by the agency.
2. Molimo, LLC is not owned, operated or controlled by any company manufacturing or distributing products it tests or labels.
3. Michael D. Stremmel, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the reports are being issued.
4. Michael D. Stremmel, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

Reference Drawings: *Endure Double Hung*. Drawing 29498.01-1001. Revision 0, 12/5/2024.

Revision Log

<u>Identification</u>	<u>Date</u>	<u>Page & Revision</u>
Original Issue	12/5/2024	Not Applicable



Appendix A – Detailed Product Description

Glazing Details: Exterior glazed against double-sided adhesive tape and secured with rigid vinyl glazing bead. 1/2" bite.

Weatherstripping:

0.187"x0.250 polypile with centerfin.	Two row, all frames
0.187"x0.250 polypile with centerfin.	One row, Pull Stiles
0.187"x0.250 polypile with centerfin.	One row, Lock Stile
0.187"x0.250 polypile with centerfin.	Three row, Top and bottom rails
"T" Slotted Vinyl off set w/ 0.275" Dia.	One row, keeper stile
Foam -filled vinyl bulb w/fin	
1-5/8" dust pad	Two, keeper stile at each end
7/8" square dust pad with 0.380" high polypile	Two, Lock stile at each end

Frame Construction: Extruded Rigid Poly (Vinyl Chloride) (PVC). Miter-cut corners and thermally welded.

Sash Construction: Extruded Rigid Poly (Vinyl Chloride) (PVC). Miter-cut corners and thermally welded.

Drainage: Sloped sill
1-1/8" weepslot w/flap at sill face; one each end
1" wide weepslot at sill outer track through bottom surface; two each end
1" wide weepslot at sill inner track; one each end
1" wide weepslot at sill intermediate wall; one each end
1/4" wide weepslot at sash, bottom rail, glazing plan through bottom surface, One each end

Hardware:	metal cam lock w/keeper	Two (2) total	Lock Stile, one per vent.
	Dual Steel roller balance.	Four (4) total	Bottom rail, one per jamb.
	Plastic night latch	One (1) total	Keeper sash on bottom rail
	Anti-lift block	Two (2) total	Head, one per sash

Reinforcement: All Windows: Lock Stile: Composite
Keeper Stile: Composite