



MolimoTM
Architectural Product Testing

PRODUCT EVALUATION

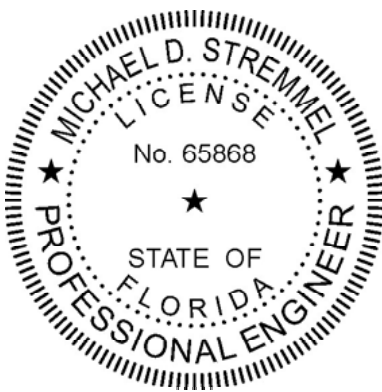
Aspect/Endure 2 Lite T-Mull Casement

REPORT TO:

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

REPORT NUMBER: 29498.02-107-16-B

REPORT DATE: 12/5/2024



2024.12.05 15:43:12 -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: Aspect/Endure 2 Lite T-Mull Casement
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: Validate Glazing with ASTM E1300

Glazing Type	Glazing Construction
GL1 (Insulating Glass)	1/8" Annealed to Exterior 1/8" Annealed to Interior
GL2 (Insulating Glass)	3/16" Annealed to Exterior 3/16" Annealed to Interior
GL3 (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 16-1222.06).
 - Concrete
Masonry: ASTM C90, minimum $f'_m = 1,500$ psi.
3/16" ITW Tapcon with Advanced Threadform Technology
Concrete and Masonry Anchors (see NOA 16-1222.06).
- 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
Aspect/Endure 2 Lite T-Mull (Glazing Type GL1)	+35/-35 psf	N/A	70" x 70" (Nail Fin & Thru-Frame)	31" x 66"
Aspect/Endure 2 Lite T-Mull (Glazing Type GL2)	+40/-40 psf	N/A	70" x 70" (Nail Fin)	31" x 66"
Aspect/Endure 2 Lite T-Mull (Glazing Type GL2)	+45/-45 psf	N/A	70" x 70" (Thru-Frame)	31" x 66"
Aspect/Endure 2 Lite T-Mull (Glazing Type GL1)	+50/-50 psf	N/A	64" x 60" (Nail Fin & Thru-Frame)	28" x 56"

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 28881.01-109-12 (AAMA/WDMA/CSA 101/I.S.2/A440-17)
Revision 0, 7/16/2024
Molimo, LLC. Springdale, Pennsylvania (TST15431)

Calculation Report 29498.02-107-16-A by Molimo
Revision -, 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: *Aspect/Endure T-Mull Casement*. Drawing 29498.02-1001, Revision -, 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:

0.250" dia. Vinyl foam-filled bulb w/dual fin.

0.375" Vinyl foam-filled bulb w/dual fin.

0.250" dia. Vinyl foam-filled bulb w/dual fin.

0.250" dia. Vinyl foam-filled bulb w/dual fin.

One row at head, sill, and jamb

One row at sill, top rail, bottom rail and lock rail.

four rows at integral mullion.

One row at sill, top rail, bottom rail and lock rail.

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
 1-1/4"x1/4" weep slot at sill dace; one each end
 3/4" wide weep slot at sill one below vent and one below guide track; two each end
 1-1/4" wide weep slot at sill intermediate; two each end
 1/4" weep hole at bottom rail glazing pocket; two each end

Hardware:	rotary single arm	Two (2) total	Sill, one per vent.
	Lever lock/Multi point balance.	Two (2) total	one per jamb.
	Composite keepers	Ten (10) total	five per vent; Four at stile, One at top rail
	Concealed bar hinge	Four (4) total	Two per vent; one each top and bottom rail
	Stud bracket	Two (2) total	One per Vent; Bottom rail
	Metal Snubbers	Six (6) Sets	Three per vent; hinge, stile/jamb
	Composite vent	Two (2) Total	One per vent; Sill

Reinforcement: All Windows: Lock rail: Polyurethane reinforced fiberglass
 Keeper rail: Polyurethane reinforced fiberglass