

PRODUCT EVALUATION

1209/1210 Premium Impact Fixed Casement Windows

REPORT TO:

**WEATHER SHIELD WINDOWS & DOORS
ONE WEATHER SHIELD PLAZA
MEDFORD, WISCONSIN 54451**

REPORT NUMBER: 27845.06-107-16-R0
REPORT DATE: 12/22/2023



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

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A handwritten signature in black ink, appearing to read "Michael D. Stremmel".

Michael D Stremmel, PE
FL PE 65868
FL REG 37122

Subject:	1209/1210 Premium Impact Fixed Casement Windows Weather Shield Windows & Doors One Weather Shield Plaza Medford, Wisconsin 54451
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, 8 th Edition (2023): §1709.5 Exterior window and door assemblies §2404 Wind, Snow, Seismic and Dead Loads on Glass
Performance Standards:	TAS 202, TAS 201, TAS 203 ASTM E1300-12ae1
Product Description:	<u>Window Frame</u> Wood/Vinyl/Aluminum Interior wood frame snap-fit to vinyl frame; aluminum nosing snap-fit to vinyl Wood frame is rabbeted and secured with screws. Vinyl corners were mitered and welded. <u>Window Sash</u> Wood Mortise and tenon corner joints secured with screw. <u>Glazing</u> Validate Glazing with ASTM E1300

Glazing Type	Glazing Construction
G1 (Insulating Glass)	5/16" Annealed (Exterior) (2) 3/16" Annealed + 0.090" SGP (Interior)
G2 (Monolithic Glass)	(2) 5/16" Annealed + 0.090" SGP
G3 (Insulating Glass)	1/4" Annealed (Exterior) (2) 3/16" Annealed + 0.090" PVB (Interior)
G4 (Insulating Glass)	1/4" Annealed (Exterior) (2) 3/16" Heat Strengthened + 0.090" PVB (Interior)

Notes: 1. SGP = Kuraray SentryGlas Interlayer (NOA 20-0915.19)
 2. PVB = Kuraray Trosifol PVB Interlayer (NOA 20-0915.22)

Interior glazed against silicone back bedding (Sika *Sikaflex 552*). Interior wood stops secured with nails. 1/2" bite.

Anchorage Various anchorages (see *Installation*)

For additional product information see Appendix A and attached product drawings.

- Installation:** Wood: Minimum Southern Yellow Pine 2x (G = 0.55).
 #10 Wood Screw (Shall conform to ANSI/ASME B18.6.1 and be corrosion resistant).
- Steel Stud: Minimum 16 gauge (0.054" thick) 50 KSI steel stud.
 #10-16TEKS 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).
- Aluminum: 1/8" wall thickness 6063-T5 aluminum tube mullion.
 #10-16 TEKS screw (see ICC ESR 1976)

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
1210 Fixed Casement (Glazing Type G1)	+55/-70 psf	Level D Wind Zone 4	72" x 84"	66-3/4" x 78-3/4"
1209 Fixed Casement (Glazing Type G2)	+55/-70 psf	Level D Wind Zone 4	72" x 84"	66-3/4" x 78-3/4"
1210 Fixed Casement (Glazing Type G3)	+55/-70 psf	Level D Wind Zone 4	72" x 84"	66-3/4" x 78-3/4"
1210 Fixed Casement (Glazing Type G4)	+55/-70 psf	Level D Wind Zone 4	72" x 84"	66-3/4" x 78-3/4"

See reference drawings for additional sizes and limitations of use.

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

Products are approved for use in High Velocity Hurricane Zone (HVHZ).

Supporting Evidence: Test Report ESP020870-1773 (TAS 202, TAS 201, TAS 203)
Revision A, 10/30/19
Element Materials Technology. Wausau, Wisconsin (TST2613)

Test Report ESP018829P-1676 (TAS 202, TAS 201, TAS 203)
Revision -, 02/20/15
Element Materials Technology. Wausau, Wisconsin (TST2613)

Calculation Report 27845.05-107-16-R0
Revision 0, 12/22/23
Michael D. Stremmel, PE (FL PE 65868)

Calculation Report 27845.01-107-16-R0
Revision 0, 12/21/23
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 Laboratories 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.
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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: 27845.05-1001 1209 Fixed Casement Windows. Revision 0, 12/22/23.
27845.05-1002 1210 Fixed Casement Windows. Revision 0, 12/22/23.

Revision Log

<u>Identification</u>	<u>Date</u>	<u>Page & Revision</u>
Original Issue	12/22/2023	Not Applicable

Appendix A – Detailed Product Description

Glazing Details: Interior glazed against a silicone back bedding (Sika *Sikaflex* 552). Wood interior glass stops are employed and secured with one row of 29mm (1-1/8") brad nails spaced 51mm (2") from each end, and 203mm - 305mm (8" - 12") on center. In addition, a back bed of silicone is used in the glazing pocket. Glass bite is 1/2".

Weatherstripping: 0.300" diameter foam filled hollow bulb. One row at interior perimeter of frame.

0.310" high pile filled bulb. One row at exterior perimeter of sash.

0.310" high pile filled bulb. At exterior edge of top rail.

Frame Construction: Exterior vinyl frame corners are miter cut and welded. The interior wood frame members are snap-fit onto the vinyl framing. Aluminum clad frame nosing is snap-fit to the vinyl frame. Aluminum frame clad nosing corners are secured with one #6 x 32mm (1-1/4") screw per corner. Wood frame corners are rabbet-cut and secured with two #7 x 64mm (2-1/2") PH Bugle Head screws per corner. Wood head, sill and side jamb covers are secured with #6 x 41mm (1-5/8") PFH drywall screws spaced approximately 102mm-152mm (4"-6") from the corners and 203mm-305mm (8"-12") on center.

Sash Construction: The sash corners utilized open mortise and tenon construction secured with one #8 x 64mm (2-1/2") screw through the stile into the rail. Aluminum clad is snap-fit and secured to the wood sash with 16mm (5/8") brads spaced 102mm – 152mm (4" – 6") on center. The sash is secured to the frame head, sill and side jambs using vinyl and aluminum clips. The head and sill utilize two 381mm (15") long vinyl clips with two #8 x 25mm (1") PH Pan Head screws per clip into the sash and one 914mm (36") aluminum clip with #8 x 25mm (1") PH Pan Head screws spaced 203mm – 229mm (8"-9") on center into the sash and 127mm – 178mm (5"-7") on center into the frame. The side jambs utilize two 152mm (6") and two 305mm (12") vinyl clips with #8 x 25mm (1") PH Pan Head screws per clip into the sash, and one 914mm (36") aluminum clip with #8 x 25mm (1") PH Pan Head screws spaced 203mm – 229mm (8"-9") on center into the sash and 127mm – 178mm (5"-7") on center into the frame.

Vertical Mull Construction: The units were mull together using a full length 13mm (1/2") x 102mm (4") aluminum stiffener. The aluminum stiffener utilized silicone sealant on both sides and was secured at the head and sill with one #7 x 19mm (3/4") screw. A full length interior 13mm (1/2") x 13mm (1/2") pine filler was secured to both jambs with corrugated fasteners placed 51mm (2") from each end and 102mm-152mm (4"-6") on center. A 51mm x 305mm (2" x 12") galvanized steel gusset plate was secured at the head and sill with six 11mm (7/16") crown x 13mm (1/2") long staples.

Drainage: Sloped sill

Hardware: None

Reinforcement: 1/2" x 4" Aluminum (6063-T5) mullion stiffener in mull units.