

Equivalency Evaluation Report

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Product Manufacturer

UNILUX GmbH
Nikolaus-Meeth-Str. 1
DE 54528 Salmtal, Germany

Product Name, Model, Series and/or Description

Fineline Curtain Wall (Impact) with
Tilt & Turn, Fixed, Door and Mull Assembly

Code: Current Edition of the Florida Building Code including the 8th Edition (2023) Florida Building Code

Compliance Method: Product Approval Rule 61G20-3.015(4)(d) – Equivalency of Standards

Product Testing and Certification:

- National Certified Testing Laboratories Test Report No. NCTL-210-3942-01 and associated laboratory drawings. Signed and sealed by Gerard J Ferrara, P.E., FL No. 11985.
- Certification by Keystone Certification Inc. to TAS 201, TAS 202 and TAS 203.
- Laminated Glazing Interlayers: Kuraray America SentryGlas Interlayer per the current Miami-Dade Notice of Acceptance (NOA) Component Approval

Performance Testing:

- TAS 201-94
- TAS 202-94
- TAS 203-94, Large Missile Impact

Equivalency Evaluation to AAMA 501-15, 8th Edition (2023) Florida Building Code:

- Discussion – Code Requirements for testing to AAMA 501-15, per 8th Edition (2023) Florida Building Code.
 - Section 1709.8.4 requires glazed curtain wall, window wall and storefront systems to be tested in accordance with the requirements of this section and the laboratory test requirements of the American Architectural Manufacturers Association (AAMA) Standard 501 with HVHZ complying with Section 2411.3.2.1.1.
 - This product is tested to HVHZ requirements – product approval is for HVHZ.
 - Therefore, Section 2411.3.2.1.1 governs with regards to Load Sequencing.
 - All other requirements of Section 1709.8.4 must be met.
 - Section 2411.3.2.1.1 requires glazed curtain wall, window wall and storefront systems to be tested in accordance with the requirements of this section and the laboratory test requirements of the American Architectural Manufacturers Association (AAMA) Standard 501, following test load sequence and test load duration in TAS 202.
 - Test Report No. NCTL-210-3942-01 tested this product in accordance with TAS 202 and its required load sequencing.
- Conformance to AAMA 501-15.
 - Laboratory Test requirements in AAMA 501-15 include sections listed as required and as optional. They are:
 - Required – All required testing performed and documented in Test Report No. NCTL-210-3942-01 demonstrating compliance with Section 1709.8.4 and Section 2411.3.2.1.1.
 - Section 4.1.1 – Test Load Sequence
 - Test Load Sequence in TAS 202 was followed as documented in NCTL-210-3942-01 as mandated by conformance to Section 2411.3.2.1.1 of the Florida Building Code.
 - Section 4.1.2: Preload test at 50% DP
 - Preload test in TAS 202 was followed as documented in NCTL-210-3942-01.
 - Section 4.1.3: ASTM E283 Air Leakage

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- Air Leakage test in TAS 202 was performed in accordance with ASTM E283 as documented in NCTL-210-3942-01.
 - Performance was measured as less than 0.1 cfm/ft² at an air pressure difference of 1.6 psf.
 - This meets and exceeds typical Commercial 0.3 cfm/ft² ratings performed at 1.57 psf.
- Section 4.1.4 ASTM E331 Water Penetration
 - The Water Penetration test in TAS 202 was performed in accordance with that standard's requirements as documented in NCTL-210-3942-01.
 - Performance was measured at a rate of 15% of the rated Design Pressure.
 - This meets typical Commercial rating requirements.
- Section 4.1.9 ASTM E330 testing. L/175 must be met for lengths to 162 inches.
 - Test Report No. NCTL-210-3942-01 indicates 0.168" for 162-inch vertical mullion,
 - $L/175 = 120/175 = .69"$ max at design loads, thus OK.
 - Test Report No. NCTL-210-3942-01 indicates 0.027" for 60" horizontal bar.
 - $L/175 = 60/175 = 0.34"$ max at design loads, thus OK.
- Section 4.1.10 ASTM E331 water resistance repeated.
 - Test Load Sequence in TAS 202 was followed as documented in NCTL-210-3942-01 as mandated by conformance to Section 2411.3.2.1.1 of the 2010 Florida Building Code.
- Section 4.1.11 ASTM E330 at 150% DP.
 - 1.5 x design pressure test load in TAS 202 was performed as documented in NCTL-210-3942-01.
- Optional – The following sections in AAMA 501-15 are listed as optional and were not performed.
 - Section 4.1.5
 - Section 4.1.6
 - Section 4.1.7
 - Section 4.1.8
 - Section 4.1.12
 - Section 4.1.14
 - Section 4.1.15
 - Section 4.1.16
- Conclusion
 - Based on the above evaluation, the Laboratory Test requirements of the American Architectural Manufacturers Association (AAMA) Standard 501 with HVHZ complying with Section 1709.8.4 and Section 2411.3.2.1.1 of the Florida Building Code have been met by the testing documented in Test Report No. NCTL-210-3942-01.

Equivalency Evaluation of TAS 201, TAS 202 and TAS 203 Performance Testing

- Testing conducted to TAS 201, TAS 202 and TAS 203 have been reviewed against the current requirements of the Florida Building Code including the 8th Edition (2023) FBC HVHZ Test Protocols and found to be in conformance.

Equivalency Evaluation of Miami-Dade NOA for Kuraray America SentryGlas

- The currently issued Miami-Dade NOA for component approval to the Florida Building Code for Kuraray America's SentryGlas Laminating Interlayer was reviewed. It was found that the testing results for ASTM E84, D635, D2843, D1929, D790, G115 and C158 are following the current edition of the Florida Building Code where applicable.
- Kuraray America Miami-Dade NOA can be found [here](#).

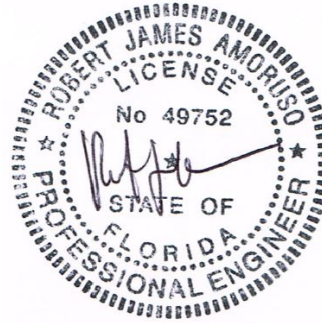
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Certificate of Independence per Product Approval Rule 61G20-3.009

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