

Product & Equivalency Evaluation Report

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<u>Product Manufacturer</u>	<u>Product Name, Model, Series and/or Description</u>
Gaulhofer Industrie-Holding GmbH Guggenbach 7 Ubelbach, Austria 8124	Series 425 Combination XOOX Tilt-Turn Window w/132mm Integral Mullion (L.M. Impact, HVHZ) Series 425 Combination XOOX Tilt-Turn Window w/132mm Integral Mullion (Non-Impact, Non-HVHZ) Series 425 Combination XXXX Tilt-Turn Window w/132mm Integral Mullion (L.M. Impact, HVHZ) Series 425 Combination XXXX Tilt-Turn Window w/132mm Integral Mullion (Non-Impact, Non-HVHZ)

Code: Current Edition of the Florida Building Code including the 7th Edition (2020) Florida Building Code

Compliance Methods:

- Product Approval Rule 61G20-3.005(1)(a) – Certification Mark or Listing
- Product Approval Rule 61G20-3.015(4)(d) – Equivalency of Standards

Product Testing, Materials and Certification:

- National Certified Testing Laboratories, Orlando, FL 32809
 - Series 425 Combination XOOX Tilt-Turn Window w/132mm Integral Mullion (L.M. Impact, HVHZ)
 - Test Report No. NCTL-210-3972-03, dated 3/12/16, signed and sealed by Gerard J. Ferrara, P.E.
 - TAS 201-94
 - TAS 202-94
 - TAS 203-94
 - Installation Drawing No. NL-0078
 - Series 425 Combination XOOX Tilt-Turn Window w/132mm Integral Mullion (Non-Impact, Non-HVHZ)
 - Test Report No. NCTL-210-3972-03B, dated 3/12/16
 - AAMA/WDMA/CSA 101/I.S. 2/A440-11
 - Installation Drawing No. NL-0079
 - Series 425 Combination XXXX Tilt-Turn Window w/132mm Integral Mullion (L.M. Impact, HVHZ)
 - Test Report No. NCTL-210-3972-04, dated 3/12/16, signed and sealed by Gerard J. Ferrara, P.E.
 - TAS 201-94
 - TAS 202-94
 - TAS 203-94
 - Installation Drawing No. NL-0080
 - Series 425 Combination XXXX Tilt-Turn Window w/132mm Integral Mullion (Non-Impact, Non-HVHZ)
 - Test Report No. NCTL-210-3972-04B, dated 3/12/16
 - AAMA/WDMA/CSA 101/I.S. 2/A440-11
 - Installation Drawing No. NL-0081
- Certification
 - Keystone Certification, Inc.
- Materials
 - Window Frame Material: Wood with Specific Gravity = 0.50 or greater
 - Impact Glazing Interlayer: Kuraray America SentryGlas (SG) per current Miami Dade Notice of Acceptance (N.O.A.) MD N.O.A. SentryGlas (SG) can be found [here](#).

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Product Installation Instructions:

- Series 425 Combination XOOX Tilt-Turn Window w/132mm Integral Mullion (L.M. Impact, HVHZ)
 - Drawing No. NL-0078, dated 11/29/16, signed and sealed by Robert J. Amoruso, P.E.
- Series 425 Combination XOOX Tilt-Turn Window w/132mm Integral Mullion (Non-Impact, Non-HVHZ)
 - Drawing No. NL-0079, dated 12/7/16, signed and sealed by Robert J. Amoruso, P.E.
- Series 425 Combination XXXX Tilt-Turn Window w/132mm Integral Mullion (L.M. Impact, HVHZ)
 - Drawing No. NL-0080, dated 11/29/16, signed and sealed by Robert J. Amoruso, P.E.
- Series 425 Combination XXXX Tilt-Turn Window w/132mm Integral Mullion (Non-Impact, Non-HVHZ)
 - Drawing No. NL-0081, dated 11/29/16, signed and sealed by Robert J. Amoruso, P.E.

Engineering Analysis: The following engineering and/or rational analysis/calculations have been performed.

- Anchorage has been verified by calculation prepared by Robert J. Amoruso, P.E. in accordance with the current edition of the Florida Building Code.
- Window glazing verified using ASTM E1300-04e1.

Equivalency Evaluation of Performance Testing:

In accordance with Product Approval Rule 61G20-3.015(4)(d) – Equivalency of Standards the following equivalency evaluation is conducted. Testing was conducted to the following

- AAMA/WDMA/CAS 101/I.S. 2/A440-11
- TAS 201-94
- TAS 202-94
- TAS 203-94

7th Edition (2020) Florida Building & Residential Code requires the following revision levels of the above testing standards as follows.

- AAMA/WDMA/CAS 101/I.S. 2/A440-11
- TAS 201-94
- TAS 202-94
- TAS 203-94

Based upon my review of the testing referenced above, the requirements of the aforementioned standards required by the 7th Edition (2020) Florida Building Code have been met.

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 in compliance with the 7th Edition (2020) Florida Building Code have been met where applicable.
- Kuraray America Miami-Dade NOA can be found [here](#).

Limitations & Conditions of Use:

- The following have been evaluated for use inside the HVHZ (High Velocity Hurricane Zone) and are Impact Resistance.
 - Series 425 Combination XOOX Tilt-Turn Window w/132mm Integral Mullion (L.M. Impact, HVHZ), Drawing No. NL-0078

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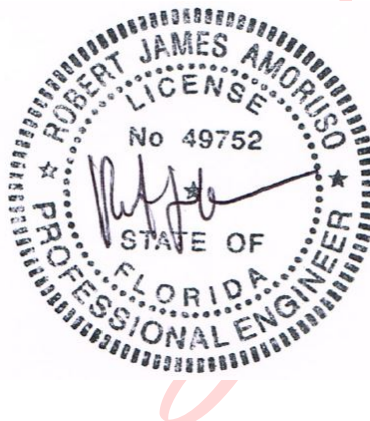
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- Series 425 Combination XXXX Tilt-Turn Window w/132mm Integral Mullion (L.M. Impact, HVHZ), Drawing No. NL-0080
- The following have NOT been evaluated for use inside the HVHZ (High Velocity Hurricane Zone) and are NOT Impact Resistance.
 - Series 425 Combination XOOX Tilt-Turn Window w/132mm Integral Mullion (Non-Impact, Non-HVHZ), Drawing No. NL-0079
 - Series 425 Combination XXXX Tilt-Turn Window w/132mm Integral Mullion (Non-Impact, Non-HVHZ), Drawing No. NL-0081
- Refer to Product Installation Instructions noted above for:
 - Maximum allowable wind loads at related maximum allowable size(s).
 - 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.
- Site wind pressures shall be determined by a licensed professional engineer in accordance with the current edition of the Florida Building Code (and/or ASCE 7 as referenced in the current edition of the Florida Building Code) for components and cladding based on allowable stress design.
- Site conditions not covered in this product evaluation document are subject to additional engineering analysis by a licensed professional engineer or registered architect as required by the authority having jurisdiction.
- Adequacy of the existing structural substrates as a main wind force resisting system capable of withstanding and transferring applied product loads to the foundation is the responsibility of the licensed professional engineer or registered architect acting as the design professional of record for the project of installation.

Certificate of Independence per Product Approval Rule 61G20-3.009

Robert J. Amoruso, P.E. does not have, nor will acquire, any financial interest in the company manufacturing or distributing product(s) covered by this Product Evaluation Report.

Robert J. Amoruso, P.E. does not have, nor will acquire any financial interest in any other entity involved in the approval process or testing of the product(s) covered by this Product Evaluation Report.



Digitally signed
by Robert J
Amoruso
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2020.12.07
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Evaluated by:
Robert J. Amoruso, P.E.
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