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Product Evaluation Report

of

YKK AP America, Inc. Series 35H Aluminum Outswing Entrance Door Impact

for Florida Product Approval

FL# FL16554 Report No. 4025

5th Edition (2014) Florida Building Code Per Rule 61G20-3

Method: 1 - D (Engineering Evaluation)

Category: Exterior Door Assembly

Sub – Category: Swinging Exterior Door Assemblies

Product: Series 35H Aluminum Outswing Entrance

Door Impact

Material: Aluminum 6063-T5

Product Dimensions: See installation instructions YKK020

Prepared For:

YKK AP America, Inc. 332 Firetower Road Dublin, GA 31021

Prepared by:

Hermes F. Norero, P.E.

Florida Professional Engineer # 73778 Date: 10/29/2015

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Digitally signed by Hermes F Norero, P.E. Reason: I am approving this document Date: 2015.10.30 10:08:25 -04'00'



FL#: FL16554 Date: 10/29/2015

Report No: 4025

Manufacturer: YKK AP America, Inc.

Product Category: Exterior Door Assembly

Product Sub-Category: Swinging Exterior Door Assemblies

Compliance Method: State Product Approval Rule 61G20-3.005 (1)(d)

Product Name: Series 35H Aluminum Outswing Entrance Door Impact

Scope: This is a Product Evaluation Report issued by Hermes F. Norero, P.E. (FL # 73778) for YKK AP

America, Inc. based on Rule Chapter No. 61G20-3.005, <u>Method 1d</u> of the State of Florida Product Approval, Department of Business and Professional Regulation - Florida Building Commission.

Hermes F. Norero, P.E. does not have nor will acquire financial interest in the company manufacturing or distributing the product or in any other entity involved in the approval process of the product named herein.

This product has been evaluated for use in locations adhering to the Florida Building Code.

See Installation Instructions **YKK020**, signed and sealed by Hermes F. Norero, P.E. (FL # 73778) for specific use parameters.

Limits of Use:

- 1. This product has been evaluated and is in compliance with the Florida Building Code, including the "High Velocity Hurricane Zone" (HVHZ).
- 2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment into substrate material shall be beyond wall dressing or stucco.
- 3. When used in areas requiring wind borne debris protection this product complies with Chapter 16 of the Florida Building Code and <u>does not</u> require an impact resistant covering.
- 4. Site conditions that deviate from the details of drawing **YKK020** require further engineering analysis by a licensed engineer or registered architect.
- 5. See Installation Instructions **YKK020** for size and design pressure limitations.

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Quality Assurance:

The manufacturer has demonstrated compliance of manufacture of products in Accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through **Architectural Testing, Inc.** (FBC Organization #: QUA 1844)

Performance Standards:

The product described herein has been tested per:

- TAS 201-94
- TAS 202-94
- TAS 203-94

Referenced Data:

1. Product Testing performed by Hurricane Test Laboratory, LLC.

Report #: G231-0103-11-R0, Report Date: 04/28/11 Report #: G231-0507-09, Report Date: 07/13/09 Report #: G231-0801-09-R0, Report Date: 11/04/09 Report #: G561-0402-10-R0, Report Date: 04/20/10 Report #: 0231-1117-03, Report Date: 03/29/04

- 2. Product Testing performed by **Architectural Testing, Inc.** Report #: C6629.08-550-18-R0, Report Date: 06/05/13
- 3. Additional Hardware Testing performed by **Architectural Testing, Inc.** Report #: D2090.01-550-18, Report Date: 12/20/13
- 4. Quality Assurance

Architectural Testing, Inc. (FBC Organization #: QUA 1844)

5. Material Certification

Miami-Dade County Notice of Acceptance Eastman Chemical Company (Previously Solutia) Solutia Saflex PVB Interlayer Vanceva Storm (Saflex CP) Interlayer

6. Material Certification

Miami-Dade County Notice of Acceptance E.I. DuPont De Nemours & Co. Inc. SentryGlas Interlayer

SentryGlas Interlayer Butacite PVB Interlayer

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Installation:

1. Approved anchor types and substrates are as follows:

Through Frame Installation:

- A. For 2x wood buck substrate, use **#14 Wood Screw** type installation anchors of sufficient length to achieve a minimum embedment of 1.50" into the wood substrate.
- B. For concrete or masonry substrate where one by (1X), non-structural, wood bucking is employed, use **1/4" diameter ITW Tapcon** type concrete screw anchors of sufficient length to achieve minimum embedment of 1.25" into concrete or masonry.
- C. For concrete or masonry substrate where wood bucking is NOT employed, use 1/4" diameter ITW Tapcon type concrete screw anchors of sufficient length to achieve minimum embedment of 1.25" into concrete or masonry.
- D. For steel stud substrate, use **1/4" TEK Screw** type steel stud anchors of sufficient length to achieve minimum 3 threads penetration beyond steel structure.
- E. For aluminum substrates, use **1/4" TEK Screw** type metal stud anchors of sufficient length to achieve minimum 3 threads penetration beyond aluminum structure.

Refer to Installation Instructions (YKK020) for anchor spacing and more details of the installation requirements.

Design Pressure:

Refer to Installation Instructions (YKK020) for design pressure limitations based on glass type, configuration, and sizes.

Installation Methods:

Refer to Installation Instructions (YKK020) for installation methods, anchor locations, and more details of the installation requirements.