

## **ENGINEERING EXPRESS® (EX) PRODUCT EVALUATION REPORT**

August 14, 2023

Application Number: FL 12549.1  
EX Project Number: 23-61406

Product Manufacturer: Impact Technology Products, Inc.  
Manufacturer Address: 584 SW Crawfish Drive  
Port St Lucie, FL 34953

Product Name & Description: Accordion Shutter with Aluminum or Polycarbonate Blades

### ***Scope of Evaluation:***

This Product Evaluation Report is being issued in accordance with the requirements of the Florida Department of Business and Professional Regulation (Florida Building Commission) Rule Chapter 61G20-3.005, F.A.C., for statewide acceptance per Method 1 (d). The product noted above has been tested and/or evaluated as summarized herein to show compliance with standard ASCE 7-22 (ASD) and the Florida Building Code Eighth Edition (2023) and is, for the purpose intended, at least equivalent to that required by the Standard and Code. Re-evaluation of this product shall be required following pertinent Florida Building Code or ASCE Standard modifications or revisions.

### ***Substantiating Data:***

- **PRODUCT EVALUATION DOCUMENTS**

EX Performance Evaluation document # 23-61406 titled "Accordion Shutter with Aluminum or Polycarbonate Blades", prepared by Engineering Express, Inc., signed & sealed by Frank Bennardo, P.E. is an integral part of this Evaluation Report, pages 1 through 13.

- **TEST REPORTS**

Uniform static structural performance has been tested on aluminum and polycarbonate blades in accordance with ASTM E330-02 / TAS 202 test standards per test report(s) #07-013TAS, 09-001TAS, 09-001 ASTM, 09-018, and 09-021 by Construction Testing Corporation (CTC), signed by Yamil G. Kuri, P.E., as well as test report(s) #AD-11-001 by Blackwater Testing Inc., signed by Yamil G. Kuri, P.E.

Large missile impact resistance and cyclic loading performance have been tested on aluminum and polycarbonate blades in accordance with ASTM E1886-05 & E1996-05 / TAS 201 & 203 test standards per test report(s) #07-013 TAS, 09-001TAS, 09-001 ASTM, 09-018, and 09-021 by Construction Testing Corporation (CTC), signed by Yamil G. Kuri, P.E., as well as test report(s) #AD-11-001 by Blackwater Testing Inc., signed by Yamil G. Kuri, P.E.

Polycarbonate material has been tested and approved under Miami-Dade County Notice of Acceptance #15-0915.08 or current version.

Impact Technology Products, Inc. - Accordion Shutter with Aluminum or Polycarbonate Blades

- **STRUCTURAL ENGINEERING CALCULATIONS**

Structural engineering calculations have been prepared which evaluate the product based on comparative and/or rational analysis to qualify the following design criteria:

1. Minimum Glass Separation
2. Anchor Spacing
3. Maximum Allowable Size/Pressure Combinations
4. Anchor Capacity

### ***Impact Resistance:***

Large / Small Missile Impact Resistance has been demonstrated as evidenced in previously listed test reports, and is accounted for in the engineering design of this product.

### ***Wind Load Resistance:***

This product has been designed to resist wind loads as indicated in the span schedule(s) on the Product Evaluation Document (i.e. engineering drawing).

### ***Installation:***

The product listed above shall be installed in strict compliance with the Performance Evaluation document (i.e. engineering document), along with all components noted therein.

The product components shall be of the material specified in the Performance Evaluation document (i.e. engineering document).

### ***Limitations & Conditions of Use:***

Use of each product shall be in strict accordance with its respective Performance Evaluation document (i.e. engineering document) as noted herein.

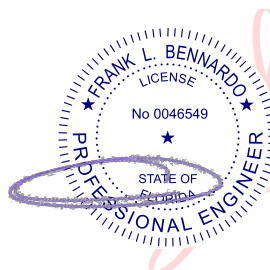
All supporting host structures shall be designed to resist all superimposed loads and shall be of a material listed in each product's respective anchor schedule. Host structure conditions which are not accounted for in each product's respective anchor schedule shall be designed for on a site-specific basis by a registered professional engineer.

All components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times. Any alteration to the respective Performance Evaluation document will invalidate it. This product has been designed for use inside and outside of the High Velocity Hurricane Zone (HVHZ & NON-HVHZ).

Respectfully,

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Frank Bennardo, P.E.  
**ENGINEERING EXPRESS®**  
#PE0046549 | Cert. Auth. 9885



Digitally signed  
by Frank  
Bennardo  
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