



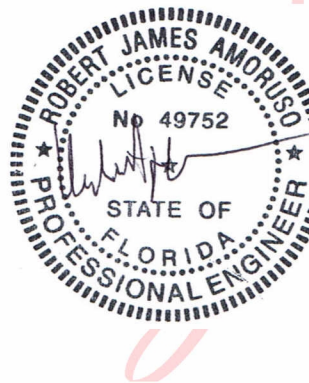
Equivalency of Standards Evaluation to FBC

Date:	October 1, 2015
Report #:	2108-EER
Report Revision No.:	1
Project #:	415-0223 and 415-0711
Product Mfg.:	Storm Depot of America, Inc. DBA Storm Busters® 720 N. Harbor City Blvd. Melbourne, FL 32925
Product Description:	16MM Clearview® Polycarbonate Storm Panels – HVHZ and Non-HVHZ
Product Category:	Shutters
Product Sub-Category:	Storm Panels
Compliance Method:	Product Approval Rule 61G20-3.015 – Equivalency of Standards
Prepared By:	Robert J. Amoruso, P.E. Florida P.E. No. 49752 PTC Product Design Group, LLC, PO Box 520775, Longwood, FL 32752-0775 Florida C of A No. 25935

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

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Digitally signed by
Robert J. Amoruso
DN: cn=Robert J.
Amoruso, o, ou=PTC
Product Design
Group,
email=robert@ptc-
corp.com, c=US
Date: 2015.10.01
15:07:03 -04'00'

Evaluated by:
Robert J. Amoruso, P.E.
FL PE License No. 49752



SCOPE

Evaluate equivalency of testing standards used for the performance testing of Storm Depot of America, Inc. DBA Storm Busters® 16MM Clearview® Polycarbonate Storm Panels for conformance to the 5th Edition (2014) Florida Building Code – Building and Residential Volumes for the following:

- Drawing No. STB0022 for use in Wind Borne Debris Regions **excluding** the High Velocity Hurricane Zone (HVHZ)
- Drawing No. STB0013 for use in Wind Borne Debris Regions **including** the High Velocity Hurricane Zone (HVHZ)

DESCRIPTION OF PRODUCT – INSTALLATION REQUIREMENTS

See PTC Product Evaluation Report No. 2108 (Reference 3) for a full description of the product including testing standards used.

PERFORMANCE AND TESTING STANDARDS SUMMARY

Reference 2 conducted testing to the following standard(s).

1. Structural Testing for non-HVHZ to:
 - a. ASTM E330-02
 - b. ASTM E1886-02
 - c. ASTM E1996-02
2. Structural Testing for non-HVHZ to:
 - a. TAS 201-94
 - b. TAS 202-94
 - c. TAS 203-94
3. Material testing to:
 - a. ASTM D638-03 Testing
 - b. ASTM D1929-96 (Reapproved 2001e1)
 - c. ASTM D2843-99 (Reapproved 2004e1)
 - d. ASTM D635-03
 - e. ASTM G26-96 (withdrawn in 2000 and replaced by ASTM G155)
 - f. ASTM G155-00a, 04a, 05

REFERENCES & SUPPORTING DOCUMENTS

1. Drawings:
 - a. STB0022, Rev. B, dated October 1, 2015, signed and sealed by Robert J. Amoruso, Storm Depot of America, Inc. DBA Storm Busters® 16MM Clearview® Polycarbonate Storm Panels for Non-HVHZ – Installation Anchorage Details



- b. STB0013, Rev. C, dated October 1, 2015, signed and sealed by Robert J. Amoruso, Storm Depot of America, Inc. DBA Storm Busters® 16MM Clearview® Polycarbonate Storm Panel for HVHZ – Installation Anchorage Details

2. Test Reports:

- a. Testing by Certified Testing Laboratories for non-HVHZ to ASTM E330-02, ASTM E1886-02 and ASTM E1996-02 – applicable to Drawing No. STB0022
 - i. CTLA-1570W-1, dated September 11, 2006
 - ii. CTLA-1632W, dated February 9, 2007
 - iii. CTLA-1632W-1, dated February 9, 2007
 - iv. Revisions to CTLA-1632W and CTLA-1632W-1, dated March 12, 2007
- b. Testing by Certified Testing Laboratories for HVHZ to TAS 201-94, TAS 202-94 (Structural Loads only) and TAS 203-94
 - i. CTLA-1570W, dated 9/11/2006, signed and sealed by Ramesh Patel, FL PE License No. 20224 on 9/14/06 – applicable to Drawing No. STB0013
- c. Brett Martin Ltd. Marlon ST Longlife 16mm Triplewall Polycarbonate Sheet Material testing to the following – applicable to Drawing No. STB0013 and STB0022
 - i. ATI Test Report Number ATI 67803.01-106-18, dated 11/28/2006
 - 1. ASTM D638-03 Testing
 - 2. ASTM D1929-96 (Reapproved 2001e1)
 - 3. ASTM D2843-99 (Reapproved 2004e1)
 - 4. ASTM D635-03
 - ii. PRI Construction Materials Test Report Number BML-001-02-01, dated July 23, 2007
 - 1. ASTM D638 (revision not recorded in report)
 - 2. ASTM G26-96 (withdrawn in 2000 and replaced by ASTM G155)
 - 3. ASTM G155-00a, 04a, 05

3. Reports

- a. PTC Report No. 2108, Rev. 1, Product Evaluation Report for Storm Depot of America, Inc. DBA Storm Busters® 16MM Clearview® Polycarbonate Storm Panels for conformance to the Current Edition Florida Building Code – Building and Residential Volumes, dated October 1, 2015, signed and sealed by Robert J. Amoruso.



Product Conformance Evaluation to 5th Edition (2014) FBC/FRC

The table below lists the HVHZ performance testing standard revision levels used in testing (Reference 2.b) and compares them to the revision level in the 5th Edition (2014) FBC – Test Protocols.

HVHZ Testing	
Standard Used in Testing	Standard as Listed in 2014 FBC – Test Protocols
TAS 201-1994	TAS 201-1994
TAS 202-1994	TAS 202-1994
TAS 203-1994	TAS 203-1994

Based upon my review of the test reports, test methods and results as well as the standards used in testing and those currently required in the Florida Building, Residential Code and HVHZ Testing Protocols, the following is concluded.

- The testing requirements in the current edition of the Florida Building Code – Testing Protocols TAS 201, TAS 202 and TAS 203 have been met.

Structural testing (Reference 2.a) was conducted to the following standards (as documented in Product Evaluation Report No. 2108 (References 3)).

<u>Standard</u>	<u>Year</u>
ASTM E330	2002
ASTM E1886	2002
ASTM E1996	2002

Based upon a review of (a) Chapter 35 of the 5th Edition (2014) Florida Building Codes and (b) Chapter 46 of the 5th Edition (2014) Florida Residential Codes the following is concluded.

- Testing standards listed above are all present in Chapter 35 of the 5th Edition (2014) Florida Building Code and Chapter 46 of the 5th Edition (2014) Florida Residential Code at the revision years shown.
- Therefore, testing to the above standards is in compliance with the 5th Edition (2014) FBC and 5th Edition (2014) FRC.



Materials testing (Reference 2.c) was conducted to the following standards as documented in Product Evaluation Report No. 2108 (References 3).

PLASTICS TESTING		5th Edition (2014) Code		Ref. 2.c
Organization	Document	FBC	FRC	
ASTM	D635	06	n/a	03
	D1929	96(2001)e1	n/a	96(2001)e1
	D2843	99(2004)e01	n/a	99(2004)e1
	D638	03	n/a	03
	G155	05a	n/a	05

Based upon a review of (a) Chapter 35 of the 5th Edition (2014) Florida Building Codes and (b) Chapter 46 of the 5th Edition (2014) Florida Residential Codes the following is concluded.

- Testing standards listed above are all present in Chapter 35 of the 5th Edition (2014) Florida Building Code but are not listed in Chapter 46 of the 5th Edition (2014) Florida Residential Code.
- The testing standard revision levels listed above and used for testing of product(s) included in this evaluation have been compared to those currently listed in the 5th Edition (2014) Florida Building Code. Based upon that review, it was determined that the test results documented in Reference 2.c test reports demonstrate code compliance to the 5th Edition (2014) FBC with regard to testing requirements, results reporting and results interpretation. No changes exist in the listed testing standards that would necessitate re-testing of the product(s) included in this evaluation.
- Therefore, all test standards listed above and test results associated with this product are valid for and demonstrate compliance to the 5th Edition (2014) Florida Building Code.