

WALTER A. TILLIT, JR., P.E.

PRODUCT EVALUATION REPORT

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FL P.E. License No. 44167
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REPORT NO.: 11-1214.03
DATE: December 14, 2011
PRODUCT CATEGORY: Hurricane Shutters
PRODUCT SUB-CATEGORY: Storm Panels
PRODUCT NAME: Clear Bertha Storm panel (2' Deep)
MANUFACTURER: Eastern Metal Supply, Inc.
4268 Westroads Drive
West Palm Beach, Florida 33407

1. PURPOSE OF EVALUATION:

This is a Product Evaluation Report (revises FL 6968-R1 with report # 07-0905.02) issued by **Walter A. Tillit, Jr., P.E.** (System ID # 1906) to **Eastern Metals Supply Inc.**, manufacturer, based on Rule Chapter No. 9B-72.070, Method 1d of the State of Florida Product Approval, Department of Community Affairs-Florida Building Commission.

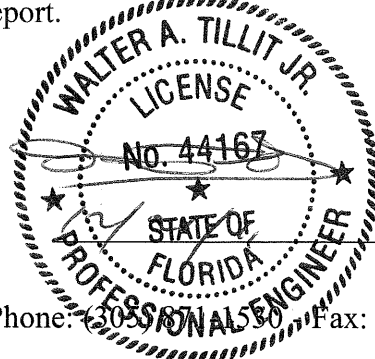
This product is being issued an Evaluation Report as described herein, and has been verified for compliance in accordance with the 2010 Edition of the Florida Building Code, and to verify that the product is for the purpose intended at least equivalent to that required by the Code.

This Product Evaluation Report shall be subject to review and revision in case of a Building Code Change that may affect its limitations and conditions.

2. EVIDENCE SUBMITTED:

2.1. PRODUCT EVALUATION DOCUMENT (P.E.D.):

Drawing No. 11-237, titled "Clear Bertha Storm panel (2' Deep)", sheets 1, thru 6 of 6 prepared by Tilteco, Inc.; signed and sealed by Walter A. Tillit, Jr., P.E.; dated 12/09/11. This drawing is an integral part of this Evaluation Report.



2.2. TEST REPORTS:

Large missile impact load tests were performed per section 1609.1.2 of the Florida Building Code. Uniform static loads as per Protocol ASTM E-330. Test reports prepared by American Testing Lab of South

Florida, Report No. 0615.01-11, dated 9/20/11, signed by Keith Harker and signed and sealed by Julio Gonzales P.E. American Testing Lab., Report # 0302.01, dated 12/13/11 signed by Keith Owen and signed and sealed by David Johnson, P.E. and Henry Hattem, P.E., Report No. ETC 01-753-10724.1, dated, July 28, 2004, signed and sealed by Joseph L. Doldan, P.E. for Self Ignition Temperature, Rate of Burn and Smoke Density tests of G.E. Plastics Polycarbonate as well as ETC 05-718-16934.1, dated 11/10/05, signed and sealed by Joseph Labora Doldan, P.E., for Dow Chemical – Calibre 302 V-6 (UV Stabilized); as well Miami-Dade County product approval for Bayer Material / Science LLC, owner of Sheffield Plastics, producer of Makrolon 1804 Polycarbonate, per letter from Bayer to Transparent Protection Systems, Inc, dated 04/18/06, certifying ownership, as per sections 202 and 2602 of the Florida Building Code.

Mill certificates from Easco Aluminum (extruders) certifying aluminum alloys & temper for components.

2.3. STRUCTURAL ENGINEERING CALCULATIONS:

On Clear Bertha Storm panel (2' Deep) for maximum panel length vs. design wind load, as well as maximum anchor spacing vs. design wind load and panel length based on rational and comparative analysis, and in accordance with section 1604 of the Florida Building Code. Calculations prepared by Tilteco, Inc., dated December 6, 2011, signed and sealed by Walter A. Tillit, Jr., P.E.

3. MISSILE IMPACT RESISTANCE:

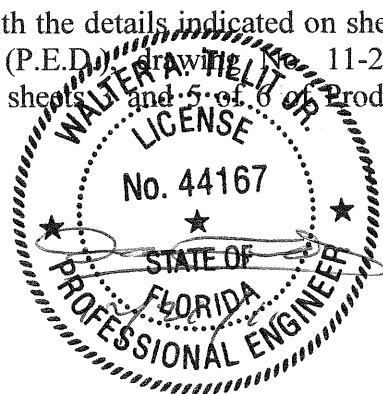
Large missile impact under section 1609.1.2 of the Florida Building Code, as per ASTM E 1996 Standard.

4. WIND LOADS RESISTANCE:

Clear Bertha Storm panel (2' Deep) has been verified to sustain wind pressures. Maximum panel length shall be as indicated on sheet 3 of 6 of Product Evaluation Document (P.E.D.), drawing No. 11-237. Maximum Anchor Spacing shall be as indicated on sheet 6 of 6 of Product Evaluation Document (P.E.D.), drawing No. 11-237. Clear Bertha Storm Panel has been verified for code compliance to work as a non-porous storm shutter assembly, as per ASTM E 1996 Standard.

5. INSTALLATION:

Installation shall be performed strictly in accordance with the details indicated on sheets 3, 4 and 5 of 6 of Product Evaluation Document (P.E.D.), drawing No. 11-237. Minimum separation to glass shall be as indicated on sheets 4 and 5 of 6 of Product Evaluation Document (P.E.D.), drawing No. 11-237.



6. MATERIAL CHARACTERISTICS AND SPECIFICATIONS:

Shall be strictly in accordance with General Notes and Components indicated on sheet 1 and 2 of 5, of Product Evaluation Document (P.E.D.), drawing No. 11-237.

Anchor specifications shall be as indicated on sheets 1 and 6 of 6 of Product Evaluation Document (P.E.D.), drawing No. 11-237.

7. LIMITATIONS AND CONDITIONS OF USE:

7.1. Shall be strictly in compliance with General Notes No. 1, 7, 8, 9, 10, 11, 12 and 13, indicated on sheet 1 of 6, of Product Evaluation Document (P.E.D.), drawing No. 11-237 prepared by Tilteco, Inc. and signed and sealed by Walter A. Tillit, Jr., P.E.

7.2. Product **shall not** be installed within HIGH VELOCITY HURRICANE ZONES as defined on section 1620.2 of the Florida Building Code.

7.3. Product shall only be installed into poured concrete, concrete block, and wood frame structures.

Product Evaluation Report prepared by Walter A. Tillit, Jr., P.E. (Florida License No. 44167), President of Tilteco, Inc. (Florida EB-0006719).

