

CLIENT: Arxx Corporation
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Canada

Attn: Chris Palmer

Evaluation Report No: RJ0270-4

Date: July 15, 2009

Product ID: The following American PolySteel products for evaluation are identified as:
PS-3000: 6", 8" and 10" Waffle-Grid Insulating Concrete Forms
PS-4000: 6" and 8" Flat-Wall Insulating Concrete Forms

For a more detailed description please see page 2

AUTHORIZATION: Authorized by Chris Palmer, dated June 26, 2009.

EVALUATION REQUESTED: Engineering services/evaluation of American PolySteel ICF products to be approved for use in a High Velocity Hurricane Zone (HVHZ) under the 2007 Florida Building Code.

RESULTS: The plastic and plastic foam used in American PolySteel products meets the necessary HVHZ requirements under the 2007 Florida Building Code.

Signed

Chris Bowness, P.E.
Florida P.E. # 64748

CP
8-25-09

EVALUATION PURPOSE

The purpose of this evaluation is to evaluate American PolySteel's products (now owned by Arxx Corporation) to be approved for use in High Velocity Hurricane Zones under the 2007 Florida Building Code. This will include a review of all applicable test results for compliance under the HVHZ requirements in the 2007 Florida Building Code.

PRODUCT DESCRIPTION

PS-3000: Insulating concrete form wall assembly. A stay-in-place form for 6", 8" or 10" thick cast-in-place reinforced concrete wall for residential and commercial construction. Design and installation to be in accordance with ICC ES NER-515 Evaluation Report and ACI-318, Building Code Requirements for Structural Concrete. Complies with FBC Section 1626.4, #4, missile impact test, and FBC Section 2612, HVHZ Requirements.

PS-4000: Insulating concrete form wall assembly. A stay-in-place form for a 6" or 8" thick cast-in-place reinforced concrete wall for residential and commercial construction. Design and installation to be in accordance with the ICC ES NER-515 Evaluation Report and ACI-318, Building Code Requirements for Structural Concrete. Complies with FBC Section 1626.4, #4, missile impact test, and FBC Section 2612, HVHZ Requirements.

HIGH VELOCITY HURRICANE ZONE REQUIREMENTS

2007 Florida Building Code

Section 1919.3: All structures of reinforced concrete, including prestressed concrete, shall be designed and constructed in accordance with the provision of ACI 318.

Section 2612.2: An approved foam plastic shall have a minimum self-ignition temperature of 650°F or greater when tested in accordance with ASTM D 1929. It shall have a smoke density rating not greater than 450 and a flame spread of 75 or less when tested in accordance with ASTM E 84.

An approved plastic shall have a minimum self-ignition temperature of 650°F or greater when tested in accordance with ASTM D 1929. It shall have a smoke density rating not greater than 450 when tested in accordance with ASTM E 84.

Section 2612.3: Foam plastics

Section 2612.3.1.1 Foam plastics used in building construction shall have a flame spread rating of not more than 75 and shall have a smoke-developed rating of not more than 450 when tested in the maximum thickness intended for use in accordance with ASTM E 84.

Section 2612.3.2.4.5 Exterior Walls of multistory buildings. The foam plastic core shall have a flame spread rating of 25 or less and a smoke-developed rating of 450 or less as determined in accordance with ASTM E 84.

RESULTS:

The following are the test results of the plastic and EPS foam suppliers used in the PolySteel Products.

ASTM D-1929 BASF: BF-Grade Styropor Expandable Polystyrene.
 SGS U.S. Testing: Report Number: 092897
 ASTM D-1929 Results: Self-Ignition Temperature= 910°F
HVHZ requirements met: Yes

ASTM D-1929 Huntsman
Expandable Polymers: EPS Foam Testing on Beads No. 5640 & 5654
 RADCO: Report Number RAD-2725
 ASTM D-1929 Results for No. 5640: Self-Ignition Temperature= 752°F
HVHZ requirements met: Yes
 ASTM D-1929 Results for No. 5654: Self-Ignition Temperature= 752°F
HVHZ requirements met: Yes

ASTM E 84: The forms are stated to have a minimum average density of 1.5 pcf, with a flame spread index of 25 or less and a maximum smoke development index of 450 or less when tested under ASTM E 84 according to the ICC-ES American PolySteel report NER-515, issued March 1, 2006.
HVHZ requirements met: Yes

The results show that the plastic and foam plastic suppliers for American PolySteel products meet the requirements stipulated in the 2007 Florida Building Code. Therefore they are allowable to be approved for use in High Velocity Hurricane Zones.

End of Report