

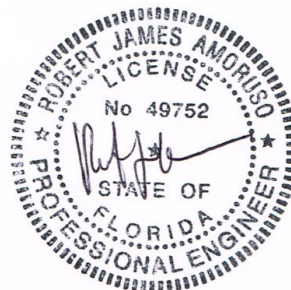


Equivalency Evaluation Report to 8th Edition (2023) FBC

Date:	June 1, 2023
PTC Report No.:	1551-EER
Report Revision No.:	6
PTC Project No.:	422-0609
Product Mfg.:	Permatherm, Inc. 269 Industrial Park Rd. Monticello, GA 31064
Product Name:	E.P.S. Core/Galvanized Steel Skin Structural Insulated Panels (SIPs)
Product Category:	Structural Components
Product Sub-Category:	Structural Wall
Compliance Method:	Product Approval Rule 61G20-3.015(4)(d) - Equivalence of Standards
Prepared By:	Robert J. Amoruso, P.E. Florida P.E. License Number 49752 PTC Product Design Group, LLC FBPE Certification of Authorization No. 25935

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by Robert J
Amoruso
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Evaluated by:
Robert J. Amoruso, P.E.
Florida P.E. License Number 49752

SCOPE

Evaluate equivalency of Testing Standards employed in the parameter testing of Permatherm, Inc. Structural Insulated Panels (SIPs) used as structural wall panels.

SUPPORTING DOCUMENTS

1. Drawings
 - a. Drawing No. PERM0001, Original Issue, dated 6/26/18, signed and sealed by Robert J. Amoruso, P.E.
2. Testing
 - a. Architectural Testing Report No. 87559.02-119-16, Revision 1, dated 07/10/09, *Performance Test Report: 4 in, 6 in, and 8 in SIPs.*
 - b. Farabaugh Engineering and Testing, Inc. Report No. T153-07, dated 3/26/07, *ASTM E72-02 Racking Load Test.*
3. Reports
 - a. PTC Product Design Group, LLC Report No. 1560, Rev. 3, Dated 4/14/15, *E.P.S. Core/Galvanized Steel Skin Structural Insulated Panels (SIPs) - Structural Design Parameter Evaluation.*
 - b. PTC Product Design Group, LLC Report No. 1551, Rev. 6, Dated 6/1/23, *E.P.S. Core/Galvanized Steel Skin Structural Insulated Panels (SIPs) - Product Evaluation Report*
4. References
 - a. Testing (Ref. 2.a)
 - i. ASTM A 370-08a Standard Test Methods and Definitions for Mechanical Testing of Steel
 - ii. ASTM C 273-00, Standard Test Method for Shear Properties of Sandwich Core Materials
 - iii. ASTM C297-04 Standard Test Method for Tensile Strength of Sandwich Constructions
 - iv. ASTM C 578-08, Standard for Rigid, Cellular Thermal Insulation
 - v. ASTM D 1037-99, Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials
 - vi. ASTM E 72-05, Test Conducting Strength Tests of Panels for Building Construction
 - vii. ASTM E 661-03, Standard Test Method for Performance of Wood and Wood-Based Floor and Under Concentrated Static and Impact Load
 - viii. AISI-North American Specification for the Design of Cold-Formed Steel Structural Members 2001 Edition

- b. Testing (Ref. 2.b)
 - i. ASTM E 72- 02, Test Conducting Strength Tests of Panels for Building Construction
- 5. Design Standards (Ref. 2.a)
 - a. AISI-North American Specification for the Design of Cold-Formed Steel Structural Members 2007 Edition, S100-07 / S1-10 and S2-10
 - i. **Ref. 3a evaluation reviewed requirements for AISI S100-16, S1-18 in conformance with the 8th Edition (2023) FBC and 8th Edition (2023) FRC and found the existing analysis in conformance with those requirements of AISI S100-16, S1-18.**

Equivalency Evaluation

Performance Testing Standards

The following test standards used in Reference 2.a & 2.b (listed in 4.a & 4.b) have different revision levels than those required by the 8th Edition (2023) FBC and/or 8th Edition (2023) FRC.

- ASTM C 578-08, Standard for Rigid, Cellular Thermal Insulation

Revision Levels in 8th Edition (2023) FBC and/or 8th Edition (2023) FRC are:

- ASTM C 578-15, Standard for Rigid, Cellular Thermal Insulation

Based on a review of the above, it was determined that no substantive changes exist that would affect the testing results obtained. Therefore, the results obtain are in compliance with the 8th Edition (2023) FBC and/or 8th Edition (2023) FRC.

The remaining test standards used in Reference 2.a or 2.b do not have corresponding equivalents in either Chapter 35 of the 8th Edition (2023) FBC or Chapter 43 of the 8th Edition (2023) FRC. They are however consistent with the intents and purposes of the 8th Edition (2023) FBC and/or 8th Edition (2023) FRC.

Design Standards

The following design standard (Ref. 5.a) used in Ref. 3.a engineering evaluation of the Structural Insulated Panels.

- AISI-North American Specification for the Design of Cold-Formed Steel Structural Members 2007 Edition, S100-07 / S1-10 and S2-10

Revision Levels in 8th Edition (2023) FBC and/or 8th Edition (2023) FRC are:

- North American Specification for the Design of Cold-formed Steel Structural Members
AISI, S100-16, S1-18.

Based on a review of the above, it was determined that no substantive changes exist that would affect the engineering evaluation results obtained. Therefore, the results obtained follow the 8th Edition (2023) FBC and/or 8th Edition (2023) FRC.