



EXTERIOR RESEARCH & DESIGN, LLC.

Certificate of Authorization #9503

353 CHRISTIAN STREET, UNIT 13

OXFORD, CT 06478

(203) 262-9245

EVALUATION REPORT

ICP Adhesives & Sealants, Inc.

12505 NW 44th Street
Coral Springs, FL 33065
(888) 774-1419

Evaluation Report 14300.04.17-R1

FL22256-R1

Date of Issuance: 04/13/2017

Revision 1: 10/12/2017

SCOPE:

This Evaluation Report is issued under **Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code and Florida Building Code, Residential Volume. The products described herein have been evaluated for compliance with the **6th Edition (2017) Florida Building Code** sections noted herein.

DESCRIPTION: POLYSET® BOARD-MAX

LABELING: Labeling shall be in accordance with the requirements the Accredited Quality Assurance Agency noted herein.

CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance documentation changes, or provisions of the Code that relate to the product change. Acceptance of this Evaluation Report by the named client constitutes agreement to notify Robert Nieminen, P.E. if the product changes or the referenced Quality Assurance documentation changes. Trinity|ERD requires a complete review of this Evaluation Report relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Evaluation Report number preceded by the words "Trinity | ERD Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

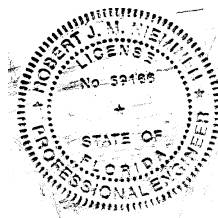
INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 3, plus a 4-page Appendix.

Prepared by:

Robert J.M. Nieminen, P.E.

Florida Registration No. 59166, Florida DCA ANE1983



The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 10/12/2017. This does not serve as an electronically signed document.

CERTIFICATION OF INDEPENDENCE:

1. Exterior Research & Design, LLC. d/b/a Trinity | ERD does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. Exterior Research & Design, LLC. d/b/a Trinity | ERD is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither Trinity|ERD nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

ROOFING COMPONENT EVALUATION:
1. SCOPE:
Product Category: Roofing

Sub-Category: Cements-Adhesives-Coatings

Compliance Statement: POLYSET® BOARD-MAX, as produced by ICP Adhesives & Sealants, Inc., has demonstrated compliance with the 6th Edition (2017) Florida Building Code through testing in accordance with the Standards set forth herein. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

<u>Sections</u>	<u>Property</u>	<u>Standard</u>	<u>Year</u>
1504.3.1	Wind	FM 4474	2011
1504.3.1	Wind	UL 1897	2012

3. REFERENCES:

<u>Entity</u>	<u>Examination</u>	<u>Reference</u>	<u>Date</u>
FM (TST 1867)	FM 4474 / FM 4470	3016663	04/22/2004
FM (TST 1867)	FM 4474 / FM 4470	3026979	02/22/2007
FM (TST 1867)	FM 4474 / FM 4470	RR201006	06/09/2015
UL, LLC. (TST 9628)	UL 1897	4786901558	04/23/2015
UL, LLC. (TST 9628)	UL 1897	TGIK.R39032	01/05/2017
UL, LLC. (QUA 9625)	Quality Assurance	MLA File No. R39032	03/27/2017
UL, LLC. (QUA 9625)	Quality Assurance	Inspection Report	01/23/2017
UL, LLC. (QUA 9625)	Quality Assurance	Service Confirmation	Exp. 04/06/2020

4. PRODUCT DESCRIPTION:

4.1 POLYSET® BOARD-MAX is a two-part, low viscosity, all water-blown, spray applied polyurethane adhesive used for attachment of rigid insulation boards to various substrates.

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither Trinity|ERD nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.
- 5.2 This Evaluation Report is not for use in FBC HVHZ jurisdictions.
- 5.3 Fire classification is not covered in this Evaluation Report; refer to a current Roofing Materials Directory for fire ratings of this product.
- 5.4 The roof cover adhered over the final layer of roof insulation shall be installed in accordance with the roof cover manufacturer's Florida Product Approval and shall be compliant with **FBC Chapter 15**, including fire classification, wind resistance, impact resistance and physical properties.
- 5.5 The roof cover adhered over the final layer of roof insulation shall be Approved for use with the specific insulation components.
- 5.6 The overall wind performance of the completed roof assembly shall be the lesser of maximum design pressure listed in Appendix 1 compared to that for the roof cover adhered to the referenced insulation, as documented through an FBC Approved Test Laboratory, Evaluation Agency or Certification Agency.
- 5.6.1 Elevated pressure zones shall be addressed in accordance with **ANSI/SPRI WD-1** or **FM Loss Prevention Data Sheet 1-29**.

- 5.7 For existing substrates in recover or re-roof installation, the existing roof surface or existing roof deck shall be examined by a representative of **ICP Adhesives & Sealants, Inc.** for compatibility and bond performance with the selected adhesive, and the existing roof system (for recover) shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through field uplift testing in accordance with **ANSI/SPRI IA-1, ASTM E907, FM Loss Prevention Data Sheet 1-52 or Testing Application Standard TAS 124.**
- 5.8 All products in the roof assembly shall have quality assurance audit in accordance with the FBC and **F.A.C. Rule 61G20-3.**

6. INSTALLATION:

- 6.1 **POLYSET® BOARD-MAX** shall be installed in accordance with **ICP Adhesives & Sealants, Inc.** published installation instructions, subject to the limitations outlined in Section 5.
- 6.2 The existing deck or roof surface shall be clean, smooth and free of foreign debris. Existing roof decks or roof surfaces shall be examined by a representative of **ICP Adhesives & Sealants, Inc.** for suitability of use with **POLYSET® BOARD-MAX.**

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction in order to properly evaluate the installation of this product.

7. MANUFACTURING LOCATIONS:

Houston, TX

9. QUALITY ASSURANCE ENTITY:

UL, LLC. – QUA9625; (414) 248-6409; karen.buchmann@ul.com

- THE FOUR (4) PAGES THAT FOLLOW FORM PART OF THIS EVALUATION REPORT -

The following notes apply to the systems outlined herein:

1. The performance data contained herein pertains to substrate interfaces bonded with POLYSET® BOARD-MAX. If a roof system's Product Approval documentation does not specifically include POLYSET® BOARD-MAX with a particular substrate or interface, the data noted herein can be used to compare with the maximum design pressure of the roof assembly's interface with the top insulation layer. The lesser of the two applies.
2. Roof decks shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
3. Unless otherwise noted, data pertains to POLYSET® BOARD-MAX applied as follows:
 - FULL coverage: 1 to 1.25 gal/square
 - RIBBON applied: Continuous 3-inch wide ribbons, 12-inch o.c.
4. Bonded polyisocyanurate insulation boards shall be maximum 4 x 4 ft.
5. For partially bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed the Zone 1 design pressure determined in accordance with FBC Chapter 16, and Zones 2 and 3 shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are ANSI/SPRI WD1 and FM Loss Prevention Data Sheet 1-29.
6. For existing substrates in recover or re-roof installation, the existing roof surface or existing roof deck shall be examined by a representative of ICP Adhesives & Sealants, Inc. for compatibility and bond performance with the selected adhesive, and the existing roof system (for recover) shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through field uplift testing in accordance with ANSI/SPRI IA-1, ASTM E907, FM Loss Prevention Data Sheet 1-52 or Testing Application Standard TAS 124.
7. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per FBC 1504.9 has already been applied). Refer to FBC 1609 for determination of design wind loads.

**TABLE 1: POLYSET® BOARD-MAX PERFORMANCE DATA (NOTE 1)
NEW CONSTRUCTION OR RE-ROOF (TEAR-OFF)**

Substrate (Notes 2 & 6)	Base Insulation		Top Insulation		MDP (psf) (Note 7)
	Type	Attach (Note 3)	Type	Attach (Note 3)	
15/32" APA rated plywood	Two (2) layers Atlas "ACFoam II", totaling 2.6-inch	FULL	None	N/A	-105.0
15/32" APA rated plywood	Min. 2.6-inch Atlas "ACFoam II"	FULL	None	N/A	-120.0
22 ga., Type B steel	Min. 0.25-inch G-P Gypsum "Dens Deck" or "Dens Deck" Prime or USG Corp "SECUROCK Gypsum Fiber Roof Board"	FULL	Min. 1.3-inch Atlas "ACFoam II"	FULL	-67.5
22 ga., Type B steel	Min. 1.3-inch Atlas "ACFoam II"	FULL	Min. 0.25-inch G-P Gypsum "Dens Deck" or "Dens Deck" Prime or USG Corp "SECUROCK Gypsum Fiber Roof Board"	FULL	-67.5
22 ga., Type B steel	Min. 1.3-inch Atlas "ACFoam II"	FULL	None	N/A	-75.0
Min. 2,500 psi structural concrete	(Optional) One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	RIBBON	Min. 2-inch Atlas "ACFoam Composite/FB" or Soprema "SOPRA-ISO FB s"	RIBBON	-165.0
Min. 2,500 psi structural concrete	One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	RIBBON	Min. 0.5-inch Georgia Pacific "FiberBase HD"	RIBBON	-165.0
Min. 2,500 psi structural concrete	One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	RIBBON	Min. 0.5-inch USG Corp "SECUROCK Gypsum Fiber Roof Board"	RIBBON	-195.0
Min. 2,500 psi structural concrete	One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	RIBBON	Min. 0.5-inch G-P Gypsum "Dens Deck Prime"	RIBBON	-232.5
Min. 2,500 psi structural concrete	One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	RIBBON	Min. 0.5-inch G-P Gypsum "Dens Deck"	RIBBON	-240.0

**TABLE 1: POLYSET® BOARD-MAX PERFORMANCE DATA (NOTE 1)
NEW CONSTRUCTION OR RE-ROOF (TEAR-OFF)**

Substrate (Notes 2 & 6)	Base Insulation		Top Insulation		MDP (psf) (Note 7)
	Type	Attach (Note 3)	Type	Attach (Note 3)	
Min. 2,500 psi structural concrete	One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	FULL	Min. 0.5-inch International Buildrite "Roof Rite" or Versico "Versico Recovery Board"	FULL	-157.5
Min. 2,500 psi structural concrete	One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	FULL	Min. 0.5-inch G-P Gypsum "Dens Deck"	FULL	-285.0
Min. 2,500 psi structural concrete	(Optional) One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	FULL	Min. 2-inch Atlas "ACFoam Composite/FB" or Soprema "SOPRA-ISO FB s"	FULL	-307.5
Min. 2,500 psi structural concrete	One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	FULL	Min. 0.5-inch Georgia Pacific "FiberBase HD"	FULL	-307.5

TABLE 2: POLYSET® BOARD-MAX PERFORMANCE DATA (NOTE 1)

RECOVER APPLICATIONS

Deck (Note 2)	Existing Roof (Note 6)	Base Insulation		Top Insulation		MDP (psf) (Note 7)
		Type	Attach (Note 3)	Type	Attach (Note 3)	
22 ga. steel	Existing asphalt built-up roof	(Optional) One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	FULL	Min. 0.5-inch G-P Gypsum "Dens Deck" or "Dens Deck Prime", USG Corp "SECUROCK Gypsum Fiber Roof Board", Georgia Pacific "FiberBase HD", International Buildrite "Roof Rite" or Versico "Versico Recovery Board" or Min. 2-inch Atlas "ACFoam Composite/FB" or Soprema "SOPRA-ISO FB s"	FULL	-45.0
Min. 2,500 psi structural concrete	Existing asphalt built-up roof	(Optional) One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	RIBBON	Min. 0.5-inch Georgia Pacific "FiberBase HD" or Min. 2-inch Atlas "ACFoam Composite/FB" or Soprema "SOPRA-ISO FB s"	RIBBON	-135.0
Min. 2,500 psi structural concrete	Existing asphalt built-up roof	(Optional) One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	RIBBON	Min. 0.5-inch G-P Gypsum "Dens Deck" or "Dens Deck Prime" or USG Corp "SECUROCK Gypsum Fiber Roof Board"	RIBBON	-195.0
Min. 2,500 psi structural concrete	Existing asphalt built-up roof	(Optional) One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	FULL	Min. 0.5-inch International Buildrite "Roof Rite" or Versico "Versico Recovery Board"	FULL	-157.5
Min. 2,500 psi structural concrete	Existing asphalt built-up roof	(Optional) One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	FULL	Min. 0.5-inch Georgia Pacific "FiberBase HD" or Min. 2-inch Atlas "ACFoam Composite/FB" or Soprema "SOPRA-ISO FB s"	FULL	-210.0
Min. 2,500 psi structural concrete	Existing asphalt built-up roof	(Optional) One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "Polyiso HP-H", "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "Polyisocyanurate MP-H" or "VersiCore MP-H"	FULL	Min. 0.5-inch G-P Gypsum "Dens Deck" or "Dens Deck Prime" or USG Corp "SECUROCK Gypsum Fiber Roof Board"	FULL	-232.5