



NEMO|etc.

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ENGINEER

EVALUATE

TEST

CONSULT

P.E. EVALUATION REPORT (PEER)

BASF CORP

1703 Crosspoint Avenue
Houston, TX 77054
(713) 383-4568

PEER-BASF-001.A.R3

FL22254-R3 (NON-HVHZ)

Date of Issuance: 04/13/2017

Revision 3: 08/06/2023

SCOPE:

This P.E. Evaluation Report (henceforth 'PEER') is issued under **F.A.C 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. The product described herein has been evaluated for compliance with the **8th Edition (2023) Florida Building Code** [sections noted herein](#).

DESCRIPTION: ELASTOTITE® G 20140 Roofing Adhesive (NON-HVHZ)

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

CONTINUED COMPLIANCE: This PEER is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our PEERs by the named client constitutes agreement to notify NEMO ETC, LLC of any changes to the product(s), the Quality Assurance or the production facility location(s). NEMO ETC, LLC requires a complete review of its PEER relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Florida Product Approval Number (FL#) preceded by the words "Nemo P.E. Evaluated" may be displayed in advertising literature. If any portion of the PEER is displayed, then it shall be done in its entirety.

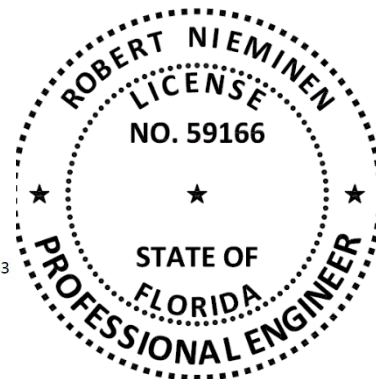
INSPECTION: Upon request, a copy of this entire PEER shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This PEER consists of pages 1 through 4, plus a 4-page Appendix.

Prepared by:

Digitally signed
by Robert
Nieminen
Date: 2023.08.06
'11:06:55 -04'00

This item has been digitally signed and sealed by Robert Nieminen, P.E.
Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.
Robert Nieminen, Florida P.E. 59166, FBC ANE1983
NEMO ETC, LLC, Florida CA #32455



CERTIFICATION OF INDEPENDENCE:

1. NEMO ETC, LLC 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. NEMO ETC, LLC 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 NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this PEER, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

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ROOFING COMPONENT EVALUATION:
1. SCOPE:

Product Category: Roofing

Sub-Category: Cements-Adhesives-Coatings

Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer

Compliance Statement: ELASTOTITE® G 20140 Roofing Adhesive, as produced by BASF CORP, has demonstrated compliance with the following sections of the **8th Edition (2023) Florida Building Code** through testing in accordance with the Standards set forth herein. Compliance is subject to the [Installation Requirements](#) and [Limitations of Use](#) set forth herein.

2. STANDARDS:

SECTIONS	PROPERTY	STANDARD	YEAR
1504.3.1	Wind	FM 4474	2011
1504.3.1	Wind	UL 1897	2015

3. REFERENCES:

ENTITY	EXAMINATION	REFERENCE	DATE
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. (QUA 9625)	Quality Assurance	Service confirmation	09/30/2021
UL, LLC. (QUA 9625)	Quality Assurance	Florida BCIS	current

4. PRODUCT DESCRIPTION:

TABLE 1: EVALUATED ADHESIVES		
PRODUCT	DESCRIPTION	PLANT(S)
ELASTOTITE® G 20140 Roofing Adhesive	A two-part, low viscosity, water-blown, spray applied polyurethane adhesive for bonding approved roof insulations to approved substrates	Houston, TX

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this PEER, or previous versions thereof, is/was used for permitting or design guidance. PEERs are not to be construed as representing any attributes not specifically listed, nor are PEERs to be construed as an endorsement of the subject, or a recommendation for its use. There is no warranty by NEMO ETC, LLC or Robert Nieminen, P.E., express or implied, as to any finding or other matter in this PEER, or as to any product covered by the PEER.
- 5.2 This PEER is not for use in FBC High Velocity Hurricane Zone jurisdictions, as defined in FBC Chapter 2 (Broward and Miami-Dade Counties).
- 5.3 This PEER pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- 5.4 This PEER does not include evaluation of fire classification. Refer to **FBC 1505** for requirements and limitations regarding roof assembly fire classification. Refer to **FBC 2603** for requirements and limitations concerning the use of foam plastic insulation.
- 5.5 This PEER does not include evaluation of roof edge termination. Refer to **FBC 1504.5** for requirements and limitations regarding edge securement for low-slope roofs.

- 5.6 Refer to **FBC 1511** for requirements and limitations regarding recover installations.
- 5.6.1 For mechanically attached components over existing roof decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Testing shall be in accordance with [ANSI/SPRI FX-1](#) or [Testing Application Standard TAS 105](#).
- 5.6.2 For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, 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](#) shall be conducted on mock-ups of the proposed new roof assembly.
- 5.6.3 For bonded insulation or membrane over existing substrates in a recover installation, the existing roof system 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 [ASTM E907](#), [FM Loss Prevention Data Sheet 1-52](#) or [Testing Application Standard TAS 124](#).
- 5.7 Refer to Appendix 1 for system attachment requirements for wind load resistance.
- 5.7.1 “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.
- 5.7.2 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.
- 5.7.3 For mechanically attached components or partially-bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 PRIME design pressure determined in accordance with **FBC Chapter 16**. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are [ANSI/SPRI WD1](#), [FM Loss Prevention Data Sheet 1-29](#), [Roofing Application Standard RAS 117](#) or [RAS 137](#). Assemblies marked with an asterisk* carry the limitations set forth in **Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29 (February 2020)** for Zone 2/3 enhancements.
- 5.7.4 For assemblies with all components fully bonded in place, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with **FBC Chapter 16**. No rational analysis is permitted for these systems.
- 5.8 All components in the roof assembly shall have quality assurance audit in accordance with **F.A.C. Rule 61G20-3**. Refer to the Product Approval of the component manufacturer for components listed in Appendix 1 that are produced by a Product Manufacturer other than the report holder on [Page 1](#) of this PEER.
- 5.8.1 The roof cover adhered over the final layer of roof insulation shall be Approved for use with the specific insulation components, 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, physical properties and applicable material standard(s).

6. INSTALLATION:

- 6.1 **ELASTOTITE® G 20140 Roofing Adhesive** shall be installed in accordance with **BASF CORP** published installation instructions, subject to the [Limitations of Use](#) herein.
- 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 **BASF CORP** for suitability of use with **ELASTOTITE® G 20140 Roofing Adhesive**.

7. BUILDING PERMIT REQUIREMENTS:

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

8. MANUFACTURING LOCATIONS:

Contact the named QA entity for manufacturing facilities covered by **F.A.C. Rule 61G20-3** QA requirements. Refer to [Section 4](#) herein for products and production locations having met codified standards.

9. QUALITY ASSURANCE ENTITY:

[UL, LLC – QUA9625](#): (360) 817-5512; bsai.inspections@ul.com

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

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE

TABLE	DECK	APPLICATION	TYPE	DESCRIPTION		PAGE
				MATERIAL	INSTALLATION	
1	Wood, Steel or Structural concrete	New or Reroof (Tear-Off)	A-1	ELASTOTITE® G 20140 Roofing Adhesive	Bonded Insulation	2
2	Steel or Structural concrete	Recover	A-1	ELASTOTITE® G 20140 Roofing Adhesive	Bonded Insulation	4

The following notes apply to the systems outlined herein:

- The performance data contained herein pertains to substrate interfaces bonded with **ELASTOTITE® G 20140 Roofing Adhesive**. If a roof system's Product Approval documentation does not specifically include **ELASTOTITE® G 20140 Roofing Adhesive** with a particular 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.
- This PEER to above-deck roof components. Roof decks shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- Unless otherwise noted, data pertains to **ELASTOTITE® G 20140 Roofing Adhesive** applied as follows. Ribbon size is at the time of application; ribbons will expand as outlined in the manufacturer's published installation instructions as insulation boards are put in place.
 - FULL coverage: 1 to 1.25 gal/square
 - RIBBON applied: Continuous 3-inch wide ribbons, 12-inch o.c.
- For adhered roof insulation and board-size: Unless otherwise noted, refer to Section 2.2.10.6.2 of [FM Loss Prevention Data Sheet](#) 1-29.
- For partially bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 PRIME design pressure determined in accordance with FBC Chapter 16. Elevated pressure zones 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.
- For existing substrates in recover or re-roof installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance shall be conducted on mock-ups of the proposed new roof assembly. For bonded insulation or membrane over existing substrates in a recover installation, the existing roof system 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. Field uplift testing shall be in accordance with [ASTM](#) E907, [FM Loss Prevention Data Sheet](#) 1-52 or [Testing Application Standard](#) TAS 124.
- "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC 1609 for determination of design wind loads.

TABLE 1: ELASTOTITE® G 20140 ROOFING ADHESIVE PERFORMANCE DATA (NOTE 1) – NEW CONSTRUCTION OR RE-ROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION

Substrate (Note 2 & Note 6)	Base Insulation		Top Insulation		MDP (psf)
	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 "DensDeck", "DensDeck Prime" or "DensDeck StormX Prime Roof Board" 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 "DensDeck", "DensDeck Prime" or "DensDeck StormX Prime Roof Board" 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 "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter Panels "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "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 "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter Panels "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "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 "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter Panels "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "VersiCore MP-H"	RIBBON	Min. 0.5-inch G-P Gypsum "DensDeck Prime" or "DensDeck StormX Prime Roof Board"	RIBBON	-232.5
Min. 2,500 psi structural concrete	One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter Panels "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "VersiCore MP-H"	RIBBON	Min. 0.5-inch G-P Gypsum "DensDeck"	RIBBON	-240.0
Min. 2,500 psi structural concrete	One or more layers, Min. 1.5-inch Atlas "ACFoam II", Carlisle SynTec "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter Panels "H-Shield", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "VersiCore MP-H"	FULL	Min. 0.5-inch Versico "Versico Recovery Board"	FULL	-157.5

TABLE 1: ELASTOTITE® G 20140 ROOFING ADHESIVE PERFORMANCE DATA (NOTE 1) – NEW CONSTRUCTION OR RE-ROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION

Substrate (Note 2 & Note 6)	Base Insulation		Top Insulation		MDP (psf)
	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 “InsulBase”, Firestone “ISO 95+ GL”, GAF “EnergyGuard Polyiso Insulation”, “GenFlex ISO Insulation”, Hunter Panels “H-Shield”, Johns Manville “ENRGY 3”, “ENRGY 3 AGF”, “ENRGY 3 CGF”, Soprema “SOPRA-ISO r”, “SOPRA-ISO s” or Versico “VersiCore MP-H”	FULL	Min. 0.5-inch G-P Gypsum “DensDeck”	FULL	-285.0
Min. 2,500 psi structural concrete	(Optional) One or more layers, Min. 1.5-inch Atlas “ACFoam II”, Carlisle SynTec “InsulBase”, Firestone “ISO 95+ GL”, GAF “EnergyGuard Polyiso Insulation”, “GenFlex ISO Insulation”, Hunter Panels “H-Shield”, Johns Manville “ENRGY 3”, “ENRGY 3 AGF”, “ENRGY 3 CGF”, Soprema “SOPRA-ISO r”, “SOPRA-ISO s” or Versico “VersiCore MP-H”	FULL	Min. 2-inch Atlas “ACFoam Composite/FB” or Soprema “SOPRA-ISO FB s”	FULL	-307.5

TABLE 2: ELASTOTITE® G 20140 ROOFING ADHESIVE PERFORMANCE DATA (NOTE 1) - RECOVER
SYSTEM TYPE A-1: BONDED INSULATION

Deck (Note 2)	Existing Roof (Note 6)	Base Insulation		Top Insulation		MDP (psf)
		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 "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter Panels "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "VersiCore MP-H"	FULL	Min. 0.5-inch G-P Gypsum "DensDeck", "DensDeck Prime" or "DensDeck StormX Prime Roof Board", USG Corp "SECUROCK Gypsum Fiber Roof Board", 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 "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter Panels "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "VersiCore MP-H"	RIBBON	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 "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter Panels "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "VersiCore MP-H"	RIBBON	Min. 0.5-inch G-P Gypsum "DensDeck", "DensDeck Prime" or "DensDeck StormX Prime Roof Board" 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 "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter Panels "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "VersiCore MP-H"	FULL	Min. 0.5-inch 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 "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter Panels "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "VersiCore MP-H"	FULL	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 "InsulBase", Firestone "ISO 95+ GL", GAF "EnergyGuard Polyiso Insulation", "GenFlex ISO Insulation", Hunter Panels "H-Shield", Johns Manville "ENRGY 3", "ENRGY 3 AGF", "ENRGY 3 CGF", Soprema "SOPRA-ISO r", "SOPRA-ISO s" or Versico "VersiCore MP-H"	FULL	Min. 0.5-inch G-P Gypsum "DensDeck", "DensDeck Prime" or "DensDeck StormX Prime Roof Board" or USG Corp "SECUROCK Gypsum Fiber Roof Board"	FULL	-232.5