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Product Approval
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OFFICE OF THE SECRETARY

FL #	FL20663-R16
Application Type	Revision
Code Version	2020
Application Status	Approved
Comments	
Archived	<input type="checkbox"/>
Product Manufacturer	GAF
Address/Phone/Email	1 Campus Drive Parispany, NJ 07054 (800) 766-3411 mstieh@gaf.com
Authorized Signature	Robert Nieminen lreith@nemoetc.com
Technical Representative	William Broussard
Address/Phone/Email	1 Campus Drive Parsippany, NJ 07054 (800) 766-3411 TechnicalQuestionsGAF@gaf.com
Quality Assurance Representative	
Address/Phone/Email	
Category	Roofing
Subcategory	Liquid Applied Roof Systems
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer <input type="checkbox"/> Evaluation Report - Hardcopy Received
Florida Engineer or Architect Name who developed the Evaluation Report	Robert Nieminen
Florida License	PE-59166
Quality Assurance Entity	UL LLC
Quality Assurance Contract Expiration Date	07/12/2025
Validated By	John W. Knezevich, PE <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received

Certificate of Independence [FL20663 R16 COI 2023 01 COI NIEMINEN.pdf](#)

Referenced Standard and Year (of Standard)	Standard	Year
	ASTM D2178	2015
	ASTM D4601	2012
	ASTM D4897	2009
	ASTM D6083	2018
	ASTM D6163	2015
	ASTM D6164	2011
	ASTM D6222	2011
	FM 4470	2016
	FM 4474	2011

Equivalence of Product Standards
Certified By

Sections from the Code

Product Approval Method: Method 1 Option D

Date Submitted: 02/07/2023
 Date Validated: 02/09/2023
 Date Pending FBC Approval: 02/16/2023
 Date Approved: 04/11/2023

Summary of Products

FL #	Model, Number or Name	Description
20663.1	GAF Liquid Applied Roof Systems (HVHZ)	Acrylic, liquid applied roof systems for use in FBC HVHZ jurisdictions.
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: No Impact Resistant: N/A Design Pressure: +N/A/-502.5 Other: 1.) The design pressure in this application pertains to one system. Refer to ER Appendix for all systems and maximum allowable design pressures. 2.) Refer to ER Section 5 for Limits of Use		Installation Instructions FL20663 R16 II 2023 02 06 FINAL A1 ER GAF LARS HVHZ FL20663-R16.pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes Evaluation Reports FL20663 R16 AE 2023 02 06 FINAL ER GAF LARS HVHZ FL20663-R16.pdf Created by Independent Third Party: Yes
20663.2	GAF Liquid Applied Roof Systems (NON-HVHZ)	Acrylic, liquid applied roof systems for use in FBC NON-HVHZ jurisdictions
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: N/A Design Pressure: +N/A/-610 Other: 1.) The design pressure in this application pertains to one system. Refer to ER Appendix for all systems and maximum allowable design pressures. 2.) Refer to ER Section 5 for Limits of Use.		Installation Instructions FL20663 R16 II 2023 02 06 FINAL A1 ER GAF LARS NON-HVHZ FL20663-R16.pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes Evaluation Reports FL20663 R16 AE 2023 02 06 FINAL ER GAF LARS NON-HVHZ FL20663-R16.pdf Created by Independent Third Party: Yes

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Product Approval Accepts:





NEMO|etc.

Certificate of Authorization #32455
353 Christian Street, Unit #13
Oxford, CT 06478
(203) 262-9245

ENGINEER

EVALUATE

TEST

CONSULT

EVALUATION REPORT BY FLORIDA P.E.

GAF

1 Campus Drive
Parsippany, NJ 07054
(800) 766-3411

Evaluation Report 3m-GAF-21-FBCER.A-R7

FL20663-R16 (HVHZ)

Date of Issuance: 01/29/2021

Revision 7: 02/06/2023

SCOPE:

This Evaluation Report 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 **7th Edition (2020) Florida Building Code, High Velocity Hurricane Zone (HVHZ) sections noted herein.**

DESCRIPTION: GAF Liquid Applied Roof Systems for use in FBC HVHZ jurisdictions

LABELING: Labeling shall be in accordance with the requirements of 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 or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our Evaluation Reports 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 Evaluation Report 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 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 4, plus a 3-page Appendix.

Prepared by:

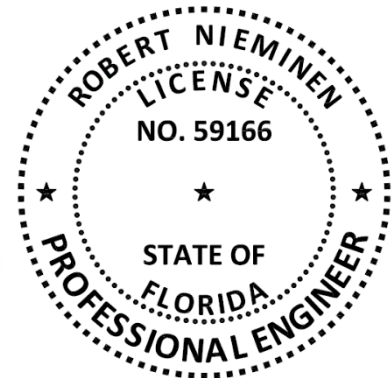
Digitally signed

**by Robert
Nieminen**

Date: 2023.02.06

'13:27:01 -05'00

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 Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

ROOFING SYSTEMS EVALUATION:
1. SCOPE:

Product Category: Roofing
Sub-Category: Liquid Applied Roof Systems
Product Approval Method: Method 1, Option D: Codified Material, Evaluation by Engineer
Compliance Statement: **GAF Liquid Applied Roof Systems**, as produced by **GAF**, has demonstrated compliance with the following sections of the **7th Edition (2020) Florida Building Code, HVHZ** through testing in accordance with the following Standards. Compliance is subject to the [Installation Requirements](#) and [Limitations of Use](#) set forth herein.

2. STANDARDS:

SECTION	PROPERTY	STANDARD	YEAR
TAS 110	Resistance to Foot Traffic	TAS 114, Section 8.9	2011
TAS 110	Wind resistance	TAS 114, Appendix C, D or J	2011
TAS 110	Susceptibility to Hail Damage	TAS 114, Appendix F	2011
TAS 110	Susceptibility to Leakage	TAS 114, Appendix G	2011
TAS 110	Material standard	ASTM D6163	2015
TAS 110	Material standard	ASTM D6083	2018

3. REFERENCES:

ENTITY	EXAMINATION	REFERENCE	DATE
ERD (TST6049)	ASTM D6163 (GA)	G40630.01.14-1	01/06/14
PRI (TST5878)	ASTM D6083, Table 2 (MA)	GAF-498-02-01	09/16/16
PRI (TST5878)	ASTM D6083, FIN (SC)	GAF-777-02-01	09/15/17
PRI (TST5878)	ASTM D6083, FIN (AZ)	376T0159	08/31/21
ERD (TST6049)	TAS 114	GAF-SC10845.04.16	04/26/16
FM (TST 1867)	FM 4470	3000150	09/01/99
FM (TST 1867)	FM 4470	RR204846	05/09/16
PRI (TST5878)	TAS 114	GAF-462-02-11	07/01/14
PRI (TST5878)	TAS 114	376T0038	01/09/20
PRI (TST5878)	TAS 114	376T0066	07/09/20
PRI (TST 5878)	TAS 114	376T0338	01/20/23
PRI (TST 5878)	TAS 114	376T0339	01/20/23
FM (CER1840)	TAS 114, Section 8.9	RoofNav Listings	Current
UL, LLC. (QUA9625)	Quality Control	Service confirmation	07/12/22
UL, LLC. (QUA9625)	Quality Control	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

This Evaluation Report covers the **GAF Liquid Applied Roof Systems** applied to Approved substrates as outlined in the [Limitations of Use](#) herein. The following products make up the subject roof covers.

TABLE 1: EVALUATED COMPONENTS

TYPE	PRODUCT	MATERIAL STANDARD			PLANT(S)
		REFERENCE	TYPE	GRADE	
LIQUID APPLIED MEMBRANE COMPONENTS	GAF Premium Acrylic HydroStop® Base Coat	N/A (not codified)	N/A	N/A	AZ, SC
	GAF Premium Acrylic HydroStop® Top Coat	ASTM D6083	I	N/A	AZ, SC
	GAF Premium Fabric	N/A (not codified)	N/A	N/A	SC
	GAF Surface Seal SB Roof Coating	ASTM D6083 (film)	N/A	N/A	MA
PRIMERS	GAF Bonding Primer	N/A (not codified)	N/A	N/A	MO
BASE PLY OR VAPOR BARRIER MEMBRANES	Ruberoid® HW 25 Smooth	ASTM D6163	I	S	GA

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 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 Non-High Velocity Hurricane Zone jurisdictions.
- 5.3 The evaluation herein pertains to above-deck roof components; deck-attachment details pertain to 'as-tested' conditions under [Testing Application Standard TAS 114, Appendix J](#). Roof decks shall be in accordance with **FBC HVHZ** requirements to the satisfaction of the Authority Having Jurisdiction.
- 5.4 This Evaluation Report does not include evaluation of fire classification. Refer to **FBC HVHZ 1516** 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 Evaluation Report does not include evaluation of roof edge termination. Refer to [Roofing Application Standard RAS 111](#) for requirements and limitations regarding edge securement for low-slope roofs.
- 5.6 Refer to **FBC HVHZ 1521** 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 [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 [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 [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 [Testing Application Standard TAS 114](#) has already been applied). Refer to **FBC HVHZ 1620** and [Roofing Application Standard RAS 128](#) for determination of design wind loads.
- 5.7.2 For mechanically attached components, 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 HVHZ 1620** or [Roofing Application Standard RAS 128](#). Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Analysis shall be in accordance with [Roofing Application Standard RAS 117](#) or [Roofing Application Standard RAS 137](#). ****This extrapolation is not permitted for systems marked with an asterisk****.
- 5.7.3 For assemblies marked with an asterisk*, the maximum design pressure (MDP) limitation shall be applicable to all roof pressure zones. Rational analysis is not permitted.
- 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 Evaluation Report.

6. INSTALLATION:

GAF Liquid Applied Roof Systems shall be installed in accordance with **GAF** current, published installation instructions, subject to the [Limitations of Use](#) noted herein.

7. BUILDING PERMIT REQUIREMENTS:

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

8. MANUFACTURING PLANTS:

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 material standards.

9. QUALITY ASSURANCE ENTITY:

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

- THE THREE (3) PAGES THAT FOLLOW FORM PART OF THIS EVALUATION REPORT -

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE

The following notes apply to the systems outlined herein:

- The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC HVHZ requirements to the satisfaction of the Authority Having Jurisdiction. Deck-attachment details pertain to 'as-tested' conditions under [Testing Application Standard](#) TAS 114, Appendix J.
- Unless otherwise noted, fasteners and stress plates shall be as follows. Fasteners shall be of sufficient length for the following engagements:

FASTENER/PLATE OPTIONS			
DECK TYPE	BY	PARTS	MINIMUM ENGAGEMENT
Wood	GAF	Drill-Tec #12 Fastener or Drill-Tec #14 Fastener with Drill-Tec 3" Standard Steel Plate, Drill-Tec 3" Steel Plate or Drill-Tec AccuTrac Flat Plate or Drill-Tec AccuTrac Recessed Plate (insulation only), Drill-Tec ASAP 3S, Drill-Tec Heavy Duty ASAP Roofing Fastener Assembled with a 3" Metal Plate, Drill-Tec #12 DP Fastener or Drill-Tec #14 HD Fastener with Drill-Tec 3" Flat Steel Plate, Drill-Tec #12 DPH Fastener with Drill-Tec 3" Recessed Steel Plate, Drill-Tec 3" ASAP Flat or Drill-Tec 3" ASAP Recessed	Minimum ¾-inch plywood penetration or minimum 1-inch wood plank embedment

- Unless otherwise noted, insulation may be any one layer or combination of FBC Approved (Local or Statewide) board(s) that meet FBC HVHZ 1516 and, for foam plastic, FBC Chapter 26, when installed with the roof cover.
- RESERVED
- RESERVED
- Unless otherwise noted, insulation adhesive application rates are as follows.
Ribbon or bead width is at the time of application; the ribbons/beads shall expand as noted in the manufacturer's published instructions. When multiple layers(s) of insulation and/or coverboard are installed in ribbon-applied adhesive, board joints shall be staggered. The maximum edge distance from the adhesive ribbon to the edge of the insulation board shall be not less than one-half the specified ribbons spacing.

INSULATION ADHESIVE REFERENCES				
BY	ADHESIVE	REFERENCE	FBC HVHZ FILE	MINIMUM RATE
GAF	GAF LRF Adhesive M	'LRF-M'	NOA 18-0521.05	Continuous 0.75 to 1-inch ribbons, 12-inch o.c.
GAF	GAF LRF Adhesive XF	'LRF-XF'	N/A	Continuous 0.75 to 1-inch ribbons, 12-inch o.c.
OMG, Inc.	OlyBond 500 Adhesive Fastener	'OB500'	NOA 22-0519.04	Continuous 0.75-inch wide ribbons, 12-inch o.c. (PaceCart, SpotShot or Canister)

- RESERVED
- RESERVED
- For mechanically attached components, 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 HVHZ 1620 or [Roofing Application Standard](#) RAS 128. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria in accordance with [Roofing Application Standard](#) RAS 117 or [Roofing Application Standard](#) RAS 137. *This extrapolation is not permitted for systems marked with an asterisk*
- For assemblies marked with an asterisk*, 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.
- For mechanically attached components over existing decks, fasteners shall be tested in the existing deck for withdrawal resistance in accordance with [Testing Application Standard](#) TAS 105. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Should the fastener resistance be less than that required, a revised fastener spacing – prepared, signed and sealed by a qualified design professional in accordance with [Roofing Application Standard](#) RAS 117 or [Roofing Application Standard](#) RAS 137 – may be submitted to the Building Official for review and acceptance.
- RESERVED

- 13 RESERVED
- 14 RESERVED
- 15 For bonded membrane applications, unless otherwise noted, refer to the following.

MEMBRANE / ADHESIVE COMBINATIONS		
REFERENCE	LAYER	APPLICATION
GAF Premium Acrylic HydroStop:	Joint Treatment:	<u>Top Insulation Layer if no Base Ply is installed:</u> GAF Premium Acrylic HydroStop Base Coat is brush applied over all top-layer insulation joints at 6-inch width at a rate of 1.25 gal./square, centered about each joint. 6-inch wide GAF Premium Fabric is embedded in the wet GAF Premium Acrylic HydroStop Base Coat. The fabric is then saturated with additional GAF Premium Acrylic HydroStop Base Coat brush applied at 1.25 gal./square.
GAF Premium Acrylic HydroStop System:	LARS:	GAF Premium Acrylic HydroStop Base Coat is brush applied at a minimum rate of 1.25 gal./square. GAF Premium Fabric is embedded in the wet GAF Premium Acrylic HydroStop Base Coat with 4 in. wide seams and is saturated with additional GAF Premium Acrylic HydroStop Base Coat brush applied at a minimum rate of 1.25 gal./square. Two (2) or more coats of GAF Premium Acrylic HydroStop Top Coat are applied at a minimum rate of 0.75 gal./square per coat.
GAF Surface Seal SB Roof Coating	LARS:	Three (3) coats at 1 to 1.25 gal./square per coat. Consult GAF for allowable cure-time between coats.

- 16 Vapor barrier options for use over structural concrete deck followed by bonded insulation carry the following MDP limitations. The lesser of the MDP listings below vs. vs. that for the selected assembly applies.

VAPOR BARRIER OPTIONS; STRUCTURAL CONCRETE DECK; FOLLOWED BY ADHESIVE-APPLIED INSULATION					
OPTION #	PRIMER	VAPOR BARRIER		INSULATION ADHESIVE PER TABLE 2A	MDP (psf)
		TYPE	APPLICATION		
C-VB-1.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Ruberoid HW 25 Smooth	Torch-applied	OlyBond 500, 12-inch o.c.	-180.0

- 17 "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC (HVHZ) 1620 and [Roofing Application Standard](#) RAS 128 for determination of design wind loads ([Note 9](#) and [Note 10](#)).

TABLE 1: WOOD DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, LIQUID APPLIED ROOF SYSTEM

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Fasten (Note 11)	Attach	Type	Attach (Notes 6,7,8)	Joint Treatment	LARS	
W-1.	Min. 19/32-inch plywood or 1-inch wood plank; 2 ft span; 8d ring shank nails 6" o.c.	Min 2-inch EnergyGuard Polyiso Insulation, EnergyGuard RH	Note 2 (#14 Fastener only)	1 per 2.0 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-M, LRF-XF or OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-52.5

TABLE 2A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, LIQUID APPLIED ROOF SYSTEM
 REFER TO [Notes 1, 2](#) FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Joint/Lap Treatment	LARS	
C-1	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch DensDeck or DensDeck Prime	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-135.0

TABLE 2B: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: NON-INSULATED, LIQUID APPLIED ROOF SYSTEM

System No.	Deck (Note 1)	Primer	Roof Cover (Note 15)		MDP (psf)*
			Base Ply	LARS	
C-2	Structural concrete	(Optional) GAF Bonding Primer at 0.20-0.25 gal/square.	None	GAF Surface Seal SB Roof Coating	-502.5
C-3	Structural concrete	GAF Bonding Primer at 0.2-0.25 gal/square	None	GAF Premium Acrylic HydroStop System	-502.5



NEMO|etc.

Certificate of Authorization #32455
353 Christian Street, Unit #13
Oxford, CT 06478
(203) 262-9245

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EVALUATION REPORT BY FLORIDA P.E.

GAF

1 Campus Drive
Parsippany, NJ 07054
(800) 766-3411

Evaluation Report **10795.06.16-R16**
FL20663-R16 (NON-HVHZ)
Date of Issuance: **06/13/2016**
Revision 16: **02/06/2023**

SCOPE:

This Evaluation Report 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 [7th Edition \(2020\) Florida Building Code sections noted herein](#).

DESCRIPTION: GAF Liquid Applied Roof Systems for use in FBC NON-HVHZ jurisdictions

LABELING: Labeling shall be in accordance with the requirements of 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 or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our Evaluation Reports 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 Evaluation Report relative to updated Code requirements with each Code Cycle.

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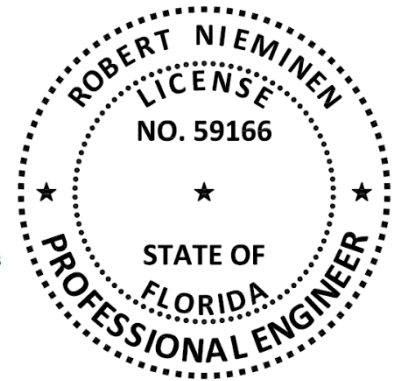
INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 4, plus a 17-page Appendix.

Prepared by:

**Digitally signed
by Robert
Nieminen
Date: 2023.02.06
'14:05:53 -05'00**

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:

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ROOFING SYSTEMS EVALUATION:
1. SCOPE:

Product Category: Roofing
Sub-Category: Liquid Applied Roof Systems
Product Approval Method: Method 1, Option D: Codified Material, Evaluation by Engineer
Compliance Statement: **GAF Liquid Applied Roof Systems**, as produced by **GAF**, has demonstrated compliance with the following sections of the **7th Edition (2020) Florida Building Code** through testing in accordance with the following Standards. Compliance is subject to the [Installation Requirements](#) and [Limitations of Use](#) set forth herein.

2. STANDARDS:

SECTION	PROPERTY	STANDARD	YEAR
1504.3.1	Wind resistance	FM 4474	2011
1504.7	Impact resistance	FM 4470	2016
1507.10.2	Material standard	ASTM D2178	2015
1507.10.2	Material standard	ASTM D4601	2012
1507.10.2	Material standard	ASTM D4897	2009
1507.11.2	Material standard	ASTM D6163	2015
1507.11.2	Material standard	ASTM D6164	2011
1507.11.2	Material standard	ASTM D6222	2011
1507.15.2	Material standard	ASTM D6083	2018

3. REFERENCES:

ENTITY	EXAM	REFERENCE	DATE	ENTITY	EXAM	REFERENCE	DATE
ERD (TST6049)	ASTM D6163 (GA)	G40630.01.14-1	01/06/14	ACRC (TST4671)	FM 4474	12-020	05/08/12
ERD (TST6049)	ASTM D6164 (GA)	G40630.01.14-2A	01/07/14	ACRC (TST4671)	FM 4474	16-003	03/04/16
ERD (TST6049)	ASTM D6164 (GA)	G40630.01.14-2A-1-R1	01/07/14	ERD (TST6049)	FM 4474	4696-04-97-1	07/11/97
ERD (TST6049)	ASTM D6222 (IN)	G43180.03.14	03/03/14	ERD (TST6049)	FM 4474	4697-12-00-1	12/07/00
ERD (TST6049)	ASTM D6164 (GA)	GAF-SC13285.03.17-5	03/23/17	ERD (TST6049)	FM 4474	GAF-SC10845.04.16	04/26/16
ERD (TST6049)	ASTM D6164 (GA)	GAF-SC13105.03.17-R1	03/23/17	FM (TST 1867)	FM 4470	3000150	09/01/99
GAF	Equivalency	Declaration	08/02/22	FM (TST 1867)	FM 4470	3023606	10/18/06
NEMO (TST6049)	ASTM D2178 (GA)	4S-GAF-18-001.01.19-1	01/02/19	FM (TST 1867)	FM 4470	3031350	09/27/07
NEMO (TST6049)	ASTM D6222 (IN)	4S-GAF-18-001.03.19.A	03/13/19	FM (TST 1867)	FM 4470	3044541	04/02/12
NEMO (TST6049)	ASTM D6164 (AR)	4q-GAF-19-SSMBB-01A	04/08/19	FM (TST 1867)	FM 4470	3046328	09/13/12
NEMO (TST6049)	ASTM D6163 (AR)	4q-GAF-19-SSMBB-02A	04/08/19	FM (TST 1867)	FM 4470	3048496	12/19/13
NEMO (TST6049)	ASTM D4601 (AL)	4q-GAF-21-SSMBB-01.A	09/07/21	FM (TST 1867)	FM 4470	RR204674	04/06/16
NEMO (TST6049)	ASTM D4897 (AL)	4q-GAF-21-SSMBB-01.B	09/07/21	FM (TST 1867)	FM 4470	RR204740	04/13/16
PRI (TST 5878)	ASTM D6083, T1 (AZ)	GAF-672-02-01	05/31/16	FM (TST 1867)	FM 4470	RR204846	05/09/16
PRI (TST 5878)	ASTM D6083, T2 (MA)	GAF-498-02-01	09/16/16	FM (TST 1867)	FM 4470	RR204845	05/09/16
PRI (TST 5878)	ASTM D6083, FIN (SC)	GAF-777-02-01	09/15/17	FM (TST 1867)	FM 4470	RR206245	09/30/16
PRI (TST 5878)	Physicals (AZ)	376T0077	06/15/20	FM (TST 1867)	FM 4470	3055491	12/05/16
PRI (TST 5878)	ASTM D6083, FIN (AZ)	376T0159	08/31/21	FM (TST 1867)	FM 4470	3058483	12/09/16
PRI (TST5878)	ASTM D2178 (AL)	MSA-039-02-02	09/27/17	FM (TST 1867)	FM 4474	3060374	03/03/18
PRI (TST5878)	ASTM D2178 (AL)	MSA-039-02-01	09/27/17	FM (TST 1867)	FM 4474	PR455417-R2	12/23/20
PRI (TST5878)	ASTM D6222 (CA-S)	376T0143	08/23/21	FM (TST1867)	FM 4470	PR452971-R1	01/28/20
PRI (TST5878)	ASTM D6222 (CA-S)	376T0144	08/26/21	FM (TST1867)	FM 4470	RR227768-267	04/09/21
PRI (TST5878)	ASTM D4601 (GA)	376T0229	12/20/21	FM (TST1867)	FM 4470	PR459831	04/21/21
PRI (TST5878)	ASTM D4897 (GA)	376T0227	12/20/21	FM (TST1867)	FM 4474	PR456101	06/24/21
PRI (TST5878)	ASTM D2178 (CA-F)	367T0275	01/31/22	FM (TST1867)	FM 4474	PR461047	10/25/21
PRI (TST5878)	ASTM D4601 (CA-F)	376T0276	02/03/22	PRI (TST 5878)	FM 4474	GAF-457-02-04	02/05/14
PRI (TST5878)	ASTM D6222 (GA)	376T0274	05/04/22	PRI (TST 5878)	FM 4474	GAF-462-02-11	07/01/14
PRI (TST5878)	ASTM D6222 (GA)	376T0273	08/29/22	PRI (TST 5878)	Criticality	GAF-559-02-03	10/16/14
ACRC (TST4671)	FM 4474	09-018	10/27/09	PRI (TST 5878)	FM 4474	QCP-018-02-01	11/14/14
ACRC (TST4671)	FM 4474	09-019	10/27/09	PRI (TST 5878)	FM 4474	GAF-654-02-01	05/17/16
ACRC (TST4671)	FM 4474	09-020	10/28/09	PRI (TST 5878)	FM 4474	GAF-833-02-01(R1)	03/02/18
ACRC (TST4671)	FM 4474	09-021	10/28/09	PRI (TST 5878)	FM 4474	376T0038	01/09/20
ACRC (TST4671)	FM 4474	09-022	10/29/09	PRI (TST 5878)	FM 4470/4474	376T0338	01/20/23
ACRC (TST4671)	FM 4474	09-023	10/29/09	PRI (TST 5878)	FM 4470/4474	376T0339	01/20/23
ACRC (TST4671)	FM 4474	10-001	02/10/10	UL (QUA9625)	QA	Service confirm	07/12/22
				UL (QUA9625)	QA	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

This Evaluation Report covers the **GAF Liquid Applied Roof Systems** applied to Approved substrates as outlined in the [Limitations of Use](#) herein. The following products make up the subject roof covers.

TABLE 1: EVALUATED COMPONENTS					
TYPE	PRODUCT	MATERIAL STANDARD			PLANT(s)
		REFERENCE	TYPE	GRADE	
LIQUID APPLIED MEMBRANE COMPONENTS	GAF Premium Acrylic HydroStop® Base Coat	N/A (not codified)	N/A	N/A	AZ, SC
	GAF Premium Acrylic HydroStop® Top Coat	ASTM D6083	I	N/A	AZ, SC
	GAF Premium Fabric	N/A (not codified)	N/A	N/A	SC
	GAF Acrylic Base Coat	N/A (not codified)	N/A	N/A	AZ, SC
	GAF Acrylic Top Coat	ASTM D6083	N/A	N/A	AZ, SC
	GAF Surface Seal SB Roof Coating	ASTM D6083 (film)	N/A	N/A	MA
PRIMERS	GAF Bonding Primer	N/A (not codified)	N/A	N/A	MO
	GAF FireOut™ Fire Barrier Coating	N/A (not codified)	N/A	N/A	MA
	GAF BarrierGuard® Surface Coating	N/A (not codified)	N/A	N/A	AZ, SC
	GAF SureBond Primer	N/A (not codified)	N/A	N/A	AZ, SC
BASE SHEETS	GAFGLAS® Stratavent® Nailable Venting Base Sheet	ASTM D4897	II	N/A	AL, GA
BASE PLY OR VAPOR BARRIER MEMBRANES	GAFGLAS® #75 Base Sheet	ASTM D4601	II	N/A	CA-F, AL, GA
	Tri-Ply® #75 Base Sheet	ASTM D4601	II	N/A	CA-F, AL, GA
	GAFGLAS® Ply 4	ASTM D2178	IV	N/A	CA-F, GA
	GAFGLAS® Ply 4 M	ASTM D2178	IV	N/A	AL
	GAFGLAS® FlexPly™ 6	ASTM D2178	VI	N/A	GA
	GAFGLAS® FlexPly™ 6 M	ASTM D2178	VI	N/A	AL
	Ruberoid® 20 Smooth	ASTM D6163	I	S	AR
	Ruberoid® HW 25 Smooth	ASTM D6163	I	S	GA
	Ruberoid® HW Smooth	ASTM D6164	I	S	GA
	Ruberoid® Mop Smooth	ASTM D6164	I	S	GA
	Ruberoid® Mop Smooth 1.5	ASTM D6164	I	S	GA
	Liberty™ SBS Self-Adhering Cap Sheet	ASTM D6164	I	G	AR, GA, IN
	Ruberoid® Torch Smooth	ASTM D6222	I	S	CA-S, GA, IN
	Ruberoid® Torch Granule	ASTM D6222	I	G	CA-S, GA, IN

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 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 High Velocity Hurricane Zone jurisdictions (i.e., Broward and Miami-Dade Counties).
- 5.3 This Evaluation Report 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 Evaluation Report does not include evaluation of fire classification. Refer to **FBC 1516** 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 Evaluation Report 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 For mechanically attached components or 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**. 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](#), [FM Loss Prevention Data Sheet 1-29](#), [Roofing Application Standard RAS 117](#) and [Roofing Application Standard 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](#) for Zone 2/3 enhancements.
- 5.7.3 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 Evaluation Report.

6. INSTALLATION:

GAF Liquid Applied Roof Systems shall be installed in accordance with **GAF** current, published installation instructions, subject to the [Limitations of Use](#) noted herein.

7. BUILDING PERMIT REQUIREMENTS:

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

8. MANUFACTURING PLANTS:

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 material standards.

9. QUALITY ASSURANCE ENTITY:

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

- THE 17-PAGES THAT FOLLOW FORM PART OF THIS EVALUATION REPORT -

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE

TABLE	DECK	APPLICATION	TYPE	DESCRIPTION	PAGE
1A	Wood	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Liquid Applied Roof System	5
1B	Wood	New, Reroof (Tear-Off) or Recover	B-1	Mech. Attached Base Insulation, Bonded Top Insulation, Bonded Roof Cover	6
1C	Wood	New, Reroof (Tear-Off) or Recover	C-1	Mech. Attached Insulation, Liquid Applied Roof System	6
1D	Wood	New, Reroof (Tear-Off) or Recover	C-1	Mech. Attached Insulation, Bonded Base Ply, Liquid Applied Roof System	6
1E	Wood	New or Reroof (Tear-Off)	E-2	Non-Insulated, Mechanically Attached Base Sheet, Liquid Applied Roof System	6
2A	Steel or Structural concrete	New, Reroof (Tear-Off) or Recover	B-1	Mech. Attached Base Insulation, SPUF, Liquid Applied Roof System	7
2B	Steel or Structural concrete	New, Reroof (Tear-Off) or Recover	B-1	Mech. Attached Base Insulation, Bonded Top Insulation, Bonded Base Ply, Liquid Applied Roof System	7
2C	Steel or Structural concrete	New, Reroof (Tear-Off) or Recover	C-1	Mech. Attached Insulation, Liquid Applied Roof System	8
2D	Steel or Structural concrete	New, Reroof (Tear-Off) or Recover	C-1	Mech. Attached Insulation, Bonded Base Ply, Liquid Applied Roof System	8
3A	Structural concrete	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Liquid Applied Roof System	10
3B	Structural concrete	New or Reroof (Tear-Off)	A-1	Bonded Insulation, SPUF, Liquid Applied Roof System	11
3C	Structural concrete	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Base Ply, Liquid Applied Roof System	11
3D	Structural concrete	New or Reroof (Tear-Off)	F	Non-Insulated, Liquid Applied Roof System	12
4A	LWIC	New, Reroof (Tear-Off)	E-2	LWC to Deck, Mechanically Attached Base Sheet, Liquid Applied Roof System	13
4B	LWIC	New	F	LWC to Deck, Non-Insulated, Liquid Applied Roof System	13
5A	Various	Recover	A-1	Bonded Insulation, Liquid Applied Roof System	14
5B	Various	Recover	A-1	Bonded Insulation, Bonded Base Ply, Liquid Applied Roof System	15
5C	Various	Recover	F	Non-Insulated, Liquid Applied Roof System	17

The following notes apply to the systems outlined herein:

- 1 The roof system evaluation herein 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.
- 2 Unless otherwise noted, fasteners and stress plates shall be as follows. Fasteners shall be of sufficient length for the following engagements:

FASTENER/PLATE OPTIONS			
DECK TYPE	BY	PARTS	MINIMUM ENGAGEMENT
Wood	GAF	Drill-Tec #12 Fastener or Drill-Tec #14 Fastener with Drill-Tec 3" Standard Steel Plate, Drill-Tec 3" Steel Plate or Drill-Tec AccuTrac Flat Plate or Drill-Tec AccuTrac Recessed Plate (insulation only), Drill-Tec ASAP 3S, Drill-Tec Heavy Duty ASAP Roofing Fastener Assembled with a 3" Metal Plate, Drill-Tec #12 DP Fastener or Drill-Tec #14 HD Fastener with Drill-Tec 3" Flat Steel Plate, Drill-Tec #12 DPH Fastener with Drill-Tec 3" Recessed Steel Plate, Drill-Tec 3" ASAP Flat or Drill-Tec 3" ASAP Recessed	Minimum ¾-inch plywood penetration or minimum 1-inch wood plank embedment
Steel	GAF	Drill-Tec #12 Fastener, Drill-Tec #14 Fastener or Drill-Tec XHD Fastener with Drill-Tec 3" Standard Steel Plate, Drill-Tec 3" Steel Plate or Drill-Tec AccuTrac Flat Plate or Drill-Tec AccuTrac Recessed Plate (insulation only); Drill-Tec ASAP 3S; Drill-Tec Heavy Duty ASAP Roofing Fastener Assembled with a 3" Metal Plate; Drill-Tec Extra Heavy Duty ASAP Roofing Fastener - Insulation, Drill-Tec #12 DP Fastener, Drill-Tec #14 HD Fastener or Drill-Tec #15 EHD Fastener with Drill-Tec 3" Flat Steel Plate, Drill-Tec #12 DPH Fastener with Drill-Tec 3" Recessed Steel Plate, Drill-Tec 3" ASAP Flat or Drill-Tec 3" ASAP Recessed	Minimum ¾-inch steel penetration and engage the top flute of the steel deck
	Note:	Unless otherwise noted, Drill Tec #12 DF Fastener or Drill Tec #14 DF Fastener with Drill Tec 3" DF Steel Insulation Plate may be used in place of Drill-Tec #12 Fastener or Drill-Tec #14 Fastener with Drill-Tec 3" Standard Steel Plate when used to secure min. 0.25-inch thick DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board to steel deck, up to a maximum allowable design pressure (MDP) of -45.0 psf.	
	Note:	Unless otherwise noted, Drill Tec #12 DF Fastener or Drill Tec #14 DF Fastener with Drill Tec 3" DF Steel Insulation Plate may be used in place of Drill-Tec #12 Fastener or Drill-Tec #14 Fastener with Drill-Tec 3" Standard Steel Plate when used to secure min. 1.5-inch EnergyGuard POLYISO INSULATION or EnergyGuard Ultra Polyiso Insulation to steel deck.	

FASTENER/PLATE OPTIONS			
DECK TYPE	BY	PARTS	MINIMUM ENGAGEMENT
Structural Concrete	GAF	Drill-Tec #14 Fastener or Drill-Tec CD-10 with Drill-Tec 3" Standard Steel Plate, Drill-Tec 3" Steel Plate or Drill-Tec AccuTrac Flat Plate or Drill-Tec AccuTrac Recessed Plate (insulation only), Drill-Tec Heavy Duty ASAP Roofing Fastener Assembled with a 3" Metal Plate, Drill-Tec #14 HD Fastener with Drill-Tec 3" Flat Steel Plate or Drill-Tec 3" ASAP Flat (#14 only)	Minimum 1-inch embedment. Fasteners installed with a pilot hole in accordance with the fastener manufacturer's published installation instructions
	Note:	Unless otherwise noted, Drill Tec #14 DF Fastener with Drill Tec 3" DF Steel Insulation Plate may be used in place of Drill-Tec #14 Fastener with Drill-Tec 3" Standard Steel Plate when used to secure min. 0.25-inch thick DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board to structural concrete deck, up to a maximum allowable design pressure (MDP) of -45.0 psf.	
	Note:	Unless otherwise noted, Drill Tec #14 DF Fastener with Drill Tec 3" DF Steel Insulation Plate may be used in place of Drill-Tec #14 Fastener with Drill-Tec 3" Standard Steel Plate when used to secure or min. 1.5-inch EnergyGuard POLYISO INSULATION or EnergyGuard Ultra Polyiso Insulation to structural concrete deck.	

- Unless otherwise noted, insulation may be any one layer or combination of FBC Approved (Local or Statewide) board(s) that meet FBC 1505 and, for foam plastic, FBC Chapter 26, when installed with the roof cover.
- Minimum 200 psi, minimum 2-inch thick FBC Approved lightweight insulating concrete may be substituted for, or installed below, rigid insulation board for System Types B-1, C-1, C-2, D-1 or D-2, whereby fasteners are installed through the lightweight insulating concrete to engage the structural deck. The structural deck shall be of equal or greater type, thickness and strength to the steel and structural concrete deck listings. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. This is a wind uplift resistance allowance and does not purport to address non-wind-uplift-related issues, such as deck venting or moisture levels within the LWIC and the potential effect on overlying components.
- Preliminary insulation attachment: Unless otherwise noted, use FBC Approved fasteners and plates refer to Section 2.2.10.1.3 of [FM Loss Prevention Data Sheet 1-29](#).
- Unless otherwise noted, insulation adhesive application rates are as follows. Ribbon or bead width is at the time of application; the ribbons/beads shall expand as noted in the manufacturer's published instructions. When multiple layers(s) of insulation and/or coverboard are installed in ribbon-applied adhesive, board joints shall be staggered. The maximum edge distance from the adhesive ribbon to the edge of the insulation board shall be not less than one-half the specified ribbons spacing.

INSULATION ADHESIVE REFERENCES				
By	ADHESIVE	REFERENCE	FBC FILE	MINIMUM RATE
GAF	GAF LRF Adhesive M	'LRF-M'	N/A	Continuous 0.75 to 1-inch ribbons, 12-inch o.c.
GAF	GAF LRF Adhesive XF	'LRF-XF'	N/A	Continuous 0.75 to 1-inch ribbons, 12-inch o.c.
OMG, Inc.	OlyBond 500 Adhesive Fastener	'OB500'	FL1608	Continuous 0.75-inch wide ribbons, 12-inch o.c. (PaceCart, SpotShot or Canister)
Generic, ASTM D312, Type IV	hot asphalt	N/A	N/A	Full coverage at 25-30 lbs/square

- Unless otherwise noted, all insulations are flat-stock or taper board of the minimum thickness noted. Tapered polyisocyanurate at the following thickness limitations may be substituted with the following Maximum Design Pressure (MDP) limitations. In no case shall these values be used to 'increase' the MDP listings in the tables; rather if MDP listing below meets or exceeds that listed for a particular system in the tables, then the thinner board listed below may be used as a drop-in for the equivalent thicker material listed in the table.

MDP LIMITATIONS FOR TAPERED POLYISOCYANURATE INSULATIONS				
ADHESIVE	INSULATION		MIN. TAPERED THICKNESS (IN)	MDP (psf)
	LISTED PRODUCT	FBC FILE		
LRF-M	EnergyGuard Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation	FL16311	0.5	-232.5
LRF-XF	EnergyGuard Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation	FL16311	0.5	-292.5
LRF-XF	EnergyGuard RA	18-0220.10	0.5	-487.5
OB500	EnergyGuard Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation	FL16311	0.5	-292.5
OB500	EnergyGuard RH	19-1017.09	0.5	-315.0
OB500	EnergyGuard RN	18-1126.10	0.5	-315.0
OB500	EnergyGuard RA	18-0220.10	0.5	-487.5
Hot asphalt	Any EnergyGuard polyisocyanurate listed with adhesive herein	Various	0.5	-240.0

- 8 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.
- 9 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 and [Roofing Application Standard](#) 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 for Zone 2/3 enhancements.
- 10 For assemblies with all components fully bonded, 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.
- 11 For mechanically attached components over existing 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 and analysis shall be in accordance with [ANSI/SPRI](#) FX-1 or [Testing Application Standard](#) TAS 105.
- 12 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 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.
- 13 Refer to FBC 1511 for requirements and limitations regarding recover installations. For Structural Concrete Deck or Recover Applications using System Type C-1 the base insulation layer is optional and for System Type C-2, D-1 or D-2, the insulation is optional. Alternatively, an FBC Approved insulation board or coverboard may be used as a separation layer. Board products shall be preliminarily attached prior to roof cover installation ([Note 5](#) herein). The separator component shall be documented as meeting FBC 1505 and, for foam plastic, FBC Chapter 26, when installed with the roof cover in Recover applications.
- 14 Lightweight insulating concrete (LWIC) shall be cast in accordance with FBC Section 1917 to the satisfaction of the Authority Having Jurisdiction. For systems where specific LWIC is referenced, refer to current LWIC Product Approval for specific deck construction and limitations. Unless otherwise noted, for systems where specific LWIC is not referenced, the minimum design mix shall be 300 psi. In all cases, the minimum top-coat thickness is 2-inches. For LWIC over structural concrete, reference is made to FBC Section 1917.4.1, Point 1. For “pre-existent” LWIC references, listings were established through testing over lightweight concrete cast using only foaming agent (ASTM C896), water and Portland cement (ASTM C150), with no proprietary additives, in accordance with procedures adopted by Miami-Dade BCCO (FBC CER1592). Use of these listings in new construction or re-roof (tear-off) applications is at the discretion of the Designer or Record and Authority Having Jurisdiction.
- 15 For bonded membrane applications, unless otherwise noted, refer to the following.

MEMBRANE / ADHESIVE COMBINATIONS			
REFERENCE	LAYER	MATERIAL	APPLICATION
SBS-CA1 (SBS, Cold-Applied)	Base Ply or Ply:	Ruberoid 20 Smooth, Ruberoid Mop Smooth 1.5	Matrix 101 Premium SBS Membrane Adhesive at 1.5 – 2.0 gal/square. Laps are torched or heat-welded
SBS-TA	Base Ply or Ply:	Ruberoid HW Smooth or Ruberoid HW 25 Smooth	Torch-applied. 3-inch wide side laps are torched or hot air welded.
GAF BarrierGuard Surface Coating	Primer:	Two (2) coats at 0.67 gal/square per coat	
GAF SureBond Primer	Primer:	0.5 gal/square	
GAF Premium Acrylic HydroStop	Insulation Joint Treatment:	Top Insulation Layer if no Base Ply is installed: GAF Premium Acrylic HydroStop Base Coat is brush applied over all top-layer insulation joints at 6-inch width at a rate of 1.25 gal./square, centered about each joint. 6-inch wide GAF Premium Fabric is embedded in the wet GAF Premium Acrylic HydroStop Base Coat. The fabric is then saturated with additional GAF Premium Acrylic HydroStop Base Coat brush applied at 1.25 gal/square.	
	Lap Treatment:	(OPTIONAL) For use over Base Sheet or Base Ply only: GAF Premium Acrylic HydroStop Base Coat is brush applied over all base sheet or base ply laps at 6-inch width at a rate of 1.25 gal./square, centered about each lap. 6-inch wide GAF Premium Fabric is embedded in the wet GAF Premium Acrylic HydroStop Base Coat. The fabric is then saturated with additional GAF Premium Acrylic HydroStop Base Coat brush applied at 1.25 gal/square.	
GAF Premium Acrylic HydroStop System:	LARS or Cap Ply:	GAF Premium Acrylic HydroStop Base Coat is brush applied at a minimum rate of 1.25 gal./square. GAF Premium Fabric is embedded in the wet GAF Premium Acrylic HydroStop Base Coat with 4 in. wide seams, and is saturated with additional GAF Premium Acrylic HydroStop Base Coat brush applied at a minimum rate of 1.25 gal./square. Two (2) or more coats of GAF Premium Acrylic HydroStop Top Coat are applied at a minimum rate of 0.75 gal./square per coat.	
GAF Acrylic Base Coat	Base Coat:	1.75 gal/sq.	
GAF Acrylic Top Coat	Top Coat:	1.75 gal/sq.	
Surface Seal SB Roof Coating	LARS:	Three (3) coats at 1 to 1.25 gal./square per coat. Consult GAF for allowable cure-time between coats.	

16 Vapor barrier options for use over structural concrete deck followed by bonded insulation carry the following MDP limitations. The lesser of the MDP listings below vs. vs. that for the selected assembly applies.

VAPOR BARRIER OPTIONS; STRUCTURAL CONCRETE DECK; FOLLOWED BY ADHESIVE-APPLIED INSULATION					
OPTION #	PRIMER	VAPOR BARRIER		INSULATION ADHESIVE PER TABLE 3A, 3B OR 3c	MDP (psf)
		TYPE	APPLICATION		
C-VB-1.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	One or two plies, GAFGLAS #75 Base Sheet, Tri-Ply #75 Base Sheet, GAFGLAS Ply 4, GAFGLAS Ply 4 M, Tri-Ply Ply 4 Ply Sheet or GAFGLAS FlexPly 6, GAFGLAS FlexPly 6 M	Hot asphalt applied	Hot asphalt	-360.0
C-VB-2.	None	GAF SA Vapor Retarder XL	Self-adhering	LRF-M, 12-inch o.c.	-112.5
C-VB-3.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Ruberoid HW 25 Smooth or Ruberoid HW Smooth	Torch-applied	LRF-M, 12-inch o.c.	-180.0
C-VB-4.	GAF SA Primer, EverGuard TPO Quick Spray Adhesive or EverGuard TPO Quick Spray Adhesive LV50	GAF SA Vapor Retarder	Self-adhering	LRF-M, 12-inch o.c.	-202.5
C-VB-5.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	One or two plies, GAFGLAS #75 Base Sheet, Tri-Ply #75 Base Sheet, GAFGLAS Ply 4, GAFGLAS Ply 4 M, Tri-Ply Ply 4 Ply Sheet or GAFGLAS FlexPly 6, GAFGLAS FlexPly 6 M	Hot asphalt applied	LRF-M, 12-inch o.c.	-495.0
C-VB-6.	None	GAF SA Vapor Retarder XL	Self-adhering	LRF-XF 12-inch o.c.	-112.5
C-VB-7.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Ruberoid Torch Granule	Torch-applied	LRF-XF, 12-inch o.c.	-169.0
C-VB-8.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Ruberoid HW 25 Smooth or Ruberoid HW Smooth	Torch-applied	LRF-XF, 12-inch o.c.	-180.0
C-VB-9.	GAF SA Primer, EverGuard TPO Quick Spray Adhesive or EverGuard TPO Quick Spray Adhesive LV50	GAF SA Vapor Retarder	Self-adhering	LRF-XF, 12-inch o.c.	-202.5
C-VB-10.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Liberty SBS Self-Adhering Cap Sheet	Self-adhering	LRF-XF, 12-inch o.c.	-250.0
C-VB-11.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	One or two plies, GAFGLAS #75 Base Sheet, Tri-Ply #75 Base Sheet, GAFGLAS Ply 4, GAFGLAS Ply 4 M, Tri-Ply Ply 4 Ply Sheet or GAFGLAS FlexPly 6, GAFGLAS FlexPly 6 M	Hot asphalt applied	LRF-XF, 12-inch o.c.	-262.5
C-VB-12.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Ruberoid 30	Hot asphalt applied	LRF-XF, 12-inch o.c.	-270.0
C-VB-13.	None	GAF SA Vapor Retarder XL	Self-adhering	OlyBond 500, 12-inch o.c.	-127.5
C-VB-14.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Ruberoid Torch Smooth	Torch-applied	OlyBond 500, 12-inch o.c.	-165.0
C-VB-15.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Ruberoid HW 25 Smooth	Torch-applied	OlyBond 500, 12-inch o.c.	-180.0
C-VB-16.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Liberty SBS Self-Adhering Cap Sheet	Self-adhering	OlyBond 500, 12-inch o.c.	-187.5
C-VB-17.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Ruberoid 20 Smooth	Matrix 102 SBS Membrane Adhesive at 1.5 gal/square	OlyBond 500, 12-inch o.c.	-202.5
C-VB-18.	GAF SA Primer, EverGuard TPO Quick Spray Adhesive or EverGuard TPO Quick Spray Adhesive LV50	GAF SA Vapor Retarder	Self-adhering	OlyBond 500, 12-inch o.c.	-202.5
C-VB-19.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Ruberoid Torch Granule	Torch-applied	OlyBond 500, 12-inch o.c.	-225.0
C-VB-20.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Ruberoid HW Smooth	Torch-applied	OlyBond 500, 12-inch o.c.	-232.5
C-VB-21.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	One or two plies, GAFGLAS #75 Base Sheet, Tri-Ply #75 Base Sheet, GAFGLAS Ply 4, GAFGLAS Ply 4 M, Tri-Ply Ply 4 Ply Sheet or GAFGLAS FlexPly 6, GAFGLAS FlexPly 6 M	Hot asphalt applied	OlyBond 500, 12-inch o.c.	-352.5

- 16A Vapor barrier options for use over **structural concrete deck** followed by cellular lightweight concrete carry the following Maximum Design Pressure (MDP) limitations. The lesser of the MDP listings below vs. that for the selected assembly applies.

VAPOR BARRIER OPTIONS; STRUCTURAL CONCRETE DECK FOLLOWED BY CELLULAR LIGHTWEIGHT INSULATING CONCRETE						
OPTION #	PRIMER	VAPOR BARRIER		LIGHTWEIGHT CONCRETE PER TABLE 4A – 4B (Note 14)	MDP (psf)	
		TYPE	ATTACH			
LWC-VB-1.	Matrix 307 Premium Asphalt Primer or ASTM D41 primer	Ruberoid HW 25 Smooth, Ruberoid HW Smooth		Torch-applied	Min. 540 psi pre-existent cellular LWC	-358.0

- 17 Fire barriers of GAF FireOut™ Fire Barrier Coating or VersaShield Solo™ Fire-Resistant Slip Sheet are optional in all assemblies when overlying components are mechanically fastened.

- 18 The following products are interchangeable within the scope of this Evaluation Report:

ACCEPTABLE ALTERNATES				
SUB-CATEGORY	MANUFACTURER	FBC FILE	LISTED PRODUCT HEREIN	ALTERNATE
Roofing Insulation	GAF	FL16311	EnergyGuard Polyiso Insulation	EnergyGuard NH Polyiso Insulation
	Georgia-Pacific Gypsum, LLC	FL1250	EnergyGuard Ultra Polyiso Insulation	EnergyGuard NH Ultra Polyiso Insulation
Vapor Barrier	GAF	N/A	DensDeck Prime	DensDeck StormX Prime Roof Board
			GAF SA Vapor Retarder XL	GAF SA Vapor Retarder XL40

- 19 For System Types B-1, B-2, C-1, C-2, D-1 or D-2, GAF SA Vapor Retarder or GAF SA Vapor Retarder XL may be installed atop the roof deck, or to a loose-laid thermal barrier of DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board, prior to installation of the insulation and roof cover. When adhering GAF SA Vapor Retarder to structural concrete, the substrate shall be primed with GAF SA Primer, EverGuard TPO Quick Spray Adhesive or EverGuard TPO Quick Spray Adhesive LV50. When adhering GAF SA Vapor Retarder to DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board, the substrate shall be primed with GAF SA Primer, EverGuard TPO Quick Spray Adhesive, EverGuard TPO Quick Spray Adhesive LV50 or Matrix 307 Premium Asphalt Primer. Refer to [FM Loss Prevention Data Sheet 1-29](#) for design and installation limitations.
- 20 “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. ([Note 9](#) and [Note 10](#))

TABLE 1A: WOOD DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF) SYSTEM TYPE A-1: BONDED INSULATION, LIQUID APPLIED ROOF SYSTEM								
System No.	Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Joint Treatment	LARS	
W-1.	Min. 15/32-inch plywood at max. 2 ft spans	(Optional) Min. 1-inch EnergyGuard Polyiso Insulation, EnergyGuard Ultra	OB500	Min. 0.25-inch DensDeck Prime	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-45.0*

TABLE 1B: WOOD DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER									
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, LIQUID APPLIED ROOF SYSTEM									
System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Fasten (Note 11)	Attach	Type	Attach (Notes 6,7,8)	Joint Treatment	LARS	
W-2.	Min. 19/32-inch plywood or 1-inch wood plank; 2 ft span; 8d ring shank nails 6" o.c.	Min 2-inch EnergyGuard Polyiso Insulation, EnergyGuard RH	Note 2 (#14 Fastener only)	1 per 2.0 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-M, LRF-XF or OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-52.5

TABLE 1C: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER									
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, LIQUID APPLIED ROOF SYSTEM									
System No.	Deck (Note 1)	Base Insulation and/or Thermal Barrier Layer(s) (Note 13)	Top Insulation Layer			Roof Cover (Note 15)		MDP (psf)	
			Type	Fasteners (Note 11)	Attach	Joint Treatment	LARS		
W-3.	Min. 19/32-inch plywood	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck	Drill-Tec #12 or #14 Fastener with Drill-Tec 3" Standard Steel Plate	1 per 1.3 ft ²	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-60.0	
W-4.	Min. 15/32-inch plywood	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck Prime	Drill-Tec #12 or #14 Fastener with Drill-Tec 3" Standard Steel Plate	1 per 1.3 ft ²	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-67.5	

TABLE 1D: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER									
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED BASE PLY, LIQUID APPLIED ROOF SYSTEM									
System No.	Deck (Note 1)	Base Insulation and/or Thermal Barrier Layer(s) (Note 13)	Top Insulation Layer			Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners (Note 11)	Attach	Base Ply	Base Ply Treatment	LARS	
W-5.	Min. 15/32-inch plywood	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck Prime	Drill-Tec #12 or #14 Fastener with Drill-Tec 3" Standard Steel Plate	1 per 1.3 ft ²	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-67.5

TABLE 1E: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)									
SYSTEM TYPE E-2: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, LIQUID APPLIED ROOF SYSTEM									
System No.	Deck (Note 1)	Slip Sheet	Base Sheet			Roof Cover (Note 15)	MDP (psf)		
			Base	Fasteners (Note 11)	Spacing				
W-6.	Min. 19/32-inch plywood	(Optional) GAF FireOut Fire Barrier Coating or VersaShield Solo Fire-Resistant Slip Sheet	GAFGLAS Stratavent Nailable Venting Base	Min. 12 ga. annular ring shank nails and 1-5/8" diameter tin caps	7-inch o.c. at 4-inch wide laps and 7-inch o.c. at two (2) equally spaced, staggered center rows	GAF Premium Acrylic HydroStop System	-45.0		

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, SPUF, LIQUID APPLIED ROOF SYSTEM**

System No.	Deck (Note 1)	Base Insulation			Spray Applied Polyurethane Foam	Roof Cover (Note 15)		MDP (psf)
		Type	Fasten (Note 11)	Attach		Base Coat	Top Coat	
S-1	Min. 22 ga., type B, Grade 33 steel or structural concrete	Min. 2-inch EnergyGuard Polyiso Insulation	Note 2	1 per 4.0 ft ²	1.5 – 6.0 in. thick BASF “ELASTOSPRAY 81285” applied at 2.85 lb./ft ³ or BASF “ELASTOSPRAY 81305” applied at 3.0 lb./ft ³ (Refer to NOA 18-0222.03)	GAF Acrylic Base Coat or GAF Acrylic Top Coat	GAF Acrylic Top Coat	-30.0*
S-2	Min. 22 ga., type B, Grade 33 steel or structural concrete	Min. 1.5-inch EnergyGuard Polyiso Insulation	Note 2	1 per 2.7 ft ²	1.5 – 6.0 in. thick BASF “ELASTOSPRAY 81285” applied at 2.85 lb./ft ³ or BASF “ELASTOSPRAY 81305” applied at 3.0 lb./ft ³ (Refer to NOA 18-0222.03)	GAF Acrylic Base Coat or GAF Acrylic Top Coat	GAF Acrylic Top Coat	-37.5*
S-3	Min. 22 ga., type B, Grade 33 steel or structural concrete	Min. 2-inch EnergyGuard Polyiso Insulation	Note 2	1 per 2.9 ft ²	1.5 – 6.0 in. thick BASF “ELASTOSPRAY 81285” applied at 2.85 lb./ft ³ or BASF “ELASTOSPRAY 81305” applied at 3.0 lb./ft ³ (Refer to NOA 18-0222.03)	GAF Acrylic Base Coat or GAF Acrylic Top Coat	GAF Acrylic Top Coat	-45.0*
S-4	Min. 22 ga., type B, Grade 33 steel or structural concrete	Min. 1.5-inch EnergyGuard Polyiso Insulation	Note 2	1 per 1.45 ft ²	1.5 – 6.0 in. thick BASF “ELASTOSPRAY 81285” applied at 2.85 lb./ft ³ or BASF “ELASTOSPRAY 81305” applied at 3.0 lb./ft ³ (Refer to NOA 18-0222.03)	GAF Acrylic Base Coat or GAF Acrylic Top Coat	GAF Acrylic Top Coat	-82.5

**TABLE 2B: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED BASE PLY, LIQUID APPLIED ROOF SYSTEM**

System No.	Deck (Note 1)	Base Insulation			Top Insulation		Roof Cover (Note 15)			MDP (psf)
		Type	Fasten (Note 11)	Attach	Type	Attach (Notes 6,7,8)	Base Ply	Base Ply Treatment	LARS	
S-5	Min. 22 ga., type B, Grade 33 steel or structural concrete	Min. 1.5-inch EnergyGuard Polyiso Insulation	Note 2	1 per 3.2 ft ²	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-M, LRF-XF or OB500	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-37.5*
S-6	Min. 22 ga., type B, Grade 33 steel or structural concrete	Min. 1.5-inch EnergyGuard Polyiso Insulation	Note 2	1 per 2.0 ft ²	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-M, LRF-XF or OB500	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-45.0*
S-7	Min. 22 ga., type B, Grade 33 steel or structural concrete	Min. 2-inch EnergyGuard Polyiso Insulation	Note 2	1 per 4.0 ft ²	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-M, LRF-XF or OB500	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-45.0*

**TABLE 2c: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, LIQUID APPLIED ROOF SYSTEM**

System No.	Deck (Note 1)	Base Insulation Layer (Note 13)	Top Insulation Layer			Roof Cover (Note 15)		MDP (psf)
			Type	Fasten (Note 11)	Attach	Joint Treatment	LARS	
S-8	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 1.5-inch EnergyGuard Polyiso Insulation	Note 2	1 per 2.0 ft ²	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-45.0*
S-9	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 2.0 ft ²	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-45.0*
S-10	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck Prime	Note 2 <i>(no Drill-Tec 3" Steel Plate)</i>	1 per 1.45 ft ²	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-67.5
S-11	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 1.5-inch EnergyGuard Polyiso Insulation	Note 2	1 per 1.45 ft ²	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-75.0
S-12	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 <i>(no Drill-Tec 3" Steel Plate)</i>	1 per 1.45 ft ²	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-75.0

**TABLE 2d: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED BASE PLY, LIQUID APPLIED ROOF SYSTEM**

System No.	Deck (Note 1)	Base Insulation Layer (Note 13)	Top Insulation Layer			Roof Cover (Note 15)			MDP (psf)
			Type	Fasten	Attach	Base Ply	Base Ply Treatment	LARS	
S-13	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 1.5-inch EnergyGuard Polyiso Insulation	Note 2	1 per 2.0 ft ²	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-45.0*
S-14	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 2-inch EnergyGuard Polyiso Insulation	Note 2	1 per 2.9 ft ²	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-45.0*
S-15	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 2.0 ft ²	SBS-CA1, SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-45.0*
S-16	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.3 ft ²	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-52.5
S-17	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck Prime	Note 2 <i>(no Drill-Tec 3" Steel Plate)</i>	1 per 1.45 ft ²	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-67.5

**TABLE 2d: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED BASE PLY, LIQUID APPLIED ROOF SYSTEM**

System No.	Deck (Note 1)	Base Insulation Layer (Note 13)	Top Insulation Layer			Roof Cover (Note 15)			MDP (psf)
			Type	Fasten	Attach	Base Ply	Base Ply Treatment	LARS	
S-18	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 1.5-inch EnergyGuard Polyiso Insulation	Note 2	1 per 1.45 ft ²	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-67.5
S-19	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 2-inch EnergyGuard Polyiso Insulation	Note 2	1 per 1.8 ft ²	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-67.5
S-20	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 0.375-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.3 ft ²	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-67.5
S-21	Min. 22 ga., type B, Grade 33 steel or structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (<i>no Drill-Tec 3" Steel Plate</i>)	1 per 1.45 ft ²	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-75.0

**TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, LIQUID APPLIED ROOF SYSTEM**

REFER TO [NOTE 13](#) FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Joint/Lap Treatment	LARS	
C-1	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-M	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-75.0
C-2	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch DensDeck	LRF-M	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-135.0
C-3	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	(Optional) Additional layer(s) base insulation	LRF-M	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-222.5
C-4	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch DensDeck Prime	LRF-M	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-335.0
C-5	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-XF	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-75.0
C-6	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch DensDeck Prime	LRF-XF	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-135.0
C-7	Structural concrete	Min. 1-inch EnergyGuard Polyiso Insulation	LRF-XF	(Optional) Additional layer(s) base insulation	LRF-XF	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-222.5
C-8	Structural concrete	Min. 1-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch DensDeck Prime	LRF-XF	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-222.5
C-9	Structural concrete	Min. 1.5-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch DensDeck Prime	LRF-XF	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-335.0
C-10	Structural concrete	Min. 1.5-inch EnergyGuard RA Polyiso Insulation	LRF-XF	(Optional) Additional layer(s) base insulation	LRF-XF	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-390.0
C-11	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-75.0
C-12	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch DensDeck or DensDeck Prime	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-135.0
C-13	Structural concrete	Min. 1-inch EnergyGuard Polyiso Insulation	OB500	(Optional) Additional layer(s) base insulation	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-222.5
C-14	Structural concrete	Min. 1-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch DensDeck Prime	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-222.5
C-15	Structural concrete	Min. 1.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch DensDeck Prime	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-335.0

TABLE 3B: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, SPRAY APPLIED POLYURETHANE FOAM, LIQUID APPLIED ROOF SYSTEM

REFER TO [NOTE 13](#) FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Base Insulation Layer		Spray Applied Polyurethane Foam	Roof Cover (Note 15)		MDP (psf)
		Type	Attach (Notes 6,7,8)		Base Coat	Top Coat	
C-16	Structural concrete	Min. 1.5-inch EnergyGuard Polyiso Insulation	LRF-M	1.5 – 6.0 in. thick BASF “ELASTOSPRAY 81285” applied at 2.85 lb./ft ³ or BASF “ELASTOSPRAY 81305” applied at 3.0 lb./ft ³ (Refer to NOA 18-0222.05)	GAF Acrylic Base Coat or GAF Acrylic Top Coat	GAF Acrylic Top Coat	-232.5
C-17	Structural concrete	Min. 1.5-inch EnergyGuard Polyiso Insulation	OB500	1.5 – 6.0 in. thick BASF “ELASTOSPRAY 81285” applied at 2.85 lb./ft ³ or BASF “ELASTOSPRAY 81305” applied at 3.0 lb./ft ³ (Refer to NOA 18-0222.05)	GAF Acrylic Base Coat or GAF Acrylic Top Coat	GAF Acrylic Top Coat	-285.0

TABLE 3C: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED BASE PLY, LIQUID APPLIED ROOF SYSTEM

REFER TO [NOTE 13](#) FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base Ply	Base Ply Treatment	LARS	
C-18	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	(Optional) Additional layer(s) base insulation	LRF-M	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-60.0
C-19	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-M	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-127.5
C-20	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-M	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-172.5
C-21	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-M	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-335.0
C-22	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-XF	(Optional) Additional layer(s) base insulation	LRF-XF	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-60.0
C-23	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-XF	SBS-CA1, SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-127.5
C-24	Structural concrete	Min. 1-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-XF	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-172.5
C-25	Structural concrete	Min. 1-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-XF	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-222.5
C-26	Structural concrete	Min. 1.5-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-XF	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-335.0
C-27	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	(Optional) Additional layer(s) base insulation	OB500	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-60.0
C-28	Structural concrete	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-CA1, SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-127.5

**TABLE 3C: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED BASE PLY, LIQUID APPLIED ROOF SYSTEM**

REFER TO [NOTE 13](#) FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base Ply	Base Ply Treatment	LARS	
C-29	Structural concrete	Min. 1-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-172.5
C-30	Structural concrete	Min. 1-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-222.5
C-31	Structural concrete	Min. 1.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-335.0

**TABLE 3D: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: NON-INSULATED, LIQUID APPLIED ROOF SYSTEM**

System No.	Deck (Note 1)	Primer	Roof Cover (Note 15)		MDP (psf)
			Base Ply	LARS	
C-32	Structural concrete	(Optional) GAF Bonding Primer at 0.20-0.25 gal/square.	None	GAF Surface Seal SB Roof Coating	-502.5
C-33	Structural concrete	GAF Bonding Primer at 0.2-0.25 gal/square	None	GAF Premium Acrylic HydroStop System	-502.5
C-34	Structural concrete	GAF BarrierGuard Surface Coating followed by GAF SureBond Primer	None	GAF Premium Acrylic HydroStop System	-610.0

**TABLE 4A: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE E-2: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, LIQUID APPLIED ROOF SYSTEM**

System No.	Deck (Note 1)	Lightweight Concrete (Note 14)	Base Sheet			Roof Cover (Note 15)		MDP (psf)
			Type	Fasten (Note 11)	Spacing	Base Ply Treatment	LARS	
LWC-1.	Min. 22 ga. type B, Grade 33 vented steel or structural concrete	Pre-existent cellular lightweight concrete, min. 300 psi, min. 2-inch thick. <i>Note: To qualify the LWIC under this assembly, a Drill-Tec Base Sheet Fastener (1.7) or Drill-Tec Base Sheet Fastener E (1.7) shall achieve an average withdrawal of 60 lbf when tested per TAS 105 or ANSI/SPRI FX-1</i>	GAFGLAS Stratavent Nailable Venting Base	Drill-Tec Base Sheet Fastener (1.7) or Drill-Tec Base Sheet Fastener E (1.7)	7-inch o.c. at 4-inch wide laps and 7-inch o.c. at two (2) equally spaced, staggered center rows	(Optional) GAF Premium Acrylic HydroStop Base Sheet Lap Treatment	GAF Premium Acrylic HydroStop System	-45.0

**TABLE 4B: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION
SYSTEM TYPE F: NON-INSULATED, LIQUID APPLIED ROOF SYSTEM**

System No.	Deck (Note 1)	Lightweight Concrete (Note 14)	Primer (Note 15)	LARS (Note 15)	MDP (psf)
LWC-2.	Min. 22 ga. type B, Grade 33 vented steel	Mearlcrete (FL13492), min. 300 psi, min. 2-inch thick	GAF BarrierGuard Surface Coating followed by GAF SureBond Primer	GAF Premium Acrylic HydroStop System	-52.5
LWC-3.	Structural concrete	Cellular lightweight concrete, min. 210 psi, min. 2-inch thick. <i>Note: To qualify the LWIC under this assembly, a Drill-Tec Base Sheet Fastener (1.7) or Drill-Tec Base Sheet Fastener E (1.7) shall achieve an average withdrawal of 89 lbf when tested per ANSI/SPRI FX-1 or a Minimum Characteristic Resistance Force (MCRF) of 78 lbf when tested per TAS 105.</i>	GAF BarrierGuard Surface Coating followed by GAF SureBond Primer	GAF Premium Acrylic HydroStop System	-502.5

TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, LIQUID APPLIED ROOF SYSTEM

^A The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

System No.	Substrate (Note 1 and Note 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf) ^A
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Joint Treatment	LARS	
R-1	Existing smooth- or granule-surface BUR or smooth- or granule-surface modified bitumen	(Optional) Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-M	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-75.0
R-2	Existing smooth- or granule-surface BUR or smooth- or granule-surface modified bitumen	(Optional) Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch DensDeck	LRF-M	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-135.0
R-3	Existing smooth-surface BUR	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	(Optional) Additional layer(s) base insulation	LRF-M	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-157.5
R-4	Existing smooth-surface BUR	(Optional) Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch DensDeck Prime	LRF-M	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-157.5
R-5	Existing granule-surface BUR or smooth- or granule-surface modified bitumen	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	(Optional) Additional layer(s) base insulation	LRF-M	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-222.5
R-6	Existing granule-surface BUR or smooth- or granule-surface modified bitumen	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch DensDeck Prime	LRF-M	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-225.0
R-7	Existing granule-surface BUR or granule-surface modified bitumen	(Optional) Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-XF	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-75.0
R-8	Existing granule-surface BUR or granule-surface modified bitumen	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch DensDeck or DensDeck Prime	LRF-XF	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-135.0
R-9	Existing granule-surface BUR or granule-surface modified bitumen	Min. 1.5-inch EnergyGuard RA Polyiso Insulation	LRF-XF	(Optional) Additional layer(s) base insulation	LRF-XF	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-160.0
R-10	Existing granule-surface BUR or granule-surface modified bitumen	Min. 1-inch EnergyGuard Polyiso Insulation	LRF-XF	(Optional) Additional layer(s) base insulation	LRF-XF	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-222.5
R-11	Existing granule-surface BUR or granule-surface modified bitumen	Min. 1-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch DensDeck Prime	LRF-XF	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-222.5

TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, LIQUID APPLIED ROOF SYSTEM

^A The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

System No.	Substrate (Note 1 and Note 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf) ^A
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Joint Treatment	LARS	
R-12	Existing granule-surface BUR or granule-surface modified bitumen	Min. 0.25-inch DensDeck Prime	LRF-XF	None	N/A	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-257.5
R-13	Existing smooth-surface asphaltic roof cover or granule-surface BUR or granule-surface modified bitumen	(Optional) Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-75.0
R-14	Existing smooth-surface asphaltic roof cover	(Optional) Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch DensDeck or DensDeck Prime	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-120.0
R-15	Existing smooth-surface asphaltic roof cover	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	(Optional) Additional layer(s) base insulation	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-120.0
R-16	Existing granule-surface BUR or granule-surface modified bitumen	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	(Optional) Additional layer(s) base insulation	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-222.5
R-17	Existing granule-surface BUR or granule-surface modified bitumen	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch DensDeck Prime	OB500	GAF Premium Acrylic HydroStop Insulation Joint Treatment	GAF Premium Acrylic HydroStop System	-225.0

TABLE 5B: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED BASE PLY, LIQUID APPLIED ROOF SYSTEM

^A The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

System No.	Substrate (Note 1 and Note 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf) ^A
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base Ply	Base Ply Treatment	LARS	
R-18	Existing smooth- or granule-surface BUR or smooth- or granule-surface modified bitumen	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	(Optional) Additional layer(s) base insulation	LRF-M	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-60.0
R-19	Existing smooth- or granule-surface BUR or smooth- or granule-surface modified bitumen	(Optional) Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch DensDeck Prime	LRF-M	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-127.5

TABLE 5B: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED BASE PLY, LIQUID APPLIED ROOF SYSTEM

^A The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

System No.	Substrate (Note 1 and Note 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf) ^A
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base Ply	Base Ply Treatment	LARS	
R-20	Existing smooth- or granule-surface BUR or smooth- or granule-surface modified bitumen	(Optional) Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-M	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-172.5
R-21	Existing smooth- or granule-surface BUR or smooth- or granule-surface modified bitumen	(Optional) Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-M	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-M	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-225.0
R-22	Existing granule-surface BUR or granule-surface modified bitumen	Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-XF	(Optional) Additional layer(s) base insulation	LRF-XF	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-60.0
R-23	Existing granule-surface BUR or granule-surface modified bitumen	(Optional) Min. 0.5-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-XF	SBS-CA1, SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-127.5
R-24	Existing granule-surface BUR or granule-surface modified bitumen	(Optional) Min. 1-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-XF	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-172.5
R-25	Existing granule-surface BUR or granule-surface modified bitumen	(Optional) Min. 1-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-XF	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-222.5
R-26	Existing granule-surface BUR or granule-surface modified bitumen	Min. 1.5-inch EnergyGuard Polyiso Insulation	LRF-XF	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	LRF-XF	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-257.5
R-27	Existing smooth-surface asphaltic roof cover or granule-surface BUR or granule-surface modified bitumen	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	(Optional) Additional layer(s) base insulation	OB500	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-60.0

TABLE 5B: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED BASE PLY, LIQUID APPLIED ROOF SYSTEM

^A The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

System No.	Substrate (Note 1 and Note 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf) ^A
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base Ply	Base Ply Treatment	LARS	
R-28	Existing smooth-surface asphaltic roof cover	(Optional) Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-CA1, SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-120.0
R-29	Existing granule-surface BUR or granule-surface modified bitumen	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500.	Min. 0.25-inch DensDeck Prime	OB500	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-127.5
R-30	Existing granule-surface BUR or granule-surface modified bitumen	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-CA1	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-172.5
R-31	Existing granule-surface BUR or granule-surface modified bitumen	Min. 0.5-inch EnergyGuard Polyiso Insulation	OB500	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-TA	(Optional) GAF Premium Acrylic HydroStop Lap Treatment	GAF Premium Acrylic HydroStop System	-225.0

TABLE 5c: RECOVER APPLICATIONS
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER

^A The reported MDP documents the allowable maximum design pressure of the new roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

System No.	Substrate (Note 1 and Note 12)	Primer	Roof Cover (Note 15)	MDP (psf)
R-32	Existing EPDM single ply	GAF Cleaning Concentrate	GAF Premium Acrylic HydroStop System	-45.0
R-33	Existing smooth- or granule-surface BUR or SBS modified bitumen or granule-surface APP modified bitumen	(Optional) GAF BarrierGuard Surface Coating at 0.5 gal/square.	GAF Premium Acrylic HydroStop System	-45.0
R-34	Existing spray polyurethane roof (SPUF)	None	GAF Premium Acrylic HydroStop System	-237.5