



NEMO | etc.

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ENGINEER

TEST

CONSULT

P.E. EVALUATION REPORT (PEER)

GAF

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

PEER-GAF-001.A.R19

FL6267-R19 (NON-HVHZ)

Date of Issuance: 02/28/2006

Revision 19: 04/25/2024

SCOPE:

This This P.E. Evaluation Report (henceforth 'PEER') is issued under **F.A.C. Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The products described herein have been evaluated for compliance with the **8th Edition (2023) Florida Building Code** [sections noted herein](#).

DESCRIPTION: GAF Attic Ventilation Products (NON-HVHZ)

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

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

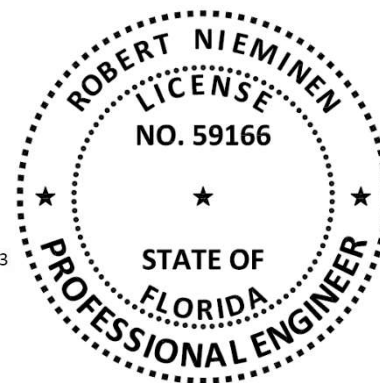
ADVERTISEMENT: The Florida Product Approval Number (FL#) preceded by the words "NEMO P.E. Evaluated" may be displayed in advertising literature. If any portion of the PEER is displayed, then it shall be done in its entirety.

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

This PEER consists of pages 1 through 11.

Prepared by: **Digitally signed**
by Robert
Nieminen
Date: 2024.04.25
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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 PEERs are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this PEER, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

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ROOFING COMPONENT EVALUATION:
1. SCOPE:

Product Category: Roofing

Sub-Category: Roofing Accessories that are an Integral Part of the Roofing System

Compliance Statement: **GAF Attic Ventilation Products**, as produced by **GAF**, have demonstrated compliance with the following sections of the **8th Edition (2023) 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:

<u>SECTION</u>	<u>PROPERTY</u>	<u>STANDARD</u>
1504.3	Wind resistance	ASTM E330
1506.5, R904.5.1, 2304.10.5	Corrosion Resistance (of nails)	TAS 114, Appendix E
1523.6.5.2.13	Wind Driven Rain	TAS 100(A)
2606.4	Rate of burning	ASTM D635
2606.4	Self-ignition temperature	ASTM D1929
2615.2(2)	Weatherometer	ASTM G155

3. REFERENCES:

<u>ENTITY</u>	<u>EXAMINATION</u>	<u>REFERENCE</u>	<u>DATE</u>
ATI (TST 1558)	Wind Uplift	87074.01-109-44	12/03/2008
ATI (TST 1558)	Wind Driven Rain	A5250.01-109-18	02/18/2011
ATI (TST 1558)	Wind Uplift	C2396.01-109-44	11/05/2012
ATI (TST 1558)	Wind Uplift	D1957.01-109-44	03/04/2014
ATI (TST 1558)	ASTM D635, D638, D1929, G155	D2702.01-106-18.R1	06/30/2014
ATI (TST 1558)	ASTM D635, D1929	D8532.01-106-18	07/10/2014
ATI (TST 1558)	Wind Uplift	E0818.01-109-44	09/23/2014
ATI (TST 1558)	Wind Uplift	E6744.01-109-44	04/30/2015
ATI (TST 1558)	Wind Driven Rain	G4123.01-109-18	01/10/2017
ATI (TST 1558)	Wind Uplift	G4123.02-109-44	01/10/2017
ITS (TST 1558)	ASTM D638, FTIR	H5341.01-106-18 R1	01/22/2018
ITS (TST 1558)	Wind Driven Rain	I3223.01-109-18	06/05/2018
ITS (TST 1558)	Wind Driven Rain	G2331.03-109-18-R1	02/25/2019
Miami-Dade (CER 1592)	Corrosion Resistance (of nails)	Certification L 20-0423.01	05/07/2020
Miami-Dade (CER 1592)	Corrosion Resistance (of nails)	Certification L 22-0429.01	06/26/2022
Miami-Dade (CER 1592)	Corrosion Resistance (of nails)	Certification L 22-0914.03	06/06/2023
PRI (TST 5878)	Wind Driven Rain	GAF-783-02-01	08/01/2017
PRI (TST 5878)	Wind Driven Rain	376T0008	07/25/2019
UL, LLC. (QUA 9625)	Quality Control	Service Confirmation	07/12/2022
UL, LLC. (QUA 9625)	Quality Control	Florida BCIS	Current



4. PRODUCT DESCRIPTION:

TABLE 1: EVALUATED VENTILATION PRODUCTS			
PRODUCT	PLANT(S)	DESCRIPTION	PUBLISHED NFVA ¹
Cobra® Exhaust Vent	Acworth, GA	Low-profile attic ridge vent of mesh-construction for use in shingle roof systems with 12-inch width ridge cap shingles. The product measures 10½-inch wide supplied in 20 and 50 ft long rolls, and is supplied with corrosion resistant 1¾-inch coil nails (nail gun version) or 2½-inch Smart Nails™ (hand nail version).	14.1 (nail gun version) 16.9 (hand nail version)
Cobra® Rigid Vent 3™	Cumming, GA New Columbia, PA	Plastic, low-profile attic ridge vent for use in shingle roof systems with 12-inch width ridge caps. The product measures 13-13/16-inch wide supplied in 48-inch long sections, and is supplied with 3-inch corrosion resistant ring shank nails.	18
Cobra® Rigid Vent 3™ - 9"	Cumming, GA	Plastic, low-profile attic ridge vent for use in shingle roof systems with 10-inch width ridge caps. The product measures 11½-inch wide supplied in 48-inch long sections, and is supplied with 3-inch corrosion resistant ring shank nails.	18
Cobra® Snow Country®	Cumming, GA New Columbia, PA	Plastic, low-profile attic ridge vent with filter for use in shingle roof systems with 12-inch width ridge cap shingles. The product measures 13-13/16-inch wide supplied in 48-inch long sections.	18
Cobra® Snow Country® Advanced	Cumming, GA New Columbia, PA	Plastic, low-profile attic ridge vent with filter for use in shingle roof systems with 12-inch width ridge caps. The product measures 13-13/16-inch wide supplied in 48-inch long sections, and is supplied with 3-inch corrosion resistant ring shank nails.	18
Cobra® Snow Country® Advanced - 9"	Cumming, GA	Plastic, low-profile attic ridge vent with filter for use in shingle roof systems with 10-inch width ridge caps. The product measures 11½-inch wide supplied in 48-inch long sections, and is supplied with 3-inch corrosion resistant ring shank nails.	18
Cobra® RidgeRunner®	Cumming, GA	Polypropylene plastic, low-profile attic ridge vent for use in shingle roof systems with 12-inch width ridge cap shingles. The product measures 11½-inch wide supplied in various lengths, and is supplied with corrosion resistant 1¾-inch coil nails.	12.5
TruSlate® Ridge Vent	Cumming, GA	Plastic, low-profile attic ridge vent for use in TruSlate® roof systems. The product measures 11.4-inch wide supplied in 48-inch long sections.	20
Cobra® Hip Vent	Cumming, GA	Plastic, low-profile attic hip vent with filter for use in shingle roof systems with 12-inch width hip shingles. The product, only for use on hips, measures nominal 11.4-inch wide supplied in 48-inch long sections, and is supplied with corrosion resistant 1¾-inch coil nails.	9
Cobra® IntakePro® Rooftop Intake Vent	Enka, NC	Woven plastic material pressed to form the molded shape. A woven fabric material is utilized on the top, bottom and front, below the vent channel of the mold. The vent is configured into a roll-out form, and is supplied with corrosion resistant 1¾-inch coil nails.	9

¹ Net Free Ventilation Area reported herein is as published by the manufacturer at the time of evaluation. The report user should verify current published data at the time of design and/or permitting to the satisfaction of the Authority Having Jurisdiction.

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this PEER, or previous versions thereof, is/was used for permitting or design guidance. PEERs are not to be construed as representing any attributes not specifically listed, nor are PEERs to be construed as an endorsement of the subject, or a recommendation for its use. There is no warranty by NEMO ETC, LLC or Robert Nieminen, P.E., express or implied, as to any finding or other matter in this PEER, or as to any product covered by the PEER.
- 5.2 This PEER is not for use in FBC High Velocity Hurricane Zone jurisdictions, as defined in FBC Chapter 2 (Broward and Miami-Dade Counties).
- 5.3 This PEER pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- 5.4 This PEER does not include evaluation of fire classification. Refer to **FBC 1505** or **R902** for requirements and limitations regarding roof assembly fire classification.

5.5 **Minimum Roof Slopes:**

TABLE 2: MINIMUM ROOF SLOPE	
PRODUCT	MINIMUM SLOPE
Cobra® Exhaust Vent	2:12
Cobra® Rigid Vent 3™	3:12
Cobra® Rigid Vent 3™ - 9"	3:12
Cobra® Snow Country®	3:12
Cobra® Snow Country® Advanced	3:12
Cobra® Snow Country® Advanced - 9"	3:12
Cobra® RidgeRunner®	3:12
TruSlate® Ridge Vent	5:12
Cobra® Hip Vent	Min. 3:12 to max. 12:12
Cobra® IntakePro® Rooftop Intake Vent	4:12

5.6 **Wind Classification:**

- 5.6.1 When installed in accordance with GAF standard attachment procedures, installation of **Cobra® Exhaust Vent**, **Cobra® Rigid Vent 3**, **Cobra® Rigid Vent 3 – 9"**, **Cobra® Snow Country®**, **Cobra® Snow Country® Advanced**, **Cobra® Snow Country® Advanced – 9"**, **Cobra® RidgeRunner®**, **TruSlate® Ridge Vent**, **Cobra® Hip Vent** and **Cobra® IntakePro®** is limited to maximum 33 ft mean roof height in Exposure B or C conditions. Refer to FBC 1609 or FBCR Chapter 3 for design wind speeds and exposure categories.
- 5.6.2 For installation on buildings outside these limitations, the performance limitations set forth in [Table 3](#) may be utilized. Allowable 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). The Allowable Design Pressure shall meet or exceed critical design pressure determined by a qualified design professional in accordance with **FBC Chapter 16** or **FBCR Chapter 3**. No rational analysis is permitted.

TABLE 3: ALLOWABLE WIND UPLIFT		
SUBSTRATE:	PRODUCT	ALLOWABLE DESIGN PRESSURE (PSF)
Min. 7/16-inch plywood	Cobra® Exhaust Vent (nail gun version)	-150
Min. 7/16-inch plywood	Cobra® Exhaust Vent (hand nail version)	-180
Min. 7/16-inch plywood	Cobra® Rigid Vent 3™, Rigid Vent 3™ - 9", Snow Country®, Snow Country® Advanced and Snow Country® Advanced - 9"	-215
Min. 7/16-inch OSB or plywood	Cobra® RidgeRunner®	-180

TABLE 3: ALLOWABLE WIND UPLIFT		
SUBSTRATE:	PRODUCT	ALLOWABLE DESIGN PRESSURE (PSF)
Min. 7/16-inch plywood	TruSlate® Ridge Vent	-190
Min. 7/16-inch plywood	Cobra® Hip Vent	-205
Min. 7/16-inch plywood	Cobra® IntakePro® Rooftop Intake Vent	-175

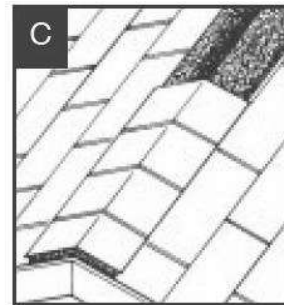
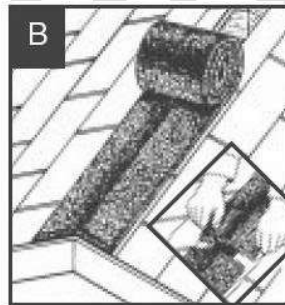
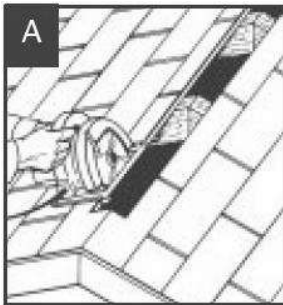
- 5.7 **GAF Attic Ventilation Products** are for use with asphalt-composition shingle roofs only.
- 5.8 Installation shall result in minimum net free ventilation area requirements set forth in **FBC 1203.2**.

6. INSTALLATION:

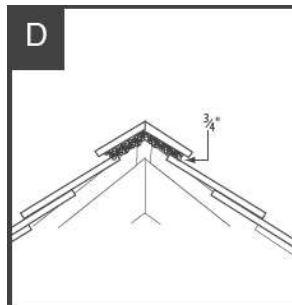
- 6.1 **GAF Attic Ventilation Products** shall be installed in accordance with **GAF** published installation instructions to the [Limitation of Use](#) herein and the specifics noted below.

6.2 COBRA® EXHAUST VENT:

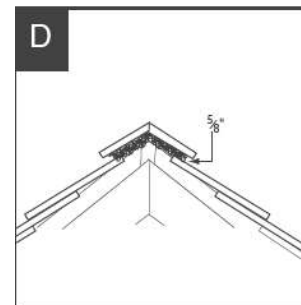
- 6.2.1 Chalk a cut-line 1-inch off each side of the ridge and cut a slot along the apex of the roof measuring 2-inch (for truss construction) or 3½-inch (for ridge pole construction). The slot should terminate 6-inches from each end and 12-inches from hip intersections or chimneys. Cut only the sheathing; do not cut trusses. Figure A.
- 6.2.2 Unroll the vent along the entire length of the ridge, covering uncut 6-inch sheathing area on both ends. Shorter lengths can be joined by caulking and butting the ends. Figure B.
- 6.2.3 Apply a bead of polyurethane roof sealant to the underside of the entire perimeter of the vent and nail with min. 2½-inch galvanized roofing nails at each corner and 10-inch o.c.
- 6.2.4 Apply a bead of polyurethane roof sealant in the shape of a “C” to the underside of the entire perimeter of the cap shingles, and install cap shingles directly over the vent using Smart Nails™ or 1¼-inch corrosion resistant coil nails (supplied with the vent). Figure C.



- 6.2.5 **Cobra® Exhaust Vent (hand nail version)** and **Cobra® Exhaust Vent (nail gun version)** have a ¾-inch or 5/8-inch nominal thickness, respectively, to facilitate ventilation. Care shall be taken not to crush or compact the product during installation. Figure D.



Hand-Nail Version



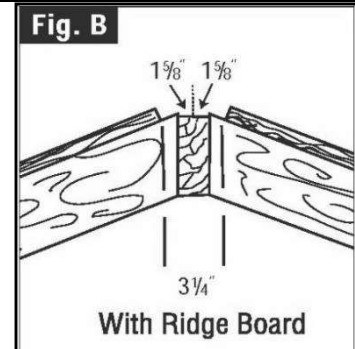
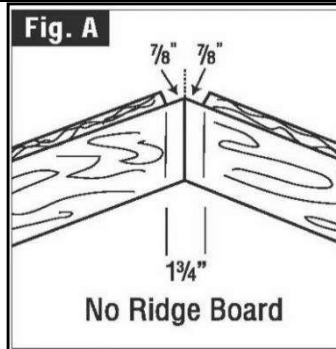
Nail Gun Version

6.3 COBRA® RIGID VENT 3™, RIGID VENT 3™-9", SNOW COUNTRY®, SNOW COUNTRY® ADVANCED AND ADVANCED-9":

- 6.3.1 Mark-off and cut the slot opening as follows, ensuring that the ends of the opening stop at least 6-inch from any end walls and at least 12-inch from hip and ridge intersections or chimneys.

No Ridge Board: Cut a 7/8-inch opening on each side of the ridge (Figure A).

With Ridge Board: Cut a 1-5/8-inch opening on each side of the ridge (Figure B).

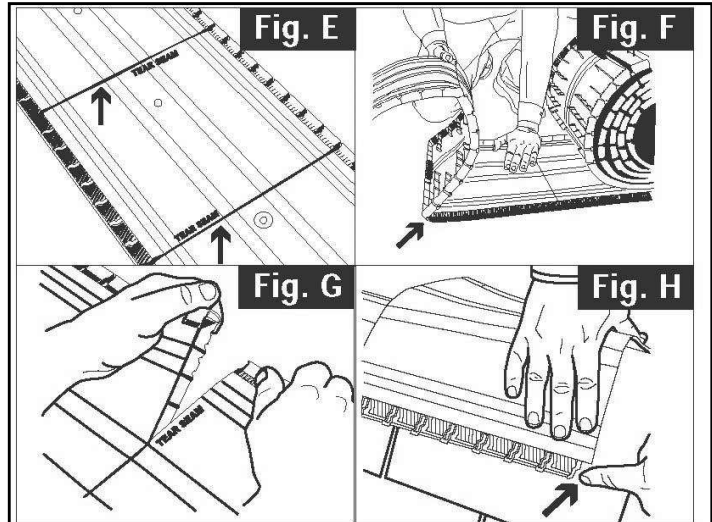


- 6.3.2 **Vent Placement:** Starting at one end of the slot, place, center and conform the Cobra® rigid vent over the slot with the vent firmly against the roof surface, ensuring the vent extends past the slot opening by at least 6-inch.
- 6.3.3 **Fasteners:** For Cobra® Rigid Vent 3™, Cobra® Rigid Vent 3™ - 9", Cobra® Snow Country® Advanced and Cobra® Snow Country® Advanced - 9" only, use the 3-inch corrosion resistant ring shank nails (included). For Cobra® Snow Country®, use corrosion resistant nails at least 3-inch or longer. Nails must always penetrate through plywood decks or at least 3/4-inch into wood planks. NOTE: GAF recommends 3-inch corrosion resistant ring shank nails for increased uplift resistance.
- 6.3.4 **Spacing:** Attach the vent section through the pre-molded nailing holes located at 3, 12, 24, 36 and 45-inch from the start of each 48-inch vent piece.
- 6.3.5 **Joints:** Apply the subsequent Cobra® rigid vent sections over the length of the ridge using the overlap/underlap tabs.
- 6.3.6 **Ridge Shingles:** Install ridge shingles in accordance with shingle manufacturer's published installation instructions, using corrosion resistant nails detailed in 6.3.3. A nail line is inscribed on top of the Cobra® rigid vent to serve as a guide.

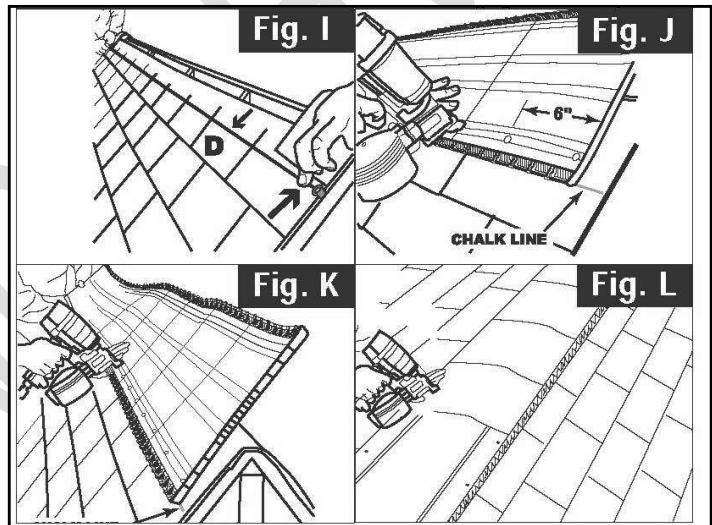
6.4 COBRA® RIDGERUNNER®

6.4.1 Cut slot per 6.3.1.

6.4.2 Tear a 1-foot section to be used as a template for laying the vent out (Figure E-G) and center the template/ locator over the ridge cap shingles at the beginning of the vent slot. Note the location of the baffle (Figure H). Make sure to do this at both ends of the installation.



6.4.3 Measure the distance from the edge of the roof slot to the exterior baffle (D). Establish a chalk line along one side of the ridge (Figure I). Unroll the vent and use the included 1-3/4-inch pneumatic corrosion resistant roofing nails to attach the first side of the ridge vent with the exterior of the baffle aligned with the chalk line (Figure J). Proceed with using the 1' interval EasyTear™ system to custom size the vent to the appropriate length. If the EasyTear™ system can not be utilized, use a utility knife to size the vent. Nail gun targets are embossed on the part as a guide for property attaching vent to the roof. The vent should be fastened on 6-inch centers (Figure K).



6.4.4 For installations over extra-thick shingles, a bead of polyurethane roof sealant may be applied to the underside of the outer baffle of the vent along both sides of the ridge and at exposed edges where the vent meets the shingles to fill any open space between the vent and shingles below.

6.4.5 **NOTE:** When fastening the vent and cap shingles, be sure that the included 1 3/4-inch corrosion resistant coil nails completely penetrate plywood or provide at least 3/4-inch penetration into wood planks. In the case they do not, you must use alternate corrosion resistant nails that provide the required penetration. Proceed with attaching the other side of the vent. When beginning to nail down the second side, do NOT begin at the end; begin between the first and second one-foot sections and then return to fasten the first one-foot section. This will allow for proper fit.

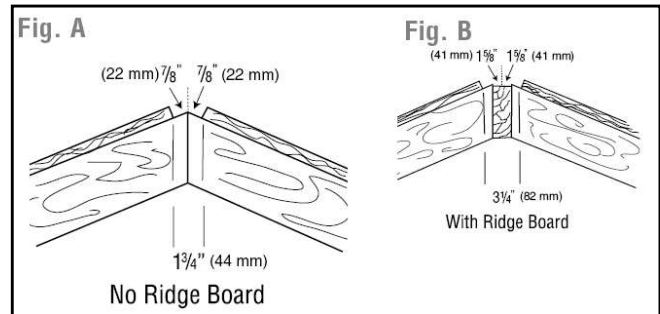
6.4.6 Install ridge shingles in accordance with shingle manufacturer's published installation instructions, using the nail-lines on top of the ridge vent for proper lapping.

6.5 TRUSLATE® RIDGE VENT:

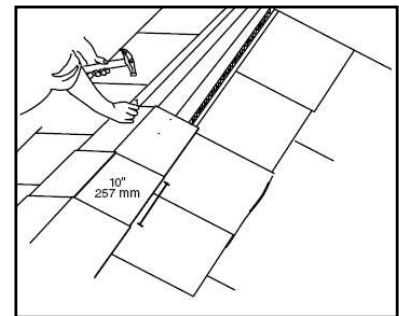
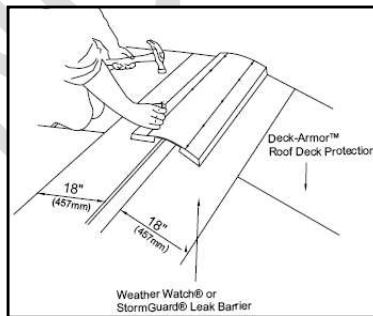
- 6.5.1 DO NOT use on hips.
- 6.5.2 Install **TruSlate® Ridge Vent** before installing the field slates.
- 6.5.3 After determining the total length of **TruSlate® Ridge Vent** required (for proper ventilation), determine the necessary slot opening. Mark-off and cut the slot opening, ensuring the ends of the opening stop at least 6-inch from any end walls and at least 12-inch from hip and ridge intersections or chimneys.

Roofs without a ridge board: Cut a 7/8-inch opening along the ridge on each side (Figure A).

Roofs with a ridge board: Cut a 1-5/8-inch opening along the ridge on each side (Figure B).



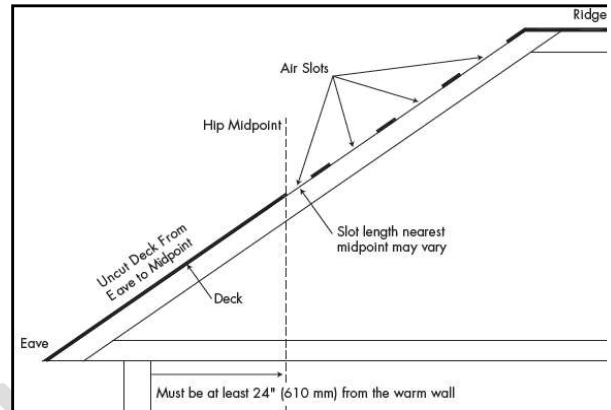
- 6.5.4 Install an 18-inch wide section of ASTM D1970 self-adhering leak barrier (holding Florida Statewide Product Approval or Approved on a Local Basis) from the edge of the ridge slot extending down towards the roof deck on both side of the slot.
- 6.5.5 Place the **TruSlate® Ridge Vent** over the ridge slot, "peaked" and centered over the ridge slot, and attach using minimum 3-inch long corrosion resistant ring-shank nails through the pre-molded nail holes on the vent, located 3-inch from the ends and 9-inch o.c. Fasteners shall penetrate through plywood decks or embed minimum 3/4-inch into wood plank decks.
- 6.5.6 Continue over the length of the ridge, utilizing the male/female connectors to connect units. Ensure the finished ends include the pre-molded end caps. Cover all exposed nail heads on the vent with silicone caulk. Install a bead of exterior grade silicone sealant at the downslope leading edges of the ridge vent, at the junction of the leading edge and the leak-barrier below.
- 6.5.7 Install the top course of TruSlate® field slates, UnderBlock™ UV & Moisture Barrier and TruSlate® trim slates in accordance with GAF published installation instructions. Install **TruSlate® trim slates** with 10-inch exposure using minimum **1-5/8-inch long deck screws** through pre-drilled holes, through the ridge vent to engage the wood deck.



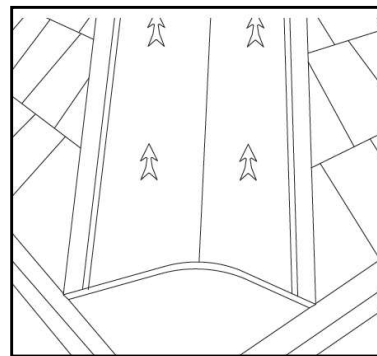
6.6 COBRA® HIP VENT

- 6.6.1 The roof deck shall consist of minimum of 7/16 inch thick plywood or OSB wood structural panels. Use only on roofs with slopes between 3:12 and 12:12. Install only on hips. Do not install Cobra® Hip Vent on ridges.
- 6.6.2 **Sequencing:** If ridge ventilation will be installed, always install the ridge vent to the end of the ridge before installing Cobra® Hip Vent.

- 6.6.3 **Hip Air Slot:** Determine the number of Cobra® Hip Vent sections needed for proper ventilation and the location for cuts in the roof hip. Cobra® Hip Vent is installed over a 2½ inch wide slot opening centered on the hip beginning at 12 inches below the top of the hip and extending 36 inches down the hip for every 4 foot section of Cobra® Hip Vent needed. Leave 12 inches of the hip uncut after each 36 inch opening, and the lowest opening must stop at the mid-point of the hip and more than 24 inches in from the exterior warm wall. Wider openings and slots below the midpoint of the hip will not improve ventilation and must be avoided. Cut away the shingles first with a roofing knife, and then cut the deck with a circular saw. The saw should be adjusted so that the rafters or trusses are not cut. Note: The roof decking must be re-nailed to the rafter at the edge closest to the hip to compensate for the nails removed when the hip slot was cut.



- 6.6.4 On plywood or OSB roof decks, where a sheathing seam intersects the hip air slot, stop cutting the air slot 2-inches (51 mm) **before** the seam and continue cutting the slot 2-inches (51 mm) **after** the seam, leaving a total of 4-inches (102 mm) of uncut deck at the seam. Then, proceed with cutting down to the previously marked 36-inch (914 mm) point. The air slot may be widened, in this case, to 5/8-inch (16 mm) on each side of the hip rafter to maintain proper NFVA.
- 6.6.5 **Sealant:** Seal all cut-edges of the asphalt shingles to the roof sheathing along all sides of the hip air slot openings, using a bead of ASTM C920 polyurethane sealant, to prevent water infiltration.
- 6.6.6 **Orientation:** Always install Cobra® Hip Vent with the "Towards Peak" arrows on the top surface of the vent pointing up towards the peak of the roof.

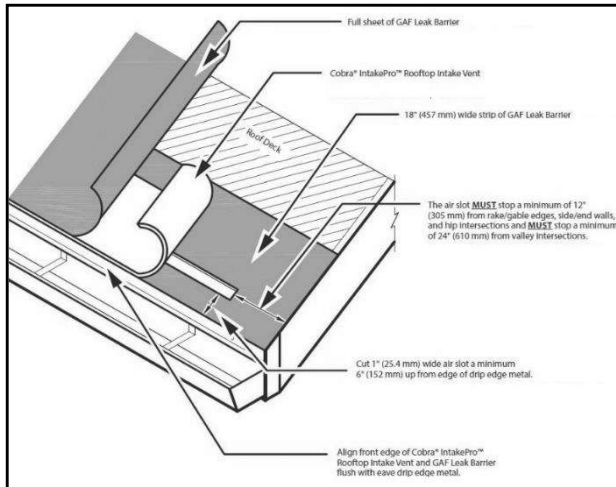


- 6.6.7 **Attachment:** Cobra® Hip Vent is fastened to the deck starting at the bottom of the hip and then up along the entire length of the hip (this includes un-cut portions of the hip). Fasten Cobra® Hip Vent to the deck with the included 1¾-inch long collated galvanized steel roofing nails, or longer corrosion resistant roofing fasteners, to achieve penetration through plywood or OSB decks or minimum 3/4-inch embedment into wood planks. Attach the Cobra® Hip Vent section through the pre-marked 6-inch increment nail targets.

- 6.6.8 **Joints & Terminations:** Apply the subsequent **Cobra® Hip Vent** sections over the length of the hip using the overlap/underlap tabs. For roofs with ridge vents, lengths of the hip vent must be butted tightly to sections of ridge vents and install a 3 inch by 12-inch strip of self-adhering leak barrier over all junctions. For roofs without ridge vents, sections of hip vent from adjacent hip runs must be mitered together tightly where they intersect and install a 3 inch by 12-inch strip of self-adhering leak barrier over all junctions. Refer to GAF published installation instruction for details.
- 6.6.9 **Ridge Shingles: Cobra® Hip Vent** is then covered with ridge cap shingles and this entire assembly is nailed to the sheathing with the included 1¾-inch long collated galvanized steel roofing nails. Depending on the field and ridge cap shingles used, longer length corrosion resistant fasteners may be necessary. The ridge cap shingles are installed per the shingle manufacturer's instructions and Florida Product Approval, with a minimum of two nails per shingle and a shingle to shingle nail spacing of 8 inches on center or less. Refer to the shingle manufacturer's Florida Product Approval for ridge cap shingle fastening and sealing requirements. Do not overdrive the nails or crush/compact the product during installation.

6.7 COBRA® INTAKEPRO® ROOFTOP INTAKE VENT

- 6.7.1 The roof deck shall consist of minimum of 7/16 inch thick plywood or OSB wood structural panels. Use only on roofs with minimum slope of 4:12. Install only on eave edges of the roof.
- 6.7.2 Determine the length of Cobra® IntakePro® Rooftop Intake Vent sections needed for proper ventilation and the location for cuts near the roof eave edge. Install a metal drip edge at the eave of the roof. Measure up 6 and 7 inches up from the edge of the metal drip edge and strike chalk lines parallel to the eave of the roof. Cut a 1 inch wide air slot opening along the chalk lines, stopping a minimum of 12" (305 mm) from rake/gable edges, side/end walls, and hip intersections, and stopping a minimum of 24" (610 mm) from the center of valley intersections. The saw should be adjusted so that the rafters or trusses are not cut.
- Note: After cutting the air slot, clear all debris blocking access into the attic space. Be sure to flatten attic insulation near the air slot to allow for proper intake airflow near the air slot. Attic baffles may be used to help prevent insulation from blocking intake airflow into the attic space.
- 6.7.3 Install a minimum 18 inch (457mm) wide FBC Approved peel-and-stick leak barrier down to the roof deck. Align peel-and-stick leak barrier flush to the edge of the roof on top of the drip edge metal. Use a sharp utility knife to cut the leak barrier, re-opening the 1 inch (25 mm) air slot that was previously cut in the deck.
- 6.7.4 Each roll of Cobra® IntakePro® Rooftop Intake Vent comes with two pieces of end cap fabric. To begin the vent run, place one piece of end cap fabric overhanging halfway over the rake/gable edge and parallel to the eave drip edge. Fasten the fabric to the roof deck using two roofing nails, one high and one low. If necessary, a piece of FBC Approved peel-and-stick leak barrier can be used in lieu of end cap fabric.
- 6.7.5 With the pre-marked dotted nail line and GAF logo facing up toward the sky, position the vent on top of the fabric end cap and flush to the rake/gable edge and eave drip edge. The front venting face of the vent should be flush with the drip edge metal below. Using the included 1-3/4 inch (44 mm) pneumatic coil nails, fasten the vent every 6 inches (152 mm) along the pre-marked nail line and fasten every 12 inches (305 mm), approximately 1-1/2 inches (38 mm) down from the up-slope edge of the vent. Do NOT nail within 1 inch (25 mm) from the side, top, or bottom edges of the vent.
- 6.7.6 Continue installing vent toward the opposite gable/rake edge or termination point. When installing multiple rolls, adjoin the rolls by butting them tightly together. There should be no gap between adjoining sections. The vent must always extend a minimum of 12 inches (305 mm) past any air slots. Miter cut the vent at any valley and hip intersections, ensuring the vent sections are butted tightly together. For terminations at gable and rake edges, cover the end of the vent run using the included fabric end cap in the same manner as the start of the vent run.
- 6.7.7 Install FBC Approved peel-and-stick leak barrier completely covering the top of the vent and extending from the eave edge to a minimum of 24 inches (610 mm) in from the building's warm wall. The leak barrier should not overhang the vent. Install rake drip edge if necessary.



- 6.7.8 Begin installing the shingle starter course. The starter course and first course of field shingles should overhang the front edge of the Cobra® IntakePro® Rooftop Intake Vent by 1/4 – 3/4 inches (6 – 19 mm) to provide a drip edge. Using the included 1-3/4 inch (44 mm) pneumatic coil nails, fasten the starter strip and field shingles as per manufacturer's installation instructions. Ensure the field shingles are not fastened into the open air intake slot below.

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 61G20-3QA** requirements. Refer to [Section 4](#) herein for products and production locations having met codified material standards.

9. QUALITY ASSURANCE ENTITY:

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

- END OF PEER -



Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

OFFICE OF THE
SECRETARY

FL #	FL6267-R19														
Application Type	Revision														
Code Version	2023														
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	Michael Stieh michael.stieh@gaf.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	Roofing Accessories that are an Integral Part of the Roofing System														
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	FL6267_R19_COI_2023_07_COI_NIEMINEN.pdf														
Referenced Standard and Year (of Standard)	<table> <thead> <tr> <th>Standard</th><th>Year</th></tr> </thead> <tbody> <tr> <td>ASTM D1929</td><td>2016</td></tr> <tr> <td>ASTM D635</td><td>2014</td></tr> <tr> <td>ASTM E330</td><td>2014</td></tr> <tr> <td>ASTM G155</td><td>2013</td></tr> <tr> <td>TAS 100(A)</td><td>2023</td></tr> <tr> <td>TAS 114, Appendix E</td><td>2011</td></tr> </tbody> </table>	Standard	Year	ASTM D1929	2016	ASTM D635	2014	ASTM E330	2014	ASTM G155	2013	TAS 100(A)	2023	TAS 114, Appendix E	2011
Standard	Year														
ASTM D1929	2016														
ASTM D635	2014														
ASTM E330	2014														
ASTM G155	2013														
TAS 100(A)	2023														
TAS 114, Appendix E	2011														
Equivalence of Product Standards Certified By															

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

04/26/2024

Date Validated

04/30/2024

Date Pending FBC Approval

05/04/2024

Date Approved

06/18/2024

Summary of Products

FL #	Model, Number or Name	Description
6267.1	GAF Attic Ventilation Products (NON-HVHZ)	Low profile roof ventilation products 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/-215 Other: 1.) The noted design pressures applies to one particular vent installation. Refer to PEER Section 5.6. 2.) Refer to PEER Section 5 for Limits of Use.		Installation Instructions FL6267 R19 II 2024 04 25 FINAL PEER-GAF-001.A VENTS FL6267-R19.pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes Evaluation Reports FL6267 R19 AE 2024 04 25 FINAL PEER-GAF-001.A VENTS FL6267-R19.pdf Created by Independent Third Party: Yes

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Next

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Product Approval Accepts:





Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

OFFICE OF THE
SECRETARY

FL #	FL10124-R35														
Application Type	Revision														
Code Version	2023														
Application Status	Approved														
Comments															
Archived	<input type="checkbox"/>														
Product Manufacturer	GAF														
Address/Phone/Email	1 Campus Drive Parisppany, 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	Asphalt Shingles														
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	12/16/2025														
Validated By	John W. Knezevich, PE <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received														
Certificate of Independence	FL10124_R35_COI_2023_07_COI_NIEMINEN.pdf														
Referenced Standard and Year (of Standard)	<table> <thead> <tr> <th>Standard</th><th>Year</th></tr> </thead> <tbody> <tr> <td>ASTM D1970</td><td>2017</td></tr> <tr> <td>ASTM D3161</td><td>2016</td></tr> <tr> <td>ASTM D3462</td><td>2016</td></tr> <tr> <td>ASTM D7158</td><td>2019</td></tr> <tr> <td>TAS 100</td><td>2023</td></tr> <tr> <td>TAS 107</td><td>2020</td></tr> </tbody> </table>	Standard	Year	ASTM D1970	2017	ASTM D3161	2016	ASTM D3462	2016	ASTM D7158	2019	TAS 100	2023	TAS 107	2020
Standard	Year														
ASTM D1970	2017														
ASTM D3161	2016														
ASTM D3462	2016														
ASTM D7158	2019														
TAS 100	2023														
TAS 107	2020														
Equivalence of Product Standards Certified By															

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

10/12/2023

Date Validated

10/19/2023

Date Pending FBC Approval

10/28/2023

Date Approved

12/12/2023

Summary of Products

FL #	Model, Number or Name	Description
10124.1	GAF Asphalt Roof Shingles (HVHZ)	Fiberglass reinforced, laminated asphalt shingles 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 Other: Refer to PEER-GAF-002.B, Section 5 for Limits of Use.		Installation Instructions FL10124 R35 II 2023 10 12 FINAL PEER-GAF-002.B SHINGLES HVHZ FL10124-R35.pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes Evaluation Reports FL10124 R35 AE 2023 10 12 FINAL PEER-GAF-002.B SHINGLES HVHZ FL10124-R35.pdf Created by Independent Third Party: Yes
10124.2	GAF Asphalt Roof Shingles (NON-HVHZ)	Fiberglass reinforced 3-tab, laminated, 5-tab and hip/ridge asphalt shingles 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 Other: Refer to PEER-GAF-002.A, Section 5 for Limits of Use.		Installation Instructions FL10124 R35 II 2023 10 12 FINAL PEER-GAF-002.A SHINGLES NON-HVHZ FL10124-R35.pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes Evaluation Reports FL10124 R35 AE 2023 10 12 FINAL PEER-GAF-002.A SHINGLES NON-HVHZ FL10124-R35.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

P.E. EVALUATION REPORT (PEER)

GAF

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

PEER-GAF-002.A.R37

FL10124-R35 (NON-HVHZ)

Date of Issuance: 01/03/2008

Revision 37: 10/12/2023

SCOPE:

This P.E. Evaluation Report (henceforth 'PEER') is issued under **F.A.C. Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been evaluated for compliance with the **8th Edition (2023) Florida Building Code** [sections noted herein](#).

DESCRIPTION: GAF Asphalt Roof Shingles (NON-HVHZ)

LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein and **FBC 1507.2.7.1 / R905.2.6.1**

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

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

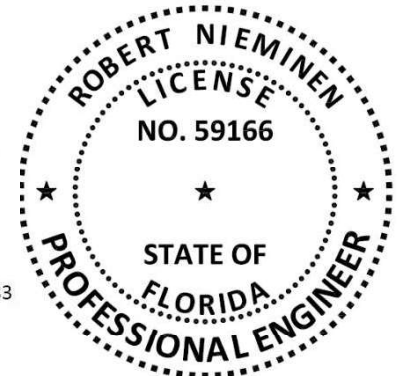
INSPECTION: Upon request, a copy of this entire PEER shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This PEER consists of pages 1 through 7.

Prepared by:

Digitally signed by
Robert Nieminen
Date: 2023.10.19
'08:36:17 -04'00

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



CERTIFICATION OF INDEPENDENCE:

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

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ROOFING SYSTEMS EVALUATION:
1. SCOPE:

Product Category: Roofing
Sub-Category: Asphalt Shingles
Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer
Compliance Statement: **GAF Asphalt Roof Shingles**, as produced by **GAF**, have demonstrated compliance with the following sections of the **8th Edition (2023) 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:

<u>SECTION</u>	<u>PROPERTY</u>	<u>STANDARD</u>
1507.1.1, 1507.2.9.2 / R905.1.1, R905.2.8.2	Material standard	ASTM D1970
1507.2.5, R905.2.4	Material standard	ASTM D3462
1507.2.7.1, R905.2.6.1	Wind Resistance	ASTM D3161
1507.2.7.1, R905.2.6.1	Wind Resistance	ASTM D7158
1507.2.7.1, R905.2.6.1	Wind Resistance	TAS 107

3. REFERENCES:

<u>ENTITY</u>	<u>EXAMINATION</u>	<u>REFERENCE</u>	<u>DATE</u>
NEMO (TST6049)	ASTM D1970	4j-GAF-22-SSUDL-02	08/08/2022
PRI (TST 5878)	ASTM D3462	GAF-897-02-01	11/08/2018
PRI (TST 5878)	ASTM D3462	GAF-898-02-01	11/08/2018
PRI (TST 5878)	ASTM D3462	GAF-899-02-01	11/15/2018
PRI (TST 5878)	ASTM D3462 (IN-MV)	376T0133	02/05/2021
PRI (TST 5878)	ASTM D3462 (CA-S)	376T0135	02/05/2021
PRI (TST 5878)	ASTM D3462 (IN-MV)	376T0163	04/20/2021
PRI (TST 5878)	ASTM D3462 (IN-MV)	376T0293	03/22/2022
UL (TST 1740)	ASTM D3462	93NK6295	11/29/1993
UL (TST 1740)	TAS 107	94NK9632	03/29/2000
UL (TST 1740)	ASTM D3161	04NK30546	03/10/2005
UL (TST 1740)	ASTM D3462, D3161	04NK22009	05/06/2005
UL (TST 1740)	ASTM D3161, D3462	06CA35251	10/18/2006
UL (TST 1740)	ASTM D3462	06CA31603	12/01/2006
UL (TST 1740)	ASTM D3161, D3462	06CA41095	12/27/2006
UL (TST 1740)	ASTM D3161	06CA31611	04/04/2007
UL (TST 1740)	ASTM D3161	06CA61148	04/09/2007
UL (TST 1740)	ASTM D3161, D3462	07CA31742	11/08/2007
UL (TST 1740)	ASTM D3161, D7158, D3462	08CA06100	03/13/2008
UL (TST 1740)	ASTM D3161, D3462	09CA10592	03/26/2009
UL (TST 1740)	ASTM D3161, D3462	09CA06856	05/15/2009
UL (TST 1740)	ASTM D3161, D7158, D3462	09CA27281	08/27/2009
UL (TST 1740)	ASTM D3161, D7158, D3462	10CA35554	03/05/2010
UL (TST 1740)	ASTM D3161, D7158, D3462	10CA13686	05/15/2010
UL (TST 1740)	ASTM D3462	10CA11953	10/29/2010
UL (TST 1740)	ASTM D3161, D7158, D3462	10CA53934	03/31/2011
UL (TST 1740)	ASTM D3161, D7158, D3462	11CA48924	10/22/2011
UL (TST 1740)	ASTM D3161, D7158, D3462	11CA47919	12/03/2011
UL (TST 1740)	ASTM D3161, D7158, D3462	11CA48725	12/09/2011
UL, LLC. (TST 9628)	ASTM D3462	12CA34891	10/12/2012
UL, LLC. (TST 9628)	ASTM D3161	12CA38083	02/26/2013
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4786875675	07/27/2015
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4787434542	05/17/2016



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ENTITY	EXAMINATION	REFERENCE	DATE
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4788717529	09/09/2016
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4788198026	11/28/2017
UL, LLC. (TST 9628)	ASTM D3161	4788698165	11/09/2018
UL, LLC. (TST 9628)	ASTM D3161	4788669132	12/13/2018
UL, LLC. (TST 9628)	ASTM D3161	4788891098	02/14/2019
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4788932264	08/16/2019
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4789115488	10/03/2019
UL, LLC. (TST 9628)	ASTM D3161, D3462	4788959558	10/17/2019
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4786508528	11/01/2019
UL, LLC. (TST 9628)	ASTM D3161	4789132672	10/27/2020
UL, LLC. (TST 9628)	ASTM D3161	4789732437	04/15/2021
UL, LLC. (TST 9628)	ASTM D3462	4790002635	01/26/2022
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4788198026	05/23/2022
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4790488380	08/22/2022
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4790111695	08/30/2022
UL, LLC. (QUA 9625)	Quality Control	Service Confirmation	12/06/2022
UL, LLC. (QUA 9625)	Quality Control	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

TABLE 1: ASPHALT SHINGLE COMPONENTS				
TYPE	PRODUCT	DESCRIPTION	MATERIAL STANDARD	PLANT(S)
ACCESSORY STARTER STRIPS	Pro-Start® Starter Strip Shingles	starter strips for asphalt roof shingles	ASTM D3462	CA-S, IN-MV
	QuickStart® Peel & Stick Starter Roll	mineral-surfaced, fiberglass-reinforced, self-adhering SBS modified bitumen starter strip, nominal 9-inch x 33 ft roll, for use with asphalt shingles with exposure of 6-inch or less	ASTM D1970	CA-S
	StarterMatch® Starter Strip Shingles	color-coordinated starter strips for use with Grand Canyon® and Grand Sequoia® series asphalt shingles. StarterMatch® are installed as the second starter for Grand Canyon® and Grand Sequoia® series installations	ASTM D3462	CA-F
	WeatherBlocker™ Premium Starter Strip Shingles	starter strips for asphalt roof shingles	ASTM D3462	IN-MV
ASPHALT SHINGLES	Marquis WeatherMax®	fiberglass reinforced 3-tab asphalt roof shingles	ASTM D3462	IN-MV
	Royal Sovereign®			AL, CA-F, FL, GA, IN-MV, PA, TX-D
	Camelot® II	fiberglass reinforced, laminated asphalt roof shingles	ASTM D3462	IN-MV
	Fortitude®			PA
	Glenwood®			IN-MV
	Grand Canyon®			CA-F, IN-MV
	Grand Sequoia®			CA-F, IN-MV
	Grand Sequoia® AS			CA-F
	Timberline® AH			AL, CA-F, IN-MC, PA
	Timberline® AS II			CA-F, CA-S, TX-E
	Timberline® CS			CA-F
	Timberline HD®			AL, CA-S, CA-F, FL, IN-MC, MD, MN, PA, TX-D, TX-E
	Timberline® Solar HD			CA-F, CA-S, IN-MV
	Timberline HDZ®			AL, CA-F, CA-S, FL, IN-MC, MD, MN, PA, TX-D, TX-E
	Timberline® UHDZ™			AL, CA-S, IN-MC, PA

TABLE 1 (CONTINUED): ASPHALT SHINGLE COMPONENTS

TYPE	PRODUCT	DESCRIPTION	MATERIAL STANDARD	PLANT(S)
ASPHALT SHINGLES	Timberline® Solar HDZ®	fiberglass reinforced, laminated asphalt roof shingles	ASTM D3462	IN-MV
	Timberline® NS			AL, CA-S, FL, IN-MC, MD, MN, PA, TX-D, TX-E
	Timberline Ultra HD®			AL, CA-S, IN-MC, MN, PA, TX-E
	Timberline® UHD			AL, CA-S, IN-MC, MN, PA, TX-E
	Woodland®			IN-MV
	Slateline™	fiberglass reinforced 5-tab asphalt roof shingle	ASTM D3462	IN-MV
HIP & RIDGE SHINGLES	Seal-A-Ridge® AS ArmorShield® SBS-Modified IR Ridge Cap Shingles	fiberglass reinforced, hip and ridge asphalt roof shingles	ASTM D3462	GA
	Seal-A-Ridge® Ridge Cap Shingles			GA, IN-MV
	Timbertex® Premium Ridge Cap Shingles			IN-MV

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this PEER, or previous versions thereof, is/was used for permitting or design guidance. PEERs are not to be construed as representing any attributes not specifically listed, nor are PEERs to be construed as an endorsement of the subject, or a recommendation for its use. There is no warranty by NEMO ETC, LLC or Robert Nieminen, P.E., express or implied, as to any finding or other matter in this PEER, or as to any product covered by the PEER.
- 5.2 This PEER is not for use in FBC High Velocity Hurricane Zone jurisdictions, as defined in FBC Chapter 2 (Broward and Miami-Dade Counties).
- 5.3 This PEER pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- 5.4 This PEER does not include evaluation of fire classification. Refer to **FBC 1505** for requirements and limitations regarding roof assembly fire classification. Refer to **FBC 2603** for requirements and limitations concerning the use of foam plastic insulation.
- 5.5 **Wind Classification:** Refer to Section 6 for installation requirements to meet wind classifications

TABLE 2A: WIND CLASSIFICATIONS, ASPHALT SHINGLES

PRODUCT	FBC TABLE 1507.2.7.1 OR R905.2.6.1
Marquis WeatherMax®	ASTM D3161(F) & ASTM D7158(H)
Royal Sovereign®	ASTM D3161(F) & ASTM D7158(H)
Camelot® II	ASTM D3161(F) & ASTM D7158(H)
Fortitude®	ASTM D3161(F) & ASTM D7158(H)
Glenwood®	ASTM D3161(F) & ASTM D7158(H)
Grand Canyon®	ASTM D3161(F) & ASTM D7158(H)
Grand Sequoia®	ASTM D3161(F) & ASTM D7158(H)
Grand Sequoia® AS	ASTM D3161(F) & ASTM D7158(H)
Timberline® AH	ASTM D3161(F) & ASTM D7158(H)
Timberline® AS II	ASTM D3161(F) & ASTM D7158(H)



TABLE 2A: WIND CLASSIFICATIONS, ASPHALT SHINGLES	
PRODUCT	FBC TABLE 1507.2.7.1 OR R905.2.6.1
Timberline® CS	ASTM D3161(F) & ASTM D7158(H)
Timberline HD®	ASTM D3161(F) & ASTM D7158(H)
Timberline® Solar HD	ASTM D3161(F) & ASTM D7158(H)
Timberline HDZ® or Timberline® UHDZ™	ASTM D3161(F) & ASTM D7158(H)
Timberline® Solar HDZ®	ASTM D3161(F) & ASTM D7158(H)
Timberline® NS	ASTM D3161(F) & ASTM D7158(H)
Timberline Ultra HD®	ASTM D3161(F) & ASTM D7158(H)
Timberline® UHD	ASTM D3161(F) & ASTM D7158(H)
Woodland®	ASTM D3161(F) & ASTM D7158(H)
Slateline™	ASTM D3161(F) & ASTM D7158(H)

5.5.1 Classification by ASTM D7158:

ASTM D7158, Class H applies only to **exposure category B or C** and a **building height of 60 feet or less**. Calculations by a qualified design professional are required for conditions outside these limitations. Contact the shingle manufacturer for data specific to each shingle.

TABLE 2B: WIND CLASSIFICATIONS, STARTER STRIPS AND HIP & RIDGE		
TYPE	PRODUCT	FBC TABLE 1507.2.7.1 OR R905.2.6.1
STARTER STRIPS	Pro-Start® Starter Strip Shingles	ASTM D3161, Class F
	WeatherBlocker™ Premium Starter Strip Shingles	ASTM D3161, Class F
HIP & RIDGE SHINGLES	Seal-A-Ridge® AS ArmorShield® SBS-Modified IR Ridge Cap Shingles	ASTM D3161, Class F
	Seal-A-Ridge® Ridge Cap Shingles	ASTM D3161, Class F
	Timbertex® Premium Ridge Cap Shingles	ASTM D3161, Class F (sealant required, See Section 6)

- 5.6 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 that are produced by a Product Manufacturer other than the report holder on Page 1 of this PEER.

6. INSTALLATION:

6.1 GENERAL:

- 6.1.1 Roof deck, slope, underlayment and fasteners shall comply with FBC 1507.2 / R905.2 and the shingle manufacturer's minimum requirements.
- 6.1.2 Underlayment shall be acceptable to GAF and shall hold current Florida Statewide Product Approval, or be Locally Approved per **F.A.C. Rule 61G20-3**, per FBC Sections 1507.2.3 or R905.2.3.
- 6.1.3 Fasteners shall be in accordance with manufacturer's published requirements, but not less than FBC 1507.2.6 or R905.2.5. Staples are not permitted.
- 6.1.4 GAF asphalt shingles are acceptable for use in reroof (tear-off) or recover applications, subject to the limitations set forth in FBC Section 1511 or R908 and GAF published installation instructions.

6.2 STARTER SHINGLES OR STARTER STRIP:

- 6.2.1 Installation of Pro-Start® Starter Strip Shingles, WeatherBlocker™ Premium Starter Strip Shingles and QuickStart® Peel & Stick Starter Roll shall comply with the GAF current published instructions.

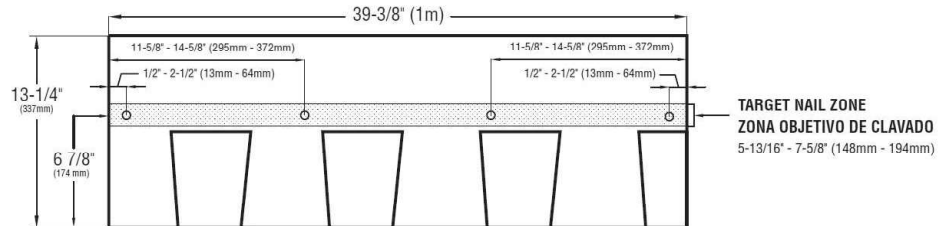
6.3 ASPHALT SHINGLES:

6.3.1 Installation of asphalt shingles shall comply with the GAF current published instructions, using minimum four (4) nails per shingle in accordance with FBC 1507.2.7 or R905.2.6, with the following exceptions:

- Camelot® II, Grand Canyon®, Grand Sequoia® and Woodland® require minimum five (5) nails per shingle.
- Slateline™ requires minimum six (6) nails per shingle.

6.3.2 The following depict nail-placement locations for GAF shingles designed with a 'target nail zone'. Where the roof slope exceeds 21 units vertical in 12 units horizontal, special methods of fastening are required. Contact the GAF for details.

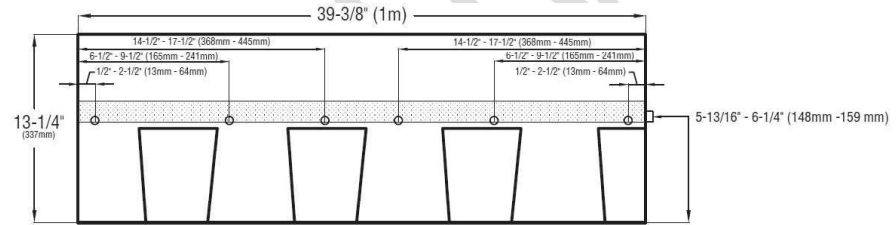
6.3.2.1 Fortitude®, Timberline® AH, Timberline® AS II, Timberline® CS, Timberline® HDZ® and Timberline® UHDZ™; slopes 2:12 up to 21:12.



STANDARD NAILING PATTERN:

Nail shingles approximately 6 7/8" (174 mm) from bottom of shingle, in nailing area, as shown. Nails must not be exposed. Not for use on Mansard roofs (21:12 slope and above).

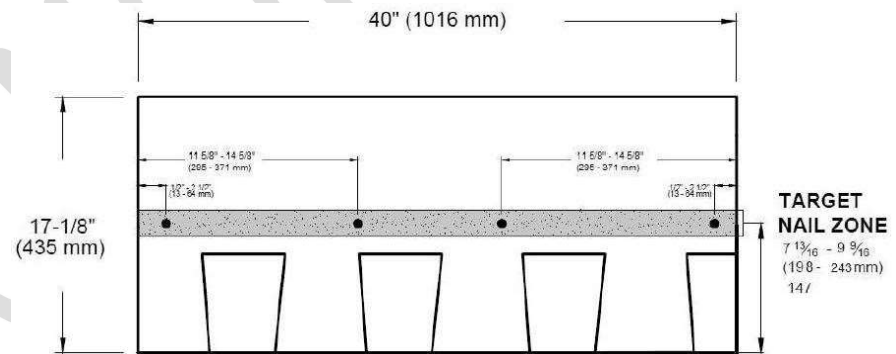
6.3.2.2 Fortitude®, Timberline® AH, Timberline® AS II, Timberline® CS, Timberline® HDZ® and Timberline® UHDZ™; slopes greater than 21:12



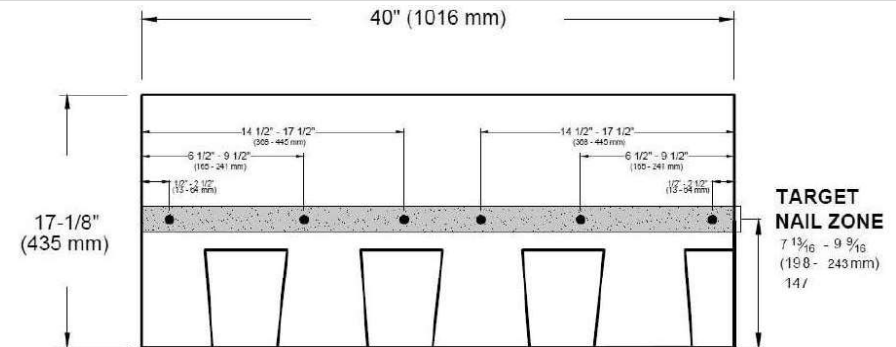
ENHANCED NAILING PATTERN:*

These shingles **MUST** be nailed a nominal 6" (152 mm) from bottom of shingle, above the cut-outs, as shown. Nails must not be exposed.

6.3.2.3 Timberline® Solar HDZ®; slopes 2:12 up to 21:12.

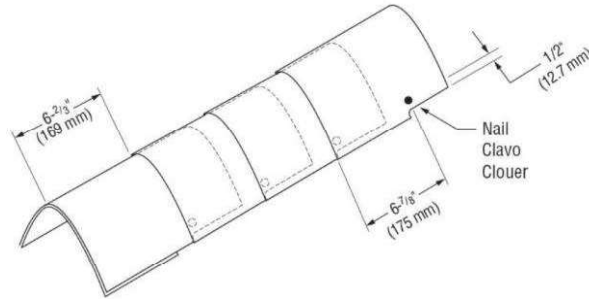


6.3.2.4 Timberline® Solar HDZ®; slopes greater than 21:12

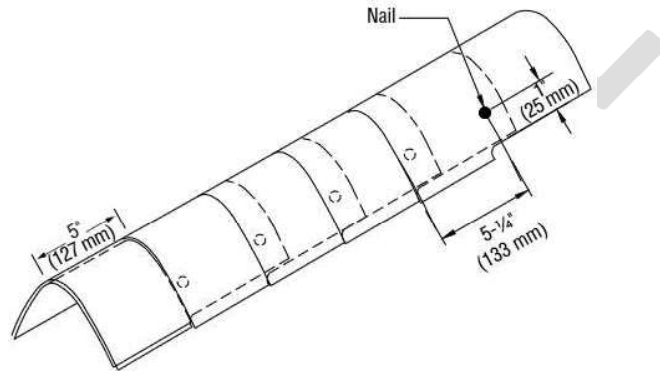


6.4 HIP & RIDGE SHINGLES:

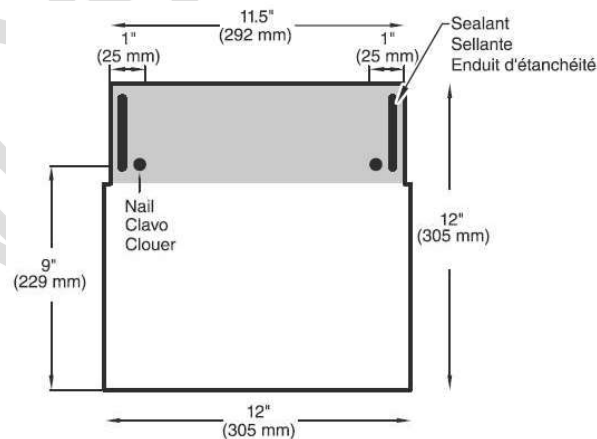
- 6.4.1 Installation of Seal-A-Ridge® Ridge Cap Shingles shall comply with the GAF current published instructions with a minimum two (2) nails, minimum 3/8-inch head diameter located 6-7/8-inch back from the exposed end and 0.5-inch from the edge.



- 6.4.2 Installation of Seal-A-Ridge® AS ArmorShield® SBS-Modified IR Ridge Cap Shingles shall comply with the GAF current published instructions with a minimum two (2) nails, minimum 3/8-inch head diameter, per shingle located 5.25-inch back from the exposed end and 1-inch from the edge.



- 6.4.3 Installation of Timbertex® Premium Ridge Cap Shingles shall comply with GAF current published instructions with a minimum two (2) nails, minimum 3/8-inch head diameter, per shingle and beads of Henkel "Loctite PL Roof & Flashing Polyurethane Sealant".



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

- END OF PEER -



Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

OFFICE OF THE
SECRETARY

FL #	FL10626-R27
Application Type	Revision
Code Version	2023
Application Status	Approved
Comments	
Archived	<input type="checkbox"/>
Product Manufacturer	GAF
Address/Phone/Email	1 Campus Drive Parisppany, NJ 07054 (800) 766-3411 mstieh@gaf.com
Authorized Signature	Michael Stieh michael.stieh@gaf.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	Underlayments
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	12/28/2026
Validated By	John W. Knezevich, PE <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received
Certificate of Independence	FL10626_R27_COI_2023_07_COI_NIEMINEN.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D1970	2017
ASTM D226	2017
ASTM D3746	2015
ASTM D4798	2011
ASTM D6164	2016
ASTM D6757	2018
ASTM D8257	2020
FM 4474	2011
FRSA/TRI Manual	2023

Equivalence of Product Standards
Certified By

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

10/10/2023

Date Validated

10/18/2023

Date Pending FBC Approval

10/21/2023

Date Approved

12/12/2023

Summary of Products

FL #	Model, Number or Name	Description
10626.1	GAF Roof Underlayments (HVHZ)	Underlayments for use in steep-slope, prepared roof systems 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/-442.5 Other: Refer to PEER Section 5 for Limits of Use.		Installation Instructions FL10626_R27_II_2023_10_18_FINAL_PEER-GAF-010.B_UNDERLAY_HVHZ_FL10626-R27.pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes Evaluation Reports FL10626_R27_AE_2023_10_18_FINAL_PEER-GAF-010.B_UNDERLAY_HVHZ_FL10626-R27.pdf Created by Independent Third Party: Yes
10626.2	GAF Roof Underlayments (NON-HVHZ)	Underlayments for use in steep-slope, prepared roof systems 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/-442.5 Other: Refer to PEER Section 5 for Limits of Use.		Installation Instructions FL10626_R27_II_2023_10_18_FINAL_PEER-GAF-010.A_UNDERLAY_NON-HVHZ_FL10626-R27.pdf Verified By: Robert Nieminen 59166 Created by Independent Third Party: Yes Evaluation Reports FL10626_R27_AE_2023_10_18_FINAL_PEER-GAF-010.A_UNDERLAY_NON-HVHZ_FL10626-R27.pdf Created by Independent Third Party: Yes

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[Contact Us](#) :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

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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

P.E. EVALUATION REPORT (PEER)

GAF

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

PEER-GAF-010.A.R27

FL10626-R27 (NON-HVHZ)

Date of Issuance: 04/25/2008

Revision 27: 10/18/2023

SCOPE:

This P.E. Evaluation Report (henceforth 'PEER') is issued under **F.A.C. Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been evaluated for compliance with the **8th Edition (2023) Florida Building Code** [sections noted herein](#).

DESCRIPTION: GAF Roof Underlayments (NON-HVHZ)

LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein and **FBC 1507.1.1**.

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

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

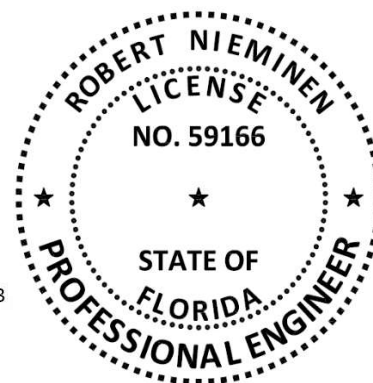
INSPECTION: Upon request, a copy of this entire PEER shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This PEER consists of pages 1 through 9.

Prepared by:

Digitally signed by
Robert Nieminen
Date: 2023.10.18
'08:29:45 -04'00

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



CERTIFICATION OF INDEPENDENCE:

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

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ROOFING COMPONENT EVALUATION:
1. SCOPE:

Product Category: Roofing
Sub-Category: Underlayment
Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer
Compliance Statement: **GAF Roof Underlayments**, as produced by **GAF**, have demonstrated compliance with the following sections of the **8th Edition (2023) 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:

<u>SECTION</u>	<u>PROPERTY</u>	<u>STANDARD</u>
1504.3.1	Wind resistance	FM 4474
1504.7	Impact resistance	ASTM D3746
1507.1.1 / R905.1.1	Material standard	ASTM D226
1507.1.1, 1507.2.9.2 / R905.1.1, R905.2.8.2	Material standard	ASTM D1970
1507.1.1 / R905.1.1	Material standard	ASTM D6757
1507.1.1 / R905.1.1	Material standard	ASTM D8257
1507.3.3, R905.3.3	Material standard	FRSA/TRI, 7th Edition
1507.11.2	Material standard	ASTM D6164
TAS 110	Accelerated Weathering	ASTM D4798
TAS 110	Material standard	TAS 103

3. REFERENCES:

<u>ENTITY</u>	<u>EXAMINATION</u>	<u>REFERENCE</u>	<u>DATE</u>
ERD (TST6049)	ASTM D6164 (GA)	G40630.01.14-2B-R2	01/07/14
ERD (TST6049)	ASTM D6164 (GA)	G46160.09.14-3A	09/09/14
ERD (TST6049)	ASTM D1970 (GA)	GAF-SC13285.03.17-3	03/01/17
ERD (TST6049)	ASTM D1970 (GA)	GAF-SC13285.03.17-4	03/01/17
ERD (TST6049)	ASTM D1970 (GA)	GAF-SC13285.03.17-1	03/08/17
ERD (TST6049)	ASTM D1970 (IN)	GAF-SC16440.12.17	12/31/17
NEMO (TST6049)	Physical Properties (ON)	4q-GAF-19-SSMBB-03.A	05/13/19
NEMO (TST6049)	ASTM D1623	4p-DOW-19-SSLAP-01.A-R2	10/01/19
NEMO (TST6049)	ASTM D1970	4j-FTS-20-SSUDL-01.A	12/01/20
NEMO (TST6049)	ASTM D1970	4j-GAF-20-SSUDL-01.A	12/22/20
NEMO (TST6049)	ASTM D4798, TAS 103	4j-GAF-20-SSUDL-02.A	03/15/21
NEMO (TST6049)	ASTM D4798	4j-FTS-21-SSUDL-02.A	06/09/21
NEMO (TST6049)	ASTM D4798, ASTM D3746	4j-GAF-21-SSUDL-02.A	11/19/21
NEMO (TST6049)	ASTM D1623 & FRSA/TRI	4j-GAF-22-SSUDL-01.A	08/09/22
NEMO (TST6049)	ASTM D1970, D4798	4j-GAF-22-SSUDL-02.A	08/29/22
NEMO (TST6049)	ASTM D1970, D4798	4j-GAF-22-SSUDL-05.A	01/03/23
PRI (TST5878)	Wind Uplift	GAF-434-02-01	09/16/13
PRI (TST5878)	Wind Uplift	GAF-434-02-03	09/16/13
PRI (TST5878)	Wind Uplift	GAF-434-02-04	09/16/13
PRI (TST5878)	ASTM D1970 (AL)	MSA-047-02-01	04/11/18
PRI (TST5878)	ASTM D1970 (AR)	376T0032	10/22/19
PRI (TST5878)	ASTM D226 (S-CA)	376T0054	02/18/20
PRI (TST5878)	ASTM D226, Type II	376T0192	09/16/21
PRI (TST5878)	TAS 114(C)	376T0310	07/19/22
PRI (TST5878)	ASTM D8257	376T0162	09/17/21
PRI (TST5878)	ASTM D1970 (IN)	376T0342	12/05/22
PRI (TST5878)	ASTM D8257	376T0428	08/21/23
PRI (TST5878)	ASTM D8257	376T0429	08/21/23

ENTITY	EXAMINATION	REFERENCE	DATE
PRI (TST5878)	ASTM D8257	376T0430	08/22/23
PRI (TST5878)	ASTM D8257	376T0431	08/23/23
PRI (TST5878)	ASTM D8257	376T0162, LTR	09/07/23
PRI (TST5878)	ASTM D8257	376T0428, LTR	09/07/23
QAI (TST9898)	ASTM D8257	RJ8299P-14	03/29/22
QAI (TST9898)	ASTM D8257	RJ8557P-1	05/27/22
QAI (TST9898)	ASTM D8257	RJ8557P-2	05/27/22
NEMO	Traceability	FBC Cross-Listing	04/08/21
UL, LLC (QUA9625)	Quality Control	Service Confirmation	09/28/23
UL, LLC (QUA9625)	Quality Control	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

TABLE 1: EVALUATED UNDERLAYMENTS		
PRODUCT	MATERIAL STANDARD	PLANT(S) ⁱ
Shingle-Mate® Roof Deck Protection	ASTM D226, Type II (Table 1)	ML2B
StormSafe™ Anchor Sheet	ASTM D226, Type II (Table 1)	ML4D
VersaShield® Fire-Resistant Roof Deck Protection	ASTM D226, Type II	ML9
Deck-Armor™ Premium Breathable Roof Deck Protection	ASTM D8257 ⁱⁱⁱ	ML3
FeltBuster® Synthetic Roofing Felt	ASTM D8257 ⁱⁱ	ML3, ML4A/ML4B/ML4C, ML5, ML7A/ML7B or ML7C
Tiger Paw™ Premium Roof Deck Protection	ASTM D8257 ⁱⁱ	ML3 or ML7C
GAF Extended Dry-In Membrane	ASTM D1970 and FRSA/TRI	ML6
LIBERTY™ SBS Self-Adhering Base/Ply Sheet	ASTM D1970	ML1A or ML1B
StormGuard® Film-Surfaced Leak Barrier	ASTM D1970 ⁱⁱⁱ	ML1A or ML1B
WeatherWatch® Mineral-Surfaced Leak Barrier	ASTM D1970	ML1A, ML1B, MD1D or ML8
Ruberoid® Mop Granule	ASTM D6164, FRSA/TRI Manual and TAS 103 (partial)	ML1B
Ruberoid® Mop Granule FR		

5. LIMITATIONS:

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

5.6 Allowable Roof Covers:

TABLE 2: ROOF COVER OPTIONS							
<u>FBC NON-HVHZ:</u>	1507.2	1507.3		1507.4 & 1507.5		1507.7	1507.8 & 1507.9
UNDERLAYMENT	ASPHALT SHINGLES	CLAY AND CONCRETE TILE		METAL PANELS OR SHINGLES		SLATE OR SLATE-TYPE SHINGLES	WOOD SHINGLES OR SHAKES
		MECHANICAL ATTACH	ADHESIVE-SET				
Shingle-Mate® Roof Deck Protection	Yes	No	No	No	No	No	No
VersaShield® Fire-Resistant Roof Deck Protection	Yes	No	No	No	No	No	No
Deck-Armor™ Premium Breathable Roof Deck Protection	Yes	No	No	Yes	Yes	Yes	No
FeltBuster® Synthetic Roofing Felt	Yes	No	No	No	No	No	No
Tiger Paw™ Premium Roof Deck Protection	Yes	No	No	Yes	Yes	Yes	No
GAF Extended Dry-In Membrane	Yes	Yes	No	Yes	Yes	Yes	Yes ^{iv}
LIBERTY™ SBS Self-Adhering Base/Ply Sheet	Yes	No	No	No	No	No	Yes ^{iv}
StormGuard® Film-Surfaced Leak Barrier	Yes	No	No	Yes	Yes	Yes	Yes ^{iv}
WeatherWatch® Mineral-Surfaced Leak Barrier	Yes	No	No	No	No	No	Yes ^{iv}
Ruberoid® Mop Granule	No	Yes (Cap Sheet in 2-ply system)	Yes (Cap Sheet in 2-ply system) (Table 2A)	No	No	No	No
Ruberoid® Mop Granule FR	No	Yes (Cap Sheet in 2-ply system)	Yes (Cap Sheet in 2-ply system) (Table 2A)	No	No	No	No

5.6.1 Adhesive-set is limited to use of following underlayment / tile-adhesive combinations.

TABLE 2A: ALLOWABLE UNDERLAYMENT / TILE-ADHESIVE COMBINATIONS ^v					
UNDERLAYMENT	TILE-ADHESIVE OPTIONS AND <u>FLORIDA PRODUCT APPROVAL</u>				
	DAP GLOBAL		DUPONT	ICP CONSTRUCTION	
	STORMBOND LOW GWP	STORMBOND 2 Low GWP	TILE BOND	APOC POLYSET AH-160	APOC POLYSET RTA-1
	FL14506	FL14506	FL22525	FL6332	FL6276
Ruberoid® Mop Granule	Yes	Yes	Yes	Yes	Yes
Ruberoid® Mop Granule FR	Yes	Yes	Yes	Yes	Yes

5.7 Allowable Substrates:

TABLE 3: SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS				
UNDERLAYMENT	APPLICATION	SUBSTRATES (DESIGNED TO MEET CODE)		
		TYPE	PRIMER	SUBSTRATES
GAF Extended Dry-In Membrane	self-adhering	Deck/sheathing:	None	plywood
LIBERTY™ SBS Self-Adhering Base/Ply Sheet, StormGuard® Film-Surfaced Leak Barrier or Weather Watch® Mineral-Surfaced Leak Barrier	self-adhering	Deck/sheathing:	(Optional) ASTM D41	plywood
		Base Sheet:	None	ASTM D226 felt, Type II
		Flashing/valley:	ASTM D41	metal
Ruberoid® Mop Granule or Ruberoid® Mop Granule FR	hot asphalt	Deck:	ASTM D41	structural concrete
		Base Sheet:	None	ASTM D226, Type II felt, GAFGLAS® #80 Ultima™ Base Sheet or Ruberoid® 20 Smooth

5.8 Attachment Limitations:

5.8.1 For use under mechanically attached NON-TILE prepared roof coverings, attachment shall be in accordance with the manufacturer's installation instructions, but – for mechanically attached underlayments or base sheets - not less than **FBC 1507.1.1** or **R905.1.1**.

5.8.2 Wind Resistance for Underlayment Systems in Tile Roof Applications:

The following wind uplift limitations apply to tile underlayment systems. The Maximum Design Pressure ('MDP') 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).

5.8.2.1 Direct-to-Deck:

The maximum design pressure for the selected assembly shall meet or exceed that required under **FRSA/TRI Manual 7th Edition**, Appendix A or the critical (highest) design pressure determined in accordance with **FBC 1609** or **FBC Residential Chapter 3**.

TABLE 4A: ALLOWABLE DESIGN PRESSURES, DIRECT-TO-DECK UNDERLAYMENT IN TILE ROOF APPLICATIONS				
SYSTEM No.	DECK	BASE PLY	CAP PLY	DESIGN PRESSURE (PSF)
1	Plywood, APA rated sheathing, 32/16, Exposure 1, PS1, 15/32 category	None	GAF Extended Dry-In Membrane, self-adhered and back-nailed within the selvage-edge side laps using corrosion resistant 12 ga. x 1 1/4" ring shank nails through 32 ga., 1-5/8" diameter tin caps or corrosion resistant 1-inch diameter metal cap nails, max. 12-inch o.c.	-45.0
2	Min. 2,500 psi structural concrete	GAFGLAS #75 Base Sheet, Tri-Ply #75 Base Sheet, GAFGLAS #80 Ultima Base Sheet, GAFGLAS Ply 4, Tri-Ply Ply 4 or GAFGLAS Flex Ply 6 applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square	Ruberoid® Mop Granule or Ruberoid® Mop Granule FR applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square, and back-nailed in accordance with GAF installation instructions, max. 12-inch o.c.	-442.5

5.8.2.2 Mechanically-Attached Base Sheet:

The maximum design pressure for the selected assembly shall meet or exceed that required under **FRSA/TRI Manual 7th Edition**, Appendix A or the critical (highest) design pressure determined in accordance with **FBC 1609** or **FBC Residential Chapter 3**.

Alternatively, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 design pressure determined in accordance with **FBC 1609** or **FBC Residential Chapter 3**. Elevated pressure zones shall employ an attachment density 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 or Roofing Application Standard RAS 117 or RAS 137. Assemblies marked with an asterisk* carry the limitations set forth in Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29 for enhancements.

TABLE 4B: ALLOWABLE DESIGN PRESSURES, 2-PLY UNDERLAYMENT SYSTEMS IN TILE ROOF APPLICATIONS				
SYSTEM No.	DECK	BASE SHEET	CAP PLY	DESIGN PRESSURE (PSF)
3	Plywood , APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	GAFGLAS® #80 Ultima™ Base Sheet or Ruberoid® 20 Smooth mechanically attached with 12 ga., min. 1.25-inch long ring shank nails through 32 ga., 1-5/8-inch diameter tin caps spaced 9-inch o.c. at the min. 4-inch wide side laps and 9-inch o.c. at two (2), equally spaced, staggered center rows in the field of the sheet	Ruberoid® Mop Granule or Ruberoid® Mop Granule FR applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square, and back-nailed in accordance with GAF installation instructions, max. 12-inch o.c.	-45.0
4	Plywood , APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	GAFGLAS® #80 Ultima™ Base Sheet or Ruberoid® 20 Smooth mechanically attached with 12 ga., min. 1.25-inch long ring shank nails through 32 ga., 1-5/8-inch diameter tin caps spaced 8-inch o.c. at the min. 4-inch wide side laps and 8-inch o.c. at three (3), equally spaced, staggered center rows in the field of the sheet	Ruberoid® Mop Granule or Ruberoid® Mop Granule FR applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square, and back-nailed in accordance with GAF installation instructions, max. 12-inch o.c.	-75.0
5	Plywood , APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	GAFGLAS® #80 Ultima™ Base Sheet or Ruberoid® 20 Smooth mechanically attached with 11 ga., min. 1.25-inch long ring shank nails through 32 ga., 1-5/8-inch diameter tin caps spaced 4-inch o.c. at the min. 2-inch wide side laps and 4-inch o.c. at four (4), equally spaced center rows in the field of the sheet	Ruberoid® Mop Granule or Ruberoid® Mop Granule FR applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square, and back-nailed in accordance with GAF installation instructions, max. 12-inch o.c.	-97.5

5.9 Exposure Limitations:

TABLE 5: EXPOSURE LIMITATIONS		
UNDERLAYMENT	PREPARED ROOF COVER INSTALLATION TYPE	MAXIMUM EXPOSURE (DAYS)
Shingle-Mate® Roof Deck Protection, StormSafe™ Anchor Sheet, VersaShield® Fire-Resistant Roof Deck Protection and LIBERTY™ SBS Self-Adhering Base/Ply Sheet	Mechanically attached	30
WeatherWatch® Mineral-Surfaced Leak Barrier	Mechanically attached	60
Deck-Armor™ Premium Breathable Roof Deck Protection, FeltBuster® Synthetic Roofing Felt and Tiger Paw™ Premium Roof Deck Protection	Mechanically attached	30
StormGuard® Film-Surfaced Leak Barrier	Mechanically attached	90
GAF Extended Dry-In Membrane	Mechanically attached	360
Ruberoid® Mop Granule and Ruberoid® Mop Granule FR	Adhesive-set tile roof system	180
	Mechanically attached	UNLIMITED

5.10 Tile Slippage Limitations:

When loading roof tiles on the underlayment, the maximum roof pitch shall be as follows. These pitch limitations can only be exceeded by using battens or loading boards during loading of the roof tiles.

TABLE 6: TILE SLIPPAGE LIMITATIONS FOR DIRECT-DECK TILE INSTALLATIONS			
UNDERLAYMENT	TILE PROFILE	STAGING METHOD	MAXIMUM STAGING PITCH
GAF Extended Dry-In Membrane	Flat or Lugged	10-tile stack	4:12
	Flat or Lugged	6-tile stack (4 over 2)	7:12
Ruberoid® Mop Granule	Flat	Max. 10-tile stack	4:12
	Lugged	battens or loading-boards required	N/A
Ruberoid® Mop Granule FR	Flat or Lugged	battens or loading-boards required	N/A

- 5.11 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 mentioned herein that are produced by a Product Manufacturer other than the report holder on Page 1 of this PEER.

6. INSTALLATION:

- 6.1 **GAF Roof Underlayments** shall be installed in accordance with **GAF** published installation instructions subject to the Limitations of Use set forth herein and the specifics noted below.

- 6.1.1 Consult GAF requirements for back-nailing at pitch of 2:12 or greater.

- 6.2 Re-fasten any loose decking panels, and check for protruding nail heads. Sweep the substrate thoroughly to remove any dust and debris prior to application and prime the substrate (if applicable).

6.3 Deck-Armor™ Premium Breathable Roof Deck Protection, FeltBuster® Synthetic Roofing Felt or Tiger Paw™ Premium Roof Deck Protection:

- 6.3.1 Non-Tile Applications:

Shall be installed in compliance with requirements for a synthetic underlayment (ASTM D8257) in **FBC 1507.1.1.1** or **FBC Residential R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions.

6.4 StormSafe™ Anchor Sheet:

- 6.4.1 Non-Tile Applications:

Shall be installed in compliance with requirements for an approved mechanically attached underlayment (ASTM D226, Type II) in **FBC Table 1507.1.1.1** or **FBC Residential Table R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions. FBC requirements take precedence over the manufacturer's installation instructions.

StormSafe™ Anchor Sheet is limited to use as a mechanically attached base layer in 2-ply underlayment systems. One the same day, install LIBERTY™ SBS Self-Adhering Base/Ply; StormGuard® Film-Surfaced Leak Barrier or WeatherWatch® Mineral-Surfaced Leak Barrier over the StormSafe™ Anchor Sheet.

6.5 Shingle-Mate® Roof Deck Protection:

- 6.5.1 Non-Tile Applications:

Shall be installed in compliance with requirements for an approved mechanically attached underlayment (ASTM D226, Type II) in **FBC Table 1507.1.1.1** or **FBC Residential Table R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions. FBC requirements take precedence over the manufacturer's installation instructions.

6.6 VersaShield® Fire-Resistant Roof Deck Protection:

6.6.1 Non-Tile Applications:

Shall be installed in compliance with requirements for an approved mechanically attached underlayment (ASTM D6757) in **FBC Table 1507.1.1.1** or **FBC Residential Table R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions. FBC requirements take precedence over the manufacturer's installation instructions.

6.7 LIBERTY™ SBS Self-Adhering Base/Ply Sheet, StormGuard® Film-Surfaced Leak Barrier or WeatherWatch® Mineral-Surfaced Leak Barrier:

6.7.1 Non-Tile Applications:

Shall be installed in compliance with requirements for an approved self-adhering underlayment (ASTM D1970) in **FBC 1507.1.1.1** or **FBC Residential R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions.

Back-nailing is required. Back-nailing shall consist of Approved cap nails spaced max. 18-inch o.c., encapsulated within min. 4-inch side laps.

When installed over a mechanically attached base sheet of FBC Approved ASTM D226 Type II felt, the felt shall be fastened in accordance with **FBC 1507.1.1** or **R905.1.1**.

6.7.2 **LIBERTY™ SBS Self-Adhering Base/Ply Sheet, StormGuard® Film-Surfaced Leak Barrier or WeatherWatch® Mineral-Surfaced Leak Barrier** may be installed as a secondary water barrier using minimum 3¼-inch wide strips to seal plywood deck joints prior to installation of the primary underlayment system.

6.8 GAF Extended Dry-In Membrane:

6.8.1 Non-Tile Applications:

Shall be installed in compliance with requirements for an approved self-adhering underlayment (ASTM D1970) in **FBC 1507.1.1.1** or **FBC Residential R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions.

Back-nailing is required. Back-nailing shall consist of Approved cap nails spaced max. 18-inch o.c., encapsulated within min. 4-inch side laps.

6.8.2 Mechanically Attached Tile Applications:

Shall be installed in compliance with the requirements for Self-Adhered Membrane set forth in **FRSA/TRI Manual 7th Edition** and the manufacturer's installation instructions.

Refer to [Section 5.8](#) herein for attachment limitations.

Refer to [Table 6](#) herein for tile staging limitations.

6.8.3 **GAF Extended Dry-In Membrane** may be installed as a secondary water barrier using minimum 3¼-inch wide strips to seal plywood deck joints prior to installation of the primary underlayment system.

6.9 Ruberoid® Mop Granule; Ruberoid® Mop Granule FR:

6.9.1 Tile Applications:

Shall be installed in compliance with requirements as an alternate to the "Hot Asphalt Applied Cap Sheet" in the "Two Ply System" in the **FRSA/TRI Manual 7th Edition**, and the manufacturer's installation instructions.

Refer to [Section 5.8](#) herein for attachment limitations.

Refer to [Table 6](#) for tile staging limitations.

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

- END OF PEER -

ⁱ Building officials, Designers of Record and other Authorities Having Jurisdiction may contact info@nemoetc.com to obtain manufacturing location information for products evaluated herein.

ⁱⁱ Agreement between purchaser and seller, as set forth in Section 4.3, Note 1 of ASTM D8257-20, should be established as to slip resistance.

ⁱⁱⁱ Agreement between purchaser and seller, as set forth in Section 4.3, Note 1 of ASTM D1970-17, should be established as to slip resistance.

^{iv} Used as min. 3 ¾-inch wide joint-strips per FBC 1507.1.1.1(2) / FBC R905.1.1.1(2) or installed in full-coverage atop ASTM D226, Type II felt, ASTM D4869 Type III or IV felt mechanically attached in accordance with FBC Table 1507.1.1.1 or FBC Residential Table R905.1.1.1

^v Refer to Tile Manufacturer's or Adhesive Manufacturer's Florida Product Approval for Overturning Moment Resistance Performance