



NEMO|etc.

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

ENGINEER

EVALUATE

TEST

CONSULT

EVALUATION REPORT

GAF

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

Evaluation Report 01506.04.08-R21

FL10626-R21

Date of Issuance: 04/25/2008

Revision 21: 04/14/2021

SCOPE:

This Evaluation Report is issued under **Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code and Florida Building Code, Residential Volume. The products described herein have been evaluated for compliance with the **7th Edition (2020) Florida Building Code** sections noted herein.

DESCRIPTION: GAF Roof Underlayments for use in FBC non-HVHZ jurisdictions

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 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|etc. Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

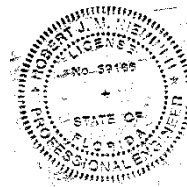
INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 8.

Prepared by:

Robert J.M. Nieminen, P.E.

Florida Registration No. 59166, Florida DCA ANE1983



The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 04/14/2021. This does not serve as an electronically signed document.

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 COMPONENT EVALUATION:
1. SCOPE:
Product Category: Roofing

Sub-Category: Underlayment

Compliance Statement: **GAF Roof Underlayments**, as produced by **GAF**, have 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 / Conditions of Use set forth herein.

2. STANDARDS:

Section	Property	Standard	Year
1504.3.1	Wind resistance	FM 4474	2011
1507.1.1, 1507.2.4, 1507.2.9.2 / R905.1.1, R905.2.8.2	Material standard	ASTM D1970	2015
1507.1.1.1(2&3, Exception), 1507.1.1.1(5) / R905.1.1.1(2&3, Exception), R905.1.1.1(5)	Tear Strength	ASTM D4533	2015
1507.1.1.1(2&3, Exception), 1507.1.1.1(5) / R905.1.1.1(2&3, Exception), R905.1.1.1(5)	Tensile strength	ASTM D5035	2011
1507.1.1.1(5) / R905.1.1.1(5)	Liquid water transmission	ASTM D4869	2016
1507.1.1 / R905.1.1	Material standard	ASTM D6757	2016
1507.3.3, R905.3.3	Material standard	FRSA/TRI, Sixth Edition	2018
1507.11.2	Material standard	ASTM D6164	2011
TAS 110	Accelerated Weathering	ASTM D4798	2011

3. REFERENCES:

Entity	Examination	Reference	Date
ERD (TST 6049)	ASTM D1623 & FRSA/TRI (Slippage)	G34150.08.11	11/14/2011
ERD (TST 6049)	ASTM D6164 (GA)	G40630.01.14-2B	01/07/2014
ERD (TST 6049)	ASTM D6164 (GA)	G46160.09.14-3A	09/09/2014
ERD (TST 6049)	ASTM D1970 (GA)	GAF-SC13285.03.17-3	03/01/2017
ERD (TST 6049)	ASTM D1970 (GA)	GAF-SC13285.03.17-4	03/01/2017
ERD (TST 6049)	ASTM D1970 (GA)	GAF-SC13285.03.17-1	03/08/2017
ERD (TST6049)	ASTM D1970 (IN)	GAF-SC16440.12.17	12/31/2017
Intertek (TST 1558)	ASTM D4869 (Dadra, India)	F8549.02-106-18	11/08/2016
NEMO (TST 6049)	Physical Properties (ON)	4q-GAF-19-SSMBB-03.A	05/13/2019
NEMO (TST6049)	ASTM D1970	4j-FTS-20-SSUDL-01.A	12/01/2020
NEMO (TST 6049)	ASTM D4798, TAS 103	4j-GAF-21-SSUDL-02.A	03/15/2021
PRI (TST 5878)	ASTM D1970 (IN)	GAF-324-02-01	11/30/2011
PRI (TST 5878)	ASTM D226 (OK)	GAF-339-02-01	03/13/2012
PRI (TST 5878)	ASTM D4798 (NC)	GAF-349-02-01	07/03/2012
PRI (TST 5878)	Wind Uplift	GAF-434-02-01	09/16/2013
PRI (TST 5878)	Wind Uplift	GAF-434-02-03	09/16/2013
PRI (TST 5878)	Wind Uplift	GAF-434-02-04	09/16/2013
PRI (TST 5878)	ASTM D4533 (various)	GAF-818-02-01	12/05/2017
PRI (TST 5878)	ASTM D1970 (AL)	MSA-047-02-01	04/11/2018
PRI (TST 5878)	ASTM D4533 (LA)	GAF-826-02-01	06/4/2018
PRI (TST 5878)	ASTM D4533 (Dadra, India)	GAF-847-02-01	06/4/2018
PRI (TST 5878)	ASTM D4533 (Dadra, India)	GAF-914-02-01	04/10/2019
PRI (TST 5878)	ASTM D4533, D5035 (VA)	376T0012	07/15/2019
PRI (TST 5878)	ASTM D4533 (Umerkui Kilvani, India)	376T0018	07/31/2019
PRI (TST 5878)	ASTM D4533 (Parzai, India)	376T0018	07/31/2019
PRI (TST 5878)	ASTM D1970 (AR)	376T0032	10/22/2019

Entity	Examination	Reference	Date
PRI (TST 5878)	ASTM D226 (S-CA)	376T0054	02/18/2020
PRI (TST 5878)	ASTM D5035 (various)	376T0103	09/11/2020
PRI (TST 5878)	ASTM D4533, D5035 (Rajasthan, India)	376T0111	12/22/2020
UL (TST 1740)	ASTM D6757 (TX)	02NK22569	06/04/2002
UL (TST 1740)	ASTM D6757 (NC)	10NK11990	05/18/2011
NEMO ETC	Traceability	FBC Cross-Listing	04/22/2020
NEMO	Traceability	FBC Cross-Listing	04/08/2021
UL, LLC (QUA 9625)	Quality Control	Service Confirmation	03/23/2021
UL, LLC (QUA 9625)	Quality Control	Service Confirmation (AL)	05/04/2020
UL, LLC (QUA 9625)	Quality Control	Florida BCIS	Current

4. PRODUCT DESCRIPTION:			
	Product	Material Standard	Plant(s)
4.1	GAF Extended Dry-In Membrane	ASTM D1970	Langley, BC Canada
4.2	Liberty™ SBS Self-Adhering Base/Ply Sheet	ASTM D1970	Mt. Vernon, IN Savannah, GA
4.3	StormGuard® Film Surfaced Leak Barrier	ASTM D1970	Mt. Vernon, IN Savannah, GA
4.4	WeatherWatch® Mineral Surfaced Leak Barrier	ASTM D1970	Arkadelphia, AR Mt. Vernon, IN Savannah, GA Tuscaloosa, AL
4.5	Deck-Armor™ Premium Breathable Roof Deck Protection	1507.1.1.1(2&3, Exception) / R905.1.1.1(2&3, Exception)	Dadra, India
4.6	FeltBuster® High-Traction Synthetic Roofing Felt	1507.1.1.1(2&3, Exception), 1507.1.1.1(5) / R905.1.1.1(2&3, Exception), R905.1.1.1(5)	Dadra, India Rajasthan, India Richmond, VA Spartanburg, SC
4.7	Shingle-Mate® Roof Deck Protection	ASTM D226, Type II (Table 1)	Pryor, OK Shafter, CA
4.8	StormSafe™ Anchor Sheet	1507.1.1.1(2&3, Exception) / R905.1.1.1(2&3, Exception)	North Bay, ON
4.9	Tiger Paw™ Roof Deck Protection	1507.1.1.1(2&3, Exception) / R905.1.1.1(2&3, Exception)	Dadra, India Parzai, India Umerkui Kilvani, India
4.10	VersaShield® Fire-Resistant Roof Deck Protection	ASTM D6757	Conover, NC
4.11	Ruberoid® Mop Granule	ASTM D6164 FRSA/TRI 09-18	Savannah, GA
4.12	Ruberoid® Mop Granule FR	ASTM D6164 FRSA/TRI 09-18	Savannah, 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 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 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 evaluation combined with supporting data for the prepared roof covering.
- 5.6 Allowable Roof Covers:

TABLE 1: ROOF COVER OPTIONS								
FBC Section:	1507.2	1507.3		1507.4 and 1507.5		1507.7	1507.8 and 1507.9	
Underlayment	Asphalt Shingles	Clay and Concrete Tile		Metal		Slate or Slate-Type Shingles	Wood	
		Mechanical Attach	Adhesive-Set	Panels	Shingles		Shingles	Shakes
GAF Extended Dry-In Membrane	Yes	No	No	Yes	Yes	Yes	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)
Liberty™ SBS Self-Adhering Base/Ply Sheet	Yes	No	No	No	No	No	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)
StormGuard® Film Surfaced Leak Barrier	Yes	No	No	Yes	Yes	Yes	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)
WeatherWatch® Mineral Surfaced Leak Barrier	Yes	No	No	No	No	No	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)
Deck-Armor™ Premium Breathable Roof Deck Protection	Yes	No	No	Yes	Yes	Yes	No	No
FeltBuster® High-Traction Synthetic Roofing Felt	Yes	No	No	No	No	No	No	No
Shingle-Mate® Roof Deck Protection	Yes	No	No	No	No	No	No	No
Tiger Paw™ Roof Deck Protection	Yes	No	No	Yes	Yes	Yes	No	No
VersaShield® Fire-Resistant Roof Deck Protection	Yes	No	No	No	No	No	No	No
Ruberoid® Mop Granule	No	Yes (Cap Sheet in 2-ply system)	Yes (Cap Sheet in 2-ply system) See 5.6.1	No	No	No	No	No
Ruberoid® Mop Granule FR	No	Yes (Cap Sheet in 2-ply system)	Yes (Cap Sheet in 2-ply system) See 5.6.1	No	No	No	No	No

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

TABLE 1A: ALLOWABLE UNDERLAYMENT / TILE-ADHESIVE COMBINATIONS ¹		
Underlayment	Adhesive	Florida Product Approval
Ruberoid® Mop Granule; Ruberoid® Mop Granule FR	Dupont “Tile Bond™” Roof Tile Adhesive”	FL22525

¹ Refer to Tile Manufacturer’s or Adhesive Manufacturer’s Florida Product Approval for Overturning Moment Resistance Performance.

5.7 Allowable Substrates:

TABLE 2: SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS			
Underlayment	Application	Primer	Substrates
GAF Extended Dry-In Membrane	self-adhering	None	plywood
Liberty™ SBS Self-Adhering Base/Ply Sheet	self-adhering	(Optional) ASTM D41	plywood
StormGuard® Film Surfaced Leak Barrier			
Weather Watch® Mineral Surfaced Leak Barrier			
Liberty™ SBS Self-Adhering Base/Ply Sheet	self-adhering	None	ASTM D226 felt, Type II
StormGuard® Film Surfaced Leak Barrier			
Weather Watch® Mineral Surfaced Leak Barrier			
Liberty™ SBS Self-Adhering Base/Ply Sheet	self-adhering	ASTM D41	metal (flashing metal, valley metal, etc.)
StormGuard® Film Surfaced Leak Barrier			
Weather Watch® Mineral Surfaced Leak Barrier			
Ruberoid® Mop Granule	hot asphalt	ASTM D41	structural concrete
Ruberoid® Mop Granule FR			
Ruberoid® Mop Granule	hot asphalt	None	GAFGLAS® #80 Ultima™ Base Sheet or Ruberoid® 20 Smooth
Ruberoid® Mop Granule FR			

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 For use under tile roof systems, attachment shall be in accordance with the manufacturer’s installation instructions, but – for mechanically attached base sheets - not less than:

- **FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual**, Sixth Edition, Appendix A, Table 1 (for Two-Ply Asphalt Applied Hot Mop Underlayment)
- or
- Section 5.8.3 herein (for other underlayment systems).

5.8.3 Wind Resistance for Underlayment Systems in Tile Roof Applications:

The following wind uplift limitations apply to underlayment systems that are not prescriptive in the **FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual**, Sixth Edition. The 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).

5.8.3.1 Direct-to-Deck:

The maximum design pressure for the selected assembly shall meet or exceed that required under **FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual**, Sixth Edition, Appendix A, Table 1A or the critical (highest) design pressure determined in accordance with **FBC 1609** or **FBC Residential Chapter 3**.

#1 Maximum Design Pressure = -442.5 psf.

Deck: Min. 2,500 psi structural concrete to meet project requirements to satisfaction of Authority Having Jurisdiction

Base Sheet: 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.

Cap 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.

5.8.3.2 Mechanically-Attached Base Sheet:

The maximum design pressure for the selected assembly shall meet or exceed that required under **FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual**, Sixth Edition, Appendix A, Table 1A 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 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 (February 2020) for enhancements.

#2 Maximum Design Pressure = -45 psf.

Deck: Min. 19/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: 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.

Cap 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.

#3 Maximum Design Pressure = -75 psf.

Deck: Min. 19/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: 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.

Cap 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.

#4 Maximum Design Pressure = -97.5 psf.

Deck: Min. 19/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: 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.

Cap 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.

5.9 Exposure Limitations:

TABLE 3: EXPOSURE LIMITATIONS		
Underlayment	Prepared Roof Cover Installation Type	Maximum Exposure (days)
Deck-Armor™ Premium Breathable Roof Deck Protection, FeltBuster® High-Traction Synthetic Roofing Felt, Shingle-Mate® Roof Deck Protection, StormSafe™ Anchor Sheet, Tiger Paw™ Roof Deck Protection, VersaShield® Fire-Resistant Roof Deck Protection, GAF Extended Dry-In Membrane, Liberty™ SBS Self-Adhering Base/Ply Sheet, StormGuard® Film Surfaced Leak Barrier and WeatherWatch® Mineral Surfaced Leak Barrier	Mechanically attached	30
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 in direct-deck tile roof assemblies, the maximum roof slope shall be as follows. These slope limitations can only be exceeded by using battens during loading of the roof tiles.

TABLE 4: TILE SLIPPAGE LIMITATIONS FOR DIRECT-DECK TILE INSTALLATIONS			
Underlayment	Tile Profile	Staging Method	Maximum Staging Slope
Ruberoid® Mop Granule	Flat	Max. 10-tile stack	4:12
	Flat	Max. 6-tile stack (4 over 2)	5:12
	Lugged	Max. 10-tile stack	5:12
Ruberoid® Mop Granule FR	Flat or Lugged	Max. 6-tile stack (4 over 2)	5:12
	Lugged	Max. 10-tile stack	4:12

6. INSTALLATION:

6.1 **GAF Roof Underlayments** shall be installed in accordance with **GAF** published installation instructions subject to the Limitations set forth in Section 5 herein and the specifics noted below.

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 or Tiger Paw™ Roof Deck Protection:

6.3.1 Shall be installed in compliance with requirements for a synthetic underlayment in **FBC 1507.1.1.1(2, Exception) or 1507.1.1.1(3, Exception) or FBC Residential R905.1.1.1(2, Exception) or R905.1.1.1(3, Exception)** 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.

6.4 FeltBuster® High-Traction Synthetic Roofing Felt:

6.4.1 Shall be installed in compliance with requirements for a synthetic underlayment in **FBC 1507.1.1.1(2, Exception), 1507.1.1.1(3, Exception) or 1507.1.1.1(5) or FBC Residential R905.1.1.1(2, Exception), R905.1.1.1(3, Exception) or R905.1.1.1(5)** 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.

6.5 StormSafe™ Anchor Sheet:

6.5.1 StormSafe™ Anchor Sheet is limited to use as a mechanically attached base layer in 2-ply underlayment systems.

- 6.5.2 Shall be installed in compliance with requirements for a synthetic underlayment in **FBC 1507.1.1.1(2, Exception) or 1507.1.1.1(3, Exception) or FBC Residential R905.1.1.1(2, Exception) or R905.1.1.1(3, Exception)** 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.
- 6.5.3 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.

6.6 Shingle-Mate® Roof Deck Protection:

- 6.6.1 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.

6.7 VersaShield® Fire-Resistant Roof Deck Protection:

- 6.7.1 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.

6.8 GAF Extended Dry-In Membrane, Liberty™ SBS Self-Adhering Base/Ply Sheet, StormGuard® Film Surfaced Leak Barrier or WeatherWatch® Mineral Surfaced Leak Barrier:

- 6.8.1 Shall be installed in compliance with requirements for an approved self-adhering underlayment (ASTM D1970) in **FBC 1507.1.1.1 or 1507.1.1.3 or FBC Residential R905.1.1.1 or R905.1.1.3** for the type of prepared roof covering to be installed, and the manufacturer’s installation instructions.
- 6.8.2 Back-nailing is required. Back-nailing shall consist of Approved cap nails spaced 18-inch o.c., encapsulated within min. 4-inch side laps.
- 6.8.3 When installed over a mechanically attached, FBC Approved ASTM D226 Type II felt, the felt shall be fastened in accordance with **FBC 1507.1.1 or R905.1.1**.
- 6.8.4 **GAF Extended Dry-In Membrane, 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 4-inch wide rolls 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 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 Florida High Wind Concrete and Clay Roof Tile Installation Manual**, Sixth Edition, and the manufacturer’s installation instructions.
- 6.9.2 Refer to Sections 5.8.2 and 5.8.3 herein for attachment limitations.
- 6.9.3 Refer to Table 4 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, LLC. – QUA9625; (414) 248-6409; karen.buchmann@ul.com

- END OF EVALUATION REPORT -