NEMO EVALUATION REPORT (NER)

PrimeSource Building Products, Inc.
2115 East Beltline Road
Carrollton, TX 75006
(508) 436-6100

SUBJECT:	**Grip-Rite Roof Underlayments**
SCOPE:	This NEMO Evaluation Report (henceforth 'NER') is issued under F.A.C. Rule 61G20-3 and the applicable rules and regulations governing Product Approval of construction materials in the State of Florida and ISO/IEC 17065 via NEMO|cert. NEMO Evaluations has evaluated the product described herein for compliance with the Code sections noted herein.
CODE:	2021 International Building Code 2021 International Residential Code 2023 Florida Building Code, 8th Edition 2023 Florida Building Code, Residential, 8th Edition
JURISDICTION:	Non-HVHZ and HVHZ
NEMO CATEGORY:	Steep Slope
FBC CATEGORY:	Roofing
FBC SUB-CATEGORY:	Underlayment
CSI DIVISION:	07 00 00 Thermal and Moisture Protection 07 30 05 Roofing Felt and Underlayment
METHOD:	Method 1, Option C – Codified Material, Evaluation by Evaluation Entity
COMPLIANCE STATEMENT:	**Grip-Rite Roof Underlayments**, as produced by **PrimeSource Building Products, Inc.**, have demonstrated compliance with the Code sections noted herein through testing in accordance with the referenced Standards, rational analysis and an ongoing quality assurance program. Compliance is subject to the Installation Requirements and Limitations of Use set forth herein.
QUALITY ASSURANCE:	Evidence of current quality assurance shall be listing and labeling in accordance with the requirements of NEMO|cert.
CONTINUED COMPLIANCE:	This NER is valid until such time the named product(s) change, the referenced Quality Assurance changes, or the evaluated Code provisions change. NEMO Evaluations require, at minimum, a complete review of this NER with each 3-year Code Cycle.
BUILDING PERMIT REQUIREMENTS:	As required by the Building Official or Authority Having Jurisdiction to evaluate the installation of this product.
ADVERTISEMENT:	"NEMO Evaluated" may be displayed in advertising literature. If any portion of the NER is displayed, it shall be displayed in its entirety.
CERTIFICATION OF INDEPENDENCE:	✓ NEMO CERT, 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. ✓ NEMO CERT, LLC is not owned, operated or controlled by any company manufacturing or distributing products it evaluates. ✓ This is a building code evaluation. NEMO CERT, LLC is not, in any way, the Designer of Record for any project on which this NER, or previous versions thereof, is/was used for permitting or design guidance.

BACK TO TOP

1. CODES, PROPERTIES AND STANDARDS:

CODE	SECTION	PROPERTY	STANDARD
2021 International Building Code	1507.1.1	Material standard (alternate)	ASTM D226
	1507.1.1, 1507.2.8.2, 1507.3.9, 1507.5.7, 1507.8.8, 1507.9.9	Material standard	ASTM D1970
2021 International Residential Code	R905.1.1	Material standard (alternate)	ASTM D226
	R905.1.1, R905.2.8.2	Material standard	ASTM D1970
2023 Florida Building Code, 8th Edition	1504.2.1.4	Wind resistance	UL 1897
	1507.1.1, 1507.2.9.2, 1507.2.9.3, 1518.2, TAS 110	Material standard	ASTM D1970
	1507.1.1, 1518.2	Material standard	ASTM D8257
	1507.3.3	Material standard	FRSA/TRI Manual
	1523.6.5.2.1, TAS 110	Material standard	TAS 103
	1523.6.5.2.9	Rupture (pull-through)	TAS 117(B)
	TAS 110	Accelerated Weathering	ASTM D4798
2023 Florida Building Code, Residential, 8th Edition	R905.1.1, R905.2.8.2, R905.2.8.5	Material standard	ASTM D1970
	R905.1.1	Material standard	ASTM D8257
	R905.3.3	Material standard	FRSA/TRI Manual

2. PRODUCTS:

TABLE 1: EVALUATED UNDERLAYMENTS (HOLDING NEMO CERTIFICATION)[1]

PRODUCT	MATERIAL STANDARD	DESCRIPTION
Grip-Rite ShingleLayment 15-Pro	ASTM D8257[2] AC188	Synthetic roofing underlayment comprised of a woven substrate of 8x8 scrim polypropylene, with the bottom surface coated with polypropylene and the top surface coated with a non-woven spun bonded polypropylene
Grip-Rite ShingleLayment 15-LWE	ASTM D8257[2] AC188	Synthetic roofing underlayment comprised of a woven substrate of 8x8 scrim polypropylene, with the bottom surface coated with polypropylene and the top surface coated with a non-woven spun bonded polypropylene
Grip-Rite ShingleLayment 15-GRE	ASTM D8257[2] AC188	Synthetic roofing underlayment comprised of a woven substrate of 8x8 scrim polypropylene, with the bottom surface coated with polypropylene and the top surface coated with a non-woven spun bonded polypropylene
Grip-Rite ShingleLayment Premium	ASTM D8257[2] AC188	Synthetic roofing underlayment comprised of a woven substrate of 10x10 scrim polypropylene, with the bottom surface coated with polypropylene and the top surface coated with a non-woven spun bonded polypropylene
Grip-Rite ShingleLayment-HT	ASTM D1970[3], FRSA/TRI and TAS 103	Self-adhering, synthetic roof underlayment
Grip-Rite Eave and Valley Protector	ASTM D1970	Self-adhering, glass-mat reinforced, sand-surfaced, SBS modified bitumen roof underlayment
Grip-Rite Smooth Seal HT	ASTM D1970	Self-adhering, glass-mat reinforced, film-surfaced, SBS modified bitumen roof underlayment

[1] *NEMO Certified. Consult Directory of Certified Products for production location(s).*
[2] *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.*
[3] *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.*

BACK TO TOP

3. INSTALLATION:

3.1	Unless otherwise noted:	
3.1.2	The term "**Grip-Rite Roof Underlayments**" herein includes the following products:	Grip-Rite ShingleLayment 15-Pro, Grip-Rite ShingleLayment 15-LWE, Grip-Rite ShingleLayment 15-GRE, Grip-Rite ShingleLayment Premium, Grip-Rite ShingleLayment-HT, Grip-Rite Eave & Valley Protector and Grip-Rite Smooth Seal HT
3.1.2	The term "**mechanically-attached Grip-Rite Roof Underlayments**" herein includes the following products:	Grip-Rite ShingleLayment 15-Pro, Grip-Rite ShingleLayment 15-LWE, Grip-Rite ShingleLayment 15-GRE or Grip-Rite ShingleLayment Premium
3.1.3	The term "**self-adhering Grip-Rite Roof Underlayments**" herein includes the following products:	Grip-Rite ShingleLayment-HT, Grip-Rite Eave & Valley Protector and Grip-Rite Smooth Seal HT

3.2 **Grip-Rite Roof Underlayments** shall be installed in accordance with **PrimeSource Building Products, Inc.** published installation instructions, subject to the Limitations of Use noted herein. In case of conflict between published installation instructions and this NER, this NER governs.

3.2.1 The report holder's installation instructions shall be made available at the jobsite at all times during installation.

3.3 Substrates shall be in accordance with codified requirements to the satisfaction of the Authority Having Jurisdiction. 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).

3.4 **IBC and IRC:**

3.4.1 **Grip-Rite Roof Underlayments** shall be installed in compliance with the applicable code, this NER and the report holder's published installation instructions.

3.4.2 **Ice Barrier:**

When used as an ice barrier, **self-adhering Grip-Rite Roof Underlayments** shall be installed in sufficient courses to extend upslope a minimum of 24-inches beyond the exterior wall plane (Reference: IBC 1507.1.2 or R905.1.2). Subsequently installed roof underlayments shall overlap the ice barrier.

3.4.3 **Roof Underlayment:**

3.4.3.1 IBC: When used as a roof underlayment:

Grip-Rite Roof Underlayments may be installed as an alternative to the codified ASTM D226 Type I or II underlayments prescribed in IBC 1507.1.1. **Self-adhering Grip-Rite Roof Underlayments** do not require mechanical attachment.

3.4.3.2 IRC: When used as a roof underlayment:

Mechanically-attached Grip-Rite Roof Underlayments may be installed as an alternate to the codified ASTM D226 Type I or II underlayments prescribed in IRC R905.1.1.

Self-adhering Grip-Rite Roof Underlayments may be installed in accordance with the codified ASTM D1970 underlayments prescribed in IRC R905.1.1.

3.4.3.3 For a double-layer application of **mechanically-attached Grip-Rite Roof Underlayments**, the Codified language is altered as follows so as to account for the different sheet-width of the subject products.

Apply a strip of underlayment for the first course that is half the width of a full sheet, parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply a full sheet of underlayment for the second course. Apply the third course of underlayment overlapping the second course half the width of a full sheet plus 2 inches (51 mm). Overlap all successive courses half the width of a full sheet plus 1 inch (25 mm).

3.4.3.4 When **self-adhering Grip-Rite Roof Underlayments** are installed atop a base sheet, the base sheet shall comply with, and be attached in accordance with IBC Table 1507.1.1(3) or Table R905.1.1(3).

Refer to Table 2A herein for allowable roof covers and Table 3 herein for allowable substrates.

3.4.4 **Joint-Strips:**

Min. 4-inch wide strips of **self-adhering Grip-Rite Roof Underlayments** may be installed in accordance with IBC 1507.1.1(1) or IRC R905.1.1(2).

BACK TO TOP

3.4.5 **Flashing:**

Self-adhering Grip-Rite Roof Underlayments may be used as flashing material where use of an ASTM D1970 compliant material is prescribed in IBC Chapter 15 or IRC Chapter 9. Flashing shall be installed in a water-shedding condition. When installed in concert with metal drip edge, **Grip-Rite Roof Underlayments** shall be installed atop eave metal and beneath rake metal.

3.5 **FBC (non-HVHZ) and FBC Residential:**

3.5.1 Refer to Section 3.4.2 herein for underlayments having prescriptive codified minimum attachment requirements or Section 4.7.2 herein for underlayment systems having maximum design pressures established in accordance with FBC 1504.2.1.4.

3.5.2 Prescriptive Underlayment Systems for use in NON-TILE applications:

3.5.2.1

CODE REFERENCE:	**1507.1.1.1 or R905.1.1.1, Option 1:**
APPLICATION:	Underlayment adhered to deck
DECK DESCRIPTION:	Code-minimum wood or structural concrete deck to the satisfaction of the Authority Having Jurisdiction (refer to **Table 3** herein for specific underlayment/substrate combinations)
UNDERLAYMENT:	**Self-adhering Grip-Rite Roof Underlayment** self-adhered in accordance with FBC Section 1507.1.1.1(1) or R905.1.1.1(1) and back-nailed in accordance with the manufacturer's requirements.
SURFACING:	FBC Approved asphalt shingles, metal roof panels or metal shingles, slate or slate type shingles, subject to the allowable roof covers in **Table 2B** herein.

3.5.2.2

CODE REFERENCE:	**1507.1.1.1 or R905.1.1.1, Option 2:**
APPLICATION:	Self-adhering strips to deck-joints followed by underlayment mechanically attached to deck
DECK DESCRIPTION:	Code-minimum wood deck to the satisfaction of the Authority Having Jurisdiction
SECONDARY WATER BARRIER:	Min. 3 ¾-inch wide strips of **Self-adhering Grip-Rite Roof Underlayment** self-adhered over joints of the roof deck prior to installation of subsequent layer(s) in accordance with FBC Section 1507.1.1.1(2) or R905.1.1.1(2). Do not overlap end-joints or T-joints. All end-joints and T-joints shall be butted firmly side by side, flush with each other but not overlapped.
UNDERLAYMENT:	**Mechanically-attached Grip-Rite Roof Underlayment** in accordance with FBC Table 1507.1.1.1 or Table R905.1.1.1, with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck. With the exception of the minimum attachment details below, FBC requirements take precedence over the manufacturer's installation instructions.
FASTENERS:	Min. 0.083-inch diameter annular ring or deformed shank nails with metal or plastic caps* with a nominal cap diameter of not less than 1-inch and minimum thickness as follows. The nail shall be of sufficient length to penetrate through the roof sheathing, or not less than 0.75-inch into the roof sheathing. *Metal caps are required where the ultimate design wind speed, V_{ult}, equals or exceeds 170 mph.

Cap Type	Minimum thickness
Metal cap	32 ga. sheet metal
Power-driven metal cap	0.010-inch
Plastic cap	0.035-inch (outside edge thickness)

FASTENING: Baseline Code Minimum: Grid pattern of 12-inches between the overlaps and 6-inch spacing at the overlaps, in accordance with FBC Table 1507.1.1.1 or Table R905.1.1.1.

Acceptable Alternate: The minimum attachment patterns noted below have been established through testing and analysis as meeting the intent of those set forth in FBC 1507.1.1.1 or FBC Residential R905.1.1.1, regardless of whether plastic cap nails or metal cap nails are utilized. Acceptance of this alternate attachment pattern is at the discretion of the Authority Having Jurisdiction in advance of underlayment installation.

MINIMUM ATTACHMENT, GRIP-RITE SHINGLELAYMENT	
PLASTIC CAP NAILS:	4-inch o.c. at all laps and 24-inch o.c. at one (1) center row
METAL CAP NAILS, $V_{ult} \leq 142$ mph:	8-inch o.c. at all laps and 24-inch o.c. at one (1) center row
METAL CAP NAILS, $V_{ult} > 142$ mph:	4-inch o.c. at all laps and 24-inch o.c. at one (1) center row
BATTENS:	When batten systems are to be installed atop the underlayment, the underlayment need only be attached at horizontal side-laps and vertical end-laps prior to batten installation.

SURFACING: FBC Approved asphalt shingles, metal roof panels or metal shingles, slate or slate type shingles, subject to the allowable roof covers in **Table 2B** herein.

3.5.2.3

CODE REFERENCE:	**1507.1.1.1 or R905.1.1.1, Option 3:**
APPLICATION:	Two-layer underlayment mechanically attached to deck

DECK DESCRIPTION: Code-minimum wood deck to the satisfaction of the Authority Having Jurisdiction

UNDERLAYMENT: Two (2) layers of **mechanically-attached Grip-Rite Roof Underlayment** in accordance with FBC Section 1507.1.1.1(3) or R905.1.1.1(3). With the exception of the minimum attachment details below, FBC requirements take precedence over the manufacturer's installation instructions.

FASTENERS: Min. 0.083-inch diameter annular ring or deformed shank nails with metal or plastic caps* with a nominal cap diameter of not less than 1-inch and minimum thickness as follows. The nail shall be of sufficient length to penetrate through the roof sheathing, or not less than 0.75-inch into the roof sheathing. *Metal caps are required where the ultimate design wind speed, V_{ult}, equals or exceeds 170 mph.

Cap Type	Minimum thickness
Metal cap	32 ga. sheet metal
Plastic cap	0.035-inch (outside edge thickness)

FASTENING: Baseline Code Minimum: Grid pattern of 12-inches between the overlaps and 6-inch spacing at the overlaps, in accordance with FBC Section 1507.1.1.1(3) or R905.1.1.1(3).

Acceptable Alternate: The minimum attachment patterns noted below have been established through testing and analysis as meeting the intent of those set forth in FBC 1507.1.1.1 or FBC Residential R905.1.1.1, regardless of whether plastic cap nails or metal cap nails are utilized. Acceptance of this alternate attachment pattern is at the discretion of the Authority Having Jurisdiction in advance of underlayment installation.

MINIMUM ATTACHMENT, GRIP-RITE SHINGLELAYMENT	
PLASTIC CAP NAILS:	4-inch o.c. at all laps and 24-inch o.c. at one (1) center row
METAL CAP NAILS, $V_{ult} \leq 142$ mph:	8-inch o.c. at all laps and 24-inch o.c. at one (1) center row
METAL CAP NAILS, $V_{ult} > 142$ mph:	4-inch o.c. at all laps and 24-inch o.c. at one (1) center row
BATTENS:	When batten systems are to be installed atop the underlayment, the underlayment need only be attached at horizontal side-laps and vertical end-laps prior to batten installation.

SURFACING: FBC Approved asphalt shingles, metal roof panels or metal shingles, slate or slate type shingles, subject to the allowable roof covers in **Table 2B** herein.

3.5.2.4

CODE REFERENCE:	**1507.1.1.1 or R905.1.1.1, Option 1 combined with Option 2 or 3:**
APPLICATION:	Optional self-adhering strips to deck-joints followed by base sheet mechanically fastened to deck followed by underlayment adhered to base sheet

DECK DESCRIPTION: Code-minimum wood deck to the satisfaction of the Authority Having Jurisdiction

SECONDARY WATER BARRIER: (Optional) Min. 3 ¾-inch wide strips of **Self-adhering Grip-Rite Roof Underlayment** self-adhered over joints of the roof deck prior to installation of subsequent layer(s) in accordance with FBC Section 1507.1.1.1(2) or R905.1.1.1(2). Do not overlap end-joints or T-joints. All end-joints and T-joints shall be butted firmly side by side, flush with each other but not overlapped.

BASE SHEET: One (1) layer of **mechanically-attached Grip-Rite Roof Underlayment** or FBC Approved ASTM D226, Type II felt, in accordance with FBC Table 1507.1.1.1 or Table R905.1.1.1, with a minimum 4-inch side lap and 6-inch end lap or two (2) layers of **mechanically-attached Grip-Rite Roof Underlayment** or FBC Approved ASTM D226, Type II felt in accordance with FBC Section 1507.1.1.1(3) or R905.1.1.1(3), mechanically fastened to deck

FASTENERS: Min. 0.083-inch diameter annular ring or deformed shank nails with metal or plastic caps* with a nominal cap diameter of not less than 1-inch and minimum thickness as follows. The nail shall be of sufficient length to penetrate through the roof sheathing, or not less than 0.75-inch into the roof sheathing. *Metal caps are required where the ultimate design wind speed, V_{ult}, equals or exceeds 170 mph.

Cap Type	Minimum thickness
Metal cap	32 ga. sheet metal
Power-driven metal cap	0.010-inch
Plastic cap	0.035-inch (outside edge thickness)

FASTENING: Baseline Code Minimum: Grid pattern of 12-inches between the overlaps and 6-inch spacing at the overlaps, in accordance with FBC Table 1507.1.1.1 or Table R905.1.1.1 or FBC Section 1507.1.1.1(3) or R905.1.1.1(3).

Acceptable Alternate: The minimum attachment patterns noted below have been established through testing and analysis as meeting the intent of those set forth in FBC 1507.1.1.1 or FBC Residential R905.1.1.1, regardless of whether plastic cap nails or metal cap nails are utilized. Acceptance of this alternate attachment pattern is at the discretion of the Authority Having Jurisdiction in advance of underlayment installation.

MINIMUM ATTACHMENT, GRIP-RITE SHINGLELAYMENT	
PLASTIC CAP NAILS:	4-inch o.c. at all laps and 24-inch o.c. at one (1) center row
METAL CAP NAILS, $V_{ult} \leq 142$ mph:	8-inch o.c. at all laps and 24-inch o.c. at one (1) center row
METAL CAP NAILS, $V_{ult} > 142$ mph:	4-inch o.c. at all laps and 24-inch o.c. at one (1) center row
BATTENS:	When batten systems are to be installed atop the underlayment, the underlayment need only be attached at horizontal side-laps and vertical end-laps prior to batten installation.

UNDERLAYMENT: **Self-adhering Grip-Rite Roof Underlayment** self-adhered in accordance with FBC Section 1507.1.1.1(1) or R905.1.1.1(1) and back-nailed in accordance with the manufacturer's requirements.

SURFACING: FBC Approved asphalt shingles, metal roof panels or metal shingles, slate or slate type shingles, subject to the allowable roof covers in **Table 2B** herein.

3.6 FBC HVHZ (Broward and Miami-Dade Counties):

3.6.1 Refer to Section 3.6.2 herein for underlayments having prescriptive codified minimum attachment requirements or Section 4.7.2 herein for underlayment systems having maximum design pressures established in accordance with TAS 103.

3.6.2 Prescriptive Underlayment Systems for use in NON-TILE applications:

3.6.2.1

CODE REFERENCE: 1518.2.1, Option 1:
APPLICATION: Underlayment adhered to deck

DECK DESCRIPTION: Code-minimum wood or structural concrete deck to the satisfaction of the Authority Having Jurisdiction (refer to **Table 3** herein for specific underlayment/substrate combinations)

UNDERLAYMENT: **Self-adhering Grip-Rite Roof Underlayment** self-adhered in accordance with FBC Section 1518.2.1(1) and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5) or FBC HVHZ Approved concrete fasteners and plates.

SURFACING: FBC HVHZ Approved asphalt shingles, metal roof panels or metal shingles, slate or slate type shingles, subject to the allowable roof covers in **Table 2B** herein.

3.6.2.2

CODE REFERENCE: 1518.2.1, Option 2:
APPLICATION: Self-adhering strips to deck-joints followed by underlayment mechanically attached to deck

DECK DESCRIPTION: Code-minimum wood deck to the satisfaction of the Authority Having Jurisdiction

SECONDARY WATER BARRIER: Min. 3 ¾-inch wide strips of **Self-adhering Grip-Rite Roof Underlayment** self-adhered over joints of the roof deck prior to installation of subsequent layer(s) in accordance with FBC Section 1518.2.1(2). Do not overlap end-joints or T-joints. All end-joints and T-joints shall be butted firmly side by side, flush with each other but not overlapped.

UNDERLAYMENT: **Mechanically-attached Grip-Rite Roof Underlayment** in accordance with FBC Table 1518.2.1, with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.

FASTENING: FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), grid pattern of 12-inches between the overlaps and 6-inch spacing at the overlaps, in accordance with FBC Table 1518.2.1.

SURFACING: FBC HVHZ Approved asphalt shingles, metal roof panels or metal shingles, slate or slate type shingles or wood shakes or shingles subject to the allowable roof covers in **Table 2B** herein.

3.6.2.3

CODE REFERENCE: 1518.2.1, Option 3:
APPLICATION: Two-layer underlayment mechanically attached to deck

DECK DESCRIPTION: Code-minimum wood deck to the satisfaction of the Authority Having Jurisdiction

UNDERLAYMENT: Two (2) layers of **mechanically-attached Grip-Rite Roof Underlayment** in accordance with FBC HVHZ 1518.2.1(3).

FASTENING: FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5) in accordance with FBC HVHZ 1518.2.1(3).

SURFACING: FBC HVHZ Approved asphalt shingles, metal roof panels or metal shingles, slate or slate type shingles subject to the allowable roof covers in **Table 2B** herein.

3.6.2.4	**CODE REFERENCE:**	**1518.2.1, Option 1 combined with Option 2 or 3:**
	APPLICATION:	Optional self-adhering strips to deck-joints followed by base sheet mechanically fastened to deck followed by underlayment adhered to base sheet
	DECK DESCRIPTION:	Code-minimum wood deck to the satisfaction of the Authority Having Jurisdiction
	SECONDARY WATER BARRIER:	(Optional) Min. 3 ¾-inch wide strips of **Self-adhering Grip-Rite Roof Underlayment** self-adhered over joints of the roof deck prior to installation of subsequent layer(s) in accordance with FBC Section 1518.2.1(2). Do not overlap end-joints or T-joints. All end-joints and T-joints shall be butted firmly side by side, flush with each other but not overlapped.
	BASE SHEET:	One (1) layer of **mechanically-attached Grip-Rite Roof Underlayment** or FBC HVHZ Approved ASTM D226, Type II felt, in accordance with FBC HVHZ Table 1518.2.1, with a minimum 4-inch side lap and 6-inch end lap or two (2) layers of **mechanically-attached Grip-Rite Roof Underlayment** or FBC HVHZ Approved ASTM D226, Type II felt in accordance with FBC HVHZ 1518.2.1(3), mechanically fastened to deck.
	FASTENING:	FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), grid pattern of 12-inches between the overlaps and 6-inch spacing at the overlaps, in accordance with FBC Table 1518.2.1 or FBC Section 1518.2.1(3).
	UNDERLAYMENT:	**Self-adhering Grip-Rite Roof Underlayment** self-adhered in accordance with FBC Section 1518.2.1(1) and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	SURFACING:	FBC HVHZ Approved asphalt shingles, metal roof panels or metal shingles, slate or slate type shingles subject to the allowable roof covers in **Table 2B** herein.

4. LIMITATIONS OF USE:

4.1 This is a building code evaluation. NEMO CERT, LLC is not, in any way, the Designer of Record for any project on which this NER, or previous versions thereof, is/was used for permitting or design guidance. NERs are not to be construed as representing any attributes not specifically listed, nor are NERs to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by NEMO CERT, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.

4.2 This NER pertains to above-deck roof components. Roof decks and structural members shall be in accordance with the applicable Code requirements to the satisfaction of the Authority Having Jurisdiction.

4.3 **Grip-Rite Roof Underlayments** may be used with any prepared roof cover where the product is specifically referenced within applicable 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.

4.4 **Fire Classification:**

4.4.1 Grip-Rite ShingleLayment 15-Pro, Grip-Rite ShingleLayment 15-LWE, Grip-Rite ShingleLayment 15-GRE and Grip-Rite ShingleLayment Premium may be used in nonclassified roof coverings or as a component of a classified roofing assembly when specifically recognized as such in a listing approved by the Authority Having Jurisdiction.

4.4.2 Grip-Rite ShingleLayment-HT may be used as outlined in NEMO Scope of Certification D8211376J, or may be used in non-classified roof coverings or as a component of a classified roofing assembly when specifically recognized as such in a listing approved by the Authority Having Jurisdiction.

4.4.3 Grip-Rite Eave & Valley Protector and Grip-Rite Smooth Seal HT may be used as outlined in UL File TGDY.R27605, or may be used in non-classified roof coverings or as a component of a classified roofing assembly when specifically recognized as such in a listing approved by the Authority Having Jurisdiction.

4.5 **Allowable Roof Covers:**

Table 2 lists allowable roof cover types, subject to fire classification documentation set forth in Section 4.4 herein (if applicable).

TABLE 2A: ROOF COVER OPTIONS, IBC/IRC

UNDERLAYMENT	ROOF COVER	IBC SECTION(S)		IRC SECTION(S)	
		SECTION	ALLOWABLE USE	SECTION	ALLOWABLE USE
Grip-Rite ShingleLayment 15-Pro, Grip-Rite ShingleLayment 15-LWE, Grip-Rite ShingleLayment 15-GRE and Grip-Rite ShingleLayment Premium	Asphalt Shingles	1507.2	Yes[4]	R905.2	Yes[4]
	Roof Tile	1507.3		R905.3	
	Metal Shingles or Panels	1507.4, 1507.5		R905.4, R905.10	
	Slate or Slate-Type Shingles	1507.7		R905.6	
	Wood Shingles or Shakes	1507.8, 1507.9		R905.7, R905.8	
Grip-Rite ShingleLayment-HT	Asphalt Shingles	1507.2	Yes[5]	R905.2	Yes[5]
	Roof Tile	1507.3		R905.3	
	Metal Shingles or Panels	1507.4, 1507.5		R905.4, R905.10	
	Slate or Slate-Type Shingles	1507.7		R905.6	
	Wood Shingles or Shakes	1507.8, 1507.9		R905.7, R905.8	
Grip-Rite Eave & Valley Protector and Grip-Rite Smooth Seal HT	Asphalt Shingles	1507.2	Yes[6]	R905.2	Yes[7]
	Roof Tile	1507.3		R905.3	
	Metal Shingles or Panels	1507.4, 1507.5		R905.4, R905.10	
	Slate or Slate-Type Shingles	1507.7		R905.6	
	Wood Shingles or Shakes	1507.8, 1507.9		R905.7, R905.8	

[4] *Product used as alternate to ASTM D226, Type I or Type II felt. For roof tile, limited to mechanically fastened tile only.*

[5] *Product used as ASTM D1970 compliant material or as alternate to ASTM D226, Type I or Type II felt. For roof tile, used with mechanically fastened tile or adhesive-set tile using adhesive options set forth in Table 2c.*

[6] *For the **IBC**, product used as min. 4-inch wide joint-strips per IBC 1507.1.1(1) or installed in full-coverage atop ASTM D226 felt or ASTM D4869 felt installed in accordance with IBC Tables 1507.1.1(2) and 1507.1.1(3). For roof tile, limited to mechanically fastened tile only.*

[7] *For the **IRC**, product used in full-coverage in accordance with IRC R905.1.1(1), or as min. 4-inch wide joint-strips per IRC R905.1.1(2) or installed in full-coverage atop ASTM D226 felt or ASTM D4869 felt installed in accordance with IRC Tables R905.1.1(2) and R905.1.1(3). For roof tile, limited to mechanically fastened tile only.*

BACK TO TOP

TABLE 2B: ROOF COVER OPTIONS, FBC					
UNDERLAYMENT	ROOF COVER	FBC AND FBC-R SECTION(S)		FBC HVHZ SECTIONS	
		SECTION	ALLOWABLE USE	SECTION	ALLOWABLE USE
Grip-Rite ShingleLayment 15-Pro, Grip-Rite ShingleLayment 15-LWE, Grip-Rite ShingleLayment 15-GRE and Grip-Rite ShingleLayment Premium	Asphalt Shingles	1507.2, R905.2	Yes[8]	*RAS 115, 1518.2.1*	Yes[8]
	Roof Tile	1507.3, R905.3	No	*RAS 118, RAS 119 or RAS 120*	No
	Metal Shingles or Panels	1507.4, 1507.5, R905.4, R905.10	Yes[8]	*RAS 133, 1518.2.1*	Yes[8]
	Slate or Slate-Type Shingles	1507.7, R905.6	Yes[8]	*1518.2.1*	Yes[8]
	Wood Shingles or Shakes	1507.8, 1507.9, R905.7, R905.8	No	*RAS 130, 1518.10*	Yes[8]
Grip-Rite ShingleLayment-HT	Asphalt Shingles	1507.2, R905.2	Yes[9]	*RAS 115, 1518.2.1*	Yes[10]
	Roof Tile	1507.3, R905.3		*RAS 118, RAS 119 or RAS 120*	
	Metal Shingles or Panels	1507.4, 1507.5, R905.4, R905.10		*RAS 133, 1518.2.1*	
	Slate or Slate-Type Shingles	1507.7, R905.6		*1518.2.1*	
	Wood Shingles or Shakes	1507.8, 1507.9, R905.7, R905.8		*RAS 130, 1518.10*	
Grip-Rite Eave & Valley Protector and Grip-Rite Smooth Seal HT	Asphalt Shingles	1507.2, R905.2	Yes[11]	*RAS 115, 1518.2.1*	Yes[12]
	Roof Tile	1507.3, R905.3	No	*RAS 118, RAS 119 or RAS 120*	No
	Metal Shingles or Panels	1507.4, 1507.5, R905.4, R905.10	Yes[11]	*RAS 133, 1518.2.1*	Yes[12]
	Slate or Slate-Type Shingles	1507.7, R905.6	Yes[11]	*1518.2.1*	Yes[12]
	Wood Shingles or Shakes	1507.8, 1507.9, R905.7, R905.8	Yes[11]	*RAS 130, 1518.10*	Yes[12]

[8] *Product used as ASTM D8257 compliant material.*

[9] *Product used as ASTM D1970 compliant material. For roof tile, used with mechanically fastened tile or adhesive-set tile using adhesive options set forth in Table 2c. For wood shakes and shingles, product is 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 or 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.*

[10] *Product used as ASTM D1970 and TAS 103 compliant material. For roof tile, used with mechanically fastened tile or adhesive-set tile using adhesive options set forth in Table 2c. For wood shakes and shingles, product is limited to use per RAS 130.*

[11] *Product used as ASTM D1970 compliant material. For wood shakes and shingles, product is 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 or 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.*

[12] *Product used as ASTM D1970 compliant material. For wood shakes and shingles, product is limited to use per RAS 130.*

BACK TO TOP

4.5.1 Adhesive-set tile is limited to use of the following Approved underlayment / tile-adhesive combinations.

TABLE 2C: ALLOWABLE UNDERLAYMENT / TILE-ADHESIVE COMBINATIONS[10]				
UNDERLAYMENT	ADHESIVE	CODE COMPLIANCE REPORT		
		IBC/IRC	FBC FPA	FBC HVHZ
Grip-Rite ShingleLayment-HT	Dupont "TILE BOND Roof Tile Adhesive"	UL ER18231-01	FL22525	NOA 22-0614.05
	ICP "APOC POLYSET AH-160"	ESR-1709	FL6332	NOA 22-0614.10

[10] *Refer to Tile Manufacturer's or Adhesive Manufacturer's compliance documentation for Overturning Moment Resistance Performance*

4.6 Allowable Substrates:

TABLE 3: SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS				
UNDERLAYMENT	APPLICATION	SUBSTRATES (DESIGNED TO MEET WIND LOADS FOR PROJECT)		
		TYPE	PRIMER	MATERIAL(S)
Grip-Rite ShingleLayment-HT	self-adhering	Deck / sheathing	None	Plywood
		Base Sheet	None	ASTM D226, Type II felt
Grip-Rite Eave and Valley Protector or Grip-Rite Smooth Seal HT	self-adhering	Deck / sheathing	(Optional) ASTM D41	plywood, OSB or Southern Yellow Pine (SYP)
			ASTM D41	structural concrete
		Insulation	None	Dens Deck Prime or SECUROCK Gypsum-Fiber Roof Board
		Base Sheet	None	ASTM D226, Type II felt

4.7 Attachment Limitations:

4.7.1 For use under the IBC and IRC and for use in NON-TILE applications under the FBC and FBC Residential, refer to Section 3 herein and the appliable Code requirements.

4.7.2 Wind Resistance for Underlayment Systems in Tile Roof Applications under the FBC and FBC Residential:
The following wind uplift limitations apply to tile underlayment systems per FBC 1504.2.1.4 and Section 7 of TAS 103. 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 has already been applied).

TABLE 4: ALLOWABLE DESIGN PRESSURES, UNDERLAYMENT IN TILE ROOF APPLICATIONS				
SYSTEM NO.	DECK	PRIMER	UNDERLAYMENT	MAX. DESIGN PRESSURE (PSF)
1	Min. 15/32-inch PS 1-09, CDX plywood	None	Grip-Rite ShingleLayment-HT, self-adhered and back-nailed within the selvedge-edge side laps using corrosion resistant 12 ga. x 1¼" ring shank nails through 32 ga., 1-5/8" diameter tin caps or corrosion resistant 1-inch diameter metal cap nails spaced max. 12-inch o.c. 6-inch wide, self-adhering end laps are blind-nailed with 1-inch diameter metal cap nails spaced 6-inch o.c.	-75.0

4.8 Exposure Limitations:

TABLE 5: EXPOSURE LIMITATIONS		
UNDERLAYMENT	PREPARED ROOF COVER TYPE (OVERTOP OF UNDERLAYMENT)	MAXIMUM EXPOSURE (DAYS)
Grip-Rite ShingleLayment 15-Pro, Grip-Rite ShingleLayment 15-LWE, Grip-Rite ShingleLayment 15-GRE or Grip-Rite Eave and Valley Protector	Mechanically attached	30
Grip-Rite Smooth Seal HT	Mechanically attached	90
Grip-Rite ShingleLayment Premium	Mechanically attached	180
Grip-Rite ShingleLayment-HT	Mechanically attached or adhesive-set tile roof system	360

4.9 Tile Slippage Limitations:

When loading roof tiles on the underlayment, the maximum roof slope shall be as follows. Slopes in excess of these limitations require the use of battens or loading boards during loading of the roof tiles, in which case the maximum staging method is a 10-tile stack.

TABLE 6: TILE SLIPPAGE LIMITATIONS			
UNDERLAYMENT	TILE PROFILE	STAGING METHOD	MAXIMUM SLOPE
Grip-Rite ShingleLayment-HT	Flat	10-tile stack	6:12
	Lugged	10-tile stack	5:12
	Lugged	6-tile stack (4 over 2)	6:12

4.10 For use under the FBC, 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 this report holder.

- END OF NER -