



NEMO EVALUATIONS REPORT

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National Nail Corp
FL47523

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NEMO EVALUATION REPORT (NER)



National Nail Corp

2964 Clydon Ave. SW
Grand Rapids, MI 49519
(800) 968-6245

SUBJECT: EXOSTKG 52 mils

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 Building Code, Residential
2023 Florida Building Code, 8th Edition
2023 Florida Building Code, Residential, 8th Edition

FBC 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: EXOSTKG 52 mils, as produced by **National Nail Corp**, 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.





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1. CODES, PROPERTIES AND STANDARDS:

CODE	SECTION	PROPERTY	STANDARD
2021 International Building Code	1507.1.1, 1507.2.8.2, 1507.3.9, 1507.5.7, 1507.8.8, 1507.9.9	Material standard	ASTM D1970
	1505.1	Fire Classification	ASTM E108
	R905.1.1, R905.2.8.2	Material standard	ASTM D1970
2021 International Building Code, Residential	R902.1	Fire Classification	ASTM E108
	1507.1.1, 1507.2.9.2, 1507.2.9.3, 1518.2, TAS 110	Material standard	ASTM D1970
2023 Florida Building Code, 8 th Edition	1505.1	Fire Classification	ASTM E108
	R905.1.1, R905.2.8.2, R905.2.8.5	Material standard	ASTM D1970
2023 Florida Building Code, Residential, 8 th Edition	R902.1	Fire Classification	ASTM E108

2. PRODUCTS:

TABLE 1: EVALUATED UNDERLAYMENTS (NEMO Certified. Consult Directory of Certified Products for production location(s))		
PRODUCT	MATERIAL STANDARD	DESCRIPTION
EXOSTKG 52 mils	ASTM D1970	Self-adhering, fiberglass reinforced, granule-surfaced, SBS modified bitumen roof underlayment

3. INSTALLATION:

3.1 **EXOSTKG 52 mils** shall be installed in accordance with **National Nail Corp** published installation instructions, subject to the [Limitations of Use](#) noted herein. In case of conflict between published installation instructions and this NER, this report governs.

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

3.2 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).

3.3 **IBC and IBC Residential:**

3.3.1 **EXOSTKG 52 mils** shall be installed in compliance with the applicable code, this NER and the report holder's published installation instructions.

3.3.2 **Ice Barrier:**

When used as an ice barrier, **EXOSTKG 52 mils** 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.

3.3.3 **Roof Underlayment:**

IBC: When used as a roof underlayment, **EXOSTKG 52 mils** may be installed as an alternate to the codified ASTM D226 Type I or II underlayments prescribed in IBC 1507.1.1, but the product is self-adhering, and do not require mechanical attachment.

IBC-R: When used as a roof underlayment, **EXOSTKG 52 mils** may be installed in accordance with IBC R905.1.1 Exception 1.

When **EXOSTKG 52 mils** are installed atop a base sheet of ASTM D226 or ASTM D4869 underlayment, the base sheet shall 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.

3.3.4 **Joint-Strips:**

Min. 4-in. wide strips of **EXOSTKG 52 mils** may be installed in accordance with IBC 1507.1.1(1) or IBC R905.1.1(2).



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3.3.5 Flashing:

EXOSTKG 52 mils may be used as flashing material where use of an ASTM D1970 compliant material is prescribed in IBC Chapter 15 or IBC Residential Chapter 9. Flashing shall be installed in a water-shedding condition. When installed in concert with metal drip edge, **EXOSTKG 52 mils** shall be installed atop eave metal and beneath rake metal.

3.4 FBC (non-HVHZ) and FBC Residential:

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

3.4.1.1 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: **EXOSTKG 52 mils** 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.

3.4.1.2 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 3/4-inch wide strips of **EXOSTKG 52 mils** 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: FBC Approved, ASTM D226 Type II, ASTM D4869 Type III or IV, ASTM D6757 or ASTM D8257 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 in accordance with FBC Table 1507.1.1.1 or Table R905.1.1.1
SURFACING: FBC Approved prepared roof cover, subject to the limitations in FBC Table [1507.1.1.1](#) or Table [R905.1.1.1](#).

3.4.1.3 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 3/4-inch wide strips of **EXOSTKG 52 mils** 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 FBC Approved, ASTM D226 Type II or ASTM D4869 Type III or IV, 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 FBC Approved, ASTM D226 Type II or ASTM D4869 Type III or IV 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.

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)

The nail shall be of sufficient length to penetrate through the roof sheathing, or not less than 0.75-inch into the roof sheathing.

*NOTE: Metal caps are required where the ultimate design wind speed, V_{ult}, equals or exceeds 170 mph.

FASTENING: 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).
UNDERLAYMENT: **EXOSTKG 52 mils** 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.



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

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

3.5.1.1 **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: **EXOSTKG 52 mils** 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.

3.5.1.2 **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 **EXOSTKG 52 mils** 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: FBC HVHZ Approved, ASTM D226 Type II, ASTM D4869 Type III or IV or ASTM D8257 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 prepared roof cover, subject to the limitations in FBC Table [1518.2.1](#).

3.5.1.3 **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 **EXOSTKG 52 mils** 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 FBC Approved, ASTM D226 Type II or ASTM D4869 Type III or IV, in accordance with FBC Table 1518.2.1, with a minimum 4-inch side lap and 6-inch end lap or two (2) layers of FBC Approved, ASTM D226 Type II or ASTM D4869 Type III or IV in accordance with FBC Section 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: **EXOSTKG 52 mils** 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 **EXOSTKG 52 mils** is limited to roofs with ventilated attic spaces in accordance with the requirement of the applicable Code.
- 4.4 Installation of **EXOSTKG 52 mils** is limited to when the ambient air and substrate temperatures are at or above 40°F.



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4.5 **EXOSTKG 52 mils** may be used with any prepared roof cover where the product is specifically referenced within the prepared roof cover’s Approval documents. If not listed, a request may be made to the Authority Having Jurisdiction for approval based on this NER combined with supporting data for the prepared roof covering.

4.6 **Fire Classification:**

4.6.1 **EXOSTKG 52 mils** may be used as outlined in the NEMO [Scope of Certification D8150507K](#), 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.

4.7 **Allowable Roof Covers:**

Table 2 lists the roof cover types that are permissible with **EXOSTKG 52 mils**, subject to fire classification documentation set forth in [Section 4.6](#) herein (if applicable).

TABLE 2A: ROOF COVER OPTIONS, IBC/IRC					
UNDERLAYMENT	ROOF COVER	IBC SECTION(S)		IRC SECTION(S)	
		SECTION	ALLOWABLE USE ¹	SECTION	ALLOWABLE USE ²
EXOSTKG 52 mils	Asphalt Shingles	1507.2	Yes	R905.2	Yes
	Roof Tile	1507.3	Yes (mechanically fastened tile only)	R905.3	Yes (mechanically fastened tile only)
	Metal Shingles or Panels	1507.4, 1507.5	Yes	R905.4, R905.10	Yes
	Slate or Slate-Type Shingles	1507.7	Yes	R905.6	Yes
	Wood Shingles or Shakes	1507.8, 1507.9	Yes	R905.7, R905.8	Yes

TABLE 2B: ROOF COVER OPTIONS, FBC					
UNDERLAYMENT	ROOF COVER	FBC SECTION(S)		FBC HVHZ SECTIONS	
		SECTION	ALLOWABLE USE	SECTION	ALLOWABLE USE
EXOSTKG 52 mils	Asphalt Shingles	1507.2, R905.2	Yes	1518.2.1, RAS 115	Yes
	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	1518.2.1, RAS 133	Yes
	Slate or Slate-Type Shingles	1507.7, R905.6	Yes	1518.2.1	Yes
	Wood Shingles or Shakes	1507.8, 1507.9, R905.7, R905.8	Yes ³	1518.10, RAS 130	Yes ⁴

¹ For the **IBC**, product is 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).

² For the **IRC**, product is 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).

³ For the **FBC** and use with 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.

⁴ For the **FBC HVHZ** and use with wood shakes and shingles, product use is limited to use as a closed-valley liner, as specified in Section 4.3 of RAS 130.



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4.8 Allowable Substrates:

TABLE 3: SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS				
UNDERLAYMENT	APPLICATION	SUBSTRATES (DESIGNED TO MEET WIND LOADS FOR PROJECT)		
		TYPE	PRIMER	MATERIAL(S)
EXOSTKG 52 mils	self-adhering	Deck / sheathing	(Optional) ASTM D41	Plywood, OSB
			(Optional) ASTM D41	Structural concrete

4.9 Attachment Limitations:

Refer to [Section 3](#) herein.

4.10 Exposure Limitations:

For use under the FBC, the maximum exposure duration set forth in Table 4 shall not be exceeded.

TABLE 4: EXPOSURE LIMITATIONS	
UNDERLAYMENT	MAXIMUM EXPOSURE (DAYS)
EXOSTKG 52 mils	30

4.11 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 -