



NEMO EVALUATIONS REPORT

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SOPREMA, Inc.
FL46297-R4

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INSPECT

CERTIFY

EVALUATE

VALIDATE

QUALIFY

NEMO EVALUATION REPORT (NER)



SOPREMA

SOPREMA, Inc.

310 Quadral Drive
Wadsworth, OH 44281
(800) 356-3521

SUBJECT: SOPREMA® 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: 2024, 2021, 2018 International Building Code TDI [Third-Party Evaluation Report](#) acceptance
2024, 2021, 2018 International Building Code, Residential
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: Underlayments

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: **SOPREMA Roof Underlayments**, as produced by **SOPREMA, 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 has not, nor does it intend to acquire or will they 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
2018 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
2018 International Building Code, Residential	R905.1.1, R905.2.8.2	Material standard	ASTM D1970
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
2021 International Building Code, Residential	R905.1.1, R905.2.8.2	Material standard	ASTM D1970
2024 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
2024 International Building Code, Residential	R905.1.1, R905.2.8.2	Material standard	ASTM D1970
2023 Florida Building Code, 8 th 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
	1507.3.3	Material standard	FRSA/TRI Manual
	1507.10.2, TAS 110	Material standard	ASTM D4601
	1523.6.5.2.1, TAS 110	Material standard	TAS 103
	TAS 110	Accelerated Weathering	ASTM D4798
2023 Florida Building Code, Residential, 8 th Edition	R905.1.1, R905.2.8.2, R905.2.8.5	Material standard	ASTM D1970
	R905.3.3	Material standard	FRSA/TRI Manual

2. PRODUCTS:

TABLE 1A: EVALUATED UNDERLAYMENTS ¹ (NEMO Certified. Consult Directory of Certified Products for production location(s))		
PRODUCT	MATERIAL STANDARD	DESCRIPTION
TOPSHIELD DEFENDER TU	ASTM D1970, FRSA/TRI and TAS 103	self-adhering, non-woven polyester fabric surfaced, SBS modified bitumen roof underlayment
Tri-Built S/A HT TU Underlayment		
LASTOBOND PRO TU HT	ASTM D1970, FRSA/TRI and TAS 103	self-adhering, non-woven polyester fabric surfaced, SBS modified bitumen roof underlayment
TRI-BUILT SMOOTH SEAL HT	ASTM D1970	self-adhering, glass-mat reinforced, film-surfaced, SBS modified bitumen roof underlayment
LASTOBOND Reinforced HT	ASTM D1970	self-adhering, glass-mat reinforced, film-surfaced, SBS modified bitumen roof underlayment
TOPSHIELD DEFENDER HT		
RESISTO LB1236	ASTM D1970	self-adhering, glass-mat reinforced, sand-surfaced, SBS modified bitumen roof underlayment
TOPSHIELD ICE & WATER DEFENDER		
TRI-BUILT SAND R S/A		
SELECT SBS GLASS STICK		

¹ Products previously evaluated and approved under Florida Product Approval FL2569.



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TABLE 1B: EVALUATED UNDERLAYMENTS (Contact contact@nemocert.com for production location(s) of non-Certified products)		
PRODUCT	MATERIAL STANDARD	DESCRIPTION
LASTOBOND Shield	ASTM D1970, FRSA/TRI and TAS 103	self-adhering, woven polyethylene surfaced, SBS modified bitumen roof underlayment available in two widths; 36 and 45 inch
LASTOBOND Pro HT-N		
RESISTO SA SMOOTH PLY 40		
MOUNTAIN BIGFOOT BARRIER HIGH TEMP		
LASTOBOND Shield HT	ASTM D1970	self-adhering, woven polyethylene surfaced, high temperature, SBS modified bitumen roof underlayment
LASTOBOND Pro HT-S		
EXCEPTIONAL HT		
MOUNTAIN BIGFOOT BARRIER EXTREME HIGH TEMP MEMBRANE		
RESISTO LB1244	ASTM D1970	self-adhering, glass-mat reinforced, sand-surfaced, SBS modified bitumen roof underlayment
BITUTAK SA Base		
MOUNTAIN BIGFOOT BARRIER BF/IW195 ICE AND WATER ARMOR		



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3. INSTALLATION:

- 3.1 Unless otherwise noted, the term “**SOPREMA Roof Underlayments**” herein includes the following products:

LASTOBOND Shield, LASTOBOND Pro HT-N, RESISTO SA SMOOTH PLY 40, MOUNTAIN BIGFOOT BARRIER HIGH TEMP, LASTOBOND Shield HT, LASTOBOND Pro HT-S, EXCEPTIONAL HT, MOUNTAIN BIGFOOT BARRIER EXTREME HIGH TEMP MEMBRANE, BITUTAK SA Base, TRI-BUILT SMOOTH SEAL HT, LASTOBOND Reinforced HT, RESISTO LB1236, RESISTO LB1244, TRI-BUILT SAND R S/A, TOPSHIELD ICE & WATER DEFENDER, SELECT SBS GLASS STICK, MOUNTAIN BIGFOOT BARRIER BF/IW195 ICE AND WATER ARMOR, TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment or LASTOBOND PRO TU HT

- 3.2 **SOPREMA Roof Underlayments** shall be installed in accordance with **SOPREMA, 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.

- 3.2.2 The side lap of **LASTOBOND PRO TU HT** configured as follows:

- ✓ Overall Width: 3.5-inch
- ✓ Outermost Release Film / Self-Adhering Width: 1.75-inch
- ✓ Innermost Fabric Surface Width: 1.75-inch

When back-nailing, the nails are installed along the centerline of the fabric-surfaced portion of the side lap, and the lap is sealed using a continuous bead of RESISTO ELASTOMERIC SEALANT, SOPRAMASTIC SBS ELASTIC CEMENT, or 2100 RUBBERIZED FLASHING CEMENT, rolled into place to achieve a watertight condition.



- 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).

- 3.3.1 The substrate shall be primed with RESISTO EXTERIOR PRIMER when installing **TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment, LASTOBOND PRO TU HT, RESISTO LB1236 or LB1244, TRI-BUILT SAND R S/A, BITUTAK SA Base, SELECT SBS GLASS STICK, MOUNTAIN BIGFOOT BARRIER BF/IW195 ICE AND WATER ARMOR or TOPSHIELD ICE & WATER DEFENDER** in a reroof (tear-off) application. Final acceptance of any existing substrate is at the discretion of the installer and the Authority Having Jurisdiction. Should a question arise as to the suitability of an existing substrate, contact [SOPREMA technical support](#).

3.4 IBC and IBC Residential:

- 3.4.1 **SOPREMA 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, **SOPREMA 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:

IBC: When used as a roof underlayment, **SOPREMA Roof Underlayments** may be installed as an alternate to the codified ASTM D226 Type I or II underlayments prescribed in IBC 1507.1.1, but the products are self-adhering, and do not require mechanical attachment.

IBC Residential: When used as a roof underlayment, **SOPREMA Roof Underlayments** may be installed in accordance with IBC R905.1.1 Exception 1.

When **SOPREMA Roof Underlayments** 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.



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3.4.4 Joint-Strips:

Min. 4-inch wide strips of **SOPREMA Roof Underlayments** or **RESISTO Repair and Seal Tape PRO** may be installed in accordance with IBC 1507.1.1 Exception 1 or IBC R905.1.1 Exception 2.

3.4.5 Flashing:

SOPREMA Roof Underlayments 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, **SOPREMA 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 3.5.2 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
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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: **SOPREMA 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
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DECK DESCRIPTION: Code-minimum wood deck to the satisfaction of the Authority Having Jurisdiction

SECONDARY WATER BARRIER: Min. 3 ¼-inch wide strips of **SOPREMA Roof Underlayment** or **RESISTO Repair and Seal Tape PRO** 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

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

SURFACING: FBC Approved prepared roof cover, subject to the limitations in FBC Table [1507.1.1.1](#) or Table [R905.1.1.1](#).



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3.5.2.3

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 ¼-inch wide strips of SOPREMA Roof Underlayment or RESISTO Repair and Seal Tape PRO 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 Modified SOPRA-G or 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 Modified SOPRA-G or 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. <table> <tr> <th>Cap Type</th><th>Minimum thickness</th></tr> <tr> <td>Metal cap</td><td>32 ga. sheet metal</td></tr> <tr> <td>Power-driven metal cap</td><td>0.010-inch</td></tr> <tr> <td>Plastic cap</td><td>0.035-inch (outside edge thickness)</td></tr> </table> The nail shall be of sufficient length to penetrate through the roof sheathing, or not less than 0.75-inch into the roof sheathing.	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)
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)								
*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:	SOPREMA 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:	SOPREMA 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 ¼-inch wide strips of SOPREMA Roof Underlayment or RESISTO Repair and Seal Tape PRO 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.



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SURFACING: FBC HVHZ Approved prepared roof cover, subject to the limitations in FBC Table [1518.2.1](#).

3.6.2.3	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 ¼-inch wide strips of SOPREMA Roof Underlayment or RESISTO Repair and Seal Tape PRO 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 Modified SOPRA-G or 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 Modified SOPRA-G or 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:	SOPREMA 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, 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 **SOPREMA 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:**
SOPREMA Roof Underlayments 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. Refer to [UL File TGDY.R21824](#) for the applicant's baseline fire classification listings.



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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	USE	SECTION	USE
TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment or LASTOBOND PRO TU HT	Asphalt Shingles	1507.2	Yes	R905.2	Yes
	Roof Tile	1507.3	Yes ²	R905.3	Yes ⁴
	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
LASTOBOND Shield, LASTOBOND Pro HT-N, RESISTO SA SMOOTH PLY 40, MOUNTAIN BIGFOOT BARRIER HIGH TEMP, LASTOBOND Shield HT, LASTOBOND Pro HT-S, EXCEPTIONAL HT, MOUNTAIN BIGFOOT BARRIER EXTREME HIGH TEMP MEMBRANE, BITUTAK SA Base, TRI-BUILT SMOOTH SEAL HT, LASTOBOND Reinforced HT, RESISTO LB1236 or LB1244, TRI-BUILT SAND R S/A, TOPSHIELD ICE & WATER DEFENDER, SELECT SBS GLASS STICK, or MOUNTAIN BIGFOOT BARRIER BF/IW195 ICE AND WATER ARMOR	Asphalt Shingles	1507.2	Yes	R905.2	Yes
	Roof Tile	1507.3	Yes ³	R905.3	Yes ⁵
	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					
UNDERLAYMENT	ROOF COVER	FBC AND FBC-R SECTION(S)		FBC HVHZ SECTIONS	
		SECTION	USE	SECTION	USE
TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment or LASTOBOND PRO TU HT	Asphalt Shingles	1507.2, R905.2	Yes	RAS 115, 1518.2.1	Yes
	Roof Tile	1507.3, R905.3	Yes ³	RAS 118, 119 or 120	Yes ³
	Metal Shingles or Panels	1507.4, 1507.5, R905.4, R905.10	Yes	RAS 133, 1518.2.1	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 ⁴	RAS 130, 1518.10	Yes ⁶
LASTOBOND Shield, LASTOBOND Pro HT-N, RESISTO SA SMOOTH PLY 40, MOUNTAIN BIGFOOT BARRIER HIGH TEMP, LASTOBOND Shield HT, LASTOBOND Pro HT-S, EXCEPTIONAL HT, MOUNTAIN BIGFOOT BARRIER EXTREME HIGH TEMP MEMBRANE, BITUTAK SA Base, TRI-BUILT SMOOTH SEAL HT, LASTOBOND Reinforced HT, RESISTO LB1236 or LB1244, TRI-BUILT SAND R S/A, TOPSHIELD ICE & WATER DEFENDER, SELECT SBS GLASS STICK, or MOUNTAIN BIGFOOT BARRIER BF/IW195 ICE AND WATER ARMOR	Asphalt Shingles	1507.2, R905.2	Yes	RAS 115, 1518.2.1	Yes
	Roof Tile	1507.3, R905.3	No	RAS 118, 119 or 120	No
	Metal Shingles or Panels	1507.4, 1507.5, R905.4, R905.10	Yes	RAS 133, 1518.2.1	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 ⁶	RAS 130, 1518.10	Yes ⁶

² For roof tile, used with mechanically fastened tile or adhesive-set tile using adhesive options set forth in [Table 2c](#).

³ For roof tile, limited to mechanically fastened tile only.

⁴ For wood shakes and wood shingles, limited to use as joint-strips per FBC 1507.1.1.1(2), 1518.2.1(2) or R905.1.1.1(2) or as cap sheet atop mechanically attached, FBC Approved ASTM D226 Type II or ASTM D4869 Type III or IV base sheet.



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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 ⁵				
UNDERLAYMENT	ADHESIVE	CODE COMPLIANCE REPORT		
		IBC/IRC	FBC FPA	FBC HVHZ
TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment or LASTOBOND PRO TU HT	Dupont "TILE BOND Roof Tile Adhesive"	UL ER18231-01	FL22525	NOA 22-0614.05
	ICP "APOC POLYSET AH-160"	ESR-1709	FL6332	NOA 23-0614.01
LASTOBOND PRO TU HT	ICP "APOC 705 Polyset RTA-1"	N/A	FL6276	NOA 22-0614.08

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)
LASTOBOND Shield, LASTOBOND Pro HT-N, RESISTO SA SMOOTH PLY 40, MOUNTAIN BIGFOOT BARRIER HIGH TEMP, LASTOBOND Shield HT, LASTOBOND Pro HT-S, EXCEPTIONAL HT, MOUNTAIN BIGFOOT BARRIER EXTREME HIGH TEMP MEMBRANE, TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment, LASTOBOND PRO TU HT, BITUTAK SA Base, RESISTO LB1236 or LB1244, TRI-BUILT SAND R S/A, TOPSHIELD ICE & WATER DEFENDER, TRI-BUILT SMOOTH SEAL HT, LASTOBOND Reinforced HT, SELECT SBS GLASS STICK, or MOUNTAIN BIGFOOT BARRIER BF/IW195 ICE AND WATER ARMOR	self-adhering	Deck / sheathing	(Optional) ASTM D41, ELASTOCOL Stick, ELASTOCOL Stick Zero, ELASTOCOL Stick LVOC	plywood, OSB or Southern Yellow Pine (SYP)
			ASTM D41	structural concrete
		Insulation	(Optional) ELASTOCOL Stick Zero, ELASTOCOL Stick LVOC	Dens Deck Prime or SECURROCK Gypsum-Fiber Roof Board
		Base Sheet	(Optional) ELASTOCOL Stick Zero, ELASTOCOL Stick LVOC	ASTM D226, Type II felt or Modified Sopra-G
TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment, LASTOBOND PRO TU HT, RESISTO LB1236 or LB1244, TRI-BUILT SAND R S/A, TOPSHIELD ICE & WATER DEFENDER, SELECT SBS GLASS STICK, or MOUNTAIN BIGFOOT BARRIER BF/IW195 ICE AND WATER ARMOR	self-adhering	Existing substrate	RESISTO EXTERIOR PRIMER	Existing sand-surfaced, glass-fiber surfaced, mineral-surfaced or film-surfaced roof underlayment*

* Final acceptance of any existing substrate in a reroof (tear-off) installation is at the discretion of the installer and the Authority Having Jurisdiction. Should a question arise as to the suitability of an existing substrate, contact [SOPREMA technical support](#).

⁵ Refer to Tile Manufacturer's or Adhesive Manufacturer's compliance documentation for Overturning Moment Resistance Performance.



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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 applicable 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 4A: ALLOWABLE DESIGN PRESSURES, ADHERED, DIRECT-TO-DECK UNDERLAYMENT SYSTEMS IN TILE ROOF APPLICATIONS					
SYSTEM No.	DECK	PRIMER	UNDERLAYMENT		MDP (PSF)
			BASE PLY	TOP PLY	
UDL-1.	Structural concrete	ELASTOCOL Stick Zero or ELASTOCOL Stick LVOC	None	TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment or LASTOBOND PRO TU HT, self-adhered and back-nailed within the seldedge-edge side laps using FBC Approved concrete fasteners and stress plates spaced 12-inch o.c.	-67.5
UDL-2.	Plywood, APA rated sheathing, 32/16, Exposure 1, PS1, 15/32 category	(Optional) RESISTO EXTERIOR PRIMER	LASTOBOND Shield, RESISTO SA SMOOTH PLY 40, or MOUNTAIN BIGFOOT HIGH TEMP, self-adhered	TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment or LASTOBOND PRO TU HT, self-adhered and back-nailed within the seldedge-edge side laps using 1.25-inch long x 1-inch head diameter annular ring shank metal cap nails or 12 ga. x 1¼" ring shank nails through 32 ga., 1-5/8" diameter tin caps spaced 12-inch o.c. LASTOBOND PRO TU HT laps sealed in accordance with Section 3.2.2 herein.	-120.0
UDL-3.	Plywood, APA rated sheathing, 32/16, Exposure 1, PS1, 15/32 category	(Optional) RESISTO EXTERIOR PRIMER	None	TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment or LASTOBOND PRO TU HT, self-adhered and back-nailed within the seldedge-edge side laps using 1.25-inch long x 1-inch head diameter annular ring shank metal cap nails or 12 ga. x 1¼" ring shank nails through 32 ga., 1-5/8" diameter tin caps spaced 12-inch o.c. LASTOBOND PRO TU HT laps sealed in accordance with Section 3.2.2 herein.	-150.0
UDL-4.	Plywood, APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	(Optional) RESISTO EXTERIOR PRIMER	LASTOBOND Reinforced HT or TOPSHIELD DEFENDER HT, self-adhered	LASTOBOND PRO TU HT, self-adhered and back-nailed within the seldedge-edge side laps using 1.25-inch long x 1-inch head diameter annular ring shank metal cap nails or 12 ga. x 1¼" ring shank nails through 32 ga., 1-5/8" diameter tin caps spaced 12-inch o.c. Sealed in accordance with Section 3.2.2 herein.	-150.0
UDL-5.	Plywood, APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	RESISTO EXTERIOR PRIMER	None	LASTOBOND PRO TU HT, self-adhered and back-nailed within the seldedge-edge side laps using 1.25-inch long x 1-inch head diameter annular ring shank metal cap nails or 12 ga. x 1¼" ring shank nails through 32 ga., 1-5/8" diameter tin caps spaced 12-inch o.c. Sealed in accordance with Section 3.2.2 herein.	-195.0
UDL-6.	Plywood, APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	None	None	LASTOBOND PRO TU HT, self-adhered and back-nailed within the seldedge-edge side laps using 1.25-inch long x 1-inch head diameter annular ring shank metal cap nails or 12 ga. x 1¼" ring shank nails through 32 ga., 1-5/8" diameter tin caps spaced 12-inch o.c. Sealed in accordance with Section 3.2.2 herein.	-202.5



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TABLE 4B: ALLOWABLE DESIGN PRESSURES, MECHANICALLY ATTACHED, MULTI-PLY UNDERLAYMENT SYSTEMS IN TILE ROOF APPLICATIONS							
SYSTEM NO.	DECK	BASE SHEET			UNDERLAYMENT		MDP (PSF)
		TYPE	FASTEN	ATTACH	BASE PLY	TOP PLY	
UDL-7.	Plywood, APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	Modified SOPRA-G	12 ga. x 1¼" ring shank nails through 32 ga., 1-5/8" diameter tin caps	6-inch o.c. at the 4-inch laps and 6-inch o.c. at three (3), equally spaced center rows	None	TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment or LASTOBOND PRO TU HT, self-adhered and back-nailed within the selvedge-edge side laps using 1.25-inch long x 1-inch head diameter annular ring shank metal cap nails or 12 ga. x 1¼" ring shank nails through 32 ga., 1-5/8" diameter tin caps spaced 12-inch o.c. LASTOBOND PRO TU HT laps sealed in accordance with Section 3.2.2 herein.	-60.0

4.8 Exposure Limitations:

TABLE 5: EXPOSURE LIMITATIONS		
UNDERLAYMENT	PREPARED ROOF COVER TYPE (OVERTOP OF UNDERLAYMENT)	MAXIMUM EXPOSURE (DAYS)
BITUTAK SA Base, RESISTO LB1236 or LB1244, TRI-BUILT SAND R S/A, TOPSHIELD ICE & WATER DEFENDER, SELECT SBS GLASS STICK, or MOUNTAIN BIGFOOT BARRIER BF/IW195 ICE AND WATER ARMOR	Mechanically attached	30
LASTOBOND Shield, LASTOBOND Pro HT-N, RESISTO SA SMOOTH PLY 40, MOUNTAIN BIGFOOT BARRIER HIGH TEMP, LASTOBOND Shield HT, LASTOBOND Pro HT-S, EXCEPTIONAL HT, MOUNTAIN BIGFOOT BARRIER EXTREME HIGH TEMP MEMBRANE, or TRI-BUILT SMOOTH SEAL HT	Mechanically attached	90
LASTOBOND Reinforced HT or TOPSHIELD DEFENDER HT	Mechanically attached	180
TOPSHIELD DEFENDER TU, Tri-Built S/A HT TU Underlayment	Mechanically attached or adhesive-set tile roof system	180
LASTOBOND PRO TU HT	Mechanically attached or adhesive-set tile roof	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
TOPSHIELD DEFENDER TU or Tri-Built S/A HT TU Underlayment	Flat	Max. 10-tile stack	6:12
	Lugged	Max. 10-tile stack	5:12
	Lugged	Double-tile stacking method, as shown below	6:12
			
LASTOBOND PRO TU HT	Flat	Max. 10-tile stack	6:12
	Lugged	Max. 6-tile stack (4 over 2), as shown below	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.

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