

NEMO etc.

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

ENGINEER EVALUATE TEST CONSULT

EVALUATION REPORT BY FLORIDA P.E.

Polyglass USA, Inc. 1111 West Newport Center Drive Deerfield Beach, FL 33442 (954) 233-1330 Evaluation Report 3m-PLYG-20-FBCER.A-R6

FL5259-R37 (HVHZ)

Date of Issuance: 12/21/2020

Revision 5: 10/06/2022

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, High Velocity Hurricane Zone sections noted herein.

DESCRIPTION: Polyglass Roof Underlayments, for use in FBC HVHZ jurisdictions

LABELING: Labeling shall be in accordance with the requirements 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 P.E. 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 11.

Prepared by:

Digitally signed by Robert

by Robert This item has been digitally signed and sealed by Robert Nieminen, P.E.

Printed copies of this document are not considered signed and sealed, and the signature

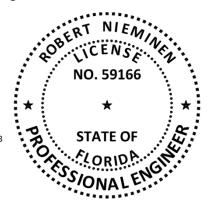
must be verified on any electronic copies.

Pate: 2022.10.06

Robert Nieminen, Florida P.E. 59166, FBC ANE1983

NEMO ETC, LLC, Florida CA #32455

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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

Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer

Compliance Statement: Roof Underlayments, as produced by Polyglass USA, Inc., 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:				
	<u>Section</u>	Property	<u>Standard</u>	<u>Year</u>	
	RAS 115, TAS 110	Material standard	ASTM D226	2009	
	TAS 110	Material standard	ASTM D1970	2015	
	TAS 110	Material standard	TAS 103	2020	
	TAS 110	Material standard	ASTM D6163	2015	
	TAS 110	Material standard	ASTM D6164	2011	
	TAS 110	Material standard	ASTM D6222	2011	
	TAS 110	Accelerated Weathering	ASTM D4798	2011	

3. REFEREN	ICES:						
<u>ENTITY</u>	EXAMINATION	REFERENCE	DATE	ENTITY	EXAMINATION	REFERENCE	DATE
ERD (TST 6049)	TAS 114(J)	11757.08.01-1	08/13/01	NEMO (TST 6049)	TAS 103	4j-PLYG-19-SSUDL-02.A	01/02/20
ERD (TST 6049)	TAS 114(C)	P1740.01.07	01/04/07	NEMO (TST 6049)	ASTM D1970, D4798	4S-PLYG-18-004.01.20.H	01/14/20
ERD (TST 6049)	ASTM D4977 / TAS 103	P11030.11.09-3	11/30/09	NEMO (TST 6049)	ASTM D1970, D4798	4S-PLYG-18-004.01.20.K	01/14/20
ERD (TST 6049)	TAS 117(B) / TAS 114(C)	P11030.11.09-2	11/30/09	NEMO (TST 6049)	ASTM D6164	4S-PLYG-18-004.01.20.B	01/16/20
ERD (TST 6049)	ASTM D6509	P37590.03.13-1-R1	02/05/13	NEMO (TST 6049)	TAS 103 (tile slippage)	4S-PLYG-18-004.01.20.A	01/16/20
ERD (TST 6049)	TAS 114(J)	P39680.03.13	03/04/13	NEMO (TST 6049)	ASTM D1623, TAS 103	4p-DOW-19-SSLAP-01.A-R2	02/10/20
ERD (TST 6049)	ASTM D6164	P37590.03.13-3A	03/06/13	NEMO (TST 6049)	TAS 103	PLYG-SC15855.05.20.A	05/29/20
ERD (TST 6049)	ASTM D6164	P37590.07.13-1	07/02/13	NEMO (TST 6049)	TAS 103	4j-PLYG-20-SSUDL-01	07/06/20
ERD (TST 6049)	ASTM D4601	P45940.09.13	09/04/13	NEMO (TST 6049)	ASTM D6222	4q-PLYG-19-SSMBB-05.A	07/23/20
ERD (TST 6049)	ASTM D1623, TAS 103, TAS 114(C)	P45270.05.14	05/12/14	NEMO (TST 6049)	ASTM D1623, D4798	4j-PLYG-19-SSUDL-05.A	09/10/20
ERD (TST 6049)	TAS 103	P44360.10.14-R1	10/07/14	NEMO (TST 6049)	ASTM D1970	4j-PLYG-20-SSUDL-05.A	09/30/20
ERD (TST 6049)	TAS 103	PLYG-SC7550.03.15	03/24/15	NEMO (TST 6049)	TAS 103	4j-PLYG-20-SSUDL-05.C	09/30/20
ERD (TST 6049)	ASTM D1623, TAS 103	PLYG-SC10130.06.16-2	06/27/16	NEMO (TST 6049)	TAS 103	4j-PLYG-20-SSUDL-11.A	10/21/20
ERD (TST 6049)	ASTM D1970, D4798	PLYG-SC10130.06.16-1	06/27/16	NEMO (TST 6049)	ASTM D1970, D4798	4S-PLYG-18-004.12.19.D	10/27/20
ERD (TST 6049)	TAS 103	PLYG-SC10130.06.16-3	06/27/16	NEMO (TST 6049)	TAS 103	4j-PLYG-19-SSUDL-01.A	11/18/20
ERD (TST 6049)	TAS 103 (tile slippage)	PLYG-SC13040.12.16	12/27/16	NEMO (TST 6049)	ASTM D1623, TAS 103	4p-ICP-20-SSLAP-01.A	12/15/20
ERD (TST 6049)	TAS 103 (tile slippage)	PLYG-SC12115.08.17	08/08/17	NEMO (TST 6049)	ASTM D1623, TAS 103	4p-ICP-20-SSLAP-03.A-R1	03/04/21
ERD (TST 6049)	TAS 103	PLYG-SC13035.08.17	10/31/17	NEMO (TST 6049)	ASTM D1623, TAS 103	4j-PLYG-20-SSUDL-09.A	10/29/21
NEMO (TST 6049)	ASTM D1970	4-PLYG-18-004.03.18	03/29/18	NEMO (TST 6049)	ASTM D1623, TAS 103	4j-PLYG-20-SSUDL-07.A	10/29/21
NEMO (TST 6049)	ASTM D1623, TAS 103	4S-ICP-18-001.07.18-R1	07/23/18	NEMO (TST 6049)	ASTM D1970, D4798	4j-PLYG-21-SSUDL-03.A	10/29/21
NEMO (TST 6049)	ASTM D6163	4S-PLYG-18-002.01.19-A	01/24/19	NEMO (TST 6049)	ASTM D1970, D4798	4j-PLYG-21-SSUDL-03.A	04/21/22
NEMO (TST 6049)	ASTM D6222	4S-PLYG-18-002.05.19-C	05/20/19	NEMO (TST 6049)	ASTM D1970	4j-PLYG-22-SSUDL-02.A	09/08/22
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.10.19-G	10/08/19	PRI (TST5878)	ASTM D1623, TAS 103	DAPF-002-01	03/08/18
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.10.19-I	10/08/19	UL (QUA9625)	Quality Control	Service Confirmation (FL)	09/13/2018
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.10.19-L	10/09/19	UL (QUA9625)	Quality Control	Service Confirmation (TX)	11/07/2019
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.12.19-F	12/18/19	UL (QUA9625)	Quality Control	Florida BCIS	Current



4. PRODUCT DESCRIPTION:

	TA	BLE 1: EVALUATED	Underlayments
Product	MATERIAL STANDARD	PLANT(s)	DESCRIPTION
Elastobase V (formerly "Elastobase")	ASTM D6163	FL	Fiberglass-reinforced, SBS modified bitumen base sheet
Elastobase P	ASTM D6164	FL	Polyester-reinforced, SBS modified bitumen base sheet
Elastoflex S6 G	ASTM D6164 TAS 103 (partial)	FL, PA	Polyester-reinforced, SBS modified bitumen cap sheet
Elastoflex S6 G FR	ASTM D6164 TAS 103 (partial)	FL	Polyester-reinforced, SBS modified bitumen cap sheet
Polyflex G	ASTM D6222 TAS 103 (partial)	FL	Polyester-reinforced, APP modified bitumen cap sheet
Polyflex G FR	ASTM D6222 TAS 103 (partial)	FL	Polyester-reinforced, APP modified bitumen cap sheet
Polyflex SA P	ASTM D6222 TAS 103 (partial)	FL, TX	Polyester-reinforced, APP modified bitumen cap sheet
Polyflex SA P FR	ASTM D6222 TAS 103 (partial)	FL, TX	Polyester-reinforced, APP modified bitumen cap sheet
Polystick IR-Xe	ASTM D1970	FL, PA, TX	Nominal 60-mil thick rubberized asphalt waterproofing membrane, glass fiber reinforced, with an aggregate surface
Polystick MTS Plus	ASTM D1970 TAS 103	FL, NV, PA, TX	Nominal 60-mil thick rubberized asphalt waterproofing membrane, glass fiber reinforced, surfaced with poly-film surface
Polystick TU Max	ASTM D1970 TAS 103	FL, PA, TX	Nominal 60-mil thick rubberized asphalt waterproofing membrane with a 190 g/m² polyester fabric surface
Polystick TU P	TAS 103	FL, PA, TX	Nominal 130-mil thick rubberized asphalt waterproofing membrane, glass-fiber/polyester reinforced, with a granular surface
Polystick TU Plus	ASTM D1970 TAS 103	FL, PA, TX	Nominal 80-mil thick rubberized asphalt waterproofing membrane, glass fiber reinforced, with a polyester fabric surface
Polystick XFR	ASTM D1970 TAS 103	NV, TX	Nominal 80-mil thick rubberized asphalt waterproofing membrane, glass fiber reinforced, surfaced with a textured film surface

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 Non-High Velocity Hurricane Zone jurisdictions (i.e., outside of 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 1516** 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 **Polyglass 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 <u>Allowable Roof Covers:</u>

	TABLE 2: ROOF COVER OPTIONS					
FBC SECTION:	TAS 110(S10), <u>RAS 115</u>	1	TAS 110(S11), RAS <u>118</u> , <u>119</u> & <u>120</u>		TAS 110(S11)	<u>RAS 130</u>
Underlayment	A SPHALT	CLAY AND COM	ICRETE TILE	METAL	SLATE OR SLATE-	Wood
UNDERLAYMENT	SHINGLES	MECHANICAL ATTACH	ADHESIVE-SET	IVIETAL	Type Shingles	WOOD
Elastobase V	Yes (Alternate to D226, Type II)	Yes (as Base Sheet, See Section 6)	Yes (as Base Sheet, See Section 6)	Yes (Alternate to D226, Type II)	Yes (Alternate to D226, Type II)	Yes (Alternate to D226, Type II)
Elastobase P	Yes (Alternate to D226, Type II)	Yes (as Base Sheet, See Section 6)	Yes (as Base Sheet, See Section 6)	Yes (Alternate to D226, Type II)	Yes (Alternate to D226, Type II)	Yes (Alternate to D226, Type II)
Elastoflex S6 G	No	Yes	Yes (Table 2A)	No	No	No
Elastoflex S6 G FR	No	Yes	No	No	No	No
Polyflex G	No	Yes	No	No	No	No
Polyflex G FR	No	Yes	No	No	No	No
Polyflex SA P	No	Yes	Yes (Table 2A)	No	No	No
Polyflex SA P FR	No	Yes	No	No	No	No
Polystick IR-Xe	Yes	No	No	No	Yes	Yes
Polystick MTS Plus	Yes	Yes	No	Yes	Yes	Yes
Polystick TU Max	No	Yes	Yes (Table 2A)	Yes	No	Yes
Polystick TU P	No	Yes	Yes (Table 2A)	No	No	Yes
Polystick TU Plus	Yes	Yes	Yes (Table 2A)	Yes	Yes	Yes
Polystick XFR	Yes	Yes	No	Yes	Yes	Yes

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

	Table 2a: Allowable Underlayment / Tile-Adhesive Combinations ¹				
	DAP	GLOBAL	DUPONT DE NEMOURS	ICP Con	STUCTION
	STORMBOND	STORMBOND 2	TILE BOND	POLYSET AH-160	POLYSET RTA-1
			<u>FL22525</u> &		
Underlayment	NOA 21-0928.04	NOA 22-0331.02	NOA 21-1006.03	NOA 22-0411.02	NOA 21-0202.07
Elastoflex S6 G	No	No	No	Yes	No
Polyflex SA P	No	No	No	Yes	No
Polystick TU Max	No	Yes	Yes	Yes	No
Polystick TU P	Yes	No	No	Yes	Yes
Polystick TU Plus	No	Yes	Yes	Yes	Yes

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



5.7 Allowable Substrates:

TABLE 3: SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS						
			SUBSTRATES (TO MEET WIND LOADS FOR PROJECT)			
Underlayment	APPLICATION	Түре	PRIMER	Material(s)		
Polystick IR-Xe, Polystick MTS Plus,		Deck	ASTM D41	structural concrete		
Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick XFR, Polyflex SA P or Polyflex SA P FR	self-adhering	Base Sheet	N/A	ASTM D226, Type II felt, Elastobase V, Elastobase P		
Elastoflex S6 G or Elastoflex S6 G	hot asphalt	Deck	ASTM D41	structural concrete		
FR		Base Sheet	N/A	ASTM D226, Type II felt, Elastobase V, Elastobase P		
Polyflex G or Polyflex G FR	torch applied	Deck	ASTM D41	structural concrete		
Polyllex G of Polyllex G FK	torch-applied	Base Sheet	N/A	Elastobase V, Elastobase P		

5.8 **Attachment Limitations:**

Refer to Section 6

5.9 **Exposure Limitations:**

Table 4: Exposure Limitation	IS	
Underlayment	PREPARED ROOF COVER INSTALLATION Type	MAXIMUM EXPOSURE (DAYS)
Elastobase V, Elastobase P or Polyglass G2 Base	Mechanically attached	30
Polystick IR-Xe	Mechanically attached	90
Polystick MTS Plus, Polystick TU Max, Polystick TU P, Polystick TU Plus or Polystick XFR	Any type (per <u>Table 2</u>)	180
Elastoflex S6 G or Polyflex SA P	Adhesive-set tile roof system	180
Elastoflex S6 G, Elastoflex S6 G FR, Polyflex G, Polyflex G FR, Polyflex SA P or Polyflex SA P FR	Mechanically attached	UNLIMITED

Tile Slippage Limitations: When loading roof tiles on the underlayment in direct-deck tile roof assemblies, the maximum roof 5.10 slope shall be as follows. These slope limitations can only be exceeded by using battens during loading of the roof tiles.

TABLE 5: TILE SLIPPAGE LIMITATIONS FOR DIRECT-DECK TILE INSTALLATIONS				
Underlayment	TILE PROFILE	STAGING METHOD	MAXIMUM STAGING SLOPE	
Elastoflex S6 G or S6 G FR	Flat or Lugged	6-tile stack (4 over 2)	Prohibited without battens	
Polyflex G or G FR	Flat or Lugged	6-tile stack (4 over 2)	4:12	
Polyflex SA P or SA P FR	Flat or Lugged	6-tile stack (4 over 2)	4:12	
Dalvetial MTC Dive	Flat	6-tile stack (4 over 2)	5:12	
Polystick MTS Plus	Lugged	6-tile stack (4 over 2)	4:12	
	Flat	6-tile stack (4 over 2) or 10-tile stack	7:12	
Polystick TU Max	Lugged	6-tile stack (4 over 2)	7:12	
	Lugged	10-tile stack	6:12	
Polystick TU P	Flat or Lugged	6-tile stack (4 over 2)	7:12	
Delystick TI I Dive	Flat or Lugged	6-tile stack (4 over 2)	7:12	
Polystick TU Plus	Flat or Lugged	10-tile stack	6:12	
Polystick XFR	Flat or Lugged	Prohibited without battens	Prohibited without battens	

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6.	Installation:					
6.1		Prlayments shall be installed in accordance with Polyglass published installation instructions subject to orth in Section 5 herein and the specifics noted below.				
6.1.1	Consult Polyglass requirements for back-nailing at slopes 2:12 or greater.					
6.1.2	All fabric-surfaced, a POLYPLUS 50 applied	ggregate-surfaced and granule-surfaced end-laps shall have a 6-inch wide, uniform layer of PG500 or I within the end-lap.				
6.2	•	lecking panels, and check for protruding nail heads. Sweep the substrate thoroughly to remove any dust pplication, and prime the substrate (if applicable).				
6.3	Approved Assemblie	<u>15:</u>				
6.3.1	DECK TYPE 1:	Wood, Non-Insulated				
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank				
	SYSTEM TYPE E:	Underlayment mechanically fastened to deck				
	Underlayment:	One or more plies of Elastobase V or Elastobase P with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.				
	FASTENING:	FBC HVHZ Approved nails and tin caps (<u>FBC HVHZ 1517.5</u>), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.				
	Surfacing:	FBC HVHZ Approved asphalt shingles, metal panels, metal shingles, slate, slate-type shingles, wood shakes or wood shingles.				
622	Droy Type 1.					
6.3.2	DECK TYPE 1:	Wood, Non-Insulated				
	DECK DESCRIPTION: SYSTEM TYPE E:	Min. 19/32" plywood or wood plank				
		Base sheet mechanically fastened to deck; underlayment adhered to base sheet				
	BASE SHEET:	One or more plies of Elastobase V, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.				
	FASTENING:	FBC HVHZ Approved nails and tin caps (<u>FBC HVHZ 1517.5</u>), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.				
	CAP PLY:	Elastoflex S6 G applied in hot asphalt or				
		Polyflex G torch-applied or				
		Polyflex SA P, self-adhering				
		and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).				
	Surfacing:	FBC HVHZ Approved mechanically attached or adhesive-set tile roof system. Refer to Table 2A for				
		allowable tile adhesives and <u>Table 5</u> for tile stagging limitations.				
6.3.3	DECK TYPE 1:	Wood, Non-Insulated				
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank				
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet				
	BASE SHEET:	One or more plies of Elastobase V, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.				
	FASTENING:	FBC HVHZ Approved nails and tin caps (<u>FBC HVHZ 1517.5</u>), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.				
	CAP PLY:	Elastoflex S6 G FR applied in hot asphalt or				
		Polyflex G FR torch-applied or				
		Polyflex SA P FR or Polystick TU P, self-adhering				
		and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).				
	Surfacing:	FBC HVHZ Approved mechanically attached tile roof system. Refer to <u>Table 5</u> for tile stagging limitations.				



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6.3.4	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	FASTENING:	FBC HVHZ Approved nails and tin caps (<u>FBC HVHZ 1517.5</u>), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.
	CAP PLY:	Polystick IR-Xe self-adhering 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, slate, slate-type shingles, wood shakes or wood shingles.
6.3.5	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	FASTENING:	FBC HVHZ Approved nails and tin caps (<u>FBC HVHZ 1517.5</u>), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.
	BASE PLY:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	CAP PLY:	Polystick MTS Plus or Polystick XFR, self-adhering 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, mechanically attached tile roof system, metal panels, metal shingles, slate, slate-type shingles, wood shakes or wood shingles. Refer to Table 5 for tile stagging limitations.
6.3.6	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	FASTENING:	FBC HVHZ Approved nails and tin caps (<u>FBC HVHZ 1517.5</u>), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.
	BASE PLY:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	CAP PLY:	Polystick TU Max, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved mechanically attached tile roof system, metal panels, metal shingles, wood shakes or wood shingles. Refer to <u>Table 5</u> for tile stagging limitations.



		- NEIVIO (CCC.
6.3.7	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt 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), 6-inch o.c. at the lap-edges and 12-inch o.c.
		in a grid-pattern between the overlaps.
	BASE PLY:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using
		FBC HVHZ Approved nails and tin caps (<u>FBC HVHZ 1517.5</u>)
	CAP PLY:	Polystick TU Plus, self-adhering 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, mechanically attached tile roof system, metal panels, metal
		shingles, wood shakes or wood shingles. Refer to <u>Table 5</u> for tile stagging limitations.
6.3.8	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt 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), 6-inch o.c. at the lap-edges and 12-inch o.c.
		in a grid-pattern between the overlaps.
	BASE PLY:	(Optional) Polystick MTS Plus, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ
	CAP PLY:	Approved nails and tin caps (FBC HVHZ 1517.5) Polyetick TLL May, Polyetick TLL Polyetick TLL Plus or Polyfley SA P. self-adhering and back-pailed may
	CAP PLY:	Polystick TU Max, Polystick TU P, Polystick TU Plus or Polyflex SA P, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved adhesive-set tile roof system. Refer to Table 2A for allowable tile adhesives and
		<u>Table 5</u> for tile stagging limitations.
6.3.9	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V or Elastobase P with a minimum 2-inch side lap and 6-inch end lap,
		mechanically fastened to deck.
	FASTENING:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 9-inch o.c. at the lap-edges and 18-inch o.c. in two (2)
		equally spaced, staggered center rows.
	CAP PLY:	Elastoflex S6 G applied in hot asphalt or
		Polyflex G torch-applied
		and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	SURFACING:	FBC HVHZ Approved mechanically attached or adhesive-set tile roof system. Refer to Table 2A for
		allowable tile adhesives and <u>Table 5</u> for tile stagging limitations.

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		TILINO CCC.
6.3.10	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V or Elastobase P with a minimum 3-inch side lap and 6-inch end lap, mechanically fastened to deck.
	FASTENING:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3) equally spaced, staggered center rows.
	PRIMER:	PG100 or ASTM D41 primer applied to stress plates
	CAP PLY:	Polyflex SA P, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved mechanically attached or adhesive-set tile roof system. Refer to <u>Table 2A</u> for allowable tile adhesives and <u>Table 5</u> for tile stagging limitations.
6.3.11	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V or Elastobase P with a minimum 2-inch side lap and 6-inch end lap, mechanically fastened to deck.
	FASTENING:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 9-inch o.c. at the lap-edges and 18-inch o.c. in two (2) equally spaced, staggered center rows.
	CAP PLY:	Elastoflex S6 G FR applied in hot asphalt or Polyflex G FR torch-applied
	Surfacing:	and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5). FBC HVHZ Approved mechanically attached tile roof system. Refer to Table 5 for tile stagging limitations.
6.3.12	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V or Elastobase P with a minimum 3-inch side lap and 6-inch end lap, mechanically fastened to deck.
	FASTENING:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3) equally spaced, staggered center rows.
	PRIMER:	PG100 or ASTM D41 primer applied to stress plates
	CAP PLY:	Polyflex SA P FR or Polystick TU P, self-adhering, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved mechanically attached tile roof system. Refer to $\frac{\text{Table 5}}{\text{Imitations}}$ for tile stagging limitations.

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		Newo Jetc.
6.3.13	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V, Elastobase P felt with a minimum 3-inch side lap and 6-inch end lap, mechanically fastened to deck.
	FASTENING:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3) equally spaced, staggered center rows.
	PRIMER:	PG100 or ASTM D41 primer applied to stress plates
	BASE PLY:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	CAP PLY:	Polystick MTS Plus or Polystick XFR, self-adhering 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, mechanically attached tile roof system, metal panels, metal shingles, slate, slate-type shingles, wood shakes or wood shingles. Refer to <u>Table 5</u> for tile stagging limitations.
6.3.14	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	FASTENING:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3) equally spaced, staggered center rows.
	PRIMER:	PG100 or ASTM D41 primer applied to stress plates
	BASE PLY:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	CAP PLY:	Polystick TU Max, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	SURFACING:	FBC HVHZ Approved mechanically attached tile roof system, metal panels, metal shingles, wood shakes or wood shingles. Refer to <u>Table 5</u> for tile stagging limitations.
6.3.15	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	FASTENING:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3) equally spaced, staggered center rows.
	PRIMER:	PG100 or ASTM D41 primer applied to stress plates
	BASE PLY:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	CAP PLY:	Polystick TU Plus, self-adhering 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, mechanically attached tile roof system, metal panels, metal shingles, wood shakes or wood shingles. Refer to <u>Table 5</u> for tile stagging limitations.



6.3.16	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	BASE SHEET:	One or more plies of Elastobase V, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a
		minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	FASTENING:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3)
		equally spaced, staggered center rows.
	PRIMER:	PG100 or ASTM D41 primer applied to stress plates
	BASE PLY:	(Optional) Polystick MTS Plus, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ
		Approved nails and tin caps (FBC HVHZ 1517.5)
	CAP PLY:	Polystick TU Max, Polystick TU P or Polystick TU Plus, self-adhering and back-nailed max. 12-inch o.c.
		using FBC HVHZ Approved nails and tin caps (<u>FBC HVHZ 1517.5</u>).
	Surfacing:	FBC HVHZ Approved adhesive-set tile roof system. Refer to <u>Table 2A</u> for allowable tile adhesives and
		Table 5 for tile stagging limitations.
6.3.17	DECK ТҮРЕ 3:	Structural concrete, non-insulated
	DECK DESCRIPTION:	Min. 2,500 psi structural concrete
	SYSTEM TYPE F:	Underlayment adhered
	PRIMER:	ASTM D41
	UNDERLAYMENT:	Elastoflex S6 G applied in hot asphalt or
		Polyflex G torch-applied or
		Polyflex SA P, self-adhering
		and back-nailed max. 12-inch o.c. using FBC HVHZ Approved concrete deck fasteners and stress plates
	_	in accordance with Polyglass' installation instructions.
	Surfacing:	FBC HVHZ Approved adhesive-set tile roof system. Refer to <u>Table 2A</u> for allowable tile adhesives and
		Table 5 for tile stagging limitations.
6.3.18	DECK ТҮРЕ 3:	Structural concrete, non-insulated
	DECK DESCRIPTION:	Min. 2,500 psi structural concrete
	SYSTEM TYPE F:	Underlayment adhered
	PRIMER:	ASTM D41
	BASE PLY:	(Optional) Polystick MTS Plus, self-adhering back-nailed max. 12-inch o.c. using FBC HVHZ Approved
		concrete deck fasteners and stress plates in accordance with Polyglass' installation instructions.
	CAP PLY:	Polystick TU Max, Polystick TU P or Polystick TU Plus, self-adhering and back-nailed max. 12-inch o.c.
		using FBC HVHZ Approved concrete deck fasteners and stress plates in accordance with Polyglass'
	STIDE A CINIC:	installation instructions. EPC HVHZ Approved adhesive set tile reef system. Pefer to Table 2A for allowable tile adhesives and
	Surfacing:	FBC HVHZ Approved adhesive-set tile roof system. Refer to <u>Table 2A</u> for allowable tile adhesives and <u>Table 5</u> for tile stagging limitations.
		Table 3 for the steaming infinitations.

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: (360) 817-5512; bsai.inspections@ul.com

- END OF EVALUATION REPORT -

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Evaluation Report 3m-PLYG-20-FBCER.A-R6