



NEMO|etc.

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ENGINEER

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CONSULT

P.E. EVALUATION REPORT (PEER)

Polyglass USA, Inc.

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Deerfield Beach, FL 33442
(954) 233-1330

**PEER-PLYG-002.B.R14
FL5259-R45 (HVHZ)**

Date of Issuance: 12/21/2020

Revision 14: 11/25/2024

SCOPE:

This P.E. Evaluation Report (henceforth 'PEER') 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 **8th Edition (2023) Florida Building Code, High Velocity Hurricane Zone sections noted herein.**

DESCRIPTION: Polyglass Roof Underlayments (HVHZ)

LABELING: Labeling shall be in accordance with the requirements the Accredited Quality Assurance Agency noted herein and [FBC 1518.2](#).

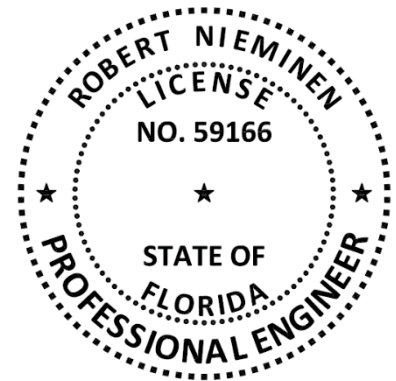
CONTINUED COMPLIANCE: This PEER is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our PEERs by the named client constitutes agreement to notify NEMO 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 PEER relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: "NEMO P.E. Evaluated" may be displayed in advertising literature. If any portion of the PEER is displayed, then it shall be done in its entirety.

INSPECTION: Upon request, a copy of this entire PEER 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 PEER consists of pages 1 through 10.

Prepared by:



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 PEERs 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 PEER, 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 **8th Edition (2023) Florida Building Code, High Velocity Hurricane Zone** through testing in accordance with the following Standards. Compliance is subject to the [Installation Requirements](#) and [Limitations of Use](#) set forth herein.

2. STANDARDS:

SECTION	PROPERTY	STANDARD
1515.2.4	Impact Resistance	ASTM D3746
TAS 110	Material standard	ASTM D226, D2626, D4601
TAS 110	Material standard	ASTM D1970
TAS 110	Accelerated Weathering	ASTM D4798
TAS 110	Material standard	ASTM D6163, D6164, D6222, D6509
TAS 110	Material standard	TAS 103

3. REFERENCES:

ENTITY	EXAMINATION	REFERENCE	DATE	ENTITY	EXAMINATION	REFERENCE	DATE
ERD (TST 6049)	ASTM D1623	P46520.10.14	10/03/14	NEMO (TST6049)	ASTM D6509	4q-PLYG-22-SSMBB-01.A	06/14/23
ERD (TST 6049)	TAS 103	P44360.10.14-R1	10/07/14	NEMO (TST6049)	ASTM D6164	4q-PLYG-22-SSMBB-01.D	07/28/23
ERD (TST 6049)	TAS 103	PLYG-SC7550.03.15	03/24/15	NEMO (TST6049)	ASTM D226, D2626	4j-PLYG-23-SSMBB-05.A	08/31/23
ERD (TST 6049)	ASTM D1623, TAS 103	PLYG-SC10130.06.16-2	06/27/16	NEMO (TST6049)	Criticality	4j-PLYG-23-SSMBB-05.B	08/31/23
ERD (TST 6049)	ASTM D1970, D4798	PLYG-SC10130.06.16-1	06/27/16	NEMO (TST6049)	ASTM D1623, TAS 103	4j-PLYG-23-SSMBB-04.A	12/12/23
ERD (TST 6049)	TAS 103	PLYG-SC10130.06.16-3	06/27/16	NEMO (TST6049)	ASTM D1623, TAS 103	4j-PLYG-23-SSMBB-03.A	02/08/24
ERD (TST 6049)	ASTM D1970, D4798	PLYG-SC8080.07.16	07/29/16	NEMO (TST6049)	ASTM D6164	4q-PLYG-22-SSMBB-01.E	06/17/24
ERD (TST 6049)	TAS 103 (tile slippage)	PLYG-SC13040.12.16	12/27/16	PRI (TST5878)	ASTM D4601	MSA-039-02-03	09/27/17
ERD (TST 6049)	TAS 103 (tile slippage)	PLYG-SC12115.08.17	08/08/17	PRI (TST5878)	ASTM D1623, TAS 103	DAPF-002-01	03/08/18
ERD (TST 6049)	TAS 103	PLYG-SC13035.08.17	10/31/17	ERD (TST 6049)	Wind Uplift	11757.04.01-1-R1	04/25/01
NEMO (TST 6049)	ASTM D1970	4-PLYG-18-004.03.18	03/29/18	ERD (TST 6049)	Wind Uplift	11757.08.01-1	08/13/01
NEMO (TST 6049)	ASTM D1623, TAS 103	4S-ICP-18-001.07.18-R1	07/23/18	ERD (TST 6049)	Wind Uplift	11776.06.02	01/16/03
NEMO (TST 6049)	ASTM D6163	4S-PLYG-18-002.01.19-A	01/24/19	ERD (TST 6049)	Wind Uplift	P1740.01.07	01/04/07
NEMO (TST 6049)	ASTM D6222	4S-PLYG-18-002.05.19-C	05/20/19	ERD (TST 6049)	Wind Uplift	P1738.02.07-R2	02/05/07
NEMO (TST6049)	TAS 103	4S-PLYG-18-004.10.19-G	10/08/19	ERD (TST 6049)	Wind Uplift	P9260.03.08	03/21/08
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.10.19-G	10/08/19	ERD (TST 6049)	Wind Uplift	P30540.11.09-R1	11/23/09
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.10.19-I	10/08/19	ERD (TST 6049)	TAS 117(B), TAS 114(C)	P11030.11.09-2	11/30/09
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.10.19-L	10/09/19	ERD (TST 6049)	Wind Uplift	P41630.08.13	08/06/13
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.12.19-F	12/18/19	ERD (TST 6049)	Wind Uplift	P11751.05.03-R1	11/26/13
NEMO (TST 6049)	TAS 103	4j-PLYG-19-SSUDL-02.A	01/02/20	ERD (TST 6049)	Wind Uplift	P11781.11.03-R1	11/26/13
NEMO (TST 6049)	ASTM D6222	4S-PLYG-18-002.12.19-K-R1	01/07/20	ERD (TST 6049)	Wind Uplift	PLYG-SC8905.05.16-1	05/17/16
NEMO (TST 6049)	ASTM D1970, D4798	4S-PLYG-18-004.01.20.H	01/14/20	ERD (TST 6049)	UL1897	PLYG-SC12025.10.16	10/12/16
NEMO (TST 6049)	ASTM D1970, D4798	4S-PLYG-18-004.01.20.K	01/14/20	FM (TST 1867)	Wind Uplift	FM 3004091	01/12/00
NEMO (TST 6049)	ASTM D6164	4S-PLYG-18-004.01.20.B	01/16/20	FM (TST1867)	FM 4470/4474	PR454230 (DATA)	01/26/22
NEMO (TST 6049)	TAS 103 (tile slippage)	4S-PLYG-18-004.01.20.A	01/16/20	NEMO (TST 6049)	Wind Uplift	4L-PLYG-18-003.01.19	01/11/19
NEMO (TST 6049)	ASTM D1623, TAS 103	4p-DOW-19-SSLAP-01.A-R2	02/10/20	NEMO (TST6049)	UL1897	4a-PLYG-23-LSWUS-05.A	09/01/23
NEMO (TST 6049)	TAS 103	PLYG-SC15855.05.20.A	05/29/20	Polyglass USA	Materials Affidavit	Polystick Compound	08/18/11
NEMO (TST 6049)	ASTM D6222	4q-PLYG-19-SSMBB-05.A	07/23/20	Polyglass USA	Materials Affidavit	Polystick Compound	01/13/21
NEMO (TST 6049)	ASTM D4798, D1623	4j-PLYG-19-SSUDL-05.A	09/10/20	Polyglass USA	SOPE	TFRM-0045	01/02/24
NEMO (TST 6049)	ASTM D1970	4j-PLYG-20-SSUDL-05.A	09/30/20	PRI (TST5878)	UL1897	708T0058-1	01/13/21
NEMO (TST 6049)	TAS 103	4j-PLYG-20-SSUDL-05.C	09/30/20	PRI (TST5878)	UL1897	708T0058-6	02/17/21
NEMO (TST 6049)	TAS 103	4j-PLYG-20-SSUDL-01.B	10/21/20	PRI (TST5878)	UL1897	708T0058-7	02/25/21
NEMO (TST 6049)	TAS 103	4j-PLYG-20-SSUDL-11.A	10/21/20	PRI (TST5878)	UL1897	708T0193.4	06/13/23
NEMO (TST 6049)	ASTM D1970, D4798	4S-PLYG-18-004.12.19.D	10/27/20	PRI (TST5878)	UL1897	708T0193.1	06/15/23
NEMO (TST 6049)	TAS 103	4j-PLYG-19-SSUDL-01.A	11/18/20	PRI (TST5878)	UL1897	708T0193.2	06/15/23
NEMO (TST 6049)	ASTM D1623, TAS 103	4p-ICP-20-SSLAP-01.A	12/15/20	PRI (TST5878)	UL1897	708T0193.3	06/15/23
NEMO (TST 6049)	ASTM D1623, TAS 103	4p-ICP-20-SSLAP-03.A-R1	03/04/21	PRI (TST5878)	UL1897	708T0167.1	06/20/23
NEMO (TST 6049)	ASTM D4798, D1623	4j-PLYG-20-SSUDL-13.A	03/15/21	PRI (TST5878)	UL1897	708T0167.2	06/20/23
NEMO (TST 6049)	ASTM D1623, TAS 103	4j-PLYG-20-SSUDL-07.A	10/29/21	PRI (TST5878)	UL1897	708T0168.1	06/20/23
NEMO (TST 6049)	ASTM D1623, TAS 103	4j-PLYG-20-SSUDL-09.A	10/29/21	PRI (TST5878)	UL1897	708T0227.1	11/06/23

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 P.E. EVALUATION REPORT: 8TH EDITION (2023) FBC HVHZ

Polyglass Roof Underlayments

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ENTITY	EXAMINATION	REFERENCE	DATE	ENTITY	EXAMINATION	REFERENCE	DATE
NEMO (TST 6049)	ASTM D1970, D4798	4j-PLYG-21-SSUDL-03.A	10/29/21	PRI (TST5878)	UL1897	708T0234.3	01/18/24
NEMO (TST 6049)	ASTM D1970	4j-PLYG-21-SSUDL-04.B	01/17/22	PRI (TST5878)	UL1897	708T0235.3	01/19/24
NEMO (TST6049)	ASTM D1970	4j-PLYG-21-SSUDL-09.A	02/14/22	PRI (TST5878)	UL1897	708T0227.2-1	02/12/24
NEMO (TST 6049)	ASTM D1970, D4798	4j-PLYG-21-SSUDL-03.A	04/21/22	PRI (TST5878)	UL1897	708T0247.4	04/05/24
NEMO (TST 6049)	TAS 103	4j-PLYG-21-SSUDL-04.A.R1	07/05/22	UL (QUA9625)	Traceability	ML File R14571	05/13/14
NEMO (TST 6049)	ASTM D1970	4j-PLYG-22-SSUDL-01.A	09/08/22	UL (QUA9625)	Quality Control	Service Confirmation (FL)	09/13/18
NEMO (TST 6049)	ASTM D1970	4j-PLYG-22-SSUDL-02.A	09/08/22	UL (QUA9625)	Quality Control	Service Confirmation (TX)	11/07/19
NEMO (TST 6049)	ASTM D4798, D3746	4j-PLYG-22-SSUDL-06.A	06/14/23	UL (QUA9625)	Quality Control	Service Confirmation (Italy)	04/24/23
NEMO (TST 6049)	TAS 103	4j-PLYG-22-SSUDL-01.B	03/31/23	UL (QUA9625)	Quality Control	Order 14853192 (Serbia)	06/15/23
				UL (QUA9625)	Quality Control	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

TABLE 1: EVALUATED UNDERLAYMENTS			
PRODUCT	MATERIAL STANDARD	PLANT(S)	DESCRIPTION
Elastobase V	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
Elastoflex SA V Flashing Strips	ASTM D1970	NV	Sef-adhering, fiberglass-reinforced, SBS modified bitumen flashing strips
PolyAnchor HV	ASTM D226, D2626	Serbia	Nominal 55-mil thick, modified bitumen, glass-mat reinforced nailable anchor sheet and roof underlayment
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
Polybase V	ASTM D6509	FL	Fiberglass-reinforced, APP modified bitumen base 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, Ponte di Piave TV (Italy)	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/m ² 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, Ponte di Piave TV (Italy)	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 PEER, or previous versions thereof, is/was used for permitting or design guidance. PEERs are not to be construed as representing any attributes not specifically listed, nor are PEERs to be construed as an endorsement of the subject, or a recommendation for its use. There is no warranty by NEMO ETC, LLC or Robert Nieminen, P.E., express or implied, as to any finding or other matter in this PEER, or as to any product covered by the PEER.
- 5.2 This PEER is exclusively for use in FBC High Velocity Hurricane Zone jurisdictions, as defined in FBC Chapter 2 (Broward and Miami-Dade Counties).
- 5.3 This PEER 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 PEER 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 Allowable Roof Covers:

TABLE 2: ROOF COVER OPTIONS						
<i>FBC HVHZ:</i>	<i>RAS 115 1518.2.1</i>	<i>RAS 118, 119 & 120</i>		<i>RAS 133 1518.2.1</i>	<i>1518.2.1</i>	<i>RAS 130 1518.10</i>
UNDERLAYMENT	ASPHALT SHINGLES	CLAY AND CONCRETE TILE		METAL	SLATE OR SLATE- TYPE SHINGLES	WOOD
		MECHANICAL ATTACH	ADHESIVE-SET			
Elastobase V	Yes (Alternate to D226, Type II)	Yes (as Base Sheet, See Table 4B)	Yes (as Base Sheet, See Table 4B)	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)	No	No	Yes (Alternate to D226, Type II)	Yes (Alternate to D226, Type II)	Yes (Alternate to D226, Type II)
PolyAnchor HV	Yes (Alternate to D226, Type II)	Yes (as Base Sheet, See Table 4B)	Yes (as Base Sheet, See Table 4B)	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 (Valley Liner)
Polystick MTS Plus	Yes	Yes	No	Yes	Yes	Yes (Valley Liner)
Polystick TU Max	No	Yes	Yes (Table 2A)	Yes	No	Yes (Valley Liner)
Polystick TU P	No	Yes	Yes (Table 2A)	No	No	Yes (Valley Liner)
Polystick TU Plus	Yes	Yes	Yes (Table 2A)	Yes	Yes	Yes (Valley Liner)
Polystick XFR	Yes	Yes	No	Yes	Yes	Yes (Valley Liner)

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					
UNDERLAYMENT	TILE-ADHESIVE OPTIONS AND MIAMI-DADE NOA				
	DAP PRODUCTS		DUPONT DE NEMOURS	ICP CONSTRUCTION	
	STORMBOND	STORMBOND 2	TILE BOND	POLYSET AH-160	POLYSET RTA-1
	NOA 23-0327.12	NOA 22-0512.02	FL22525 & NOA 22-0614.05	NOA 23-0614.01	NOA 22-0614.08
Elastoflex S6 G	Yes	Yes	Yes	Yes	Yes
Polyflex SA P	Yes	Yes	Yes	Yes	Yes
Polystick TU Max	Yes	Yes	Yes	Yes	Yes
Polystick TU P	Yes	Yes	Yes	Yes	Yes
Polystick TU Plus	Yes	Yes	Yes	Yes	Yes

5.7 Allowable Substrates:

TABLE 3: SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS				
UNDERLAYMENT	APPLICATION	SUBSTRATES (TO MEET WIND LOADS FOR PROJECT)		
		TYPE	PRIMER	MATERIAL(S)
Polystick IR-Xe, Polystick MTS Plus, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick XFR, Polyflex SA P or Polyflex SA P FR	self-adhering	Deck / sheathing	(Optional) ASTM D41	Plywood or Southern Yellow Pine (SYP)
		Base Sheet	N/A	structural concrete
Elastoflex S6 G or Elastoflex S6 G FR	hot asphalt	Deck	ASTM D41	ASTM D226, Type II felt, Elastobase V, Elastobase P or PolyAnchor HV
		Base Sheet	N/A	structural concrete
Polyflex G or Polyflex G FR	torch-applied	Deck	ASTM D41	ASTM D226, Type II felt, Elastobase V, Elastobase P
		Base Sheet	N/A	structural concrete

5.8 Attachment Limitations:

5.8.1 Refer to [Section 6](#) for codified prescriptive systems.

5.8.2 Refer to Tables [4A](#) and [4B](#) for underlayment systems which have documented compliance with Section 7 of [TAS 103](#). The Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety has already been applied). No extrapolation or rational analysis is permitted for assemblies marked with an asterisk*.

5.8.3 Unless otherwise noted, referenced back-nailing shall utilize corrosion resistant “nails and tin caps” meeting the specifications set forth in [FBC HVHZ 1517.5](#).

TABLE 4A: ALLOWABLE DESIGN PRESSURES, ADHERED, DIRECT-TO-DECK UNDERLAYMENT SYSTEMS						
Unless otherwise noted, referenced back-nailing shall utilize corrosion resistant “nails and tin caps” meeting the specifications set forth in FBC HVHZ 1517.5 .						
SYSTEM No.	DECK	PRIMER	JOINT TREATMENT	BASE PLY	CAP PLY	MDP (psf)
UDL-1.	New: Plywood, APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category or nominal 1-inch wood plank Reroof: Plywood, APA rated sheathing, 32/16, Exposure 1, PS1 , 15/32 category	WB-3000	None	(Optional) Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-105.0

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

**TABLE 4A: ALLOWABLE DESIGN PRESSURES,
ADHERED, DIRECT-TO-DECK UNDERLAYMENT SYSTEMS**

Unless otherwise noted, referenced back-nailing shall utilize corrosion resistant "nails and tin caps" meeting the specifications set forth in [FBC HVHZ 1517.5](#).

SYSTEM No.	DECK	PRIMER	JOINT TREATMENT	BASE PLY	CAP PLY	MDP (PSF)
UDL-2.	New: Plywood, APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category Reroof: Plywood, APA rated sheathing, 32/16, Exposure 1, PS1 , 15/32 category	(Optional) PG100 or ASTM D41	Elastoflex SA V Flashing Strips	(Optional) Polystick MTS Plus, self-adhered and back-nailed back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-135.0
UDL-3.	Nominal 1-inch wood plank	(Optional) PG100 or ASTM D41	None	(Optional) Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-150.0
UDL-4.	New: Plywood, APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category Reroof: Plywood, APA rated sheathing, 32/16, Exposure 1, PS1 , 15/32 category	None	None	None	Polystick TU Max, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-165.0
UDL-5.	New: Plywood, APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category Reroof: Plywood, APA rated sheathing, 32/16, Exposure 1, PS1 , 15/32 category	(Optional) PG100 at 0.5 gal/sq.	None	Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polystick TU Max, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-202.5
UDL-6.	New: Plywood, APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category Reroof: Plywood, APA rated sheathing, 32/16, Exposure 1, PS1 , 15/32 category	PG100 at 0.5 gal/sq.	None	None	Polystick TU Max, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-255.0
UDL-7.	Structural concrete	PG100 or ASTM D41	None	(Optional) Polystick MTS Plus, self-adhered and back-nailed using FBC HVHZ approved fasteners and plates, max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed using FBC HVHZ approved fasteners and plates, max. 12-inch o.c.	-202.5
UDL-8.	Structural concrete	PG100 or ASTM D41	None	None	Elastoflex S6 G, applied in full mopping of hot asphalt and back-nailed using FBC HVHZ approved fasteners and plates, max. 12-inch o.c. or Polyflex G, torch-applied and back-nailed using FBC HVHZ approved fasteners and plates, max. 12-inch o.c.	-622.5

**TABLE 4B: ALLOWABLE DESIGN PRESSURES,
MECHANICALLY ATTACHED, MULTI-PLY UNDERLAYMENT SYSTEMS**

**Nails shall be corrosion resistant and be of sufficient length to penetrate through the sheathing by min. 3/16-inch

Unless otherwise noted, referenced back-nailing shall utilize corrosion resistant "nails and tin caps" meeting the specifications set forth in [FBC HVHZ 1517.5](#).

SYSTEM No.	DECK	BASE SHEET		BASE PLY	CAP PLY	MDP (PSF)
		TYPE	ATTACH			
UDL-9.	Plywood , APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8" diameter tin caps; 6-inch o.c. at the 4-inch wide side laps and 12-inch o.c. at two (2) equally spaced center rows.	(Optional) Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-45.0

**TABLE 4B: ALLOWABLE DESIGN PRESSURES,
MECHANICALLY ATTACHED, MULTI-PLY UNDERLAYMENT SYSTEMS**

**Nails shall be corrosion resistant and be of sufficient length to penetrate through the sheathing by min. 3/16-inch

Unless otherwise noted, referenced back-nailing shall utilize corrosion resistant “nails and tin caps” meeting the specifications set forth in [FBC HVHZ 1517.5](#).

SYSTEM NO.	DECK	BASE SHEET		BASE PLY	CAP PLY	MDP (psf)
		TYPE	ATTACH			
UDL-10.	Plywood , APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category	Elastobase V (sanded top surface for hot-asphalt or torch-applied cap or poly-film surface for torch-applied cap)	Min. 11 ga. x 3/8-inch head-diameter, annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 8-inch o.c. at the 4-inch wide side laps and 8-inch o.c. at three (3) equally spaced staggered center rows.	None	Elastoflex S6 G, applied in full mopping of hot asphalt and back-nailed max. 12-inch o.c. or Polyflex G, torch-applied and back-nailed max. 12-inch o.c.	-60.0
UDL-11.	Plywood , APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category	Elastobase V (sanded top surface for hot-asphalt or torch-applied cap or poly-film surface for torch-applied cap)	OMG #12 Standard Roofgrip with OMG Flat Bottom Metal Plates (NOA 23-0718.03); 12-inch o.c. at the 4-inch wide side laps and 12-inch o.c. at two (2) equally spaced staggered center rows.	None	Elastoflex S6 G, applied in full mopping of hot asphalt and back-nailed max. 12-inch o.c. or Polyflex G, torch-applied and back-nailed max. 12-inch o.c.	-60.0
UDL-12.	New: Plywood, APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category Reroof: Plywood, APA rated sheathing, 32/16, Exposure 1, PS1 , 15/32 category	Polyglass G2 Base or Polybase V (requires use of torch-applied cap ply)	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 8-inch o.c. at the 4-inch wide side laps and 8-inch o.c. at four (4) equally spaced staggered center rows.	None	Elastoflex S6 G, applied in full mopping of hot asphalt and back-nailed max. 12-inch o.c. or torch-applied or Polyflex G, torch-applied and back-nailed max. 12-inch o.c.	-67.5
UDL-13.	New: Plywood, APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category Reroof: Plywood, APA rated sheathing, 32/16, Exposure 1, PS1 , 15/32 category	Polyglass G2 Base or Polybase V (requires use of torch-applied cap ply)	Dekfast DF-#14-PH3 with DF-PLT-2-7/8-H (NOA 22-0913.02), OMG #14 Heavy Duty with OMG AccuTrac Flat Bottom Plates (NOA 23-0718.03) or Trufast HD with Trufast 3-inch Insulation Plates (NOA 22-1214.02); 10-inch o.c. at the 4-inch wide side laps and 10-inch o.c. at three (3) equally spaced staggered center rows.	None	Elastoflex S6 G, applied in full mopping of hot asphalt and back-nailed max. 12-inch o.c. or torch-applied or Polyflex G, torch-applied and back-nailed max. 12-inch o.c.	-75.0
UDL-14.	Plywood , APA rated sheathing, 32/16, Exposure 1, PS2 , 15/32 category over nominal 2x10 No. 2 SYP lumber supports	PolyAnchor HV	Min. 12 ga. x min. 1 ¼-inch long annular ring shank roofing nails with 32 ga., 1-5/8-inch diameter tin caps <u>installed to engage SYP Lumber supports</u> ; 24-inch o.c. at the 4-inch wide side laps and 24-inch o.c. at eight (8) equally spaced center rows.	(Optional) Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-75.0
UDL-15.	Plywood , APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 10-inch o.c. at the 4-inch wide side laps and 10-inch o.c. at three (3) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-75.0
UDL-16.	New: Plywood, APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category Reroof: Plywood, APA rated sheathing, 32/16, Exposure 1, PS1 , 15/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 6-inch o.c. at the 2-inch wide side laps and 6-inch o.c. at three (3) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-82.5

**TABLE 4B: ALLOWABLE DESIGN PRESSURES,
MECHANICALLY ATTACHED, MULTI-PLY UNDERLAYMENT SYSTEMS**

**Nails shall be corrosion resistant and be of sufficient length to penetrate through the sheathing by min. 3/16-inch

Unless otherwise noted, referenced back-nailing shall utilize corrosion resistant “nails and tin caps” meeting the specifications set forth in [FBC HVHZ 1517.5](#).

SYSTEM NO.	DECK	BASE SHEET		BASE PLY	CAP PLY	MDP (psf)
		TYPE	ATTACH			
UDL-17.	Plywood , APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category	Elastobase V (poly-film top surface)	Min. 11 ga. x 3/8-inch head-diameter, annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 4-inch o.c. at the 4-inch wide side laps and 4-inch o.c. at four (4) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-97.5
UDL-18.	New: Plywood, APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category Reroof: Plywood, APA rated sheathing, 32/16, Exposure 1, PS1 , 15/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 5-inch o.c. at the 4-inch wide side laps and 5-inch o.c. at four (4) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-105.0
UDL-19.	Plywood , APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 6-inch o.c. at the 2-inch wide side laps and 6-inch o.c. at three (3) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-112.5
UDL-20.	Plywood , APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 5-inch o.c. at the 4-inch wide side laps and 5-inch o.c. at three (3) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-120.0
UDL-21.	Plywood , APA rated sheathing, 40/20, Exposure 1, PS1 , 19/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 6-inch o.c. at the 4-inch wide side laps and 6-inch o.c. at four (4) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and back-nailed max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed max. 12-inch o.c.	-135.0

5.9 Exposure Limitations:

TABLE 5: EXPOSURE LIMITATIONS

UNDERLAYMENT	PREPARED ROOF COVER INSTALLATION TYPE	MAXIMUM EXPOSURE (DAYS)
Elastobase V, Elastobase P, Polyglass G2 Base or PolyAnchor HV	Mechanically attached	30
Polystick IR-Xe	Mechanically attached	90
Polystick MTS Plus, Polystick TU Max, Polystick TU P or Polystick XFR	Any type (per Table 2)	180
Polystick TU Plus	Any type (per Table 2)	360
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

5.10 **Tile Slippage Limitations:** When loading roof tiles on the underlayment, the maximum roof pitch shall be as follows. These pitch limitations can only be exceeded by using battens or loading boards during loading of the roof tiles.

TABLE 6: TILE SLIPPAGE LIMITATIONS			
UNDERLAYMENT	TILE PROFILE	STAGING METHOD	MAXIMUM STAGING PITCH
Elastoflex S6 G or S6 G FR	Flat or Lugged	Prohibited without battens or loading boards	N/A
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
Polystick MTS Plus	Flat or Lugged	Prohibited without battens or loading boards	N/A
Polystick TU Max	Flat	6-tile stack (4 over 2) or 10-tile stack	7:12
	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
Polystick TU Plus	Flat or Lugged	6-tile stack (4 over 2)	7:12
	Flat or Lugged	10-tile stack	6:12
Polystick XFR	Flat or Lugged	Prohibited without battens or loading boards	N/A

6. INSTALLATION:

6.1 **Polyglass Roof Underlayments** shall be installed in accordance with **Polyglass** published installation instructions subject to the [Limitations of Use](#) herein and the specifics noted below.

6.1.1 Consult Polyglass requirements for back-nailing at pitch 2:12 or greater.

6.1.2 All fabric-surfaced, aggregate-surfaced and granule-surfaced end-laps shall have a 6-inch wide, uniform layer of PG500 or POLYPLUS 50 applied within the end-lap.

6.2 Re-fasten any loose decking panels, and check for protruding nail heads. Sweep the substrate thoroughly to remove any dust and debris prior to application, and prime the substrate (if applicable).

6.3 Refer to [Section 6.4](#) for underlayments having prescriptive codified minimum attachment or Tables [4A](#) and [4B](#) for underlayment systems having maximum design pressures established in accordance with Section 7 of [TAS 103](#).

6.4 **Underlayment Assemblies with Prescriptive Minimum Attachment for use in NON-TILE applications:**

6.4.1 **CODE REFERENCE: 1518.2.1, Option 1:** Underlayment adhered to deck

DECK DESCRIPTION: Code-minimum, new or existing (roof replacement) wood or structural concrete deck to the satisfaction of the Authority Having Jurisdiction (refer to [Table 3](#) for specific underlayment/substrate combinations)

UNDERLAYMENT: BASE PLY: (Optional) **Polystick MTS Plus or Polystick XFR** 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.

CAP PLY: **Polystick IR-Xe, Polystick MTS Plus, Polystick TU Max, Polystick TU Plus or Polystick XFR**, self-adhered in accordance with FBC HVHZ 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 2](#) herein.

6.4.2	CODE REFERENCE: 1518.2.1, Option 2: Self-adhering strips to deck-joints followed by underlayment mechanically attached to deck
DECK DESCRIPTION:	Code-minimum, new or existing (roof replacement) wood deck to the satisfaction of the Authority Having Jurisdiction
SECONDARY WATER BARRIER:	Elastoflex SA V Flashing Strips self-adhered over joints of the plywood roof deck prior to installation of subsequent layer(s) in accordance with FBC HVHZ 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:	Elastobase V, Elastobase P, PolyAnchor HV 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, 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 HVHZ Table 1518.2.1.
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 2 herein.
6.4.3	CODE REFERENCE: 1518.2.1, Option 3: Two-layer underlayment mechanically fastened to deck
DECK DESCRIPTION:	Code-minimum, new or existing (roof replacement) wood deck to the satisfaction of the Authority Having Jurisdiction
UNDERLAYMENT:	Two (2) layers of Elastobase V, Elastobase P or PolyAnchor HV 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 2 herein.
6.4.4	CODE REFERENCE: 1518.2.1, Option 1 combined with Option 2 or 3: 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, new or existing (roof replacement) wood deck to the satisfaction of the Authority Having Jurisdiction
SECONDARY WATER BARRIER:	(Optional) Elastoflex SA V Flashing Strips self-adhered over joints of the plywood roof deck prior to installation of subsequent layer(s) in accordance with FBC HVHZ 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) or two (2) layer(s) of Elastobase V, Elastobase P, PolyAnchor HV 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, 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 HVHZ Table 1518.2.1.
UNDERLAYMENT:	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 IR-Xe, Polystick MTS Plus, Polystick TU Max, Polystick TU 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, metal roof panels or metal shingles, slate or slate type shingles, subject to the allowable roof covers in Table 2 herein.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Contact the named QA entity for manufacturing facilities covered by **F.A.C. Rule 61G20-3** QA requirements. Refer to [Section 4](#) herein for products and production locations having met codified material standards.

9. QUALITY ASSURANCE ENTITY:

[UL, LLC – QUA9625](#): (360) 817-5512; bsai.inspections@ul.com

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