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

ENGINEER **EVALUATE** **TEST** **CONSULT**

P.E. EVALUATION REPORT (PEER)

CertainTeed, LLC
20 Moores Road
Malvern, PA 19355
(610) 893-5400

PEER-CTR-007.B
FL11288-R22 (HVHZ)
Date of Issuance: 08/07/2023

SCOPE:

This P.E. Evaluation Report (henceforth 'PEER') is issued under **F.A.C. 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. The product described herein has been evaluated for compliance with the **8th Edition (2023) Florida Building Code, High Velocity Hurricane Zone** sections noted herein.

DESCRIPTION: CertainTeed Roof Underlayments (HVHZ)

LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein and FBC 1507.1.1.

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.

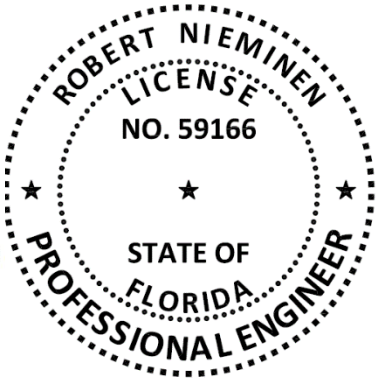
ADVERTISEMENT: The Florida Product Approval Number (FL#) preceded by the words "NEMO P.E. Evaluated" may be displayed in advertising literature. If any portion of the PEER is displayed, then it shall be done in its entirety.

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 8.

Prepared by: Digitally signed by Robert Nieminen
Date: 2023.08.08 '18:49:39 -04'00

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.
Robert Nieminen, Florida P.E. 59166, FBC ANE1983
NEMO ETC, LLC, Florida CA #32455



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.

© 2019 NEMO ETC, LLC

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: **CertainTeed Roof Underlayments**, as produced by **CertainTeed, LLC**, have demonstrated compliance with the following sections of the **8th Edition (2023) Florida Building Code, High Velocity Hurricane Zone (HVHZ)** 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	YEAR
TAS 110	Material standard	ASTM D1970	2017
TAS 110	Material standard	TAS 103	2020 (from 2023 Code)
TAS 110	Material standard	ASTM D4601	2012
TAS 110	Material standard	ASTM D6163	2016
TAS 110	Material standard	ASTM D6164	2016
TAS 110	Material standard	ASTM D6222	2016
TAS 110	Accelerated Weathering	ASTM D4798	2011

3. REFERENCES:

ENTITY	EXAMINATION	REFERENCE	DATE
ERD (TST6049)	ASTM D1970, D4798	C45240.01.14-1	01/15/2014
ERD (TST6049)	TAS 103	C45240.01.14-2	01/24/2014
ERD (TST6049)	TAS 103, TA-LTA	CTR-SC11505.12.16	12/22/2016
NEMO (TST6049)	ASTM D1970	4S-CTR-18-003.01.19	01/16/2019
NEMO (TST6049)	ASTM D1970, D4798	4S-CTR-18-003.07.19.C	07/26/2019
NEMO (TST6049)	TAS 103, Tile Slippage	4S-CTR-18-003.08.19.E2	09/06/2019
NEMO (TST6049)	TAS 103, TA-LTA	4p-DOW-19-SSLAP-01.A-R2	10/01/2019
NEMO (TST6049)	TAS 103, TA-LTA	4p-ICP-20-SSLAP-01.A	12/15/2020
NEMO (TST6049)	TAS 103, TA-AW	4j-CTR-20-SSUDL-03.A	03/15/2021
NEMO (TST6049)	TAS 103, Tile Slippage	4j-CTR-21-SSUDL-03.A	08/02/2021
NEMO CERT (CER13842)	Various	Certified Products	Current
PRI (TST5878)	ASTM D6164	CTC-093-02-01	08/08/2011
PRI (TST5878)	ASTM D6164	CTC-131-02-01	06/08/2012
PRI (TST5878)	ASTM D1970	CTC-327-02-01	06/28/2017
PRI (TST5878)	ASTM D1970, D4798	256T0075	04/05/2022
ERD (TST6049)	TAS 103, Uplift	C8370.08.08-R1	10/05/2009
ERD (TST6049)	TAS 103, Uplift	C39670.08.12	08/20/2012
ERD (TST6049)	TAS 103, Uplift	CTR-SC9920.01.16-R1	01/20/2016
ERD (TST6049)	TAS 103, Uplift	CTR-SC10420.01.16	01/25/2016
ERD (TST6049)	TAS 103, Uplift	CTR-SC12255.12.16	12/27/2016
NEMO (TST6049)	TAS 103, Uplift	4a-CTR-19-LSWUS-05.A	02/05/2020
NEMO (TST6049)	TAS 103, Uplift	4a-CTR-23-LSWUS-02.A	07/17/2023
PRI (TST5878)	TAS 103, Uplift	CTC-112-02-01	12/12/2011
UL, LLC. (QUA9625)	Quality Control	Service Confirmation	08/08/2022

PROPOSED

4. PRODUCT DESCRIPTION:

TABLE 1: EVALUATED UNDERLAYMENTS

PRODUCT	MATERIAL STANDARD	PLANT(S)	DESCRIPTION
Black Diamond® Base Sheet	ASTM D1970	Shakopee, MN[1]	self-adhering, glass mat reinforced, fine-mineral surfaced, SBS modified membrane
MetaLayment®	ASTM D1970	Little Rock, AR	self-adhering, film-surfaced, SBS modified bitumen roof underlayment
WinterGuard® Granular	ASTM D1970	Shakopee, MN	self-adhering, glass-mat reinforced, granule-surfaced, SBS modified bitumen roof underlayment
WinterGuard® HT	ASTM D1970	Little Rock, AR	self-adhering, glass-scrim reinforced, film-surfaced, SBS modified bitumen roof underlayment
WinterGuard® Sand	ASTM D1970	Shakopee, MN	self-adhering, glass-mat reinforced, sand-surfaced, SBS modified bitumen roof underlayment
Flintlastic® SA Cap FR	ASTM D6163	Little Rock, AR[1]	self-adhering, glass mat reinforced, granule-mineral surfaced, SBS modified membrane
Flintlastic® SA Cap	ASTM D1970 ASTM D6164 TAS 103	Little Rock, AR	self-adhering, polyester reinforced, granule-mineral surfaced, SBS modified membrane
Flintlastic® GTA	ASTM D6222 TAS 103 (partial)	Little Rock, AR[1]	torch-applied, polyester reinforced, granule-surfaced, APP modified membrane
Flintlastic® GMS	ASTM D6164 TAS 103 (partial)	Little Rock, AR	asphalt-applied, polyester reinforced, granule-surfaced, SBS modified membrane

[1] Indicates membrane/plant combination is Certified by ISO/IEC 17065 Certification Entity; NEMO|cert. to the noted standard.

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 CertainTeed 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						
FBC HVHZ:	*TAS 110(S10), RAS 115*	*TAS 110(S11), RAS 118, 119 & 120*		*RAS 133*	*TAS 110(S11)*	*RAS 130*
UNDERLAYMENT	ASPHALT SHINGLES	CLAY AND CONCRETE TILE		METAL	SLATE OR SLATE-TYPE SHINGLES	WOOD
		MECHANICAL ATTACH	ADHESIVE- OR MORTAR-SET			
Black Diamond Base Sheet	Yes	No	No	No	Yes	Yes[1]
MetaLayment	Yes	No	No	Yes	Yes	Yes[1]
WinterGuard Granular	Yes	No	No	No	Yes	No
WinterGuard HT	Yes	No	No	Yes	Yes	Yes[1]
WinterGuard Sand	Yes	No	No	No	Yes	Yes[1]
Flintlastic SA Cap FR	Yes	No	No	No	Yes	No
Flintlastic SA Cap	Yes	Yes	Yes (Table 2A)	No	Yes	No
Flintlastic GTA	No	Yes	Yes (Table 2A)	No	No	No
Flintlastic GMS	No	Yes	Yes (Table 2A)	No	No	No

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

TABLE 2A: ALLOWABLE UNDERLAYMENT / TILE-ADHESIVE OR MORTAR COMBINATIONS[2]		
UNDERLAYMENT	ADHESIVE / MORTAR	HVHZ APPROVAL
Flintlastic SA Cap or Flintlastic GMS	Dupont de Nemours “Tile Bond™ Roof Tile Adhesive”	22-0614.05
Flintlastic SA Cap, Flintlastic GTA or Flintlastic GMS	ICP Construction “Polyset® AH-160”	22-0614.10
Flintlastic SA Cap, Flintlastic GTA or Flintlastic GMS	Mortar holding current Florida HVHZ Product Approval.	

5.7 Allowable Substrates:

TABLE 3: SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS		
UNDERLAYMENT	PRIMER	SUBSTRATES
WinterGuard HT, WinterGuard Sand, WinterGuard Granular or MetaLayment	(Optional) ASTM D41 or FlintPrime QD	plywood
	none	ASTM D226, Type II felt
Black Diamond Base Sheet, Flintlastic SA PlyBase, Flintlastic SA MidPly, Flintlastic Ultra Glass SA, Flintlastic SA Cap or Flintlastic SA Cap FR	(Optional) ASTM D41 or FlintPrime QD	plywood
	ASTM D41 or FlintPrime QD	structural concrete
	none	ASTM D226, Type II felt or Flintlastic SA NailBase
Flintlastic SA Cap or Flintlastic SA Cap FR	none	Flintlastic SA PlyBase or Flintlastic SA MidPly
Flintlastic GMS applied in hot asphalt	ASTM D41 or FlintPrime QD	structural concrete
	none	ASTM D226, Type II felt, ASTM D4601, Type II base sheet, Black Diamond Base Sheet or Flintlastic Ultra Glass SA
Flintlastic GTA torch-applied	ASTM D41 or FlintPrime QD	structural concrete
	none	ASTM D226, Type II felt, ASTM D4601, Type II base sheet, Black Diamond Base Sheet or Flintlastic Ultra Glass SA

[1] *Used atop ASTM D226, Type II felt, or equivalent base sheet, mechanically attached in accordance with FBC HVHZ Table 1518.2.1.*

[2] *Refer to Tile Manufacturer’s or Adhesive Manufacturer’s Florida Product Approval or NOA for Overturning Moment Resistance Performance.*

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*.

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

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 **Reroof:** Plywood, APA rated sheathing, 32/16, Exposure 1, PS1, 15/32 category	(Optional) ASTM D41 or FlintPrime QD	None	(Optional) Flintlastic SA PlyBase or Flintlastic SA MidPly, self-adhered and back-nailed max. 12-inch o.c.	Flintlastic SA Cap, self-adhered and back-nailed max. 12-inch o.c.	-105.0*
UDL-2.	**Plywood**, APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	ASTM D41 or FlintPrime QD	Min. 4-inch wide strips of Flintlastic SA PlyBase, self-adhered over all plywood joints	(Optional) Flintlastic SA PlyBase or Flintlastic SA MidPly, self-adhered and back-nailed max. 12-inch o.c.	Flintlastic SA Cap, self-adhered and back-nailed max. 12-inch o.c.	-127.5*
UDL-3.	**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) FlintPrime QD	None	Flintlastic SA PlyBase or Flintlastic SA MidPly, self-adhered and back-nailed max. 12-inch o.c.	Flintlastic SA Cap, self-adhered and back-nailed max. 12-inch o.c.	-127.5*
UDL-4.	Structural concrete	ASTM D41 or FlintPrime QD	N/A	Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered and back-nailed max. 12-inch o.c.	Flintlastic GTA, torch-applied and back-nailed max. 12-inch o.c. or Flintlastic GMS, applied in hot asphalt and back-nailed max. 12-inch o.c.	-240.0*
UDL-5.	Structural concrete	ASTM D41 or FlintPrime QD	N/A	(Optional) Flintlastic SA PlyBase or Flintlastic SA MidPly, self-adhered and back-nailed max. 12-inch o.c.	Flintlastic SA Cap, self-adhered and back-nailed max. 12-inch o.c.	-240.0*

TABLE 4B: ALLOWABLE DESIGN PRESSURES, 2-PLY UNDERLAYMENT SYSTEMS

SYSTEM NO.	DECK	BASE SHEET		BASE PLY	CAP PLY	MDP (PSF)
		TYPE	ATTACH			
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	Glasbase Base Sheet; Flexiglas Base Sheet; Flintlastic Base 20; All Weather / Empire Base Sheet; Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base	Simplex MAXX Cap Fasteners (NOA 18-1227.05); 9-inch o.c. at the 2-inch wide side laps and 18-inch o.c. at two (2) equally spaced, staggered center rows	None	Flintlastic GTA, torch-applied and back-nailed max. 12-inch o.c. or Flintlastic GMS, applied in hot asphalt and back-nailed max. 12-inch o.c.	-45.0*
UDL-7.	**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	Flintlastic SA NailBase	Simplex MAXX Cap Fasteners (NOA 18-1227.05); 9-inch o.c. at the 3-inch wide side laps and 12-inch o.c. at two (2) equally spaced, staggered center rows FlintPrime QD at stress plates	(Optional) Flintlastic SA PlyBase or Flintlastic SA MidPly, self-adhered and back-nailed max. 12-inch o.c.	Flintlastic SA Cap, self-adhered and back-nailed max. 12-inch o.c.	-52.5

TABLE 4B: ALLOWABLE DESIGN PRESSURES, 2-PLY UNDERLAYMENT SYSTEMS						
SYSTEM NO.	DECK	BASE SHEET		BASE PLY	CAP PLY	MDP (PSF)
		TYPE	ATTACH			
UDL-8.	**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	Glasbase Base Sheet; Flexiglas Base Sheet; Flintlastic Base 20; All Weather / Empire Base Sheet; Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base	Simplex MAXX Cap Fasteners (NOA 18-1227.05); 9-inch o.c. at the 2-inch wide side laps and 12-inch o.c. at two (2) equally spaced, staggered center rows	None	Flintlastic GTA, torch-applied and back-nailed max. 12-inch o.c. or Flintlastic GMS, applied in hot asphalt and back-nailed max. 12-inch o.c.	-52.5
UDL-9.	**Plywood**, APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	Flintlastic SA NailBase	12 ga., 1¼-inch long galvanized ring shank nails through 32 ga., 1 5/8-inch diameter tin caps; 8-inch o.c. at the min. 2-inch laps and 8-inch o.c. at three (3) equally spaced, staggered center rows	(Optional) Flintlastic SA PlyBase or Flintlastic SA MidPly, self-adhered and back-nailed max. 12-inch o.c.	Flintlastic SA Cap, self-adhered and back-nailed max. 12-inch o.c.	-60.0
UDL-10.	**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	Flintlastic SA NailBase	Simplex MAXX Cap Fasteners (NOA 18-1227.05); 8-inch o.c. at the 3-inch wide side laps and 8-inch o.c. at three (3) equally spaced, staggered center rows FlintPrime QD at stress plates	(Optional) Flintlastic SA PlyBase or Flintlastic SA MidPly, self-adhered and back-nailed max. 12-inch o.c.	Flintlastic SA Cap, self-adhered and back-nailed max. 12-inch o.c.	-67.5
UDL-11.	**Plywood**, APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	Flintlastic SA NailBase	12 ga., 1¼-inch long galvanized ring shank nails through 32 ga., 1 5/8-inch diameter tin caps; 6-inch o.c. at the min. 2-inch laps and 6-inch o.c. at four (4) equally spaced, staggered center rows	(Optional) Flintlastic SA PlyBase or Flintlastic SA MidPly, self-adhered and back-nailed max. 12-inch o.c.	Flintlastic SA Cap, self-adhered and back-nailed max. 12-inch o.c.	-75.0
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	Glasbase Base Sheet; Flexiglas Base Sheet; Flintlastic Base 20; All Weather / Empire Base Sheet; Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base	Simplex MAXX Cap Fasteners (NOA 18-1227.05); 6-inch o.c. at the 2-inch wide side laps and 6-inch o.c. at two (2) equally spaced, staggered center rows	None	Flintlastic GTA, torch-applied and back-nailed max. 12-inch o.c. or Flintlastic GMS, applied in hot asphalt and back-nailed max. 12-inch o.c.	-90.0
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	Glasbase Base Sheet; Flexiglas Base Sheet; Flintlastic Base 20; All Weather / Empire Base Sheet; Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base	Simplex MAXX Cap Fasteners (NOA 18-1227.05); 6-inch o.c. at the 2-inch wide side laps and 6-inch o.c. at three (3) equally spaced, staggered center rows	None	Flintlastic GTA, torch-applied and back-nailed max. 12-inch o.c. or Flintlastic GMS, applied in hot asphalt and back-nailed max. 12-inch o.c.	-105.0
UDL-14.	**Plywood**, APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	Flintlastic SA NailBase	12 ga., 1¼-inch long galvanized ring shank nails through 32 ga., 1 5/8-inch diameter tin caps; 4-inch o.c. at the min. 2-inch laps and 4-inch o.c. at four (4) equally spaced, staggered center rows	(Optional) Flintlastic SA PlyBase or Flintlastic SA MidPly, self-adhered and back-nailed max. 12-inch o.c.	Flintlastic SA Cap, self-adhered and back-nailed max. 12-inch o.c.	-105.0

FBC HVHZ

5.9 Exposure Limitations:

TABLE 5: EXPOSURE LIMITATIONS		
UNDERLAYMENT	PREPARED ROOF COVER INSTALLATION TYPE	MAXIMUM EXPOSURE (DAYS)
Black Diamond Base Sheet, WinterGuard HT, WinterGuard Sand, WinterGuard Granular or MetaLayment	Mechanically attached	180
Flintlastic SA Cap, Flintlastic SA Cap FR, Flintlastic GTA or Flintlastic GMS	Mechanically attached	UNLIMITED
Flintlastic SA Cap, Flintlastic GTA or Flintlastic GMS	Adhesive- or mortar-set tile	180

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 PITCH
Flintlastic GMS or Flintlastic SA Cap	All	Max. 6-tile stack (4 over 2)	4:12
Flintlastic GTA	Flat	Max. 10-tile stack	4:12
	Lugged	Prohibited without battens or loading boards	N/A

6. INSTALLATION:

6.1 **CertainTeed Roof Underlayments** shall be installed in accordance with **CertainTeed** published installation instructions subject to the Limitations of Use herein and the specifics noted below.

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

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 primed 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, determined in accordance with Section 7 of TAS 103.

6.4 Assemblies with Prescriptive Minimum Attachment:

6.4.1

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 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.
CAP PLY:	Black Diamond Base Sheet, MetaLayment, WinterGuard Granular, WinterGuard HT, WinterGuard Sand, Flintlastic SA Cap FR or Flintlastic SA Cap, self-adhering.
SURFACING:	Refer to Table 2.

6.4.2

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 Glasbase Base Sheet; Flexiglas Base Sheet; Flintlastic Base 20; All Weather / Empire Base Sheet; Flintlastic Poly SMS Base, Flintlastic Ultra Poly SMS Base 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.

FBC HVHZ

	BASE PLY:	(Optional) Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	CAP PLY:	Flintlastic GMS applied in hot asphalt or Flintlastic GTA torch-applied and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	SURFACING:	Refer to Table 2. Refer to Table 6 for tile staging limitations.
6.4.3	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 Flintlastic SA NailBase 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) Flintlastic SA PlyBase or Flintlastic SA MidPly, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	CAP PLY:	Flintlastic SA Cap, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	SURFACING:	Refer to Table 2. Refer to Table 6 for tile staging limitations.
6.4.4	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE F:	Underlayment adhered to deck
	UNDERLAYMENT:	Black Diamond Base Sheet, MetaLayment, WinterGuard Granular, WinterGuard HT, WinterGuard Sand, Flintlastic SA Cap FR or Flintlastic SA Cap, self-adhering.
	SURFACING:	Refer to Table 2 but limited to asphalt shingles, metal, slate or slate-type shingles per FBC HVHZ 1518.2.1(1).

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

- END OF PEER –