

Registry No. 29824 17520 Edinburgh Dr Tampa, FL 33647 (813) 480-3421

# **EVALUATION REPORT**

# FLORIDA BUILDING CODE, 7<sup>TH</sup> EDITION (2020)

Manufacturer:	IKO INDUSTRIES, LTD 40 Hansen Rd S Brampton, ON L6W 3H4 Canada (905) 457-2880 www.iko.com	Issued February 12, 2023
Manufacturing Plants:	Brampton, Ontario Calgary, Alberta Hawkesbury, Ontario Hillsboro, TX Kankakee, IL Sumas, WA Sylacauga, AL Toronto, Ontario	
Quality Assurance:	PRI Construction Materials Technologies (QUA9110)	
SCOPE		
• •	ofing halt Shingles	

Category:	Rooting
Subcategory:	Asphalt Shingles
Code Edition:	Florida Building Code, 7 <sup>th</sup> Edition (2020) including High-Velocity Hurricane Zones (HVHZ)
Code Sections:	1504.1.1, 1507.2.5, 1507.2.7.1, 1523.5.1, 1523.6.5.1
Properties:	Physical properties, Wind Resistance, Wind Driven Rain

#### REFERENCES

<u>Entity</u>	Report No.	Standard	<u>Year</u>
FM Approvals (TST1867)	3036971	FM 4475	2010
FM Approvals (TST1867)	3040947	FM 4475	2010
		ASTM E 108	2016
FM Approvals (TST1867)	3041689	FM 4475	2010
FM Approvals (TST1867)	3044376	FM 4475	2010
FM Approvals (TST1867)	3045254	FM 4475	2010
FM Approvals (TST1867)	3046191	FM 4475	2010
PRI Construction Materials Technologies (TST5878)	IKO-050-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-051-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-053-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-067-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-071-02-01	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	IKO-072-02-02	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-076-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-077-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-088-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-095-02-01	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	IKO-096-02-01	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	IKO-099-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-100-02-01	TAS 107	2020
PRI Construction Materials Technologies (TST5878)	IKO-114-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-115-02-01	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	IKO-117-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-120-02-01	ASTM D 3462	2010A
<b>3</b> ( )			

IKO19002.5

FL30310-R4

Page 1 of 17



<u>Entity</u>	Report No.	Standard	Year
PRI Construction Materials Technologies (TST5878)	IKO-121-02-01	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	IKO-123-02-01	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	IKO-125-02-01	TAS 107	2020
		ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	IKO-126-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-127-02-01	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	IKO-128-02-01	TAS 107	2020
DDI Construction Materials Technologies (TSTE979)	IKO-129-02-01	ASTM D 3161 ASTM D 3462	2016 2010A
PRI Construction Materials Technologies (TST5878)	IKO-129-02-01 IKO-130-02-01	ASTM D 3462 ASTM D 3161	
PRI Construction Materials Technologies (TST5878)			2016
PRI Construction Materials Technologies (TST5878)	IKO-131-02-01	TAS 107 ASTM D 3161	2020 2016
PRI Construction Materials Technologies (TST5878)	IKO-140-02-01	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	IKO-148-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-153-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-171-02-01	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	IKO-171-02-02	TAS 107	2020
		ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	IKO-171-02-03	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-198-02-01	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	IKO-198-02-02	TAS 100	2020
PRI Construction Materials Technologies (TST5878)	IKO-198-02-03	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	IKO-199-02-01	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	IKO-199-02-02	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-199-02-03	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	IKO-201-02-01	ASTM D 3462	2010A
······································		<b>ASTM E 108</b>	2016
		ASTM D 3018	1990(R94)E1
PRI Construction Materials Technologies (TST5878)	IKO-201-02-02	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	IKO-201-02-07	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-202-02-01	ASTM D 3462	2010A
		ASTM E 108	2011
PRI Construction Materials Technologies (TST5878)	IKO-202-02-02	ASTM D 3018 TAS 107	1990(R94)E1 2020
FIX Construction materials rechnologies (1313078)	10-202-02-02	ASTM D 3161	2020
PRI Construction Materials Technologies (TST5878)	IKO-202-02-07	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-203-02-01	ASTM D 3462	2010A
<b>3</b> ( )		ASTM E 108	2011
		ASTM D 3018	1990(R94)E1
PRI Construction Materials Technologies (TST5878)	IKO-203-02-02	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	IKO-203-02-07	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-205-02-01	ASTM D 3462	2010A
		ASTM E 108	2016
PRI Construction Materials Technologies (TST5878)	IKO-205-02-02	ASTM D 3018 ASTM D 3161	1990(R94)E1 2016
PRI Construction Materials Technologies (TST5878)	IKO-205-02-02	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-205-02-07	ASTM D 3462	2010A
FIX Construction materials rechnologies (1313078)	10-200-02-01	ASTM E 108	2010A 2016
		ASTM D 3018	1990(R94)E1
PRI Construction Materials Technologies (TST5878)	IKO-206-02-02	ASTM D 3161	2016 ໌
PRI Construction Materials Technologies (TST5878)	IKO-206-02-07	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	IKO-208-02-01	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	IKO-217-02-01	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	IKO-218-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476C0017.1	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476C0017.2	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	476C0017.3	ASTM E 108	2016
PRI Construction Materials Technologies (TST5878)	476C0020.1	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476C0020.2	ASTM D 3161	2016

FL30310-R4

Page 2 of 17



<u>Entity</u>	Report No.	Standard	Year
PRI Construction Materials Technologies (TST5878)	476C0020.3	ASTM E 108	2016
PRI Construction Materials Technologies (TST5878)	476C0033.1	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476C0033.2	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	476C0033.3	ASTM E 108	2016
PRI Construction Materials Technologies (TST5878)	476T0002	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0003	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0004	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	476T0012	ASTM D 3462	2010A
		ASTM D 3018	1990(R94)E1
PRI Construction Materials Technologies (TST5878)	476T0013	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	476T0021	TAS 107 ASTM D 3462	2020 2010A
	47010021	ASTM D 3018	1990(R94)E1
PRI Construction Materials Technologies (TST5878)	476T0022	ASTM D 3161	2016
		TAS 107	2020
PRI Construction Materials Technologies (TST5878)	476T0023	ASTM E 108	2016
PRI Construction Materials Technologies (TST5878)	476T0034	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0039	ASTM D 3462	2010A
	17070010	ASTM D 3018	1990(R94)E1
PRI Construction Materials Technologies (TST5878)	476T0040	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	476T0041	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0042	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0043	ASTM D 3018 TAS 100	1990(R94)E1 1995
PRI Construction Materials Technologies (TST5878)	476T0044	ASTM D 3462	2010A
	47010044	ASTM D 3018	1990(R94)E1
PRI Construction Materials Technologies (TST5878)	476T0045	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	476T0046	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0057	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0058	<b>ASTM E 108</b>	2016
PRI Construction Materials Technologies (TST5878)	476T0059	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	476T0061	ASTM D 7158	2019ae1
PRI Construction Materials Technologies (TST5878)	476T0107	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0111	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0112	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	476T0114	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0115	ASTM D 3161	2016
		TAS 107	2020
PRI Construction Materials Technologies (TST5878)	476T0116	ASTM D 7158	2019ae1
PRI Construction Materials Technologies (TST5878)	476T0117	ASTM E 108	2016
PRI Construction Materials Technologies (TST5878)	476T0118	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0121	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0122	ASTM E 108	2016
PRI Construction Materials Technologies (TST5878)	476T0123	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	476T0126	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0132	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0134	ASTM D 3161	2016
PRI Construction Materials Technologies (TST5878)	476T0136	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0138	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0140	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0141	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0142	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0158	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0159	ASTM D 3161	2016
		TAS 107	2020
PRI Construction Materials Technologies (TST5878)	476T0160	ASTM E 108	2016
PRI Construction Materials Technologies (TST5878)	476T0161	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0163.1	ASTM D 3462	2010A

FL30310-R4

Page 3 of 17



Entity	Report No.	Standard	Year
PRI Construction Materials Technologies (TST5878)	476T0164	ASTM D 3161	2016
		TAS 107	2020
PRI Construction Materials Technologies (TST5878)	476T0165	ASTM E 108	2016
PRI Construction Materials Technologies (TST5878)	476T0166	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0192	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0194	ASTM E 108	2016
PRI Construction Materials Technologies (TST5878)	476T0196	ASTM D 3161	2016
		TAS 107	2020
PRI Construction Materials Technologies (TST5878)	476T0202	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	476T0207	ASTM D 3462	2010A
PRI Construction Materials Technologies (TST5878)	476T0209	ASTM E 108	2016
PRI Construction Materials Technologies (TST5878)	476T0208	ASTM D 3161	2016
		TAS 107	2020
PRI Construction Materials Technologies (TST5878)	476T0210	TAS 100	1995
PRI Construction Materials Technologies (TST5878) PRI Construction Materials Technologies (TST5878)	476T0166 476T0192 476T0194 476T0196 476T0202 476T0207 476T0209 476T0208	TAS 100 ASTM D 3462 ASTM E 108 ASTM D 3161 TAS 107 TAS 100 ASTM D 3462 ASTM E 108 ASTM D 3161 TAS 107	1995 2010A 2016 2020 1995 2010A 2016 2016 2020

FL30310-R4

Page 4 of 17



## **PRODUCT DESCRIPTION**

Roofshake™ HW (Calgary)	13-3/4" x 40-7/8", ASTM D 3161, Class F self-sealing, fiberglass reinforced, laminated architectural asphalt shingle surfaced with granules complying with ASTM D 3462. Shingles shall be used in the non-HVHZ only.
Armourshake™ (Sumas)	18-1/2" x 37-3/8", ASTM D 3161, Class F self-sealing, fiberglass reinforced, laminated architectural asphalt shingle surfaced with granules complying with ASTM D 3462.
Royal Estate™ (Toronto)	13-1/4" x 40", ASTM D 3161, Class F self-sealing, fiberglass reinforced, laminated architectural asphalt shingle surfaced with granules complying with ASTM D 3462.
Crowne Slate (Toronto)	13-1/4" x 39-1/2", ASTM D 3161, Class F self-sealing, fiberglass reinforced, laminated architectural asphalt shingle surfaced with granules complying with ASTM D 3462.
Dynasty™ (Calgary, Hawkesbury, Hillsboro, Kankakee, Sumas & Sylacauga)	13-3/4" x 40-7/8", ASTM D 3161, Class F self-sealing, fiberglass reinforced, laminated architectural asphalt shingle surfaced with granules complying with ASTM D 3462. Shingles manufactured in Calgary and Sumas shall be used in the non-HVHZ only.
Nordic™ (Calgary, Hillsboro & Kankakee)	13-3/4" x 40-7/8", ASTM D 3161, Class F self-sealing, fiberglass reinforced, laminated architectural asphalt shingle surfaced with granules complying with ASTM D 3462. Shingles manufactured in Hillsboro shall be used in the non-HVHZ only.
Cambridge™ (Brampton, Calgary, Hawkesbury, Hillsboro, Kankakee, Sumas, Sylacauga & Toronto)	13-3/4" x 40-7/8", ASTM D 3161, Class F self-sealing, fiberglass reinforced, laminated architectural asphalt shingle surfaced with granules complying with ASTM D 3462. Shingles manufactured in Brampton, Calgary and Toronto shall be used in the non-HVHZ only.
CRC Biltmore® (Brampton, Calgary, Hawkesbury, Kankakee, Sumas & Toronto)	13-3/4" x 40-7/8", ASTM D 3161, Class F self-sealing, fiberglass reinforced, laminated architectural asphalt shingle surfaced with granules complying with ASTM D 3462. Shingles manufactured in Brampton, Calgary and Toronto shall be used in the non-HVHZ only.
CRC Regency® (Calgary & Hawkesbury)	13-3/4" x 40-7/8", ASTM D 3161, Class F self-sealing, fiberglass reinforced, laminated architectural asphalt shingle surfaced with granules complying with ASTM D 3462. Shingles manufactured in Calgary shall be used in the non-HVHZ only.
CRC Superglass® (Calgary, Hawkesbury & Toronto)	13-1/4" x 39-3/8", ASTM D 3161, Class F self-sealing, 3-tab asphalt shingle with fiberglass mat coated on both sides with asphalt and surfaced with granules complying with ASTM D 3462. Shingles manufactured in Calgary and Toronto shall be used in the non-HVHZ only.
Marathon™ Plus AR (Calgary, Hawkesbury, Hillsboro, Kankakee, Sumas, Sylacauga & Toronto)	13-1/4" x 39-3/8", ASTM D 3161, Class F self-sealing, 3-tab asphalt shingle with fiberglass mat coated on both sides with asphalt and surfaced with granules complying with ASTM D 3462. Shingles manufactured in Calgary, Sumas and Toronto shall be used in the non-HVHZ only.
Hip & Ridge™ 12 (Calgary, Kankakee, Sylacauga & Toronto)	13-1/4" x 36", ASTM D 3161, Class F fiberglass reinforced, monolayer asphalt hip and ridge shingle surfaced with granules and perforated every 12-inches complying with ASTM D 3462.
Hip & Ridge™ Class 4 (Calgary & Kankakee)	13-1/4" x 36", ASTM D 3161, Class F fiberglass reinforced, monolayer asphalt hip and ridge shingle surfaced with granules and perforated every 12-inches complying with ASTM D 3462.

IKO19002.5

FL30310-R4

Page 5 of 17

This evaluation report is provided for State of Florida product approval under Rule 61G20-3. The manufacturer shall notify CREEK Technical Services, LLC of any product changes or quality assurance changes throughout the duration for which this report is valid. This evaluation report does not express nor imply warranty, installation, recommended use, or other product attributes that are not specifically addressed herein.



Hip & Ridge Plus™ (Calgary)	13-/14: x 39-3/8", ASTM D 3161, Class F fiberglass reinforced, monolayer asphalt hip and ridge shingle surfaced with granules and perforated every 13-inches complying with ASTM D 3462. Shingles shall be used in the non-HVHZ only.
Hip and Ridge™ (Sumas)	13-1/4" x 39-3/8", ASTM D 3161, Class F fiberglass reinforced, monolayer asphalt hip and ridge shingle surfaced with granules and perforated every 10-inches complying with ASTM D 3462. <i>Shingles shall be used in the non-HVHZ only.</i>
Armour Starter™ (Calgary)	13-1/4" x 39-3/8", ASTM D 3161, Class F fiberglass reinforced asphalt strip embedded with granules complying with ASTM D 3462. For use with Armourshake™ shingles.
Leading Edge Plus™ (Calgary & Hawkesbury)	7-7/8" x 40-7/8", ASTM D 3161, Class F fiberglass reinforced, monolayer asphalt shingle strip surfaced with granules complying with ASTM D 3462. Shingles manufactured in Calgary shall be used in the non-HVHZ only.

FL30310-R4

Page 6 of 17



#### INSTALLATION

Roofshake™ HW	Basic Wind Speed (Vult):	Max. 194 mph
(Calgary)	Basic Wind Speed (Vasd):	Max. 150 mph
	Deck (HVHZ):	In accordance with FBC requirements;
		Solidly sheathed min. 19/32 in. plywood or wood plank for
		new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	Solidly sheathed in accordance with FBC requirements.
	Underlayment:	In accordance with FBC requirements. 2:12 and in accordance with FBC requirements. Refer to
	Min. slope:	the manufacturer's application instructions when installing
		shingles at slopes greater than 21:12.
	Installation (Non-HVHZ):	Installed with 5-7/8 inch exposure, in accordance with FBC
		requirements and manufacturer's published installation
		instructions. Shingles shall be attached using "4 Nail
		Pattern" detailed below.
Standard Ap Requires 4 N	-	Nail Line
	-	Roofshake™ HW (Non-HVHZ only)

FL30310-R4



Armourshake™	Basic Wind Speed (Vult):	Max. 194 mph
(Sumas)	Basic Wind Speed (Val):	Max. 150 mph
(Guinas)	Deck (HVHZ):	In accordance with FBC requirements;
	Deck (ITVTIZ).	Solidly sheathed min. 19/32 in. plywood or wood plank for
		new construction; Min. 15/32 in. plywood existing
		construction.
	Deck (Non-HVHZ):	Solidly sheathed in accordance with FBC requirements.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12.
	Installation (HVHZ):	Installed with 5-7/8 inch exposure in accordance with RAS 115 and manufacturer's published installation instructions. Shingles shall be attached using "6 Nail Pattern" detailed below.
	Installation (Non-HVHZ):	Installed with 5-7/8 inch exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "5 Nail Pattern" or "6 Nail Pattern" detailed below.
	Standard Applicatior Requires 5 Nails/Faste	
	Figure 2.	Alignment Notches Armourshake™
		(Non-HVHZ only)
	Nailing – Steep Slo Requires 6 Nails/Fa	ppes/High Wind Areas Applications asteners
	ail Line	
Ali N	gnment otches	Alignment Notches
	Figure 3.	Armourshake™ il Pattern
	0 NA	

This evaluation report is provided for State of Florida product approval under Rule 61G20-3. The manufacturer shall notify CREEK Technical Services, LLC of any product changes or quality assurance changes throughout the duration for which this report is valid. This evaluation report does not express nor imply warranty, installation, recommended use, or other product attributes that are not specifically addressed herein.

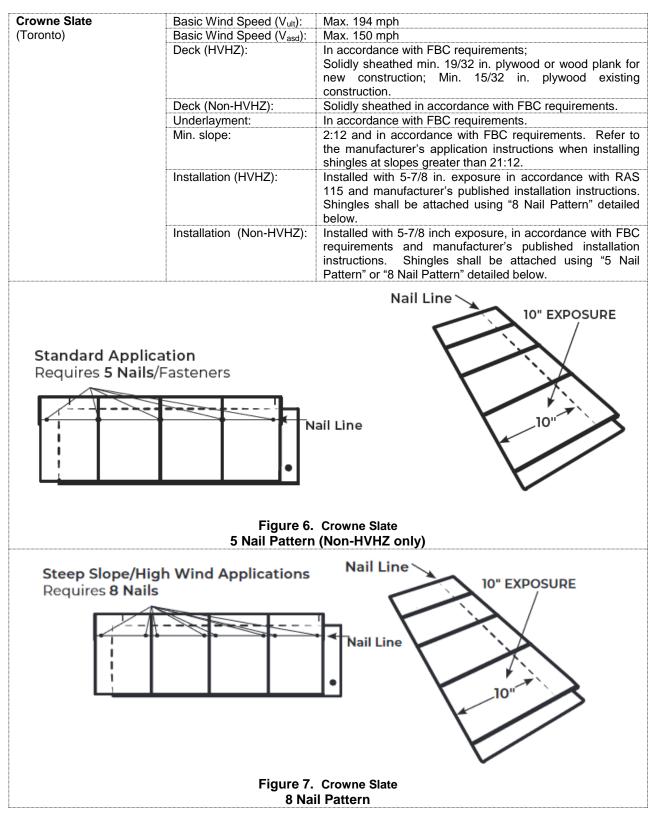


Royal Estate™	Basic Wind Speed (Vult):	Max. 194 mph
(Toronto)	Basic Wind Speed (Vaid):	Max. 150 mph
(*******)	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	Solidly sheathed in accordance with FBC requirements.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12.
	Installation (HVHZ):	Installed with 5-7/8 in. exposure in accordance with RAS 115 and manufacturer's published installation instructions. Shingles shall be attached using "6 Nail Pattern" detailed below.
	Installation (Non-HVHZ):	Installed with 5-7/8 in. exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "4 Nail Pattern" or "6 Nail Pattern" detailed below.
	ı"→ Figure 4.	Nails Royal Estate™
		(non-HVHZ only)
	Steep Slope/High Requires 6 Nails/F	Wind Applications asteners
	1"→ ←	Nails
		Royal Estate™ il Pattern

FL30310-R4

Page 9 of 17





FL30310-R4

Page 10 of 17



Dynasty™	Basia Wind Speed (V/ )	May 104 mph
(Calgary (Non-HVHZ),	Basic Wind Speed (V <sub>ult</sub> ): Basic Wind Speed (V <sub>asd</sub> ):	Max. 194 mph Max. 150 mph
Hawkesbury, Kankakee,	Deck (HVHZ):	In accordance with FBC requirements;
Sumas (Non-HVHZ) &		Solidly sheathed min. 19/32 in. plywood or wood plank for
Sylacauga)		new construction; Min. 15/32 in. plywood of wood plank for
-,		construction.
and	Deck (Non-HVHZ):	Solidly sheathed in accordance with FBC requirements.
	Underlayment:	In accordance with FBC requirements.
Nordic™	Min. slope:	2:12 and in accordance with FBC requirements. Refer to
(Calgary, Hillsboro (Non-	•	the manufacturer's application instructions when installing
HVHZ) & Kankakee)		shingles at slopes greater than 21:12.
	Installation (HVHZ):	Installed with 5-7/8 in. exposure in accordance with RAS
and		115 and manufacturer's published installation instructions.
CDC Deserver		Shingles shall be attached using "6 Nail Pattern" detailed
		below.
(Calgary (Non-HVHZ) & Hawkesbury)	Installation (Non-HVHZ):	Installed with 5-7/8 in. exposure in accordance with FBC
Hawkesbury)		requirements and manufacturer's published installation
		instructions. Shingles shall be attached using either "4 Nail
		Pattern" or "6 Nail Pattern" detailed below.
	$\sim$	Common Bond
		ArmourZone ordic <sup>™</sup> , and CRC Regency <sup>®</sup> (non-HVHZ only)
		ArmourZone ordic <sup>™</sup> , and CRC Regency <sup>®</sup> a (non-HVHZ only) 1-1/4* ArmourZone
		ArmourZone ordic <sup>™</sup> , and CRC Regency <sup>®</sup> (non-HVHZ only)
Steep Slope/High	4 Nail Patterr	ArmourZone ordic <sup>™</sup> , and CRC Regency <sup>®</sup> a (non-HVHZ only) 1-1/4 <sup>*</sup> ArmourZone
	4 Nail Patterr Wind Applications	ArmourZone ordic <sup>™</sup> , and CRC Regency <sup>®</sup> a (non-HVHZ only) 1-1/4 <sup>*</sup> ArmourZone
Steep Slope/High Requires 6 Nails/F	4 Nail Patterr Wind Applications	ArmourZone ordic <sup>™</sup> , and CRC Regency <sup>®</sup> a (non-HVHZ only) 1-1/4 <sup>*</sup> ArmourZone
	4 Nail Patterr Wind Applications	ArmourZone ordic™, and CRC Regency® (non-HVHZ only)
	4 Nail Patterr Wind Applications	ArmourZone ordic <sup>™</sup> , and CRC Regency <sup>®</sup> a (non-HVHZ only) 1-1/4 <sup>*</sup> ArmourZone
	4 Nail Patterr Wind Applications	ArmourZone ordic™, and CRC Regency® (non-HVHZ only)
	4 Nail Patterr Wind Applications	ArmourZone ordic™, and CRC Regency® (non-HVHZ only)
	4 Nail Patterr Wind Applications	ArmourZone ordic™, and CRC Regency® (non-HVHZ only) 1-1/4* ArmourZone Common Bond Common Bond
	4 Nail Patterr Wind Applications	ArmourZone ordic <sup>™</sup> , and CRC Regency <sup>®</sup> (non-HVHZ only)
	4 Nail Patterr Wind Applications	ArmourZone ordic™, and CRC Regency® (non-HVHZ only) 1-1/4* ArmourZone Common Bond Common Bond
	4 Nail Patterr Wind Applications	ArmourZone ordic™, and CRC Regency® (non-HVHZ only) 1-1/4* ArmourZone Common Bond 1-1/4*
	4 Nail Patterr	ArmourZone ordic <sup>TM</sup> , and CRC Regency <sup>®</sup> (non-HVHZ only) 1-1/4" ArmourZone 1-1/4" ArmourZone Common Bond (ordic TM, and CRC Regency <sup>®</sup> (non-HVHZ only)
	4 Nail Patterr Wind Applications asteners Figure 9. Dynasty™ No.	ArmourZone ordic <sup>™</sup> , and CRC Regency® (non-HVHZ only) 1-1/4* ArmourZone 1-1/4* ArmourZone 1-1/4* ArmourZone

FL30310-R4

Page 11 of 17

This evaluation report is provided for State of Florida product approval under Rule 61G20-3. The manufacturer shall notify CREEK Technical Services, LLC of any product changes or quality assurance changes throughout the duration for which this report is valid. This evaluation report does not express nor imply warranty, installation, recommended use, or other product attributes that are not specifically addressed herein.



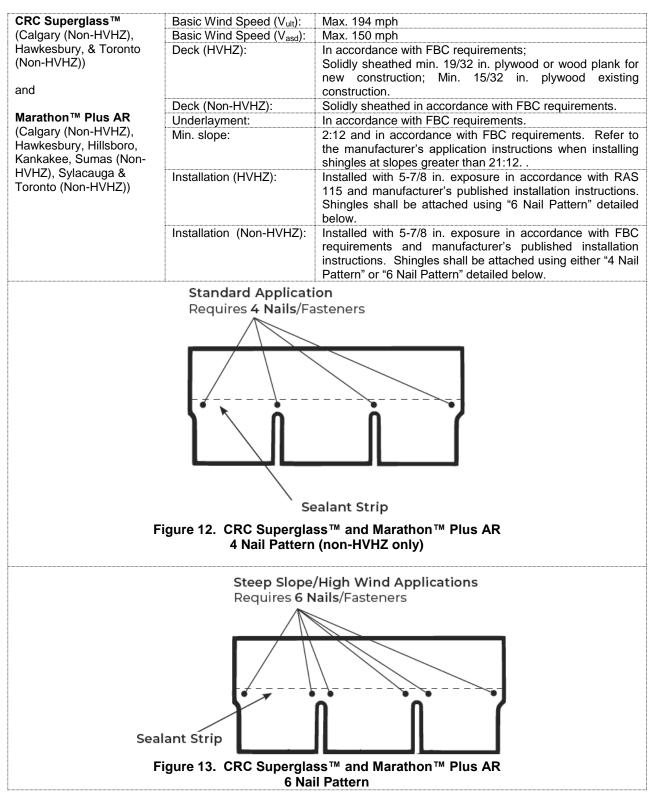
Cambridge™	Basic Wind Speed (Vult):	Max. 194 mph		
(Brampton (Non-HVHZ),	Basic Wind Speed (V <sub>asd</sub> ):	Max. 150 mph		
Calgary (Non-HVHZ), Hawkesbury, Hillsboro,	Deck (HVHZ):	In accordance with FBC requirements;		
Kankakee, Sumas,		Solidly sheathed min. 19/32 in. plywood or wood plank for		
Sylacauga & Toronto		new construction; Min. 15/32 in. plywood existing construction.		
(Non-HVHZ))	Deck (Non-HVHZ):	Solidly sheathed in accordance with FBC requirements.		
(110111112))	Underlayment:	In accordance with FBC requirements.		
and	Min. slope:	2:12 and in accordance with FBC requirements. Refer to		
CRC Biltmore™ (Brampton (Non-HVHZ), Calgary (Non-HVHZ), Hawkesbury, Kankakee, Sumas (Non-HVHZ) & Toronto (Non-HVHZ))	·	the manufacturer's application instructions when installing shingles at slopes greater than 21:12.		
	Installation (HVHZ):	Installed with 5-7/8 in. exposure in accordance with RAS 115 and manufacturer's published installation instructions. Shingles shall be attached using "6 Nail Pattern" detailed below.		
	Installation (Non-HVHZ):	Installed with 5-7/8 in. exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "4 Nail Pattern" or "6 Nail Pattern" detailed below.		
		Nail Line ge™ and CRC Biltmore™ (non-HVHZ only)		
		Nail Line Common Bond		
Stoop Slope/U	ah Wind Applicati	Common Bona		
Steep Slope/High Wind Applications				
Requires 6 Nails/Fasteners				
$\wedge$				
· · · · · ·		Nail Line		
		5-7/8		
Figure 11. Cambridge™ and CRC Biltmore™ 6 Nail Pattern				

FL30310-R4

Page 12 of 17

This evaluation report is provided for State of Florida product approval under Rule 61G20-3. The manufacturer shall notify CREEK Technical Services, LLC of any product changes or quality assurance changes throughout the duration for which this report is valid. This evaluation report does not express nor imply warranty, installation, recommended use, or other product attributes that are not specifically addressed herein.





FL30310-R4

Page 13 of 17

This evaluation report is provided for State of Florida product approval under Rule 61G20-3. The manufacturer shall notify CREEK Technical Services, LLC of any product changes or quality assurance changes throughout the duration for which this report is valid. This evaluation report does not express nor imply warranty, installation, recommended use, or other product attributes that are not specifically addressed herein.

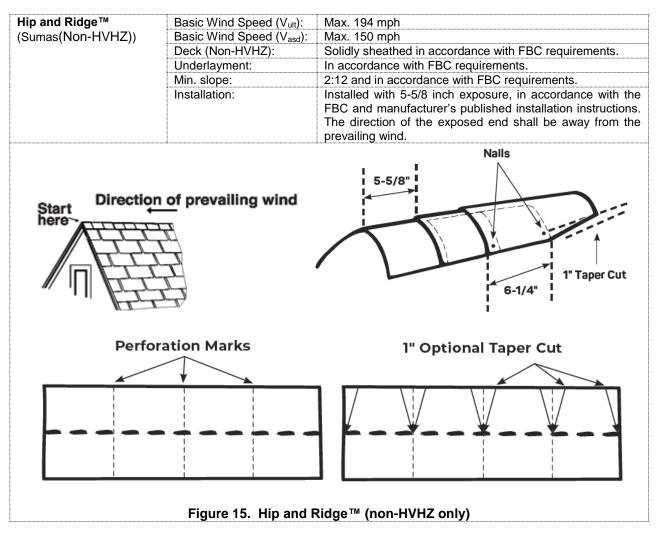


		Marc 404 and		
Hip & Ridge™ 12	Basic Wind Speed (Vult):	Max. 194 mph		
(Calgary, Kankakee,	Basic Wind Speed (V <sub>asd</sub> ):	Max. 150 mph		
Sylacauga & Toronto)	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed		
and		min. 19/32 in. plywood or wood plank for new construction;		
anu	Deck (Non-HVHZ):	Min. 15/32 in. plywood existing construction.		
Hip & Ridge™ Class 4		Solidly sheathed in accordance with FBC requirements.		
(Calgary & Kankakee)	Underlayment:	In accordance with FBC requirements.		
(ouigury a rankatoo)	Min. slope:	2:12 and in accordance with FBC requirements.		
and	Installation:	Installed with 5-5/8 inch exposure in accordance with the		
		FBC and manufacturer's published installation instructions.		
Hip & Ridge Plus™		The direction of the exposed end shall be away from the		
(Calgary (Non-HVHZ))		prevailing wind.		
Perforation Marks				
Start Direction of prevailing wind				
		Nails		
	5-5/8" 			
4		1" Taper Cut 6-1/4"		
Figure 14. Hip & Ridge™ 12, Hip & Ridge Class 4 and Hip & Ridge Plus™ (non-HVHZ only)				

Page 14 of 17

This evaluation report is provided for State of Florida product approval under Rule 61G20-3. The manufacturer shall notify CREEK Technical Services, LLC of any product changes or quality assurance changes throughout the duration for which this report is valid. This evaluation report does not express nor imply warranty, installation, recommended use, or other product attributes that are not specifically addressed herein.





Page 15 of 17



Armour Starter™	Basic Wind Speed (Vult):	Max. 194 mph
(Calgary)	Basic Wind Speed (V <sub>alt</sub> ): Basic Wind Speed (V <sub>asd</sub> ):	Max. 150 mph
	······	In accordance with FBC requirements; Solidly sheathed
	Deck (HVHZ):	min. 19/32 in. plywood or wood plank for new construction;
		Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	Solidly sheathed in accordance with FBC requirements.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements.
	Installation:	Installed in accordance with the FBC and manufacturer's
		published installation instructions. Shall be attached with min. 1" x 12 ga. roofing nails with min. 3/8-inch head.
Sta	ndard Application Req	uires <b>4 Nails</b> /Fasteners
E		
E E		
T		Match Color
	STARTER COURSE	to Selected
	1" and 13" from Each	
		Shingle
	Figure 16. A	rmour Starter™
Leading Edge Plus™	Basic Wind Spood (V/):	Max 104 mph
(Calgary (Non-HVHZ) &	Basic Wind Speed (V <sub>ult</sub> ):	Max. 194 mph
Hawkesbury)	Basic Wind Speed (V <sub>asd</sub> ):	Max. 150 mph In accordance with FBC requirements; Solidly sheathed
Tawkesbury)	Deck (HVHZ):	min. 19/32 in. plywood or wood plank for new construction Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	Solidly sheathed in accordance with FBC requirements.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements.
	Installation:	Installed in accordance with the FBC and manufacturer's
	motanation.	published installation instructions. Shall be attached with
		min. 1" x 12 ga. roofing nails with min. 3/8-inch head.
	Application 4 Nails/Fasteners	1" from Each End
L		3" to 4" from Bottom

This evaluation report is provided for State of Florida product approval under Rule 61G20-3. The manufacturer shall notify CREEK Technical Services, LLC of any product changes or quality assurance changes throughout the duration for which this report is valid. This evaluation report does not express nor imply warranty, installation, recommended use, or other product attributes that are not specifically addressed herein.

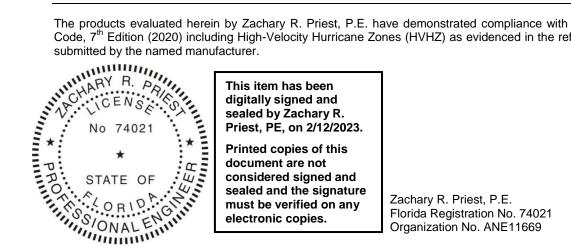


#### LIMITATIONS

- 1) Fire Classification is not within the scope of this evaluation.
- The roof deck and the roof deck attachment shall be designed by others to meet the minimum design loads 2) established for components and cladding and in accordance with FBC requirements.
- 3) The mean roof height shall be restricted to a maximum 33 ft in the HVHZ.
- 4) Deck substrates shall be clean, dry, and free from any irregularities and debris. All fasteners in the deck shall be checked for protrusion and corrected prior to underlayment application.
- 5) Shingles shall be installed starting at the eave in horizontal layers such that the laps shed water from the deck.
- 6) Installation of the evaluated products shall comply with this report, the FBC, and the manufacturer's published application instructions. Where discrepancies exist between these sources, the more restrictive and code compliant detail shall prevail.
- 7) All products listed in this report shall be manufactured under a quality assurance program in compliance with Rule 61G20-3.

#### **COMPLIANCE STATEMENT**

The products evaluated herein by Zachary R. Priest, P.E. have demonstrated compliance with the Florida Building Code, 7<sup>th</sup> Edition (2020) including High-Velocity Hurricane Zones (HVHZ) as evidenced in the referenced documents submitted by the named manufacturer.



#### **CERTIFICATION OF INDEPENDENCE**

CREEK Technical Services, LLC does not have, nor will it acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

CREEK Technical Services, LLC is not owned, operated, or controlled by any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

## END OF REPORT

IKO19002.5

FL30310-R4

Page 17 of 17