



FLORIDA BUILDING CODE ENGINEERING EVALUATION REPORT

Date | Dec 16, 2020
File No. | 0081-1-2
For | Bluelinx Corporation
Address | 4300 Wildwood Parkway, Atlanta, GA 30339

Subject

PROLinx UDL10, UDL20, UDL30 Roofing Underlayment

Evaluation Scope

This report is provided to assist registered design professionals and building officials in the United States with determining compliance to the performance objectives in the named building codes. The product(s) described herein have been evaluated to the 2020 Florida Building Code (FBC) and Residential Code (FBC-R).

CSI DIVISION: 07 00 00 THERMAL AND MOISTURE PROTECTION

SUBDIVISION: 07 30 05 Roofing Felt and Underlayment

FBC CATEGORY: Roofing

SUB-CATEGORY: Underlayments

CODE SECTIONS AND STANDARDS:

<u>FBC Section</u>	<u>Description</u>	<u>Referenced Standard or Code Section¹</u>	<u>Year</u>
1505.1	Fire Classification	ASTM E108	2016
1507.1.1.1	Underlayment for asphalt, metal, mineral surfaced, slate and slate-type roof coverings	ASTM D226	2009
		ASTM D4533	2015
		ASTM D5035	2011
		ASTM D4869	2016

<u>FBC-R Section</u>	<u>Property</u>	<u>Referenced Standard or Code Section¹</u>	<u>Year</u>
R902.1	Fire Classification	ASTM E108	2016
R905.1.1.1	Underlayment for asphalt, metal, mineral surfaced, slate and slate-type roof coverings	ASTM D226	2009
		ASTM D4533	2015
		ASTM D5035	2011
		ASTM D4869	2016

1. Only the applicable reference standards and code sections cited in the main body text are listed. (-) indicates that the main body text covers the full explanation of the objective.



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Compliance Statement: PROLinX UDL10, UDL20, UDL30 Roofing Underlayment, installed as described in this report, have demonstrated compliance with the listed sections of the 2020 Florida Building Code (FBC) and Residential Code (FBC-R), through testing in accordance with the code-referenced Standards. Design and performance information can be found in Section 2 of this report.

This report has been prepared and reviewed on behalf of Boca Engineering Co. by:

Christopher Bowness, P.Eng., P.E.

2020-12-16

Date



Evaluation

1.0 PRODUCT DESCRIPTION:

- 1.1 **PROLinX UDL10, UDL20, UDL30 Roofing Underlayment** is a mechanically attached roll underlay sheet comprised of a non-woven polymeric top scrim laminated onto a cross-woven bottom scrim. The underlayment is an approved ASTM D226 Type II alternate in accordance with FBC 1507.1.1.1 and R905.1.1.1.
- 1.2 **UDL10** has an overall nominal weight of 1.74 lbs per 100 sqft.
- 1.3 **UDL20** has an overall nominal weight of 1.97 lbs per 100 sqft. The bottom side of cross-woven scrim is coated with an elastomeric material.
- 1.4 **UDL30** an overall nominal weight of 2.5 lbs per 100 sqft. The exposed side is coated with an elastomeric material.

2.0 TECHNICAL EVALUATION:

2.1 INSTALLATION

- 2.1.1 PROLinX underlayment shall be installed in accordance with the Florida Building Code and this report, subject to the Limitations in Section 3.
- 2.1.2 Underlayment is applied on a nailable deck, with overlaps and fastening per FBC Table 1507.1.1.1 or R905.1.1.1 for the applicable type of roof covering.
- 2.1.3 The roof assembly construction details of FBC 1503 or R903 are to be followed. Flashing, ventilation, and drainage details are to be applied and interact with the underlayment in accordance with the Code requirements.
- 2.1.4 Joints in the roof deck must be prepared and flashed in accordance with FBC 1507.1.1.1 or R905.1.1.1, prior to applying the roof underlayment.



2.2 CODE SECTIONS REVIEW

<u>FBC Section</u>	<u>Description</u>
1505.1	Fire Classification See Section 4 of this report.
1507.1.1.1	Underlayment for asphalt, metal, mineral surfaced, slate and slate-type roof coverings The underlayments are in compliance with the requirements of Method 2 and 3 Exception (alternate) and of Method 5. The products are a reinforced synthetic underlayment that has been tested and found as an alternative to underlayment complying with the physical properties requirements of ASTM D226 Type II, has a minimum tear strength of 15 lbf in accordance with ASTM D4533, a minimum tensile strength of 20 lbf/inch in accordance with ASTM D5035 and meets the liquid water transmission test of Section 8.6 of ASTM D4869. References to the applicable third-party testing reports are found in Section 9 of this report. The installation details and limitations are as per Sections 2.1 and 3 of this report.
<u>FBC-R Section</u>	<u>Property</u>
R902.1	Fire Classification See Section 4 of this report.
R905.1.1	Underlayment for asphalt, metal, mineral surfaced, slate and slate-type roof coverings Same as this report commentary to FBC 1507.1.1.1.

3.0 LIMITATIONS:

- 3.1 This Evaluation is for the base code requirements of the building system as addressed in this report. In some building applications, additional performance objectives may be required by Code which must be addressed in the building design for those specific cases.
- 3.2 Design calculations, drawings, and special inspections are to be furnished for building projects by registered professionals as required by the respective jurisdictional authorities and Codes.
- 3.3 The underlayment is for use only on nailable decks as described in FBC Table 1507.1.1.1 or R905.1.1.1.
- 3.4 Roof coverings are limited to those in FBC 1507.1.1.1 or R905.1.1.1, or with a recognized mechanically attached approved alternate where synthetic underlayment approved alternates to ASTM D226 is a recognized component of the installation in accordance with the roof covering product approval.
- 3.5 Installation as an underlayment for Concrete and Clay roof tiles and Wood Shakes and Shingles is not recognized within the scope of this report.
- 3.6 Roof slopes must be 2:12 or greater.
- 3.7 Where V_{ult} exceeds 170 mph, metal cap nails are required.
- 3.8 This product is not for use as materials in built-up roofing as described in FBC 1507.10 or R905.9.
- 3.9 Scope of evaluation does not include High Velocity Hurricane Zone sections of the Code.



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4.0 FIRE CLASSIFICATION:

FBC 1505.1, FBC-R R902.1: Fire Classification

Where roof fire classification of Class A, B, or C is required, Bluelinx PROLinX UDL10, UDL20, UDL30 underlayments are approved as components in specific ASTM E108 Listed assemblies by QAI Laboratories which may be found at <https://qai.org/directory/bluelinx-corporation-2/>. Classification only applies to those Listed assembly details.

5.0 QUALITY ASSURANCE ENTITY:

The products evaluated in this report are surveyed at the approved manufacturing locations with third-party quality assurance inspections and product certification labeling by QAI.

6.0 MANUFACTURING PLANTS:

Any manufacturing location approved by the quality assurance entity.

7.0 LABELING:

Labeling shall be in accordance with the requirements of the FBC, and the Accredited Quality Assurance Agency.

8.0 EVALUATION RENEWALS: This Evaluation Report expires Dec 31, 2023, open to renewal. Up to the renewal date, the report is valid until such time as the named product(s) changes, the Quality Assurance Agency changes, or provisions of the Code that relate to the product change.

9.0 REFERENCE TESTING AND EVALUATION DOCUMENTS:

Bluelinx I.d.	Performance Subject	Standard	Entity	Entity Accred. ¹	Report No.	Issue Date
PROLinX UDL10	Specification alt. compliance	ASTM D226	QAI	IAS TL-220	RJ5049P-4	2016-11-11
	Tear Strength	ASTM D4533	QAI	IAS TL-220	RJ7745P-4	2020-12-15
	Tensile Strength	ASTM D5035	QAI	IAS TL-220	RJ7745P-1	2020-10-21
	Alt. solution physical properties	ICC-ES AC188	QAI	IAS TL-220	RJ4403-9 ²	2016-02-22
	Fire Classification	ASTM E108	QAI	IAS PCA-119	B1108-1	2017-10-17
	QA Inspections	ISO 17020	QAI	IAS AA-723	B1108-1	2017-10-17
PROLinX UDL20	Specification alt. compliance	ASTM D226	QAI	IAS TL-220	RJ5049P-4	2016-11-11
	Tear Strength	ASTM D4533	QAI	IAS TL-220	RJ7745P-4	2020-12-15
	Tensile Strength	ASTM D5035	QAI	IAS TL-220	RJ7745P-1	2020-10-21
	Alt. solution physical properties	ICC-ES AC188	QAI	IAS TL-220	RJ4403-EEV ²	2014-06-18
	Fire Classification	ASTM E108	QAI	IAS PCA-119	B1108-1	2017-10-17
	QA Inspections	ISO 17020	QAI	IAS AA-723	B1108-1	2017-10-17
PROLinX UDL30	Specification alt. compliance	ASTM D226	QAI	IAS TL-220	RJ3157-P-9	2016-12-13
	Tear Strength	ASTM D4533	QAI	IAS TL-220	RJ7745P-4	2020-12-15
	Tensile Strength	ASTM D5035	QAI	IAS TL-220	RJ7745P-1	2020-10-21
	Alt. solution physical properties	ICC-ES AC188	QAI	IAS TL-220	RJ3157-EEV-A ²	2014-06-18
	Fire Classification	ASTM E108	QAI	IAS PCA-119	B1108-1	2017-10-17
	QA Inspections	ISO 17020	QAI	IAS AA-723	B1108-1	2017-10-17

1. Testing, certification, evaluation, and inspection agencies referenced have been verified to be accredited by the International Accreditation Service (www.iasonline.org) for the applicable scope, in good standing on the date of the evaluation, in accordance with ISO 17025 and ISO 17020 international standards for testing and inspection bodies. Approved Organization status with FBC also accepted.
2. This test report includes testing to the liquid water transmission section of ASTM D4869.



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10.0 CERTIFICATION OF INDEPENDENCE:

1. Boca Engineering Co., its employees and shareholders, do not have, nor do they intend to or will acquire, a financial interest in any company manufacturing or distributing products that they evaluate.
2. Boca Engineering Co. is not owned, operated or controlled by any company manufacturing or distributing products that they evaluate.

11.0 EVALUATION REPORT TERMS:

This report is a general evaluation of the building code section requirements as identified and applies only to the samples that were evaluated. It does not imply any endorsement or warranty, nor that the signatory Engineer is the Designer of Record of any construction project for which the information is used.

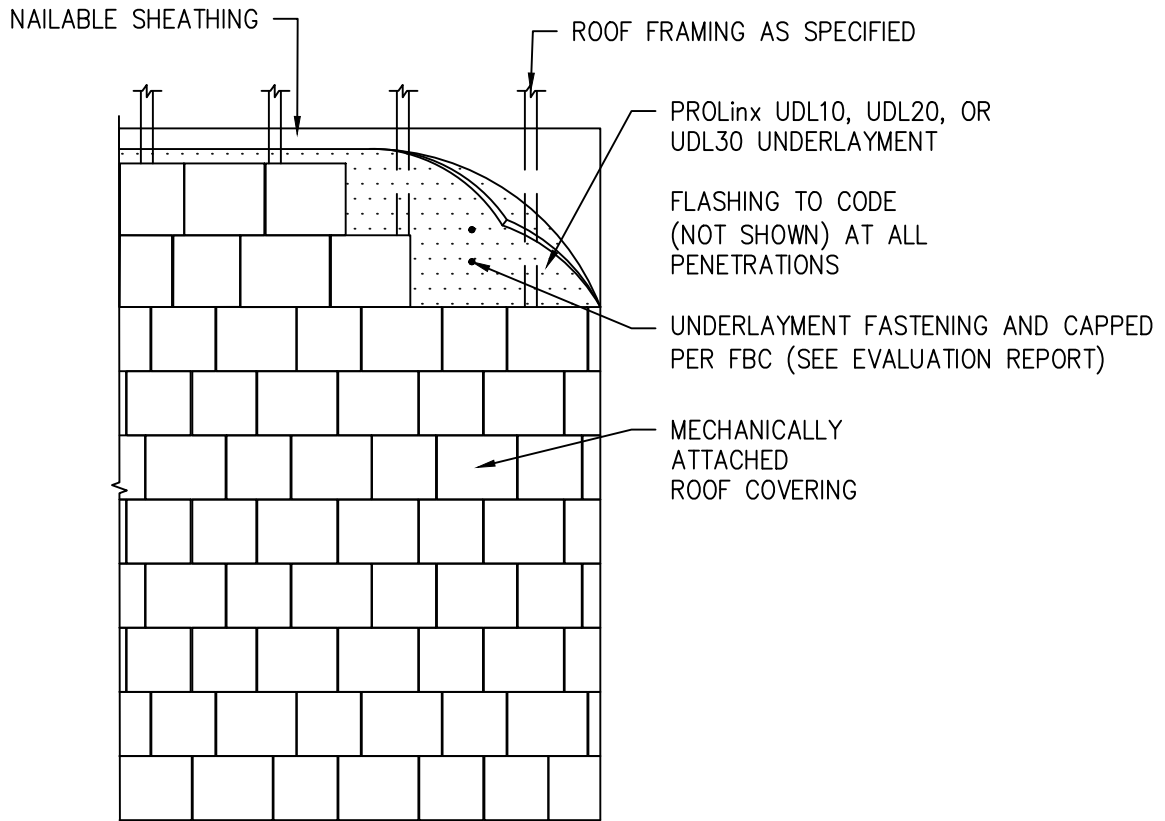
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ATTACHMENTS:

1. Diagram of Typical Roof Assembly with PROLinX UDL Underlayment _____ (pg 6)



PROlinx UDL10, UDL20, UDL30 ROOFING UNDERLAYMENT ROOF ASSEMBLY COMPONENTS DIAGRAM



A
1

GENERAL ROOFING INSTALLATION ASSEMBLY
ELEVATION VIEW NOT-TO-SCALE

NOTES:

1. THE INSTALLATION DETAILS DESCRIBED ARE OF THE LABORATORY TESTED ASSEMBLY AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, THE LICENSED ENGINEER OR ARCHITECT PREPARED SITE-SPECIFIC DOCUMENTS SHALL BE USED.
2. THESE DRAWINGS APPLY TO THE TESTING ASSEMBLY ONLY AND DO NOT IMPLY THAT THE SIGNATORY ENGINEER IS THE DESIGNER OF RECORD FOR ANY FUTURE CONSTRUCTION ON WHICH THEY ARE USED.

DRAWING FOR PROlinx UDL10, UDL20, UDL30 ROOFING UNDERLAYMENT ENGINEERING EVALUATION REPORT – NOT FOR USE AS CONSTRUCTION DESIGN DOCUMENTS

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CLIENT:	PROJECT:	TITLE:
BLUELINX CORPORATION	PROlinx ROOFING UNDERLAYMENT	BLUElinx ROOFING INSTALLATION COMPONENT DETAILS

0	2020/10/26	FOR PUBLICATION	CB
REV	DATE	ISSUE	APP
DRAWING NO.	0081-1-2		
DATE	OCTOBER 26, 2020	DES	CB
		DRN	LI
		CHK	CB