Code Compliance Research Report
CCRR-1105

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DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Section: 07 30 05 – Roofing Felt and Underlayment

REPORT HOLDER:
Intertape Polymer Inc.
50 Abbey Avenue
Truro, N.S B2N 6W4
Canada
1-800-565-2000
www.itape.com

REPORT SUBJECT:
NovaSeal Pro, NovaSeal Prime, NovaSeal Elite, NovaSeal Ultra, NovaSeal Ultra SA-HT, Palisade, Palisade SA-HT, Palisade Butyl-HT, and Palisade Butyl-HT PLUS Synthetic Roofing Underlayments

ADDITIONAL LISTEE:
Kratos Building Products
12901 Nicholson Road, Suite 330
Farmers Branch, TX 75234
www.kratosbp.com

ADDITIONAL LISTEE SUBJECT:
Kratos Synthetic Roofing Underlayment

ADDITIONAL LISTEE:
Klaus Roofing Systems
29 Northridge Drive
Windham, CT 06256
www.klausroofingsystems.com

ADDITIONAL LISTEE SUBJECT:
Velora One Roof Underlayment

ADDITIONAL LISTEE:
Taylor Metal Products
4566 Ridge Drive NE,
Salem, OR 97301
www.taylormetal.com

ADDITIONAL LISTEE SUBJECT:
TMP SAM-HT Underlayment

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2024, 2021, 2018 *International Building Code®* (IBC)
- 2024, 2021, 2018 *International Residential Code®* (IRC)
- 2023 *Florida Building Code* (FBC) - Building and Residential Codes, including High-Velocity-Hurricane Zones (HVHZ) (see Section 9)

NOTE: This report references the most recent Code editions noted. Section numbers in earlier editions may differ.

1.2 The underlayments have been evaluated for the following properties (see Table 1):

- Physical properties
- Ice barrier
- Fire classification

1.3 The NovaSeal Pro, NovaSeal Prime, NovaSeal Elite, NovaSeal Ultra, and Palisade underlayments have been evaluated for the following uses (see Table 1):

- Under the 2024 IBC and IRC, the underlayments may be used in the field of roofs where ASTM D8257-compliant underlayments are required as specified in IBC Chapter 15 and IRC Chapter 9
- Under the 2021 and 2018 Codes, the underlayment may be used as an alternative to the ASTM D226, Type I and Type II, roof underlayments specified in IBC Chapter 15 and IRC Chapter 9
- In areas of the roof required by IBC Section 1507 or IRC Section R905 to have an ice barrier roof underlayment, when installed as noted in Section 4.2
- As a component of a classified assembly when installed as noted in Section 4.1 of this report

1.4 NovaSeal Ultra SA-HT, Palisade SA-HT, Palisade Butyl-HT, and Palisade Butyl-HT PLUS underlayments have been evaluated for the following uses (see Table 1):

- Use in the field of the roof where ASTM D1970-compliant self-adhering roof underlayments are required as specified in IBC Chapter 15 and IRC Chapter 9
- Use in areas of the roof required by IBC Section 1507 or IRC Section R905 to have an ice barrier roof underlayment, when installed as noted in Section 4.2
- Use of Palisade SA-HT and NovaSeal Ultra SA-HT as a component of classified assemblies when installed as described Section 4.1

Use of Palisade Butyl-HT and Palisade Butyl-HT PLUS is limited to buildings permitted to have non-classified roofing in accordance with IBC Section 1505.5.

2.0 STATEMENT OF COMPLIANCE

NovaSeal Pro, NovaSeal Prime, NovaSeal Elite, NovaSeal Ultra, and Palisade Synthetic Roofing Underlayments, as well as NovaSeal Ultra SA-HT, Palisade SA-HT, Palisade Butyl-HT, and Palisade Butyl-HT PLUS Self-Adhered Roofing Underlayments comply with the Codes listed in Section 1.1, for the properties stated in Section 1.2, and uses stated in Section 1.3 and 1.4, when installed as described in this report, including the Conditions of Use stated in Section 6.0.

3.0 DESCRIPTION

3.1 NovaSeal Pro Synthetic Roofing Underlayment: NovaSeal Pro is a mechanically attached, synthetic roofing underlayment consisting of a non-woven polypropylene top scrim laminated to a central woven polypropylene scrim with polymeric coating on the sheathing side. The underlayment has a nominal weight of 1.76 pounds per 100 square feet. The underlayment roll size varies.

3.2 NovaSeal Prime Synthetic Roofing Underlayment: NovaSeal Prime is a mechanically attached, synthetic roofing underlayment consisting of a non-woven polypropylene top scrim laminated to a central woven polypropylene scrim with polymeric coating on the sheathing side. The underlayment has a nominal weight of 2.1 pounds per 100 square feet. The underlayment roll size varies.

NovaSeal Prime is also labeled as Kratos Synthetic Roofing Underlayment.

3.3 NovaSeal Elite Synthetic Roofing Underlayment: NovaSeal Elite is a mechanically attached, synthetic roofing underlayment consisting of a non-woven polypropylene top scrim laminated to a central woven polypropylene scrim with a polymeric coating on the sheathing side. The underlayment has a nominal weight of 2.8 pounds per 100 square feet. The underlayment roll size varies.

3.4 NovaSeal Ultra Synthetic Roofing Underlayment: NovaSeal Ultra is a mechanically attached, synthetic roofing underlayment consisting of a non-woven polypropylene top scrim laminated to a central woven polypropylene scrim with a polymeric coating on the sheathing side. The underlayment has a nominal weight of 3.4 pounds per 100 square feet. The underlayment roll size varies.

NovaSeal Ultra is also labeled as Velora One Roof Underlayment.

3.5 NovaSeal Ultra SA-HT Self-Adhered Roofing Underlayment: NovaSeal Ultra SA-HT is a self-adhered underlayment consisting of a woven topside, woven scrim, modified bitumen adhesive layer, and a release liner. It is available in 36 in. width by 66.7 ft. length with a nominal weight of 18 pounds per 100 square feet. The exposed face is beige in color.

3.6 Palisade Synthetic Roofing Underlayment: Palisade is a four-layered mechanically attached, synthetic roofing underlayment consisting of a coating layer on the sheathing side, polypropylene woven fabric, LDPE lamination layer, and a PEV dotted non-woven fabric on the exposed side. The underlayment has a nominal weight of 3.2 pounds per 100 square feet.

3.7 Palisade SA-HT Self-Adhered Roofing Underlayment: Palisade SA-HT is a self-adhered underlayment consisting of a woven facer, adhesive compound, and a release liner. It is available in 36 in. width by 66.7 ft. length with a nominal weight of 18 pounds per 100 square feet. The exposed face is blue in color.

Palisade SA-HT is also labeled as TMP SAM-HT Underlayment.

3.8 Palisade Butyl-HT Self-Adhered Roofing Underlayment: Palisade Butyl-HT is a self-adhered underlayment consisting of a woven polypropylene facer, butyl and modified bitumen blend adhesive compound, and a release liner. It is available in a standard roll size of 36 in. width by 66.7 ft. length, with a nominal weight of 15.2 pounds per 100 square feet. The exposed face is blue in color.

3.9 Palisade Butyl-HT PLUS Self-Adhered Roofing Underlayment: Palisade Butyl-HT PLUS is a high temperature; self-adhered waterproofing membrane made with a butyl rubber adhesive formulation for steep slope roofing applications 2:12 and greater. Palisade Butyl-HT PLUS is composed of polyolefin composites fabric layer, butyl rubber adhesive layer and release film layer. The underlayment is blue in color on the exposed side. It has a nominal weight of 19.4 pounds per 100 square feet and is available in rolls of 3 ft. wide by 67 ft. long.

4.0 PERFORMANCE CHARACTERISTICS

4.1 Fire Classification: When installed in accordance with the assembly described in Table 2 of this report, the Novaseal Pro, NovaSeal Prime, NovaSeal Elite, NovaSeal Ultra, Palisade, NovaSeal Ultra SA-HT, and Palisade SA-HT roofing underlayments meet Class A fire classification per ASTM E108. Additionally, the underlayment may be used as follows:

- As a component of a classified roof assembly when specifically recognized as such in a Listing Report approved by the Code official
- As an alternative to the underlayment specified in the Code for roof coverings permitted under Exceptions 1 - 4 to IBC Section 1505.2 and Exceptions 1 - 4 to IRC Section R902.1
- Where non-classified roofing is permitted in IBC *S*ection 1505.5

4.2 Ice Barrier:

Mechanically Attached Roofing Underlayments: In areas of the roof required by IBC Section 1507.1.2 or IRC Section R905.1.2 to have an ice barrier, two layers of the roofing underlayment solidly cemented together may be used provided the ice barrier extends up the roof a minimum distance of 24 inches inside the exterior wall line of the building.

Self-Adhered Roofing Underlayment: When used as an ice barrier, the membrane is applied from the lower edge of the roof, extending up the roof a distance of 24 inches inside the exterior wall line of the building.

4.3 Vapor Permeability: NovaSeal and Palisade underlayments have permeances of 0.1 and 0.12 perms, respectively, based on testing in accordance with ASTM E96.

5.0 INSTALLATION

5.1 General: NovaSeal Pro, NovaSeal Prime, NovaSeal Elite, NovaSeal Ultra, Palisade, NovaSeal Ultra SA-HT, Palisade SA-HT, Palisade Butyl-HT, and Palisade Butyl-HT PLUS roofing underlayments must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

For NovaSeal Ultra SA-HT, Palisade SA-HT, Palisade Butyl-HT, and Palisade Butyl-HT PLUS Self-adhered Roofing Underlayments, the roof deck must be in proper condition to ensure adhesion. Installation is limited to solid-sheathed decks of plywood substrates. The membrane is self-adhered to the substrate after the release liner is removed.

The membrane must be lapped a minimum of 3 inches on horizontal seams and 6 inches on vertical seams. Flashings around protrusions must be installed under the NovaSeal Ultra SA-HT, Palisade SA-HT, Palisade Butyl-HT, and Palisade Butyl-HT PLUS Self-adhered Roofing Underlayments.

The underlayments may be installed with the roof coverings specified in IBC Table 1507.1.1(1) and IRC Table R905.1.1(1), where ASTM D8257-compliant (NovaSeal Pro, NovaSeal Prime, NovaSeal Elite, NovaSeal Ultra, and Palisade) and ASTM D1970-compliant (NovaSeal Ultra SA-HT, Palisade SA-HT, Palisade Butyl-HT, and Palisade Butyl-HT PLUS) underlayments are permitted. The underlayments must be installed in accordance with IBC Table 1507.1.1(2) and IRC Table R905.1.1(2) and fastened in accordance with IBC Table 1507.1.1(3) and IRC Table R905.1.1(3).

The underlayment must be laid with the print side up, with laps as required by the applicable Code, evaluation report, or manufacturer's instructions, whichever is more restrictive.

The roof covering may be installed immediately following the underlayment application, and the underlayment must be covered within the time designated in the report holder's published installation instructions.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 Installation is limited to use with approved mechanically attached roof covering systems.

6.3 Installation is limited to roof systems that do not involve hot asphalt or coal-tar pitch.

6.4 Installation is limited to roofs with a slope of 2:12 (17%) or greater.

6.5 Attic ventilation must be provided in accordance with the applicable Code because there are no requirements to evaluate vapor permeability of the underlayment.

6.6 Palisade Butyl-HT and Palisade Butyl-HT PLUS are limited to buildings permitted to have non-classified roofing in accordance with the IBC Section 1505.5, unless the underlayment is specifically recognized as a component of a classified roofing assembly in a listing approved by the Code official.

6.7 The underlayments are manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Reports of tests demonstrating compliance with ASTM D8257-20 and ASTM E108-20a for NovaSeal Pro, NovaSeal Prime, NovaSeal Elite, NovaSeal Ultra, and Palisade underlayments.

7.2 Reports of tests demonstrating compliance with ASTM D1970-21 and ASTM E108-20a for NovaSeal Ultra SA-HT and Palisade SA-HT underlayments.

7.3 Reports of tests demonstrating compliance with ASTM D1970-21 for Palisade Butyl-HT and Palisade Butyl-HT PLUS self-adhered underlayment.

7.4 Intertek Listing Report "Intertape – NovaSeal Pro, NovaSeal Prime, NovaSeal Elite, NovaSeal Ultra, NovaSeal Ultra SA-HT, Palisade, Palisade SA-HT and Palisade Butyl-HT Roofing Underlayments", on the Intertek Directory of Building Products.

7.5 Intertek Listing Report "Kratos Synthetic Roofing Underlayment" on the Intertek Directory of Building Products.

7.6 Intertek Listing Report "Velora One Roof Underlayment" on the Intertek Directory of Building Products.

7.7 Intertek Listing Report "Taylor Metal Products - TMP SAM-HT Self-Adhered Underlayment" on the Intertek Directory of Building Products.

8.0 IDENTIFICATION

The underlayments are identified with the manufacturer's name, address and telephone number, the product name, the Intertek Mark as shown below, and the Code Compliance Research Report number (CCRR-1105).

9.0 OTHER CODES

9.1 Florida Building Code: The NovaSeal Pro, NovaSeal Prime, NovaSeal Elite, NovaSeal Ultra, NovaSeal Ultra SA-HT, Palisade, Palisade SA-HT, Palisade Butyl-HT, and Palisade Butyl-HT PLUS underlayments, described in Sections 2.0 through 7.0 of this Research Report, comply with the *Florida Building Code – Building* and *Florida Building Code – Residential*, for the editions indicated in Section 1.1 of this report, subject to the following conditions:

9.1.1 For Use Outside HVHZ: The NovaSeal Pro, NovaSeal Prime, NovaSeal Elite, NovaSeal Ultra, and Palisade underlayments may be installed with the roof coverings specified in FBC (Building) Table 1507.1.1.1 and FBC (Residential) Table R905.1.1.1, where ASTM D8257-compliant underlayments are permitted.
The NovaSeal Ultra SA-HT, Palisade SA-HT, Palisade Butyl-HT, and Palisade Butyl-HT PLUS underlayments may be installed with the roof coverings specified in FBC (Building) Section 1507.1.1.1 and FBC (Residential) Section R905.1.1.1, where ASTM D1970-compliant underlayments are permitted. The underlayments must be installed in accordance with the provisions of FBC (Building) Section 1507 and FBC (Residential) R905.

When installed as described in Table 2 of this report, the roofing assembly meets Class A fire classification per ASTM E108. Additionally, the underlayments may be used as follows:

- As a component of a classified roof assembly when specifically recognized as such in a Listing Report approved by the Code official.
- As an alternative to the underlayment specified in the Code for roof coverings permitted under Exceptions 1 - 4 to FBC (Building) Section 1505.2 and Exceptions 1 - 4 to FBC (Residential) Section R902.1.
- Where non-classified roofing is permitted in FBC (Building) Section 1505.5.

9.1.2 For Use Inside HVHZ: The NovaSeal Pro, NovaSeal Prime, NovaSeal Elite, NovaSeal Ultra, and Palisade underlayments may be installed with the roof coverings specified in FBC (Building) Table 1518.2.1, where ASTM D8257-compliant underlayments are permitted. The NovaSeal Ultra SA-HT, Palisade SA-HT, Palisade Butyl-HT, and Palisade Butyl-HT PLUS underlayments may be installed with the roof coverings specified in FBC (Building) Section 1518, where ASTM D1970-compliant underlayments are permitted.

The NovaSeal Ultra SA-HT, Palisade SA-HT, Palisade Butyl-HT, and Palisade Butyl-HT PLUS underlayments may additionally be used where underlayments complying with TAS 103 are permitted in TAS 110, as referenced in FBC (Building) Section 1515.1.4. The underlayments must be installed in accordance with the provisions of FBC (Building) Section 1518. Evaluation for use with discontinuous roof tile systems in HVHZ is outside the scope of this report.

When installed as described in Table 2 of this report, the roofing assembly may be used where Class A fire classification is required in FBC (Building) Section 1516.2.1. Additionally, the underlayment may be used with roof coverings permitted under the Exception to FBC (Building) Section 1516.2.1.

Intertek is an approved evaluation entity and quality assurance entity pursuant to Florida Statute 553.842 – Product Evaluation and Approval.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the https://bpdirectory.intertek.com is recommended to ascertain the current version and status of this report.

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TABLE 1 – PROPERTIES EVALUATED

PROPERTY	APPLICABLE CODE SECTIONS[1]			
	IBC	IRC	FLORIDA BUILDING CODE - BUILDING	FLORIDA BUILDING CODE – RESIDENTIAL
Physical Properties	104.11, 1506, and 1507	R104.11, R904, and R905	104.11, 1506, 1507, 1515.1.4, 1516 and 1518.2	R904 and R905
Ice Barrier	1507	R905	N/A	N/A
Fire Classification	1505	R902.1	1505	R902

[1] NOTE: Section numbers may be different for earlier versions of the Codes

TABLE 2 – FIRE CLASSIFICATION

CLASSIFICATION AND SLOPE	DECK	UNDERLAYMENT	ROOF COVERING
Class A 2:12 or greater	A minimum nominal 3/8 in. thick Code Compliant exterior grade plywood	A single layer of NovaSeal Prime, NovaSeal Elite, or NovaSeal Ultra roofing underlayment mechanically fastened to the plywood every 12 in. oc in the field and 6 in. oc on the perimeter using plastic cap nails	Asphalt shingles Listed per ASTM D3462 with a minimum weight of 190 pounds per 100 square feet installed per manufacturer's installation
Class A 2:12 or greater	A minimum nominal 3/8 in. thick AC Grade exterior grade plywood	A single layer of Palisade roofing underlayment mechanically fastened to the plywood every 12 in. oc in the field and 6 in. oc on the perimeter using plastic cap nails, and 4 in. overlap on horizontal joints	Asphalt shingles Listed per ASTM D3462 with a minimum weight of 180 pounds per 100 square feet installed per manufacturer's installation instructions
Class A 2:12 or greater	A minimum nominal 3/8 in. thick AC Grade exterior grade plywood	A single layer of NovaSeal Ultra SA-HT or Palisade SA-HT roofing underlayment installed using the products peel and stick backing	Asphalt shingles Listed per ASTM D3462 with a minimum weight of 190 pounds per 100 square feet installed per manufacturer's installation instructions
Class A 2:12 or greater	A minimum nominal 3/8 in. thick AC Grade exterior grade plywood	A single layer of NovaSeal Pro roofing underlayment mechanically fastened to the plywood every 12 in. oc in the field, 6 in. oc on the perimeter using plastic cap nails, and 4 in. overlap on horizontal joints	Asphalt shingles Listed per ASTM D3462 with a minimum weight of 190 pounds per 100 square feet installed per manufacturer's installation instructions