



PALISADETM

SYNTHETIC UNDERLAYMENT

ARCHITECTS & SPECIFIERS : SHINGLES, TILES, & ROOF COVERINGS - 07305

1. Product Name

PALISADETM Synthetic Roofing Underlayment

2. Manufacturer

SDP Advanced Polymer Products Inc. 410-130 Bridgeland Ave., Toronto, Ontario, Canada M6A-1Z4
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3. Product Description

BASIC USE

PALISADETM synthetic roofing underlayment is used on steep sloped roofs beneath shingles, tiles, metal, copper shake, slate, and non fire retardant wood shake as a replacement of ASTM D226 Type I & Type II asphalt felt paper underlayment. The underlayment is also used as component of classified roofing assemblies when installed as described in this report.

PALISADETM synthetic roofing underlayment is a water shedding device designed to reduce the occurrence of leaks caused by wind driven rain penetrating primary roof system coverings, as well as damaged roof coverings, and as temporary cover on exposed roof systems. PALISADETM is not substitute for self adhered bitumen underlayments designed for ice damming conditions.

PALISADETM synthetic roofing underlayment is a lightweight (10 squares per 40 lb roll), synthetic polymer underlayment possessing very high tear strength (30X Type I asphalt felt paper) to resist tearing, ripping and blow offs from high wind exposure. PALISADETM possesses STRONGHOLDTM skid resistant technology which provides superior applicator and roof loading traction safety, advanced UV technology for up to 6 month exposed roof protection, and CLASS A fire rating under shingle, tile, metal, slate, and non fire retardant wood shake roof coverings.

PALISADETM provides for significantly enhanced productivity enhancements to applicators due to the low weight per roll and superior roll coverage, and increased security and reduced water damage in prolonged exposed roof conditions.

PALISADETM utilizes a light blue KOOL BLUETM technology to render the material low glare, and cool temperature during handling and installation, and reduces surface heat buildup by over 8X compared to black asphalt felt paper.

COMPOSITION & MATERIALS

PALISADETM is a mechanically attached, steep sloped roofing underlayment comprised 100% of high temperature, high strength polymers. PALISADETM is a coated woven polyolefin, possessing STRONGHOLDTM skid resistant technology on the upper surface, a high strength inner woven core, and skid resistant lower surface to reduce underlayment/wood deck interface slippage during installation.

PRECAUTIONS & LIMITATIONS

- Depending on roof pitch and surface conditions (wet, dusty, frost, dew), coefficient of friction may change, and surface can become slippery.
- Consistent with good roofing practices as referenced by OSHA, use caution when walking or standing on roof deck, and always wear fall protection.
- In high wind or long term exposed roof conditions, follow installation instructions to increase fastening rate hold down force on the underlayment, and seal laps.
- Do not leave permanently exposed to sunlight. PALISADETM is not designed to replace primary roof covering, but can be left exposed for up to 6 months if installation instructions are followed.



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4. Technical Data

APPLICABLE STANDARDS

ASTM International

- ASTM D146, Standard Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing
- ASTM D226-97a, Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
- ASTM D228, Standard Test Methods for Asphalt Roll Roofing, Cap Sheets, and Shingles
- ASTM D412-98a, Test Method for Vulcanized Rubber, Thermoplastic Rubbers, and Thermoplastic Elastomers-in-Tension
- ASTM D828-97, Test Method for Tensile Properties of Paper and Paperboard Using Constant-Rate-of-Elongation Apparatus
- ASTM D4533, Test Method for Index Trapezoidal Tearing Strength of Geotextiles
- ASTM D4869-03, Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing
- ASTM D1876, Standard Test Method for Peel Resistance of Adhesives (T-Peel Test)
- ASTM D1938, Standard Test Method for Tear-Propagation Resistance (Trousers Tear) of Plastic Film and Thin Sheeting by a Single-Tear Method
- ASTM D1970-00, Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
- ASTM D2523, Standard Practice for Testing Load-Strain Properties of Roofing Membranes
- ASTM D2626, Standard Specification for Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing
- ASTM D5147, Standard Test Methods for Sampling and Testing Modified Bituminous Sheet Material
- ASTM D5261, Standard Test Method for Measuring Mass per Unit Area of Geotextiles
- ASTM D570, Standard Test Method for Water Absorption of Plastics
- ASTM D1682-64 (1975), Test Method for Breaking Load and Elongation of Textile Fabrics
- ASTM D1970-01, Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials,
- ASTM D3018-90 (1994)01, Specification for Class A Asphalt Shingles Surfaced with Mineral Granules
- ASTM D4869-93, Specification for Asphalt-Saturated (Organic Felt) Underlayment Used in Steep Slope Roofing
- ASTM E96, Standard Test Methods for Water Vapor Transmission of Materials
- ASTM E108-00, Standard Test Methods for Fire Tests of Roof Coverings
- ASTM G90, Standard Practice for Performing Accelerated Outdoor Weathering of Nonmetallic Materials Using Concentrated Natural Sunlight.

ICC-ES (International Code Council Evaluation Service)

- AC08, Acceptance Criteria for Concrete Tile Underlayment on Spaced Sheathing
- AC85, Acceptance Criteria for Test Reports July 1, 2003
- AC188, Acceptance Criteria for Roof Underlayment, Effective March 1, 2003: Low Temperature Unrolling, High Temperature Unrolling (Section 3.2)
- AC48, Acceptance Criteria for Roof Underlayment For Use In Severe Climate Areas, Effective February 1, 2000: Accelerated Aging (Section 4.7): Ultraviolet Resistance (Section 4.8), Cyclic Elongation (Section 4.6)

TAS (Florida Building Code, HVHZ)

- TAS 104, Test Procedure for Nail-On Underlayments for Use in Discontinuous Roof Systems, 1995 Miami-Dade Building Code Compliance Office.
- TAS 117, Appendix B, Test Procedure for Dynamic Pull-Through Performance of Roofing Membranes Over Fastener Heads or Fasteners with Metal Bearing Plates, Miami-Dade Building Code Compliance Office

RAS (Florida Building Code, HVHZ)

- RAS 118, Installation of Mechanically Fastened Roof Tile Systems
- RAS 119, Mortar and Adhesive Set Tile Application
- RAS 120, Mortar and Adhesive Set Tile Application

UL

- UL 790, Tests for Fire Resistance of Roof Covering Materials

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PALISADE™ synthetic roofing underlayment meets or exceeds IBC/IRC 2003, ICC AC-188, ASTM D226 Type I & II requirements

International Code Council (ICC ES), Report No. 1847

2003 International Residential Code (IRC) - Chapter 9

2003 International Building Code (IBC) – Chapter 15

2004 Florida Building Code (2004): FL-5325.1 (HVHZ)

PHYSICAL PROPERTIES

PALISADE™ synthetic roofing underlayment meets the physical and performance characteristics as indicated in Table 1.

TABLE 1 - PHYSICAL PROPERTIES OF PALISADE™

Property	Standard	Unit	PALISADE™	30# Felt
Tensile Strength	ASTM D226	lbs	150	30
Tear Strength	ASTM D4533	lbs	50	1.5
Puncture Strength	ASTM D751	psi	300	50
Cap Nail Pull Strength	TAS 117B	lbs	230	40
UV Rating	ASTM G90	%	>90	<50
Water Transmission Rating	ASTM D4869	Pass/Fail	Pass	Pass
Surface Temperature	SDP	F	+10	+50
Water Absorption	ASTM D1970	%	0.1	35
Oils Leaching	SDP	Pass/Fail	N/A	Fail
Moisture Buckling	SDP	inch	N/A	0.50
Permeability	ASTM E96-A	Perms	0.10	8
Temperature Rating	SDP	F	-70 to 300	32 to 150
CLASS A (tile, metal, shingle, slate, non FR shake)	ASTM E108/UL 790	Pass/Fail	Pass	-
Thickness	ASTM D5147	mils	25	60
Weight Per Square	ASTM D5261	lbs	4.0	28

Values, weights and measures are typical data and not limiting specifications. All values +/- 10%

FIRE RATING

ASTM International/UL

ASTM E108/UL 790 CLASS A fire classification under concrete and clay tile, metal or copper shingles or sheets, fiberglass shingles, and non fire retardant treated wood shakes. (ICC ESR 1847)

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5. Installation

SURFACE PREPARATION

PALISADE™ synthetic roofing underlayment must be installed above properly ventilated spaces, as the underlayment is considered a vapor barrier (follow all applicable building codes). The deck surface must be 2:12 slope or greater, dry, and free of dust, dirt, voids, loose nails and other protrusions. Damaged sheathing must be replaced. The use of a rosin paper slip-sheet is not required underneath metal roofing systems. Installation is limited to use with roof coverings that do not involve hot asphalt or coal-tar pitch.

PALISADE™ is installed horizontally with the printed side up, and with 3-inch horizontal laps and 6-inch vertical laps. Overlaps must run with the flow of the water in a shingle pattern. The underlayment is only attached to the roof deck with roofing nails having 1-inch minimum diameter plastic or steel caps. **USE NO STAPLES.** Cap nails are spaced at 6 inches on center at vertical laps, and at 11 inches on center at horizontal laps. In the field area, apply fasteners at 13 inches spaced vertically and 22 inches on center horizontally. All caps (including nails) must be fully flush with the underlayment surface. Do not install fasteners over unsupported areas/voids. Repair all tears, holes, or damage to the underlayment.

In coastal areas, high wind conditions, or prolonged exposure, double the fastener schedule at minimum. (For Florida Miami-Dade/Broward **High Velocity Hurricane Zones (HVHZ)**, see FL-5325.1 (HVHZ) code approval). In addition, secure laps by folding all laps over before nailing, or taping securely across lap seams using exterior grade sheathing tape, or using sealants such as roofing cement (asbestos free meeting ASTM D4586), EPDM, or Butyl to seal laps.

For batten secured installations, use only adequate length ring shanked nails or screws. **USE NO STAPLES** to secure battens to the roof deck. When battens are installed over **PALISADE™**, the underlayment need only be preliminarily attached with cap nails pending attachment of the battens or counter-battens. Layout underlayment such that cap nails will not interfere with batten installation.

For slopes less than 3:12, use a full 20" half lap over the underlying course. Apply underlayment up all abutments at least 6 inches.

Depending on roof pitch and surface conditions, blocking may be required to support roofing materials. Use caution when walking on underlayment that has not been fastened to the deck.

PALISADE™ is not designed to replace the primary roof covering material, or for indefinite outdoor exposure. Final roofing must be installed within 6 months.

AS WITH ANY ROOFING PRODUCT, OBSERVE ALL SAFE ROOFING CODES & PRACTICES (OSHA Regulations, Fall Protection Systems Criteria and Practices – 1926.502). USE CAUTION WHEN WALKING OR STANDING ON **PALISADE™**, AS SKID RESISTANCE MAY CHANGE WITH WET, DUST OR FROST CONDITIONS, AND ROOF PITCH. FAILURE TO USE PROPER SAFETY GEAR AND FOOTWEAR CAN RESULT IN SERIOUS INJURY.

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6. Availability & Cost

AVAILABILITY

Strategically located warehouses and dealers across the USA stock PALISADE™ synthetic roofing underlayment.

COST

PALISADE™ is competitively priced with ASTM D226 Type II asphalt felt underlayment. When reduced labor installation, reduced roll damage and wastage, reduced fastener usage, reduced call backs and reduced blowoffs are factored in, the overall installation costs are generally lower than equivalent asphalt felt paper.

7. Warranty

PALISADE™ is backed by a 25 yr limited warranty.

8. Maintenance

When installed in accordance with manufacturer's recommendations, PALISADE™ synthetic roofing underlayment will not require maintenance.

9. Technical Services

Support is provided by technically trained SDP representatives and technical service personnel, and backed by advanced R&D staff. For technical assistance, call toll free 866-747-4035 or email info@sdp-products.com

10. Filing Systems

Additional product information is available from the manufacturer.

Disclaimer

SDP Advanced Polymer Products Inc hopes the information here will be useful. It is based upon data and knowledge considered to be true and accurate and is offered for the users' consideration, investigation and verification, but we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would infringe any patent or copyright.

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