

ICC-ES Evaluation Report

ESR-1697

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This report also contains:


Revised March 2024

- CBC Supplement

Subject to renewal November 2025

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<p>DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION</p> <p>Section: 07 30 05— Roofing Felt and Underlayment</p>	<p>REPORT HOLDER: POLYGLASS USA, INC.</p> <p>ADDITIONAL LISTEES: MULE-HIDE PRODUCTS CO., INC.</p>	<p>EVALUATION SUBJECT: POLYSTICK IR-Xe, TU, TU PLUS, TU P, TU MAX, DUAL PRO, TILE PRO, MTS PLUS, MU-X AND XFR ROOF UNDERLAYMENTS AND POLYSTICK P AND POLYSTICK MTS ICE BARRIERS</p>	
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1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2021, 2018, 2015, 2012, 2009 and 2006 [International Building Code® \(IBC\)](#)
- 2021, 2018, 2015, 2012, 2009 and 2006 [International Residential Code® \(IRC\)](#)

Properties evaluated:

- Physical properties
- Water resistance

1.2 Evaluation to the following green standards:

- 2020, 2015, 2012 and 2008 [ICC 700 National Green Building Standard™](#) (ICC 700-2020, ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attributes verified:

- See Section 3.1

2.0 USES

2.1 Roof Underlayment:

Polystick IR-Xe, TU, TU Plus, TU P, TU Max, MTS Plus, MU-X, XFR, Dual Pro and Tile Pro are self-adhering membranes used as alternatives to ASTM D226, Type I and Type II, roofing underlayment specified in IBC Chapter 15 and IRC Chapter 9 IRC.

2.2 Ice Barrier:

Polystick P and Polystick MTS are limited to use as alternatives to the ice barrier specified in IBC Chapter 15 and IRC Chapter 9. Polystick IR-Xe, TU, TU Plus, TU P, TU Max, MTS Plus, MU-X, XFR, Dual Pro and Tile Pro roof underlayments may also be used as alternatives to the ice barrier specified in IBC Chapter 15 and IRC Chapter 9.

3.0 DESCRIPTION

3.1 General:

Polystick IR-Xe, TU, TU Plus, TU P, TU Max, Dual Pro, Tile Pro, MTS Plus, MU-X and XFR roof underlayments and Polystick P and Polystick MTS ice barriers are self-adhering, modified asphalt membranes constructed as described in Sections 3.2 through 3.12 of this report. These products are also specified for the additional listee as described in [Table 1](#).

The attributes of the Polystick membranes have been verified as conforming to the requirements of (i) ICC 700-2020 Sections 602.1.13, 11.602.1.13, 1202.9 and 13.104.17; (ii) ICC 700-2015 Section 602.1.13, 11.602.1.13 and 12.6.602.1.13; (iii) ICC 700-2012 Sections 602.1.13, 11.602.1.13 and 12.5.602.1.14; and (iv) ICC 700-2008 Section 602.10 for ice barriers. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

3.2 Polystick IR-Xe:

Polystick IR-Xe is an APP-modified-asphalt, fiberglass-mat-reinforced membrane having a fine granular mineral surface. The membrane has a nominal weight of 27 pounds per 100 square feet (1.3 kg/m²) and is supplied in various lengths and widths.

3.3 Polystick P:

Polystick P is an SBS-modified-asphalt, unreinforced membrane having a polyethylene film surface. The membrane has a nominal weight of 31 pounds per 100 square feet (1.5 kg/m²) and is supplied in rolls of various lengths and widths.

3.4 Polystick TU:

Polystick TU is an APP-modified-asphalt, fiberglass-mat-reinforced membrane having a coarse granular mineral surface. The membrane has a nominal weight of 64 pounds per 100 square feet (3.1 kg/m²) and is supplied in rolls of various lengths and widths.

3.5 Polystick TU Plus:

Polystick TU Plus is an APP-modified-asphalt, fiberglass-mat-reinforced membrane having a polyester fabric surface. The membrane has a nominal weight of 31 pounds per 100 square feet (1.5 kg/m²) and is supplied in rolls of various lengths and widths.

3.6 Polystick MTS:

Polystick MTS is an APP-modified-asphalt, fiberglass-mat-reinforced membrane having a polymer film surface. The membrane has a nominal weight of 33 pounds per 100 square feet (1.6 kg/m²) and is supplied in rolls of various lengths and widths.

3.7 Polystick TU P:

Polystick TU P is an APP-modified-asphalt, glass-fiber and polyester reinforced membrane with a granular surface. The membrane has a nominal weight of 80 pounds per 100 square feet (3.9 kg/m²) and is supplied in rolls of various lengths and widths.

3.8 Polystick TU Max:

Polystick TU Max is an APP-modified-asphalt, polyester reinforced membrane self-adhering membrane. The membrane has a nominal weight of 25 lbs per 100 square feet (1.2 kg/m²) and is supplied in rolls of various lengths and widths.

3.9 Polystick Dual Pro:

Polystick Dual Pro is an APP- modified-asphalt, glass fiber and polyester reinforced self-adhering membrane. The membrane has a nominal weight of 31 pounds per 100 square feet (1.5 kg/m²) and is supplied in rolls of various lengths and widths.

3.10 Polystick Tile Pro:

Polystick Tile Pro is an APP-modified-asphalt, glass fiber and polyester reinforced self-adhering membrane. The membrane has a nominal weight of 33 pounds per 100 square feet (1.6 kg/m²) and is supplied in rolls of various lengths and widths.

3.11 Polystick MTS Plus:

Polystick MTS Plus is a SBS-modified-asphalt, fiberglass reinforced self-adhering membrane having a polymer film surface. The membrane has a nominal weight of 29 pounds per 100 square feet (1.4 kg/m²) and is supplied in rolls of various lengths and widths.

3.12 Polystick MU-X:

Polystick MU-X is an SBS-modified-asphalt, fiberglass reinforced self-adhering membrane with a polypropylene film surface. The membrane has a nominal weight of 31 pounds per 100 square feet (1.5 kg/m²) and is supplied in rolls of various lengths and widths.

3.13 Polystick XFR:

Polystick XFR is an SBS-modified-asphalt, fiberglass reinforced self-adhering membrane with a polymer film surface. The membrane has a nominal weight of 43 pounds per 100 square feet (2.1 kg/m²) and is supplied in rolls of various lengths and widths.

4.0 INSTALLATION

4.1 General:

Installation of the Polystick roof underlayments must comply with the applicable code, this report and the manufacturer's published installation instructions. The installation instructions must be available at the jobsite at all times during installation.

Prior to application of the underlayment, the deck surface must be free of frost, dust and dirt, loose fasteners, and other protrusions. Damaged sheathing must be replaced. Installation is limited to plywood substrates. The underlayment must be applied only when the ambient air and substrate temperatures are above 40°F (4.4°C).

The underlayments are cut into workable lengths and rerolled prior to placement. The release film is peeled back approximately 1 to 2 feet (305 to 610 mm) and the membrane aligned with the lower edge of the roof and set in place. The remainder of the underlayment is applied directly to the roof deck by removing the film and firmly pressing the membrane into place. The end seams must be overlapped a minimum of 6 inches (152 mm). Edge seams must be overlapped 3 inches (76 mm) or as indicated on product surface. The subsequent courses of underlayment are applied parallel to the eave, from the lower edge of the roof upwards in a shingle-lap manner. For slopes greater than 4:12 (33.33 percent), the membrane may be laid in a strapping fashion (length of roll parallel to slope).

If the underlayment becomes misaligned, the roll is to be cut and restarted. The underlayment is pressed firmly into place, from the center to edge. After application, the underlayment must be inspected, and any defects repaired. "Fish mouths" are slit, pressed flat, and covered with a patch of membrane of sufficient width and length to overlap each side and end of the slit a minimum of 3 inches (76 mm). Membranes should be installed in a manner that water will run over or parallel to all laps.

Installation of the roof covering can proceed immediately following application of the underlayment. The underlayment should be covered by an approved roof covering as soon as possible. For reroofing application, the same procedures apply after removal of the existing roof covering and roofing felts to expose the roof deck.

4.2 Ice Barrier:

When used as an ice barrier, the Polystick IR-Xe, P, TU, TU Plus, TU P, MTS, TU Max, MTS Plus, MU-X, Dual Pro, Tile Pro and XFR membranes must be installed as prescribed in IBC Chapter 15 and IRC Chapter 9 where an ice barrier is required. The membranes must be installed in sufficient courses to extend up the roof for a minimum distance of 24 inches (610 mm) inside the exterior wall line of the building. When used as roof underlayment in the field of the roof, the underlayment products recognized in this report must overlap the ice barrier.

4.3 Roof Underlayment:

Polystick IR-Xe, TU, TU Plus, TU P, TU Max, MTS Plus, MU-X, XFR, Dual Pro and Tile Pro underlayments must be installed as prescribed in IBC Chapter 15 or IRC Chapter 9 where an ASTM D226, Type I or Type II underlayment is required.

4.4 Flashing:

Flashing must be in accordance with the applicable code. Flashing around protrusions must be over the lower course of the underlayment and under the upper course of the underlayment, to prevent water backup. When used, metal drip edges must be installed beneath the underlayment at the eaves and over the underlayment at rakes.

5.0 CONDITIONS OF USE:

The Polystick roof underlayments and ice barriers described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation must comply with the applicable code, this report and the manufacturer's published installation instructions. In the event of a conflict between this report and the manufacturer's instructions, this report governs.
- 5.2 Recognition in this evaluation report is limited to installation on plywood substrates.
- 5.3 Installation is limited to roofs with a slope of 2:12 (16.67%) or greater.
- 5.4 Installation is limited to use with roof coverings that do not involve hot asphalt or coal-tar pitch.
- 5.5 Installation is limited to use with roof coverings that are mechanically fastened through the underlayment to the sheathing or rafters.
- 5.6 Installation is limited to roofs with ventilated attic spaces in accordance with the requirements of the applicable code.
- 5.7 The underlayments and ice barriers must be installed only when the ambient air and substrate temperatures are above 40°F (4.4°C).
- 5.8 Installation is limited to structures located in areas where nonclassified roof coverings are permitted or as a component of a classified roofing assembly when specifically recognized as such in a listing approved by the code official.
- 5.9 The membranes are produced in Fernley, Nevada, Hazleton, Pennsylvania, Winter Haven, Florida, and Waco, Texas under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the [ICC-ES Acceptance Criteria for Self-Adhered Roof Underlayments for Use as Ice Barriers \(AC48\)](#), dated February 2012 (editorially revised February 2021). Specifically, data in accordance with Section 3.1.1 of AC48 (ASTM D1970) for Polystick IR-Xe, Polystick TU P, Polystick MU-X and Polystick XFR.
- 6.2 Data in accordance with the [ICC-ES Acceptance Criteria for Self-Adhered Roof Underlayments for Use as Ice Barriers \(AC48\)](#), dated February 2012 (editorially revised February 2021). Specifically, data in accordance with Section 3.1.2 of AC48 for Polystick P, Polystick TU, Polystick TU Plus, Polystick MTS, Polystick TU Max, Polystick MTS Plus, Polystick Dual Pro and Polystick Tile Pro.
- 6.3 Data in accordance with the [ICC-ES Acceptance Criteria for Roof Underlayments \(AC188\)](#), dated February 2012 (editorially revised June 2020) for Polystick IR-Xe, Polystick TU, Polystick TU Plus, Polystick TU P, Polystick TU Max, Polystick MTS Plus, Polystick MU-X, Polystick.

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-1697) along with the name, registered trademark, or registered logo of the report holder and listee must be included in the product label.
- 7.2 The Polystick roof underlayments and ice barriers described in this report are identified by a label, on the container of each roll of membrane, bearing the Polyglass U.S.A. Inc., name, the product name and the manufacturing location, and the evaluation report number (ESR-1697).

7.3 The report holder’s contact information is the following:

POLYGLASS USA, INC.
 1111 WEST NEWPORT CENTER DRIVE
 DEERFIELD BEACH, FLORIDA 33442
 (800) 894-4563
www.polyglass.us

7.4 The Additional Listee’s contact information is the following:

MULE-HIDE PRODUCTS CO., INC.
 1195 PRINCE HALL DRIVE
 BELOIT, WISCONSIN 53511
 (800) 786-1492
www.mulehide.com/en-us/

TABLE 1 – PRODUCT NAME CROSS-REFERENCE FOR REPORT HOLDER AND ADDITIONAL LISTEE

COMPANY	POLYGLASS USA, INC.	MULE-HIDE PRODUCTS CO., INC.
PRODUCT NAME	Polystick IR-Xe	-
	Polystick TU	-
	Ploystick TU Plus	Shur-Gard TU FORCE HT
	Polystick TU P	-
	Polystick TU Max	Shur-Gard TU PRIME HT
	Polystick MTS Plus	Shur-Gard MU FORCE HT
	Polystick MU-X	-
	Polystick XFR	-
	Polystick Dual Pro	-
	Polystick Tile Pro	-
	Polystick P	Shur-Gard MU PRIME HT
	Polystick MTS	-

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

REPORT HOLDER:

POLYGLASS USA, INC.

EVALUATION SUBJECT:**POLYSTICK IR-Xe, TU, TU PLUS, TU P, TU MAX, DUAL PRO, TILE PRO, MTS PLUS, MU-X AND XFR ROOF UNDERLAYMENTS AND POLYSTICK P AND POLYSTICK MTS ICE BARRIERS****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that Polystick IR-Xe, TU, TU Plus, TU P, TU Max, Dual Pro, Tile Pro, MTS Plus and MU-X and XFR roof underlayments and Polystick P and Polystick MTS ice barriers, described in ICC-ES evaluation report ESR-1697, have also been evaluated for compliance with the code editions noted below.

Applicable code editions:

- 2022 California Building Code (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2022 California Residential Code (CRC)

2.0 CONCLUSIONS**2.1 CBC:**

The Polystick IR-Xe, TU, TU Plus, TU P, TU Max, Dual Pro, Tile Pro, MTS Plus, MU-X and XFR roof underlayments and Polystick P and Polystick MTS ice barriers, described in Sections 2.0 through 7.0 of the evaluation report ESR-1697, comply with CBC Chapter 15, provided the design and installation are in accordance with the 2021 *International Building Code*® provisions, as applicable, noted in the evaluation report and the additional requirements of CBC Chapter 15, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Polystick IR-Xe, TU, TU Plus, TU P, TU Max, Dual Pro, Tile Pro, MTS Plus and MU-X and XFR roof underlayments and Polystick P and Polystick MTS ice barriers, described in Sections 2.0 through 7.0 of the evaluation report ESR-1697, comply with CRC Chapter 9, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions, as applicable, noted in the evaluation report and the additional requirements of CRC Chapter 9, as applicable.

This supplement expires concurrently with the evaluation report, reissued November 2023 and revised March 2024.