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Code Compliance Research Report CCRR-1054

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

REPORT HOLDER:
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REPORT SUBJECT:
TBSYN10, TBSYN25, TBSYN PLUS, and TBSYN MAX
Synthetic Roofing Underlayments

1.0 SCOPE OF EVALUATION

This Research Report addresses compliance with the following Codes:

- 2015, 2012, and 2009 *International Building Code®* (IBC)
- 2015, 2012, and 2009 *International Residential Code®* (IRC)

2.0 USES

TBSYN10, TBSYN25, TBSYN PLUS, and TBSYN MAX roof underlayments are used in the field of the roof as an alternative to the ASTM D226, Type I and II, roofing underlayments specified in Chapter 15 of the IBC and Chapter 9 of the IRC.

The underlayments may be used 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.

The underlayments may be used as components of classified assemblies when installed as described in this report.

The underlayments have been evaluated for the following properties:

| PROPERTY | IBC SECTION ¹ | IRC SECTION ¹ |
|---------------------|--------------------------|--------------------------|
| Physical Properties | 104.11, 1506, and 1507 | R104.11, R904, and R905 |
| Fire Classification | 1505 | R902.1 |
| Ice Barrier | 1507 | R905 |

¹ Referenced sections apply to the 2015, 2012, and 2009 IBC and IRC

3.0 DESCRIPTION

TBSYN 10 is a mechanically attached synthetic underlayment comprised of a polypropylene woven core, polypropylene non-woven scrim on the exposed side, and a polyolefin coating on the sheathing side. The underlayment is black in color and has an overall weight of 1.74 pounds per 100 square feet. The underlayment is available in rolls of 48 in. wide by 250 ft. long.

TBSYN 25 is a mechanically attached synthetic underlayment comprised of a polypropylene woven core, polypropylene non-woven scrim on the exposed side, and a polyolefin coating on the sheathing side. The underlayment is black in color and has an overall weight of 2.05 pounds per 100 square feet. The underlayment is available in rolls of 48 in. wide by 250 ft. long.

TBSYN PLUS is a mechanically attached synthetic underlayment comprised of a polypropylene woven core, polypropylene non-woven scrim on the exposed side, and a polyolefin coating on the sheathing side. The underlayment is black/green in color and has an overall weight of 2.46 pounds per 100 square feet. The underlayment is available in rolls of 48 in. wide by 250 ft. long.

TBSYN MAX is a mechanically attached synthetic underlayment comprised of a polypropylene woven core, polypropylene non-woven scrim on the exposed side, and a polyolefin coating on the sheathing side. The underlayment is black/grey in color and has an overall weight of 3.69 pounds per 100 square feet. The underlayment is available in rolls of 48 in. wide by 250 ft. long.

4.0 INSTALLATION

4.1 General:

Installation must comply with the applicable Code, this report, and the report holder's published installation instructions.

The underlayments must be installed in accordance with the subsections of IBC Section 1507 and IRC Section R905 applicable to the roof covering being installed. The underlayments 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 underlayments must be covered within the time designated in the report holder's published installation instructions.

4.2 Ice Barrier:

In areas of the roof required by IBC Section 1507 or IRC Section R905 to have an ice barrier, two layers of the underlayments solidly cemented together with a low solvent based roofing cement, complying with ASTM D4586 Type 1, may be used provided the ice barrier extends up the roof a minimum distance of 24 in. inside the interior wall line of the building. The underlayments installed in the field of the roof must overlap the ice barrier.

4.3 Fire Classification:

The underlayments may be used as a component of a classified roof assembly when specifically recognized as such in a Listing approved by the Code official. The underlayments may also be used as an alternative to the underlayments specified in the Code for roof coverings permitted under the Exceptions to IBC Section 1505.2 and IRC Section R902.1, and may be used where non-classified roofing is permitted in IBC Section 1505.5.

5.0 CONDITIONS OF USE

The underlayments described in this Research Report comply with, or are suitable alternatives to, what is specified in those Codes listed in Sections 1.0 and 2.0 of this report, subject to the following conditions:

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

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

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

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

5.5 Attic ventilation must be provided in accordance with the applicable Code since there are no requirements to evaluate vapor permeability of the underlayments.

5.6 The underlayments are manufactured under a quality control program with inspections by Intertek Testing Services NA Inc. (AA-647).

6.0 SUPPORTING EVIDENCE

6.1 Reports of tests in accordance with ASTM E108.

6.2 Data in accordance with ICC-ES Acceptance Criteria for Roof Underlayments (AC188), dated February 2012 (editorially revised December 2015).

6.3 Intertek Listing Report ["Tri-Built Synthetic Roofing Underlayments"](#).

7.0 IDENTIFICATION

The underlayments are directly imprinted with product name, company name, the Intertek Mark, and Code Compliance Research Report number (CCRR-1054). Each roll of the product is also labeled with product name, company name, and installation instructions.

8.0 OTHER CODES

This section is not applicable.

9.0 CODE COMPLIANCE RESEARCH REPORT USE

9.1 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.

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

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

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