ICC EVALUATION SERVICE®

ICC-ES Evaluation Report

ESR-2053

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

REPORT HOLDER:

GAF

EVALUATION SUBJECT:

VERSASHIELD® FIRE-RESISTANT ROOF DECK PROTECTION

1.0 EVALUATION SCOPE

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)
- 2013 *Abu Dhabi International Building Code* (ADIBC)†

†The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

*For evaluation for compliance with the anticipated requirements of the 2021 IBC and IRC.

Properties evaluated:

- Physical properties
- Fire classification

2.0 USES

VersaShield® Fire-Resistant Roof Deck Protection is used as an alternative to ASTM D226, Type I or Type II, roofing underlayment specified in Chapter 15 of the IBC and Chapter 9 of the IRC.

When installed in accordance with Section 4.2.1 of this report, VersaShield® Fire-Resistant Roof Deck Protection can also be used over existing wood shakes or shingles as an alternative to the covering materials specified in 2021, 2018 or 2015 IBC Section 1511 (2012, 2009 or 2006 IBC Section 1510.4) or 2021, 2018 and 2015 IRC Section R908.4 (2012, 2009 and 2006 IRC Section R907.4).

VersaShield® Fire-Resistant Roof Deck Protection is also used as a component of classified roofing assemblies as described in Section 4.3, when installed in accordance with this report.

3.0 DESCRIPTION

VersaShield® Fire-Resistant Roof Deck Protection is a resin-bound chopped-glass-fiber substrate, coated on both sides with a mineral-filled aqueous coating. The underlayment has a weight of 15 pounds per 100 square feet (0.73 kg/m^2), and is supplied in rolls.

4.0 INSTALLATION

4.1 General:

VersaShield® Fire-Resistant Roof Deck Protection is installed in accordance with the requirements of the applicable code, the manufacturer's published installation instructions and this report. The manufacturer's published installation instructions are to be available at the jobsite during the installation.

VersaShield® Fire-Resistant Roof Deck Protection is limited to use over spaced or solid sheathing, or over existing asphalt shingles, wood shakes or wood shingles installed on spaced or solid sheathing. Prior to application of the underlayment, the deck surface is to be free of dust and dirt, loose nails and other protrusions. Damaged sheathing is to be replaced. The underlayment is applied at right angles to the slope of the roof, beginning at the low point of the roof, and is laid with minimum 2-inch (51 mm) horizontal and 6-inch (152 mm) vertical lapped joints. It is attached with a sufficient number of nails, having tin caps or 1-inch-diameter (25.4 mm) plastic caps, to hold the underlayment in place until the roof covering is applied, except in areas subject to high winds where the underlayment fastening must comply with the high wind attachment requirements specified in IBC Section 1507 or IRC Section R905. The underlayment may be bent to a minimum $^1/_2$-inch (12.7 mm) radius, but is not to be creased. At junctions between the roof deck and vertical surfaces, the underlayment is installed a minimum of 3 inches (76 mm) up the vertical surface.

In areas of the roof required to have an ice barrier under Chapter 15 of the IBC or Chapter 9 of the IRC, a self-adhesive polymer bitumen sheet, complying with ASTM D1970 or the ICC-ES Acceptance Criteria for Self-adhered Underlayments for Use as Ice Barriers (AC48), is to be applied. The underlayment is to be applied over the solid substrate in sufficient courses so that the underlayment extends up the roof a distance equal to the distance inside the exterior wall line of the building that is specified by the applicable code. The underlayment, applied in the field of the roof, is to completely overlap the ice barrier (severe climate underlayment) protection a minimum of 2 inches (51 mm).

Installation of the roof covering can proceed immediately following the underlayment application. The underlayment is to be covered by a roof covering within the time set forth in the manufacturer's published installation instructions.

4.2 Reroofing:

The existing roof must be inspected in accordance with 2021, 2018 or 2015 IBC Section 1511 (2012, 2009 or 2006 IBC Section 1510) or 2021, 2018 and 2015 IRC Section R908.4 (2012, 2009 and 2006 IRC Section R907). The new roof covering is installed over the VersaShield® Fire-Resistant Roof Deck Protection in accordance with the roof covering manufacturer's published installation instructions. The new roof covering must be recognized in a current ICC-ES evaluation report, and, when applicable, the evaluation report must address installation over wood shake, wood shingle or asphalt shingle roofs.

4.2.1 Existing Wood Shakes or Shingles: Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, VersaShield® Fire-Resistant Roof Deck Protection can be used as an alternative to the covering materials specified in 2021, 2018 or 2015 IBC Section 1511.4 (2012, 2009 or 2006 IBC Section 1510.4) or 2021, 2018 and 2015 IRC Section R908.4 (2012, 2009 and 2006 IRC Section R907.4). The underlayment covers the entire existing wood roof. Battens used for the new roof covering system are installed over the underlayment. The underlayment may be placed under or over counterbattens, spaced a maximum of 24 inches (610 mm) on center. The underlayment is fastened to the counterbattens with a sufficient number of nails, having tin caps or 1-inch-diameter (25.4 mm) plastic caps, to hold the underlayment in place until the horizontal battens and roof covering are applied. When counterbattens are installed over the underlayment or when counterbattens are not used, the underlayment is fastened directly to the existing roof covering in the same manner.

4.2.2 Existing Asphalt Shingles: When installed over existing asphalt shingles, the underlayment is applied over the existing roof covering and fastened through the shingles to the sheathing with a sufficient number of nails, having tin caps or 1-inch-diameter (25.4 mm) plastic caps, to hold the underlayment in place until the roof covering is applied.

4.3 Roof Classification:

When installed in accordance with this report, VersaShield® Fire-Resistant Roof Deck Protection can be used as an alternative to Exception 2 to IBC Section 1505.2 (Exception to 2006 IBC Sections 1505.2 and 1505.3), and IRC Section R902.1; or any roofing assembly having a Class A, B or C roof classification, without reducing the roof classification. When installed in accordance with Section 4.1 and Table 1 of this report, roofing assemblies incorporating VersaShield® Fire-Resistant Roof Deck Protection have the roof classification specified in Table 1. The roof coverings must be recognized in a current ICC-ES evaluation report as shown in Table 2.

5.0 CONDITIONS OF USE

The VersaShield® Fire-Resistant Roof Deck Protection described in this report, complies with, or is a suitable alternative 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 this report; the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.

5.2 Installation is limited to roofs with a minimum slope of 2:12 (16.67 percent slope) or to the minimum slope required for the roof covering in accordance with the applicable code, whichever is greater.

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

5.4 Installation is limited to use with approved roof coverings that are mechanically fastened through the underlayment to the sheathing or rafters.

5.5 Installation is limited to roofs with ventilated attic spaces in accordance with the requirements of the applicable code.

5.6 VersaShield® Fire-Resistant Roof Deck Protection is produced in Conover, North Carolina, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Nonasphaltic Fiberglass-based Roof Underlayment (AC160), dated January 2000 (editorially revised April 2020).

7.0 IDENTIFICATION

7.1 Each roll of underlayment bears a label indicating the GAF name and address, the plant identification, the product name, the roll number, and the evaluation report number (ESR-2053).

7.2 The report holder's contact information is the following:

GAF
1 CAMPUS DRIVE
PARSIPPANY, NEW JERSEY 07054
(800) 766-3411
www.gaf.com

TABLE 1—ROOF CLASSIFICATION OF ASSEMBLIES INCORPORATING VERSASHIELD® FIRE-RESISTANT ROOF DECK PROTECTION

ROOF COVERING[2]	SUBSTRATE	UNDERLAYMENT[1]	ROOF CLASSIFICATION	MAXIMUM SLOPE
Class A asphalt glass fiber shingle	$^{15}/_{32}$-inch plywood	One layer VersaShield®	A	Unlimited
Stone coated, steel, direct to deck, 0.013-inch thickness (0.330 mm), shingles or panels	$^{15}/_{32}$-inch plywood or spaced sheathing	One layer VersaShield®	A	Unlimited
Steel direct to deck, 0.013-inch thickness (0.330 mm), shingles or panels	$^{15}/_{32}$-inch plywood or spaced sheathing	One layer VersaShield®, and one layer Type 30 asphalt saturated organic felt	A	Unlimited
	$^{15}/_{32}$-inch plywood or spaced sheathing	One layer VersaShield®	B	Unlimited
Steel over battens, 0.013-inch thickness (0.330 mm), shingles or panels	$^{15}/_{32}$-inch plywood or spaced sheathing	One layer VersaShield®	A	Unlimited
	Existing wood shakes or shingles installed over spaced or solid sheathing	Two layers VersaShield®	A	Unlimited
	Existing wood shakes or shingles installed over spaced or solid sheathing	One layer VersaShield®	B	Unlimited
Steel, 0.016-inch thickness (0.406 mm), panels or standing seam system	$^{15}/_{32}$-inch plywood or spaced sheathing	One layer VersaShield®	A	Unlimited
Copper, 0.016-inch thickness (0.406 mm), shingles or panels	$^{15}/_{32}$-inch plywood or spaced sheathing	One layer VersaShield®, and one layer Type 30 asphalt saturated organic felt	A	Unlimited
	Existing wood shakes or shingles installed over spaced or solid sheathing	Two layers of VersaShield®	A	Unlimited
	$^{15}/_{32}$-inch plywood or spaced sheathing	One layer VersaShield®	B	Unlimited
	Existing wood shakes or shingles installed over spaced or solid sheathing	One layer of VersaShield®	B	Unlimited
Aluminum, 0.018-inch (0.457 mm), shingles, panels, or standing seam system	$^{15}/_{32}$-inch plywood or spaced sheathing	Two layers VersaShield®	A	Unlimited
	$^{15}/_{32}$-inch plywood or spaced sheathing	One layer VersaShield®	B	Unlimited
	Existing wood shakes or shingles installed over spaced or solid sheathing	One layer VersaShield®	B	Unlimited
TPO, CSM, CPA, EPDM, cap sheet, or modified bitumen single-ply membranes	$^{15}/_{32}$-inch plywood	Two layers VersaShield®	A	$1^{1}/_{2}$:12
	$^{15}/_{32}$-inch plywood, insulation	Two layers VersaShield®	A	$1^{1}/_{2}$:12
	$^{15}/_{32}$-inch plywood	One layer VersaShield®	B	$1^{1}/_{2}$:12
PVC single-ply membrane	$^{15}/_{32}$-inch plywood	Two layers VersaShield®	A	2:12
	$^{15}/_{32}$-inch plywood, insulation	Two layers VersaShield®	A	$1^{1}/_{2}$:12
	$^{15}/_{32}$-inch plywood	One layer VersaShield®	B	$1^{1}/_{2}$:12

For **SI:** 1 inch = 25.4 mm.

[1]Underlayment must be installed in accordance with Section 4.0 of this report.
[2]Roof coverings must be recognized in a current ICC-ES evaluation report. The roof covering must comply with the Class A or B flame-spread requirements of UL790 (ASTM E108), as applicable to the systems defined in this table.

TABLE 2—EVALUATION REPORT CROSS-REFERENCE

COMPANY	ICC-ES EVALUATION REPORT NUMBER	RECOGNIZED PRODUCT
Carlisle Syntec	ESR-1463	EPDM, PVC and TPO Single-Ply Membranes
Delta Building Products, Ltd.	ESR-1790	Delta Roof Panels: Shake, Tile and Hidden Fastener Tile; Delta Roof Shingles: Shingle, Slate and Diamond
Decra Roofing Systems, Inc.	ESR-1754	Steel Roofing Panels: Tile Profile: Decra Villa Tile; Shake Profile: Decra Shake XD™; Shingle Profile: Decra Shingle XD™; Panel Profile: Decra Shingle Plus™
Decra Roofing Systems, Inc.	ESR-2901	Steel Roofing Panels: Tile Profile: DECRA Tile Shake Profile: DECRA Shake Shingle Profile: DECRA Shingle Plus
Gerard Roofing Technologies	ESR-1188	GRANITE-RIDGE SHINGLE STEEL ROOFING PANELS
Ideal Roofing Company Ltd.	ESR-3101	Wakefield Bridge (26 gage) Steel Panels and Wakefield Bridge (29 gage) Steel Panels
Ideal Roofing Company Ltd.	ESR-3100	HF-16 and HF-20.25 Roof Panels
DaVinci Roofscapes, LLC	ESR-2119	DaVinci Slate, DaVinci Shake, Bellaforte Shake and Bellaforte Slate Roof Shingles
Feroof Co., Ltd.	ESR-3331	Steel Roofing Panels: Veneto I, Veneto II, Rio, Rio EZ, Diva, Wood, Zissen and Slate
Ensoltis Green Hybrid Roofing LLC	ESR-2904	Ensoltis Savanna S Roof Tile
Custom-Bilt Metals	ESR-2048	Custom-Bilt Standing Seam Metal Roof: CB-150 and SL-1750
Roser Co., Ltd	ESR-1763	Roser Steel and Copper Roofing Panels
Berridge Manufacturing Company	ESR-3486	Berridge Cee-Lock and Zee-Lock Standing Seam Roof Panels

[1]The aluminum panels are limited to Class B roof covering assemblies.