



ICC-ES Evaluation Report

ESR-3319

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Revised November 2023

This report is subject to renewal May 2024.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 25 00—Water-Resistive Barriers/Weather Barriers

Section: 07 65 00—Flexible Flashing

REPORT HOLDER:

TREMCO CPG, INC.

EVALUATION SUBJECT:

DRYVIT BACKSTOP NT, BACKSTOP NTX WATER-RESISTIVE BARRIERS/AIR BARRIERS AND AQUAFLASH FLEXIBLE FLASHING

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2021, 2018, 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2021, 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2021, 2018, 2015, 2012 and 2009 *International Energy Conservation Code*® (IECC)
- 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.

Properties evaluated:

- Physical properties
- Water resistance
- Surface-burning characteristics
- Air barrier
- Types I, II, III, IV, and V construction

1.2 Evaluation to the following green code(s) and/or standards:

- 2022 California Green Building Standards Code (CALGreen), Title 24, Part 11

- 2021, 2018, 2015 and 2012 *International Green Construction Code*® (IgCC)
- 2020, 2017, 2014 and 2011 ANSI/ASHRAE/USGBC/IES Standard 189.1—Standard for the Design of High-Performance Green Buildings, Except Low-Rise Residential Buildings
- 2020, 2015, 2012 and 2008 *ICC 700 National Green Building Standard*™ (ICC 700-2020, ICC 700-2015, ICC 700-2012 and ICC 700-2008)

2.0 USES

Backstop NT-Smooth, Backstop NT-Texture, Backstop NTX-Smooth and Backstop NTX-Texture water- resistive barriers are used as alternatives to the water- resistive barrier specified in 2021 and 2018 IBC Section 1403.2 (2015, 2012 and 2009 IBC Section 1404.2) and IRC Section R703.2 for any type of construction. The barriers comply with ASTM E2570 as indicated in 2021 and 2018 IBC Section 1407.4.1.1 (2015, 2012 and 2009 IBC Section 1408.4.1.1) and 2021, 2018 and 2015 IRC Section R703.9.2 (2012 and 2009 IRC Section R703.9.2.1). The barriers may be used as an air barrier material in accordance with IRC Section N1102 and 2021, 2018 and 2015 IECC Sections C402.5 and R402.4 (2012 IECC Sections C402.4 and R402.4 and 2009 and 2006 IECC Sections 402.4 and 502.4). Backstop NT-Smooth, Backstop NT-Texture, Backstop NTX-Smooth and Backstop NTX-Texture may be used as water-resistive barriers behind wall coverings. Backstop NT and Backstop NTX can be used in Types I, II, III, IV and V construction. Under the 2021, 2018 and 2015 IBC for Types I, II, III and IV construction, use is limited to exterior walls of buildings having a maximum height of 40 feet (12.2 m) above grade plane, except for walls in which the water- resistive barrier is the only combustible component and the exterior wall has a wall covering of brick, concrete, stone, terra cotta, stucco or steel with minimum thicknesses in accordance with 2021 and 2018 IBC Table 1404.2 and 2015 IBC Table 1405.2. Under the 2012 IBC for Types I, II, III and IV construction, use is limited to exterior walls of buildings having a maximum height of 40 feet (12.2 m) above grade plane in accordance with 2012 IBC Section 1403.5.

The liquid-applied water-resistive barriers, when installed at a maximum thickness of 20 mils [0.02 inch (0.5 mm)] may be used in fire-resistance-rated exterior wall assemblies described in 2021, 2018, 2015 and 2012 IBC Table 721.1(2) (2009 IBC Table 720.1 (2)), that specify use of building

paper, without changing the assigned hourly rating of the assembly.

The attributes of Backstop NT-Smooth, Backstop NT-Texture, Backstop NTX-Smooth and Backstop NTX-Texture water-resistive barriers used as air barrier materials have been verified as conforming to the provisions of (i) 2020 IgCC Section 701.3.1.2, 2018 IgCC Section 701.3.1.1 and 2015 and 2012 IgCC Section 605.1.2.1 for air barriers; and (ii) 2020 ASHRAE 189.1 Section 7.3.1.2, 2017 and 2014 ASHRAE 189.1 Section 7.3.1.1 and 2011 ASHRAE 189.1 Section 7.4.2.9 for air barriers.

The attributes of Backstop NT-Smooth, Backstop NT-Texture, Backstop NTX-Smooth and Backstop NTX-Texture water-resistive barriers (i) CALGreen Section 5.407.1 for water-resistive barriers; (ii) ICC 700-2020 Sections 602.1.8, 11.602.1.8, 1202.6 and 13.104.1.4; (iii) ICC 700-2015 Section 602.1.8, 11.602.1.8 and 12.6.602.1.8; (iv) ICC 700-2012 Section 602.1.8, 11.602.1.8 and 12.5.602.1.8; and (v) ICC 700-2008 Section 602.9 for water-resistive barriers.

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.

AquaFlash combined with AquaFlash Mesh may be used as self-adhering flashing under 2021 and 2018 IBC Section 1404.4 (2015 IBC Section 1405.4 and 2012 and 2009 IBC Section 1405.3) and 2021, 2018 and 2015 IRC Section R703.4 (2012 and 2009 IRC Section R703.8), when installed in accordance with Section 4.3.1 of this report. AquaFlash is limited to use in Type V construction in accordance with the IBC, except under the 2021, 2018 and 2015 IBC where used as flashing for fenestration products as allowed under 2021 and 2018 IBC Section 1402.5 (2015 IBC Section 1403.5), and in structures constructed in accordance with the IRC

3.0 DESCRIPTION

3.1 General:

Backstop NT-Smooth, Backstop NT-Texture, Backstop NTX-Smooth and Backstop NTX-Texture are factory-mixed, liquid-applied, water-resistive barriers that are applied over substrates described in Section 3.5.2. The products are packaged in 5-gallon (19 L) pails and have a shelf life of two years when stored at temperatures no lower than 40°F (4.4°C). The water vapor transmission value of Backstop NT (when tested in accordance with ASTM E96, Desiccant Method) is greater than 35 g/m² per 24 hours, making the products equivalent to a Grade D barrier. Backstop NT and Backstop NTX have a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 (UL 723).

3.2 Grid Tape:

Dryvit Grid Tape is a self-adhering woven and treated glass-fiber mesh that is used with Backstop NT as a treatment for substrate joints and wrapping of rough openings for windows, doors, mechanical equipment, and through-wall penetrations. The fabric is supplied in 4-inch and 9-inch (102 mm and 229 mm) widths and must be stored in a dry location at temperatures no lower than 40°F (4.4°C).

3.3 AquaFlash:

AquaFlash liquid is a flexible, water-based polymer material used in conjunction with AquaFlash Mesh to seal substrates around windows, doors and other openings. AquaFlash is

also used to bridge across expansion/control joints and substrate transitions.

3.4 AquaFlash Mesh:

AquaFlash Mesh is a nonwoven cloth reinforcement packaged in 4-inch (102 mm), 6-inch (152 mm) and 9-inch (229 mm) widths and used in conjunction with AquaFlash liquid.

3.5 Exterior Sheathing or Substrate:

3.5.1 AquaFlash flashing: When AquaFlash flashing material is used, the substrates may be:

- Glass-mat faced gypsum sheathing complying with ASTM C1177 and having a minimum ¹/₂-inch (12.7 mm) thickness.
- Exposure 1 plywood complying with U.S. DOC PS-1 or PS-2; or Exposure 1 oriented strand board (OSB) complying with U.S. DOC PS-2 and having a minimum ⁷/₁₆-inch (11.1 mm) thickness.
- Uncoated aluminum.
- PVC complying with ASTM D1784.
- Concrete and concrete masonry complying with the applicable sections of the applicable codes.

3.5.2 Backstop NT and Backstop NTX Water-Resistive Barriers: When Backstop NT or Backstop NTX water-resistive barrier coating is used, the substrates may be:

- Exterior-grade, water-resistant core gypsum sheathing complying with ASTM C1396 and having a minimum ¹/₂-inch (12.7 mm) thickness.
- Glass-mat faced gypsum sheathing complying with ASTM C1177 and having a minimum ¹/₂-inch (12.7 mm) thickness.
- Cement board sheathing complying with ASTM C1325 and having a minimum ¹/₂-inch (12.7 mm) thickness.
- Exposure 1 plywood complying with U.S. DOC PS-1 or PS-2 having a nominal ¹⁹/₃₂-inch (12.7 mm) minimum thickness, or Exposure 1 oriented strand board (OSB) complying with U.S. DOC PS-2 having a nominal ¹⁹/₃₂-inch (11.1 mm) minimum thickness.
- Concrete and concrete masonry complying with the applicable sections of the applicable codes.

4.0 INSTALLATION

4.1 General:

Installation of Dryvit Backstop NT, Backstop NTX and Dryvit AquaFlash must comply with this report and the manufacturer's published application instructions. When use is behind cement plaster (stucco), a single layer of Grade D building paper or equivalent, to serve as a slip sheet, is required over the dry Backstop NT and Backstop NTX. The manufacturer's published application instructions must be available at the jobsite at all times during installation. Relevant documents are available at:

<http://www.dryvit.com/media/328338/ds300.pdf>

<http://www.dryvit.com/media/304747/ds200.pdf>

<http://www.dryvit.com/filesare/doc/us/detail/ds840.pdf>

4.2 Exterior Sheathing or Substrate Preparation:

Surfaces must be structurally sound and free of loose material, voids, projections, or other conditions that may interfere with the installation of Dryvit Backstop NT, Backstop NTX or AquaFlash. The substrate must be flat, and free of fins or planar irregularities greater than ¹/₄ inch in 4 feet (6.4 mm in 1219 mm).

4.3 Coating Application:

4.3.1 Flashing: Rough openings must be wrapped with Dryvit AquaFlash by applying AquaFlash liquid to all surfaces and immediately embedding AquaFlash Mesh in accordance with the manufacturer's published installation instructions. A second coat of AquaFlash liquid is applied over the AquaFlash Mesh to ensure a continuous, void-free membrane application.

4.3.2 Water-resistive Barrier: Prior to application of Backstop NT and Backstop NTX (Smooth or Texture) over the face of the sheathing substrate, Dryvit Grid Tape is applied along all joints in the sheathing and to corners and exposed edges at terminations that will not be covered with Dryvit AquaFlash or Dryvit Flashing Tape. The Dryvit Grid Tape and fastener heads are covered with a layer of Backstop NT-Texture or Backstop NTX-Texture before application of the Backstop NT-Smooth, NT-Texture, Backstop NTX-Smooth or NTX-Texture. A minimum of one coat of Backstop NT-Smooth or NT-Texture; or Backstop NTX-Smooth or NTX-Texture is required over gypsum sheathing, cement board or plywood substrates. A minimum of two coats of Backstop NT-Smooth or Backstop NTX-Smooth is required over OSB substrate. A minimum of two coats of Backstop NT-Texture or Backstop NTX-Texture is required over concrete and concrete masonry.

4.4 Curing and Drying:

The material must be allowed to dry for at least two hours before installation of the approved cladding. The minimum dry thickness is 12 mils [0.012 inch (0.3 mm)]. Curing time varies depending on temperature/humidity and surface conditions. During the curing, the material must be protected from rain and from temperatures below 40°F (4.4°C) for 24 hours.

5.0 CONDITIONS OF USE

The Dryvit Backstop NT, Backstop NTX and Dryvit AquaFlash 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 this report, the manufacturer's published application 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 For water-resistive coatings used in EIFS applications, special inspections are required at the jobsite in accordance with 2021, 2018 and 2015 IBC Section 1705.16 [2012 IBC Section 1705.15.1 (2009 IBC Section 1704.14.1)]. For other applications, special inspections are not required at the jobsite if installation is done by an installer or contractor trained by the manufacturer, and a certificate of installation is presented to the code official at the completion of each project; otherwise, special inspections are required at the jobsite in accordance with 2021, 2018, 2015 and 2012 IBC Section 1705.1.1 (2009 IBC Section 1704.15). Duties of the inspector include verifying field preparation of materials, expiration dates, installation

of components, curing of components, installation of joints and sealants, applied dry-film thickness and interface of coating material with flashings.

- 5.3 The barriers must be covered with an exterior wall covering complying with the applicable code or a current evaluation report. A single layer of Grade D building paper to serve as a slip sheet is required when the barriers are used behind cement plaster (stucco).
- 5.4 Joints and cracks treated with Backstop NT must be a maximum of 1/8 inch (3.2 mm) wide.
- 5.5 Backstop NT must not be used for repairing moving cracks or joints.

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Coatings Used as Water-resistive Barriers over Exterior Sheathing (AC212), dated February 2015 (editorially revised July 2020).
- 6.2 Data in accordance with the ICC-ES Acceptance Criteria for Flexible Flashing Materials (AC148), dated July 2017 (editorially revised March 2021).
- 6.3 Report containing results of testing in accordance with ASTM E84 (UL 723).
- 6.4 Report containing results of testing in accordance with ASTM E2178.

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-3319) along with the name, registered trademark, or registered logo of the report holder (Tremco CPG, Inc.) must be included in the product label.
- 7.2 In addition, each container of material is identified by the Tremco CPG, Inc., name, the product name, the production date and batch number and shelf life.
- 7.3 The report holder's contact information is the following:

TREMCO CPG, INC.
3735 GREEN ROAD
BEACHWOOD, OHIO 44122
(401) 822-4100

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**Section: 07 25 00—Water-Resistive Barrier/Weather Barriers****Section: 07 65 00—Flexible Flashing****REPORT HOLDER:**

TREMCO CPG, INC.

EVALUATION SUBJECT:**DRYVIT BACKSTOP NT, BACKSTOP NTX WATER-RESISTIVE BARRIERS/AIR BARRIERS AND AQUAFLASH FLEXIBLE FLASHING****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that Dryvit Backstop NT, Backstop NTX Water-Resistive Barrier/Air Barrier and Aquaflash Flexible Flashing, described in ICC-ES evaluation report ESR-3319, have also been evaluated for compliance with the codes 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 Dryvit Backstop NT, Backstop NTX Water-Resistive Barriers/Air Barriers and Aquaflash Flexible Flashing, described in Sections 2.0 through 7.0 of the evaluation report ESR-3319, comply with CBC Chapters 7 and 14, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapter 14, 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 Dryvit Backstop NT, Backstop NTX Water-Resistive Barriers/Air Barriers and Aquaflash Flexible Flashing, described in Sections 2.0 through 7.0 of the evaluation report ESR-3319, comply with CRC Chapter 7, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report and the applicable requirements of the CRC, as applicable.

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

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**Section: 07 25 00—Water-Resistive Barriers/Weather Barriers****Section: 07 65 00—Flexible Flashing****REPORT HOLDER:**

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Applicable code editions:

- 2023 Florida Building Code—Building
- 2023 Florida Building Code—Residential

2.0 CONCLUSIONS

The Dryvit Backstop NT, Backstop NTX Water-resistive Barriers/Air Barriers and AquaFlash Flexible Flashing, described in Sections 2.0 through 7.0 of the evaluation report ESR-3319, comply with the *Florida Building Code—Building* and *Florida Building Code—Residential*. The design requirements must be determined in accordance with the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-3319 for the 2021 *International Building Code*® meet the requirements of the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as noted in the evaluation report.

Use of the Dryvit Backstop NT, Backstop NTX Water-resistive Barriers/Air Barriers and AquaFlash Flexible Flashing for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and *Florida Building Code—Residential* has not been evaluated and is outside the scope of this supplemental report.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official, when the report holder does not possess an approval by the Commission).

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