

Backstop® NTX-VB™



A Liquid Applied, Water-Resistive Membrane, Air Barrier
and Class I Vapor Retarder

DS831

Backstop NTX-VB Application Instructions

CHECKLIST PRIOR TO THE INSTALLATION OF BACKSTOP NTX-VB**Project Conditions**

- Maximum storage temperature shall not exceed 100 °F (38 °C). Minimum storage temperature shall not be less than 40 °F (4 °C).
- Air and surface temperatures for application of Backstop NTX-VB products must be from 25°F (-4 °C) minimum to 100 °F (38 °C) maximum and must remain so for a minimum of 12 hours thereafter.
- Ensure that all roof-to-wall flashings, wall to deck flashings, run-off diverters (i.e. kick-outs), or other penetration flashings, are installed where required to direct water to the exterior of the building envelope. Particular attention must be paid to the eaves/chimney intersections, sloped roof/wall intersections, decks, and windows.
- Application of Backstop NTX-VB materials and associated Dryvit products shall not take place during inclement weather unless appropriate protection is provided.
- Protect materials from inclement weather until they are completely dry.
- Protect surrounding areas and surfaces during installation of the Backstop NTX-VB.
- Backstop NTX-VB can be exposed to weather up to 180 days to provide sufficient time for installation of the cladding. Inspect the surface of the Backstop NTX-VB for any damage, cracks, voids or other detrimental conditions and repair prior to installation of the cladding. The Backstop NTX-VB surface shall be clean, dry, and free of any detrimental conditions that may affect adhesion.

MATERIALS USED WHEN INSTALLING DRYVIT'S BACKSTOP NTX-VB**Materials Supplied by Dryvit Systems, Inc.**

- Dryvit Backstop NTX-VB (required for sheathing joint treatment)
- Dryvit Backstop NTX-VB Smooth
- Dryvit Grid Tape™ (Required for sheathing joint treatment)
- Dryvit AquaFlash® Liquid and AquaFlash® Mesh (if specified)
- Backstop® Flash & Fill (if specified)

TOOLS USED FOR THE INSTALLATION OF DRYVIT'S BACKSTOP NTX-VB

- 3/4 in (19 mm) nap roller
- 1/2 in (13 mm) nap roller
- FoamPro #58 Roller
- Appropriate texture spray equipment for Backstop NTX-VB (if needed)
- Hawk and Trowel for Backstop NTX-VB
- Airless spray equipment for Backstop NTX-VB Smooth

I. Mixing

- A. Open the bucket with a utility knife or lid-off.
- B. Backstop NTX-VB is ready to use after an initial spin-up using a "Twister" paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 450 – 500 rpm. Do not add cement or any other additives.
- C. Do not dilute the product or add any foreign materials to the Backstop NTX-VB product.

II. Substrate Check

- A. Ensure that the substrate is of a type listed in the Dryvit Backstop NTX-VB Specification, [DS830](#).
- B. Ensure that ambient and surface temperatures are minimum 25°F (-4 °C) to maximum 100 °F (38 °C) at the time of Backstop NTX-VB application.
- C. Ensure that the substrate is dry. Plywood or OSB moisture content shall not exceed 19% as measured by a probe type moisture meter.
- D. Ensure that the substrate is flat within 1/4 in (6.4 mm) in a 4 ft (1.2 m) radius.
- E. Ensure that sheathing gaps do not exceed 1/4 in (6.4 mm). Larger gaps must be corrected by replacing the sheathing material.
- F. Notify the general contractor and/or architect and/or owner of all discrepancies. Do not proceed with work until discrepancies have been corrected.

III. Surface Preparation

- A. The substrate shall be prepared to be free of foreign materials such as oil, efflorescence, dust, dirt, paint, wax, water repellents, moisture, frost, and any other materials that may inhibit adhesion.

IV. Backstop NTX-VB Application

- A. Ensure that the wall surface and ambient temperature are from 25°F (-4 °C) minimum to 100 °F (38 °C) maximum at the time of Backstop NTX-VB application. **WARNING: Do not apply the Dryvit materials in the rain. The underlying wall materials and substrate surface must be dry prior to applying the air/vapor/water-resistive barrier.**
- B. Sheathing Substrates:
 - 1. Prior to applying Backstop NTX-VB products over a sheathing substrate, check to ensure that:
 - a. The sheathing is of a type listed in the Backstop NTX-VB Specification, [DS830](#).
 - b. The sheathing is structurally sound, free of loose material, voids, projections, or other conditions that may interfere with the installation of the Backstop NTX-VB material.
 - c. The sheathing is clean, dry, and free of grease, oil, paint, and other foreign material.
 - 1) Exterior grade gypsum sheathing facing paper shall not show signs of deterioration and shall be firmly bonded to the core.
 - 2) Plywood or OSB moisture content shall not exceed 19% Wood Moisture Equivalent (WME) as measured by a probe type moisture meter.
 - d. There are no planar irregularities greater than 1/4 in (6.4 mm) within any 4 ft (1.2 m) radius.
SHEATHING WITH GAPS OR DAMAGE EXCEEDING 6.4 mm (1/4 IN) IN ANY ONE DIRECTION MUST BE REPLACED. NOTE: Notify the general contractor and/or architect and/or owner of all discrepancies. Do not proceed until all unsatisfactory conditions have been corrected.

C. Concrete or Masonry Substrates

1. Prior to applying Backstop NTX-VB products over a concrete or masonry substrate, check to ensure that:
 - a. All cracks are repaired using appropriate procedures and materials.
 - b. The substrate is structurally sound, free of loose material, voids, projections, or other conditions that may interfere with the installation of the Backstop NTX-VB material.
 - c. Concrete shall have cured a minimum of 28 days prior to application of the Backstop NTX. If efflorescence, form release agents or curing compounds are present on the concrete surface, the surface shall be thoroughly washed with muriatic acid and flushed to remove residual acid. All projections shall be removed and small voids filled with Dryvit Primus®, Primus® DM, Genesis® or Genesis® DM mixture (see product data sheets for mixing and application).
 - d. The substrate is clean, dry, free of grease, oil, paint, form release agents, efflorescence and other foreign materials that may inhibit adhesion.
 - e. There are no planar irregularities greater than 1/4 in (6.4 mm) within any 4 ft (1.2 m) radius.
 - 1) **Mortar joints that are NOT struck flush or heavily textured masonry units shall be skim coated with Dryvit Genesis®, Genesis® DM or Genesis® DMS prior to the application of Backstop NTX-VB products.**
 - a) Mix Genesis, Genesis DM or Genesis DMS in accordance with the appropriate Product Data Sheet.
 - b) With a stainless-steel trowel, apply a coat of the Genesis mixture, Genesis DM mixture or Genesis DMS mixture over the substrate to fill the mortar joints and surface texture to provide a uniform smooth surface for the application of the Backstop NTX-VB material.
 - c) Allow the skim coat to completely dry prior to applying the Backstop NTX-VB products.

D. Usage/Application Chart

Backstop NTX-VB Usage/Application Chart			
			Approx. Coverage Per Pail ^d
Exterior Grade Gypsum Sheathing			
Joints ^a	BSNTX-VB	Trowel	300 lin. ft. (91 m)
Face ^{ei}	BSNTX-VB	Trowel ^b or Texture Sprayer	For both tools 200 ft ² (18.6 m ²) max (2 coats)
	BSNTX-VB Smooth	Airless Spray	300-375 ft ² (28-35 m ²) (2 coats)
Fiberglass Faced Exterior Gypsum Sheathing			
Joints ^a	BSNTX-VB	Trowel	300 lin. ft. (91 m)
Face ^{ei}	BSNTX-VB	Trowel or Texture Sprayer	For both tools 200 ft ² (18.6 m ²) max [includes joints] (2 coats)
	BSNTX-VB Smooth	Airless Spray	300-375 ft ² (28-35 m ²) (2 coats)
APA Exposure 1, Exterior Grade, and Fire Retardant Treated Plywood; and Exterior Cement Board			
Joints ^a	BSNTX-VB	Trowel	300 lin. ft. (91 m)
Face ^{ei}	BSNTX-VB	Trowel ^b or Texture Sprayer	For both tools 200 ft ² (18.6 m ²) max (2 coats)
	BSNTX-VB Smooth	Airless Spray	300-375 ft ² (28-35 m ²) (2 coats)
APA Exposure 1 Rated Oriented Strand Board (OSB)			
Joints ^a	BSNTX-VB	Trowel	300 lin. ft. (91 m)
Face ^{ei}	BSNTX-VB	Trowel ^b	200 ft ² (18.6 m ²) max (2 coats)
		Texture Sprayer	200 ft ² (18.6 m ²) max (2 coats, backrolled) ^g
	BSNTX-VB Smooth	Airless Spray	300-375 ft ² (28-35 m ²) (2 coats, backrolled) ^h
Concrete and Masonry^c			
Face ^{ei}	BSNTX-VB	Trowel	100-125 ft ² (9-12 m ²) ^f (2 coats)
		Texture Sprayer	100-125 ft ² (9-12 m ²) ^f (2 coats, backrolled) ^g
	BSNTX-VB Smooth ⁱ	Airless Spray	150-375 ft ² (14-35 m ²) ^f (2 coats, backrolled) ^h

^a Tape the joints with Dryvit Grid Tape prior to application of Backstop NTX-VB at joints and screw heads.

^b Up to 1 pint (16 oz) of water may be added to a 60 lb pail of Backstop NTX-VB for spray applications only.

^c Due to variations in types of concrete/masonry, apply a 6 ft x 6 ft test area with coverage as indicated in the chart, before proceeding with the entire job. If there are voids in the substrate, particularly at the mortar joints, the job should be parged with Genesis[®], 24 hours prior to BSNTX-VB application. Backstop NTX-VB shall NOT be used as a skim coat for parging CMU joints or heavy textured units.

^d Backstop NTX-VB should be applied at the recommended coverage rates to form a continuous film free of voids

^e Backstop NTX-VB (with up to 1 pint water addition per 60 lb. pail).

^f Coverage may vary depending on the texture and porosity of the masonry substrate. Coverage based on smooth, dense block surface.

^g FoamPro #58 roller is recommended

^h 1/2 in or 3/4 in nap roller is recommended.

ⁱ Backstop NTX-VB should be applied at the recommended coverage rates to form a continuous film free of voids, pinholes or other discontinuities. The following approximate mil thicknesses are recommended:

Backstop NTX-VB	24 DFT	40*WFT
Backstop NTX-VB Smooth	18 DFT	30*WFT

*Based on volume solids

Refer to Product Data Sheets for Complete Mixing and Application Instructions

E. Application of Backstop NTX-VB Products

Note: This section provides the procedure for applying Backstop NTX to the wall surface only. At the completion of the Backstop NTX application, all openings and terminations must be treated with either the Dryvit AquaFlash System or Backstop Flash & Fill (see Section V) to protect surfaces from water penetration and all terminations must be otherwise properly flashed to ensure that water is diverted to the exterior of the cladding.

1. Dryvit Grid Tape (not required with concrete and masonry substrates).

- For sheathing substrates, apply the Dryvit Grid Tape along all joints in the sheathing, as well as inside corners, outside corners, and exposed edges at terminations that will not be covered with Dryvit AquaFlash or Backstop Flash & Fill.
- Center the Dryvit Grid Tape on the sheathing joints, edges, etc. with the pressure sensitive adhesive backing in contact with the sheathing surface. Press into position with hand pressure until adhesion is achieved.
- Apply only enough Dryvit Grid Tape as can be covered with Backstop NTX-VB in the same day.

2. Dryvit Backstop NTX-VB Application

- General: Backstop NTX-VB can be applied using a trowel or texture spray equipment over the listed substrates, as noted in the usage chart above. Backstop NTX-VB should be applied at the recommended coverage rate to achieve a continuous film.

b. Trowel Application

- Apply Dryvit Grid Tape as described in Section IV.E.1 above. Mix the material, as described in Section I and using a stainless-steel trowel or spatula, apply a layer of Backstop NTX-VB over the grid tape. Spotting of fasteners is not necessary when applying Backstop NTX-VB using a trowel. Allow to dry for a minimum of 2 hours or until dry to the touch. Figure 1.

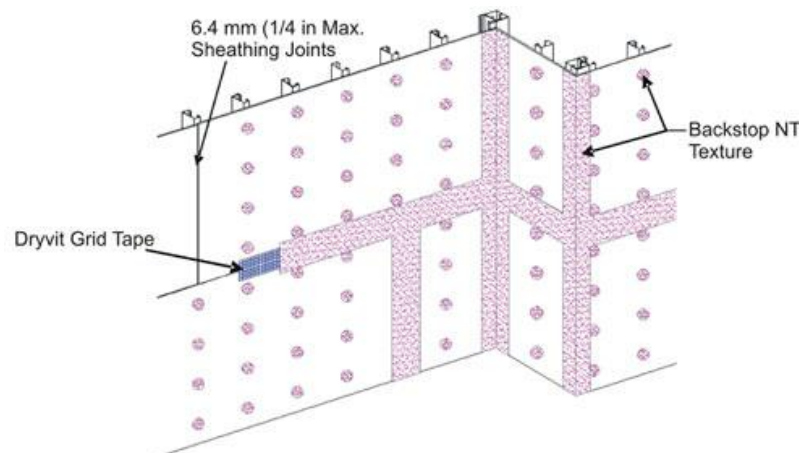


Figure 1

- Using a stainless-steel trowel, apply a continuous coating of Backstop NTX-VB material onto the entire surface. The material should be applied at a smooth, uniform, continuous film and allow to dry until firm to the touch.
 - Apply a second pass in the same manner as the first. If the material on the wall pulls away or drags, it should be allowed to dry for a longer period until the second pass may be applied without disturbing the first layer.
 - The Backstop NTX-VB material should be applied in a uniform, continuous film at the recommended coverage rate. **NOTE: Substrates with a surface texture or high porosity will require additional material.**
- d. Spray/Back-rolling Application for Masonry and porous substrates
- Apply Dryvit Grid Tape as described in Section IV.E.1 above. Mix the material as described in Section I and using a stainless-steel trowel or spatula, apply a layer of Backstop NTX-VB over the grid tape and spot all fastener heads. Allow to dry for a minimum of 2 hours or until dry to the touch.
 - Because of the absorption characteristics, plywood substrates may require a second pass to fill any voids at the sheathing joints. After the first pass has dried, check the joints, and spot any voids that may be present with additional Backstop NTX-VB material and allow to dry.

- 3) Using a handheld hopper gun or other suitable texture spray equipment; spray a layer of Backstop NTX-VB onto the wall surface. Using a coarse, open-cell foam roller cover with a 3/8 in (9.5 mm) foam nap (FoamPRO #58 roller), roll the material to create a smooth continuous film. **NOTE: If the roller pulls material back out of the sheathing joints, it indicates that the joint material is not sufficiently dry.**
- 4) While Backstop NTX-VB is still wet, using a trowel or spatula, smooth out the Backstop NTX-VB around all window and door perimeters and other areas that will later receive AquaFlash or Backstop Flash & Fill. Allow to dry until firm to the touch.
- 5) Apply a second pass in the same manner as the first. If the material on the wall pulls away or drags, it should be allowed to dry for a longer period until the second pass may be applied without disturbing the first layer.
- 6) Backstop NTX-VB material should be applied in a uniform, continuous film at the recommended coverage rate. **NOTE: Substrates with a surface texture or high porosity will require additional material.**

3. Dryvit Backstop NTX-VB Smooth Spray Application

- a. General: Dryvit Backstop NTX-VB Smooth can be applied using appropriate spray equipment over the acceptable sheathing substrates.
 - 1) Airless spray equipment must be capable of providing minimum 3,000 psi and minimum material flow of 1 gallon per minute with a minimum 0.021 spray tip.

NOTE: OSB sheathing requires that joints and fasteners be treated with Backstop NTX-VB.
- b. Sheathing Substrates: All fastener heads shall be spotted, and joints treated with Backstop NTX-VB and Dryvit Grid Tape in accordance with Section IV.E.1 prior to Backstop NTX-VB Smooth application.
 - 1) Backstop NTX-VB Smooth material should be applied in a uniform, continuous film at the recommended coverage rate free of voids and pinholes – Figure 4.

NOTE: Sheathing substrates with a surface texture or high porosity will require additional material.

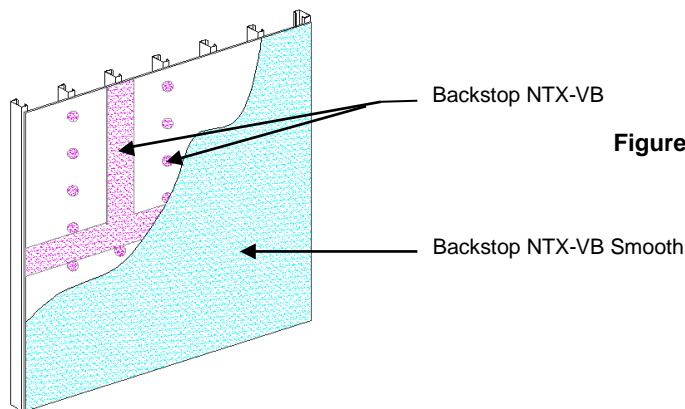


Figure 4

- c. Concrete/Masonry Substrates
 - 1) Backstop NTX-VB Smooth may be applied to the wall using appropriate airless spray equipment and back rolled using the appropriate nap roller (see Usage Application Chart).
 - 2) Allow the Backstop NTX-VB Smooth to completely dry, check the wall to ensure that the Backstop NTX-VB Smooth is continuous and touch up any visible voids with additional material.
- d. Allow the Backstop NTX-VB Smooth to completely dry prior to installation of the Dryvit EIF system or specified cladding.

V. Detailing at Transitions

- A. The Backstop NTX-VB membrane must be tied into all openings and penetrations to achieve continuity of the air barrier and it must be integrated with flashing material to eliminate water penetration.
1. Integration with flashing, openings, and terminations
 - a. Dryvit AquaFlash
 - 1) May be applied directly over clean galvanized, painted metal, or PVC flashing.
 - 2) Clean the surface of the flashing to ensure it is free of dirt, dust, oil, or other contaminants that may interfere with adhesion. Note: PVC products should be lightly abraded to break the surface skin and provide tooth for the coating.
 - 3) Refer to Dryvit AquaFlash Application Instructions, [DS196](#) for application and sequencing.
 - b. Backstop Flash & Fill
 - 1) Refer to Backstop Flash & Fill Data Sheet, [DS848](#).
 2. Continuity of the air barrier
 - a. The Backstop NTX-VB membrane must be connected at the following locations to provide continuity:
 - 1) air barrier for the roof and foundation
 - 2) to concrete below grade structures
 - 3) to windows and doors
 - 4) louvers and other mechanical equipment
 - 5) electrical boxes
 - 6) hose bibs
 - 7) any other wall penetrations
 - b. Provide a bead of compatible sealant complying with ASTM C920 between the Backstop NTX-VB membrane, AquaFlash or Backstop Flash & Fill and the adjacent material.

DISCLAIMER

Information contained in these application instructions conforms to standard detail and product recommendations for the installation of the Dryvit Backstop NTX-VB products as of the date of publication of this document and is presented in good faith. Dryvit Systems, Inc. assumes no liability, expressed or implied, as to the architecture, engineering or workmanship of any project. To ensure that you are using the latest, most complete information, contact Dryvit Systems, Inc. at:

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