APPLICATION INSTRUCTIONS

Backstop® NTX™

A High Performance, Polymer-Based, Non-cementitious Water-Resistive Membrane and Air Barrier

DSC181

CHECKLIST PRIOR TO THE INSTALLATION OF BACKSTOP NTX TEXTURE and SMOOTH

Project Conditions

- Maximum storage temperature shall not exceed 38 °C (100 °F). Minimum storage temperature shall not be less than 4 °C (40 °F).
- Air and surface temperatures for application of Backstop NTX materials must be from 4 °C (40°F) minimum to 38 °C (100 °F).
- 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 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.
- Backstop NTX 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 for any damage, cracks, voids or other detrimental conditions and repair prior to installation of the cladding. The Backstop NTX surface shall be clean, dry and free of any detrimental conditions that may affect adhesion.
- Avoid conditions during construction that result in excessive moisture load in the building. High moisture can cause condensation in the unfinished exterior walls and sheathing during periods of cold weather. Forced air heaters, wet masonry, poured concrete and finishing materials introduce large volumes of water vapor into the building.

MATERIALS USED WHEN INSTALLING DRYVIT'S BACKSTOP NTX TEXTURE and SMOOTH

Materials Supplied by Tremco CPG, Inc. (Dryvit)

- Dryvit Backstop NTX Texture
- Dryvit Backstop NTX Smooth→ **Note: Backstop NTX Smooth and Backstop NTX Spray are now one product.**
- Dryvit AquaFlash® Liquid
- Dryvit AquaFlash Mesh
- Dymonic 100

TOOLS USED FOR THE INSTALLATION OF DRYVIT'S BACKSTOP NTX TEXTURE and SMOOTH

Tool	Product
19 mm (3/4 in) nap roller	Backstop NTX Smooth
13 mm (1/2 in) nap roller	Backstop NTX Smooth
Texture spray equipment (if needed)	Backstop NTX Texture
Airless Spray Equipment (if needed)	Backstop NTX Smooth
Hawk and Trowel	Backstop NTX Texture
Sealant putty knife	Dymonic 100
Sealant gun	Dymonic 100

1. MIXING

A. Open the bucket with a utility knife or lid-off.

B. Backstop NTX is ready to use after an initial spin-up using a "Twister" paddle or equivalent mixing blade, powered by a 12.7 mm (1/2 in) drill, at 450 – 500 rpm. Do not add cement or any other additives.

C. Do not dilute the product or add any foreign materials (including water) to the Backstop NTX product.

2. SUBSTRATE CHECK

A. Ensure that the substrate is of a type listed in the Dryvit Backstop NTX Specifications, DSC180.

B. Ensure that ambient and surface temperatures are minimum 4 °C (40 °F) to maximum 38 °C (100 °F) at the time of Backstop NTX 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 in all directions within 6.4 mm (1/4 in) over 2440 mm (96 in).

E. Ensure that sheathing gaps do not exceed 6 mm (1/4 in). 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.

3. SURFACE PREPARATION

A. The substrate shall be prepared so as to be free of foreign materials such as oil, efflorescence, dust, dirt, paint, wax, water repellents, moisture, frost and any other materials that may affect adhesion. Additionally, the surface must be free of loose mortar, wires, or any projections that will not allow a continuous film to be applied.

B. CMU mortar joints shall be struck flush. Tooled mortar joints and heavily textured CMU, not split-faced, shall be skim coated with a non-shrinking grout or other concrete patching material.

C. Excess mortar must be removed.

4. BACKSTOP NTX APPLICATION

A. Ensure that the wall surface and ambient temperature are from 4 °C (40 °F-) minimum to 38 °C (100 °F) maximum at the time of Backstop NTX 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/water-resistive barrier.**

B. Per CAN/ULC-S716.2, all substrates are to receive no less than two-coats of the LA-WRB materials. Allow to dry a minimum of 2 hours or until dry to the touch.

C. Sheathing Substrates:

1. Prior to applying Backstop NTX products over a sheathing substrate, check to ensure that:

   a. The sheathing is of a type listed in the Backstop NTX Specification, DSC180.

   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 material.

   c. The sheathing is clean, dry and free of grease, oil, paint and other foreign material.

      1) 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 6 mm (1/4 in) over 2.44 m (96 in).
   SHEATHING WITH GAPS OR DAMAGE EXCEEDING 6 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.

1. Concrete or Masonry Substrates
   Prior to applying the Backstop NTX 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, clean, dry, free of grease, oil, paint, form release agents, efflorescence, loose material, voids, projections or other conditions that may interfere with the installation of the Backstop NTX 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®, Genesis® DM, or Pargit® mixture (see product data sheets for mixing and application). If concrete laitence is present, removal may require scarification and washing. Condition is to be brought to the attention of project authoity for correction. (Note: Correction is generally not the responsibility of the EIFS contractor.)
   d. There are no planar irregularities greater than 6 mm (1/4 in) over 2.44 m (96 in).
      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 Texture or Backstop NTX Smooth.
         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 material.
         c) Allow the skim coat to completely dry prior to applying the Backstop NTX Texture or Backstop NTX Smooth.

D. Usage/Application Chart

BACKSTOP NTX (BSNTX) – TEXTURE AND SMOOTH USAGE/APPLICATION CHART

			APPROX. COVERAGE PER PAIL	APPROX. COVERAGE PER DRUM
FIBERGLASS FACED EXTERIOR GYPSUM SHEATHING				
Joints[a]	BSNTX Texture with AquaFlash Mesh	Trowel	91 m (300 lin. ft)	
	AquaFlash Liquid with AquaFlash Mesh	Brush or 19 mm (¾ in)	91 m (300 lin. ft) with 101.6 mm (4") wide mesh and 3.6 kg (8 lb) pail or 457 m (1500 lin. ft) per 18.1 kg (40 lb) pail	
	Dymonic 100	Putty Knife	9.8 m (32 lin. ft) at 38 mm (1.5 in) wide and 1 mm (40 mils) thick per 567 g (20 oz) sausage	
Face[e,f]	BSNTX Texture	Trowel or Texture Sprayer[d]	12-14.5 m^2 (130-156 ft^2)	
	BSNTX Smooth[c]	19 mm (3/4 in) Nap Roller	30.4 m^2 (327 ft^2)	
		Airless Sprayer[d]	38-45.6-m^2 (409-491 ft^2)	380-456 m^2 (4,090-4,910 ft^2)
EXPOSURE 1, EXTERIOR GRADE, AND FIRE RETARDANT TREATED PLYWOOD; AND EXTERIOR CEMENT BOARD				
Joints[a]	BSNTX Texture with AquaFlash Mesh	Trowel	91 m (300 lin. ft)	
	AquaFlash Liquid with AquaFlash Mesh	Brush or 19 mm (¾ in)	91 m (300 lin. ft) with 101.6 mm (4") wide mesh and 3.6 kg (8 lb) pail or 457 m (1500 lin. ft) per 18.1 kg (40 lb) pail	
	Dymonic 100	Putty Knife	9.8 m (32 lin. ft) at 38 mm (1.5 in) wide and 1 mm (40 mils) thick per 567 g (20 oz) sausage	
Face[e,f]	BSNTX Texture	Trowel or Texture Sprayer	12-14.5 m^2 (130-156 ft^2)	
	BSNTX Smooth[c]	12.7 mm (1/2 in) Nap Roller	49.4 m^2 (532 ft^2)	
		Airless Sprayer[d]	38-45.6-m^2 (409-491 ft^2)	380-456 m^2 (4,090-4,910 ft^2)
APA EXPOSURE 1 RATED ORIENTED STRAND BOARD (OSB)				
Joints[a]	BSNTX Texture with AquaFlash Mesh	Trowel	91 m (300 lin. ft)	
	AquaFlash Liquid with AquaFlash Mesh	Brush or 19 mm (¾ in)	91 m (300 lin. ft) with 101.6 mm (4") wide mesh and 3.6 kg (8 lb) pail or 457 m (1500 lin. ft) per 18.1 kg (40 lb) pail	
	Dymonic 100	Putty Knife	9.8 m (32 lin. ft) at 38 mm (1.5 in) wide and 1 mm (40 mils) thick per 567 g (20 oz) sausage	
Face[e,f]	BSNTX Texture	Trowel or Texture Sprayer[b]	17.8-20.3 m^2 (192-219 ft^2)	
	BSNTX Smooth	12.7 mm (1/2 in) Nap Roller	26.6-30.4 m^2 (286-327 ft^2)	
		Airless Sprayer[d]	26.6-30.4 m^2 (286-327 ft^2)	2,660-3,040 m^2 (2,860-3,270 ft^2)
CONCRETE AND MASONRY[c]				
Face[e,f]	BSNTX Texture	Trowel	9.7-12 m^2 (104-130 ft^2)	
	BSNTX Texture	Texture Sprayer[b]	9.7-12 m^2 (104-130 ft^2)	
	BSNTX Smooth	Airless Spray	22.8-38 m^2 (245-409 ft^2)	2,280-3,800 m^2 (2,450-4,090 ft^2)

a Embed AquaFlash Mesh in BSNTX Texture, apply the AquaFlash System, or apply Dymonic 100 at joints, and apply Backstop NTX Texture or Dymonic 100 at screw heads.

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

c Due to variations in types of concrete/masonry, apply a 1.8 m x 1.8 m (6 ft x 6 ft) test area with coverage as indicated in the chart, before proceeding with. If there are voids in the substrate, particularly at the mortar joints, the job should be parged with Genesis®, 24 hours prior to BSNTX Texture application. Backstop NTX shall NOT be used as a skim coat for parging CMU joints or heavy textured units.

d Backstop NTX Texture (with up to 1 pint water addition per 27.2 kg (60 lb.) pail) or Smooth may be sprayed and backtrowelled.

e Coverage may vary depending on the texture and porosity of the substrate. Coverage assumes a smooth, dense surface.

f Backstop NTX 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 Texture	25 DFT	32 WFT
Backstop NTX Smooth	11 DFT	14 WFT

Refer to Product Data Sheets for Complete Mixing and Application Instructions

E. Application of Backstop NTX

Note: This section provides the procedure for applying Backstop NTX to the wall surface only. Openings and terminations must be treated with either the Dryvit AquaFlash System or Dymonic 100 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. Joint Treatment and Fastener Heads: AquaFlash Mesh embedded in Backstop NTX Texture, AquaFlash System (Mesh and Liquid), or Dymonic 100 (not required with concrete and masonry substrates)
    a. For sheathing substrates, joints are to be treated using one of the following methods:
        1) embed AquaFlash Mesh in Backstop NTX Texture,
        2) apply the AquaFlash System (see DSC196), or
        3) apply Dymonic 100 (after applying a bead of Dymonic 100 to the joint, use a putty knife and spread the Dymonic 100 19 mm (¾") on either side of the joint.

        at rates referenced in the Application Chart. Joints include sheathing joints, as well as inside corners, outside corners, and exposed edges at terminations that will not be covered with Dryvit AquaFlash. Apply Backstop NTX Texture or Dymonic 100 to all fastener heads.
    b. Allow joints treated with Backstop NTX Texture to dry for a minimum of 2 hours or until dry to the touch. Joints treated with AquaFlash Mesh will be dry between 30 minutes and one and a half hours depending on environmental conditions and the absorption characteristics of the substrate. Dymonic 100 shall develop a skin, usually in 2 to 3 hours depending on environmental conditions.

    NOTE: OSB sheathing requires that joint and fasteners be treated with Backstop NTX Texture.

    NOTE: CAN/ULC S716.2 requires a minimum of two (2) coats of all LA-WRBs regardless of substrate type. Allow to dry a minimum of 2 hours or until dry to the touch.

    NOTE: Dryvit AquaFlash Mesh is not necessary over fastener heads.
2. Dryvit Backstop NTX Texture Application
    a. General: Backstop NTX Texture can be applied using a trowel or texture spray equipment over the listed substrates, as noted in the usage chart above. Backstop NTX Texture should be applied at the recommended coverage rate to achieve a continuous film at a thickness of approximately 32 mils wet (0.8 mm) or 25 mils dry (0.6 mm). **NOTE: Substrates with a surface texture or high porosity will require additional material.**
    b. Trowel Application
        1) Treat joints as described above. Mix the material, as described in Section 1. Spotting of fasteners is not necessary when applying Backstop NTX Texture using a trowel.
        2) Using a stainless steel trowel, apply a continuous coating of Backstop NTX Texture material onto the entire surface. The material should be applied at a smooth, uniform, continuous film approximately equal to the thickness of the aggregate. Avoid pulling material too tight and creating scratches or other voids.
    c. Spray/Back Troweling Application
        1) Check the joints and spot any voids that may be present and treat with additional material and allow to dry.
        2) Using a hand held hopper gun or other suitable texture spray equipment; spray a layer of Backstop NTX Texture onto the wall surface. While the material is wet, use a low trowel angle and pull the application tight (about the the thickness of the aggregate), flat and smooth while avoiding the creation of voids and scratches. Coat the entire wall area.
        3) After the first pass has dried, follow the same application method as described above and apply a second coat.
        4) Backstop NTX Texture 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. Backstop NTX Smooth Application
    a. General: Dryvit Backstop NTX Smooth can be applied using a roller or sprayed and back-rolled over acceptable substrates.
    b. Sheathing Substrates: All fastener heads shall be spotted and joints treated in accordance with Section 4.E prior to Backstop NTX Smooth application.

        NOTE: CAN/ULC S716.2 requires a minimum of two (2) coats of all LA-WRBs regardless of substrate type. Allow to dry for a minimum of 2 hours or until dry to the touch.
    c. Allow the Backstop NTX Smooth to completely dry, check the wall to ensure that the Backstop NTX Smooth is continuous and touch up any visible voids with additional material.
    d. Allow the Backstop NTX Smooth to completely dry prior to installation of the Dryvit EIF system or specified cladding.
    e. Roller Application
        1) Using the appropriate nap roller (see Usage Application Chart), apply the Backstop NTX Smooth over the entire wall surface, including previously treated joints. **NOTE: If the roller pulls material back out of the sheathing joints, it indicates that the joint material is not sufficiently dry.**
        2) Backstop NTX Smooth material should be applied in a uniform, continuous film at the recommended coverage rate. **NOTE: Substrates with a surface texture or high porosity may require additional material.**
    f. Backstop NTX Spray Application
        1) General: Dryvit Backstop NTX Smooth can be applied using appropriate spray equipment over the acceptable substrates.
        2) Airless spray equipment must be capable of providing minimum 3000 psi and minimum material flow of 1 gallon per minute with a minimum .021 spray tip.**NOTE: OSB sheathing requires that joints and fasteners be treated with Backstop NTX Texture.**
        3) Backstop NTX Smooth material should be applied in a uniform, continuous film at the recommended coverage rate free of voids and pinholes. **NOTE: Substrates with a surface texture or high porosity may require additional material.**
        4) Back-rolling with a ½" to ¾" (depending on the surface) nap roller is recommended for substrates with potential voids such as OSB, plywood and masonry/concrete in order to ensure a continuous film with no voids, pin-holes or discontinuities.

5. DETAILING AT TRANSITIONS

A. The Backstop NTX 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 System
            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 DSC196 for application and sequencing.
        b. Dymonic 100
            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 Tremco Dymonic 100 Rough Opening Installation Instructions.

2. Continuity of the air barrier
    a. The Backstop NTX membrane must be connected at the following locations in order 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 Dymonic 100 or other compatible sealant complying with ASTM C 920 between the Backstop NTX membrane, AquaFlash System or Dymonic 100 and the adjacent material.

Information contained in this product sheet conforms to the standard detail recommendations and specifications for the installation of Dryvit products as of the date of publication of this document and is presented in good faith. Dryvit 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.

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