

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

Description

Backstop NT is a flexible, polymer-based, noncementitious, air/water-resistive barrier, which resists water penetration, eliminates air infiltration, and is vapor permeable. It is classified as a Class III vapor retarder over vertical above grade walls. Backstop NT is available in three versions:

- **Backstop NT - Texture** is applied using a trowel, roller, or texture spray equipment.
- **Backstop NT - Smooth** is applied by roller or texture spray equipment.
- **Backstop NT - Spray** is applied by airless spray equipment.

Uses

Backstop NT – Texture, Smooth and Spray are designed for use with Dryvit EIF Systems as well as other building cladding systems. When used with the Dryvit AquaFlash® System or Dryvit Flashing Tape™, Backstop NT provides an effective air barrier and water-resistive membrane for acceptable substrates.

Benefits

Backstop NT is a low VOC water-based product used straight out of the pail after an initial spin up to provide a continuous membrane with ease of application. The liquid applied coating dries quickly and serves as an excellent surface for adhesively attaching EPS. Backstop NT is seamless and will not tear. Additionally, it is stable under air pressure differences and will not be affected by wind.

Packaging

Backstop NT – Texture and Smooth are supplied in 5 gal (19 L) pails. Backstop NT – Spray is supplied in a 5 gal (19 L) pail or in a 55 gallon (280 L) drum.

Coverage

Backstop NT – Texture and Smooth are supplied in a 5 gal (19 L) pail. Backstop NT – Spray is supplied in a 5 gal (19 L) pail or in a 55 gallon (280 L) drum. Coverage will vary, depending on application method and substrate. For guidance refer to the usage chart included in this document.

Properties

Working Time – Backstop NT - Texture, Smooth and Spray are noncementitious, water based materials and will not set-up in the pail. Keep pail covered when not in use to minimize skinning.

Drying Time – The drying time is dependent upon the air temperature, wind conditions and relative humidity. Under average drying conditions [70 °F (21 °C), 55% R.H.], Backstop NT will be dry to the touch within 2 hours and cure in 6 hours.

Testing Information

For test data refer to the chart included with this document.

Application Procedure For complete application instructions, refer to, DS181.

Job Conditions

Air and surface temperature for application of Backstop NT must be from 40 °F (4 °C) minimum to 100 °F (38 °C) maximum and must remain so for a minimum of 12 hours.

Temporary Protection

Shall be provided at all times until membrane is dry and shall not be exposed to weather for longer than 180 days prior to installation of the specified cladding.

Acceptable Substrates

All sheathing substrate joints must be treated with Dryvit Grid Tape and Backstop NT - Texture prior to application over the full sheathing surface. Acceptable substrates include:

- a. Core treated exterior grade gypsum sheathing meeting ASTM C 1396 (formerly C 79).
- b. Core treated exterior grade gypsum sheathing with fiberglass mat facers meeting ASTM C 1177.
- c. Exterior fiber reinforced cement or calcium silicate boards.
- d. APA Exterior or Exposure 1 Rated Plywood, Grade C-D or better, nominal 1/2 in (12.7 mm) minimum, installed with the C face out.
- e. APA Exterior Grade Fire Retardant Treated Plywood, nominal 1/2 in (12.7 mm) minimum, installed with the C face out.
- f. APA Exposure 1 Rated OSB, nominal 1/2 in (12.7 mm) minimum. **Note: Applications over OSB sheathing requires a minimum of 2 coats of Backstop NT – Smooth or Spray. Backstop NT – Texture is not recommended for the field of wall application over OSB.**
- g. Unpainted, unsealed concrete and CMU.

Surface Preparation

- Sheathing board gaps shall not exceed 1/4 in (6.4 mm) and the surface must be flat within 1/4 in (6.4 mm) in any 4 ft (1.2 m) radius. CMU mortar joints shall be struck flush (tooled mortar joints and heavily textured CMU [not split faced] shall be skimmed with Dryvit Genesis®, Genesis® DM or Genesis® DMS) prior to application of the Backstop NT – Texture or Spray.

Backstop NT

CMU shall be clean, unpainted and free of efflorescence. All substrates shall be dry and free of foreign materials such as dirt, dust, oil, paint, wax, water repellants or other materials that inhibit adhesion.

- All substrate transitions and gaps between openings and penetration components such as windows, doors, electrical boxes, etc., shall be treated with Backstop NT - Texture, Dryvit AquaFlash®, or Dryvit FlashingTape™. Any sealants used shall be tested for compatibility and comply with ASTM C 920.
- All opening terminations, roof/wall intersections, transitions between different materials, chimneys, decks, roof, windows, etc., must be properly flashed, wrapped and sealed as required by the building code, good construction practice and/or Dryvit Backstop NT Application Instructions, DS181.

Mixing

Material is ready for use after an initial spin-up using a drill with paddle mixer. DO NOT ADD CEMENT.

Backstop NT Application Refer to the usage/application chart for the appropriate use and application technique for a given substrate.

Clean Up

Clean tools with water while material is still wet.

Storage

Backstop NT must be stored at a minimum of 40 °F (4 °C) and a maximum of 100 °F (38 °C) in tightly sealed containers protected from weather and out of direct sunlight.

Cautions and Limitations

- Apply to acceptable substrates only.
- Avoid applying Backstop NT in direct sunlight. Always work on the shady side of the wall or protect the area with appropriate shading material.
- CMU - Application over unpainted concrete and CMU requires one of the following:
 - a. Two coats of Backstop NT- Texture, spray or roller-applied.
 - b. Two coats of Backstop NT - Spray.

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- c. One coat of Backstop NT – Texture, trowel applied.
 - d. Shall not be used below grade or on surfaces that will be subjected to water immersion.
 - e. Shall not be used to treat holes or sheathing joints exceeding 6.4 mm (1/4 in).
 - f. When used beneath Portland cement stucco or adhered stone products, paper backed lath shall be installed over Backstop NT as a slip sheet.
- Backstop NT can be exposed to weather up to 180 days to provide sufficient time for installation of the cladding. Inspect the surface of the Backstop NT for any damage, cracks, voids or other detrimental conditions and repair prior to installation of the cladding. The Backstop NT surface shall be clean, dry and free of any detrimental conditions that may affect adhesion.

Technical and Field Service

Available on request.

Backstop NT (BSNT) - Texture, Smooth, and Spray Usage/Application Chart													
			Approx. Coverage Per Pail	Approx. Coverage Per Drum									
Exterior Grade Gypsum Sheathing													
Joints ^a	BSNT - Texture	Trowel	300 lin. ft (91 m)										
Face ^e	BSNT - Texture	Trowel, FoamPRO #58 Roller ^b or Texture Sprayer	250-300 ft ² (23-28 m ²)										
	BSNT - Smooth ^{c,g}	1/2 in (12.7 mm) Nap Roller or Texture Sprayer	500 ft ² (46 m ²)										
	BSNT - Spray ⁱ	Airless Spray	500-600 ft ² (46-56 m ²)	5,000-6,000 ft ² (465-557 m ²)									
Fiberglass Faced Exterior Gypsum Sheathing													
Joints ^a	BSNT - Texture	Trowel	300 lin. ft (91 m)										
Face ^e	BSNT - Texture	Trowel or Texture Sprayer	250-300 ft ² (23-28 m ²) [includes joints]										
	BSNT - Smooth ^{c,g}	3/4 in (19 mm) Nap Roller or Texture Sprayer	400 ft ² (37 m ²)										
	BSNT - Spray ^g	Airless Spray	500-600 ft ² (46-56 m ²)	5,000-6,000 ft ² (465-557 m ²)									
Exposure 1, Exterior Grade, and Fire Retardant Treated Plywood; and Exterior Cement Board													
Joints ^a	BSNT - Texture	Trowel	300 lin. ft (91 m)										
Face ^e	BSNT - Texture	Trowel, FoamPRO #58 Roller ^b or Texture Sprayer	250-300 ft ² (23-28 m ²)										
	BSNT - Smooth ^{c,g}	1/2 in (12.7 mm) Nap Roller or Texture Sprayer	400 ft ² (37 m ²)										
	BSNT - Spray ^g	Airless Spray	500-600 ft ² (46-56 m ²)	5,000-6,000 ft ² (465-557 m ²)									
APA Exposure 1 Rated Oriented Strand Board (OSB)													
Joints ^a	BSNT - Texture	Trowel	300 lin. ft (91 m)										
Face ^e	BSNT - Smooth ^g	1/2 in (12.7 mm) Nap Roller or Texture Sprayer	350-400 ft ² (33-37 m ²), applied in 2 coats, backrolled										
	BSNT - Spray ^g	Airless Spray		3,500-4,000 ft ² (325-372 m ²)									
Concrete and Masonry ^{d,g}													
Face	BSNT - Texture	Trowel ^f	200-250 ft ² (19-23 m ²) ^f applied in 1 coat										
	BSNT - Texture	FoamPRO #58 Roller or Texture Sprayer	200-250 ft ² (19-23 m ²) ^f applied in 2 coats, backrolled										
	BSNT - Spray ^g	Airless Spray	300-500 ft (28-46 m ²)	3,000-5,000 ft (279-465 m ²)									
<p>^a Tape the joints with Dryvit Grid Tape prior to application of Backstop NT - Texture at joints and screw heads.</p> <p>^b Up to 1 pint (16 oz) of water may be added to a 60 lb pail of Backstop NT - Texture for roller or spray applications only. The FoamPRO #58 roller cover (FoamPRO Mfg., Inc., www.foampromfg.com) is available at home supply stores.</p> <p>^c Because of application methodology and absorptive surface differences, two coats may be required to obtain this coverage.</p> <p>^d 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 BSNT - Texture application. Backstop NT shall NOT be used as a skim coat for parging CMU joints or heavy textured units.</p> <p>^e Backstop NT - Texture (with up to 1 pint water addition per 60 lb. pail) or Smooth may be sprayed and backtrowelled/backrolled.</p> <p>^f Coverage may vary depending on the texture and porosity of the substrate. Coverage assumes a smooth, dense surface.</p> <p>^g Backstop NT 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:</p> <table style="margin-left: 40px;"> <tr> <td>Backstop NT Texture</td> <td>12 DFT</td> <td>20* WFT</td> </tr> <tr> <td>Backstop NT Smooth</td> <td>12 DFT</td> <td>20* WFT</td> </tr> <tr> <td>Backstop NT Spray</td> <td>9 DFT</td> <td>15* WFT</td> </tr> </table> <p>*Based on volume solids</p> <p style="text-align: center;"><i>Refer to Product Data Sheets for Complete Mixing and Application Instructions</i></p>					Backstop NT Texture	12 DFT	20* WFT	Backstop NT Smooth	12 DFT	20* WFT	Backstop NT Spray	9 DFT	15* WFT
Backstop NT Texture	12 DFT	20* WFT											
Backstop NT Smooth	12 DFT	20* WFT											
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Backstop® NT™ – Texture, Smooth and Spray Testing			
Test	Test Method	Criteria	Results
Surface Burning Characteristics	ASTM E 84	Flame Spread <25 Smoke Developed <450	Passed
Flexibility	ASTM D 522 Method B	No ICC or ANSI/EIMA Criteria	No cracking at 2 mm diameter
Water Vapor Transmission	ASTM E 96 Procedure B*	Vapor Permeable	Backstop NT: 7 Perms ² Backstop NT - Spray: 7.9 Perms ²
Freeze-Thaw Resistance	ASTM E 2485 Method B*	No deleterious effects after 10 cycles ¹	Passed - 10 cycles: No deleterious effects ¹
Water Resistance	ASTM D 2247*	14 days exposure No deleterious effects ¹	No deleterious effects ¹ after 14 days exposure
Tensile Strength and Elongation	ASTM D 2370	No ICC or ANSI/EIMA Criteria	Tensile strength: 160 psi Elongation: 16.8%
Wind Driven Rain	Fed TT-C-555	No ICC or ANSI/EIMA Criteria	No water penetration
Nail Sealability	ASTM D 1970	No ICC or ANSI/EIMA Criteria	Passed ABAA Criteria
Air Leakage	ASTM E 283	No ICC or ANSI/EIMA Criteria	0.002 cfm/ft ² (0.01 l/sec/m ²)
Air Permeance	ASTM E 2178	No ICC or ANSI/EIMA Criteria	1.2x10 ⁻⁴ cfm/ft ² @ 1.6psf (0.0006 l/s/m ² @ 75Pa)
Air Barrier Assembly	ASTM E 2357	No ICC or ANSI/EIMA Criteria	<0.001 cfm/ft ² @ 6.24 psf (0.05 l/sec m ² @300 Pa)
Structural Performance	ASTM E 1233 Procedure A*	Minimum 10 positive cycles at 1/240 deflection; No cracking in field, at joints or interface with flashing.	Passed
Racking	ASTM E 72*	No cracking in field, at joints or interface with flashing at net deflection of 1/8 in (3.2 mm)	Passed
Restrained Environmental	ICC-ES Procedure*	5 cycles; No cracking in field; at joints or interface with flashing	Passed
Water Penetration	ASTM E 331*	No water penetration beyond the inner-most plane of the wall after 15 minutes at 2.86 psf (137 kPa)	Passed
Tensile Bond	ASTM C 297/E 2134*	ICC and ANSI/EIMA 99-A-2001 Minimum 15 psi (104 kPa)	Substrates: Minimum 19 psi (131 kPa) Flashing: Minimum 431 psi (2970 kPa)
Weathering UV Exposure	ASTM D 2898 Method B*	210 hours of exposure	Passed
Accelerated Aging	ICC ES Procedure*	25 cycles of wetting and drying	Passed
Hydrostatic Pressure Test	AATCC 127*	21.6 in (549 mm) water column for 5 hours	Passed
VOC	Regulatory	Meets South Coast Air Quality Management District (SCAQMD) Requirements	Less than 5 g/L
Volume Solids	Calculated	N/A	Smooth: 60 % Spray: 60 % Texture: 64 %
Weight/Gal	Calculated	N/A	Smooth: 12 lb/gal Spray: 12 lb/gal Texture: 14 lb/gal
<p>* ASTM E 2570 Standard Test Method for Evaluating Water-Resistive Barrier (WRB) Coatings Used Under Exterior Insulation and Finish Systems (EIFS) or EIFS with Drainage; also referred to as AC212 – Acceptance Criteria for Water-Resistive Coatings Used as Water-Resistive Barriers over Exterior Sheathing</p> <p>1. No cracking, checking, rusting, crazing, erosion, blistering, peeling, or delamination when viewed under 5x magnification 2. Defined as a Class III vapor retarder per the 2009 IBC and IRC</p>			

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