# Backstop<sup>®</sup> NTX™



A High Performance, Polymer-Based, Non-cementitious Water-Resistive Membrane and Air Barrier	DSC180	
Backstop NTX Specifications		

# TREMCO CPG, INC. MANUFACTURER'S SPECIFICATION CSI MASTERFORMAT SECTIONS 07 25 00, 07 26 13, 07 27 26 DRYVIT BACKSTOP® NTX™ WATER-RESISTIVE MEMBRANE AND AIR BARRIER

# **PART I - GENERAL**

#### 1.01 SUMMARY

- A. This document contains all the manufacturer's requirements for the proper design, use, and installation of the Dryvit Backstop NTX Texture and Smooth air/water-resistive barrier. This document is intended to be used in conjunction with:
  - 1. Backstop NTX Application Instructions, DSC181
  - 2. Backstop NTX Product Data Sheet, DSC455
  - 3. Backstop NTX Air/Water-Resistive Barrier Details, DSC840
- B. Related Sections
  - 1. Water-Resistive Barriers Section 07 25 00
  - 2. Vapor Retarders 07 26 13
  - 3. Air Barriers 07 27 26

# 1.02 REFERENCES

#### A. Section Includes

- 1. ASTM C1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
- 2. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension
- 3. ASTM D522 Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings
- 4. ASTM E72 Standard Methods for Conducting Strength Tests of Panels for Building Construction
- 5. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- 6. ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials
- 7. ASTM E331 Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference
- 8. ASTM E1131 Standard Test Method for Compositional Analysis by Thermogravimetry
- 9. ASTM E1233 Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Cyclic Air Pressure Differential
- 10. ASTM E1252 Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis
- 11. ASTM E2570 Standard Test Method for Evaluating Water-Resistive Barrier (WRB) Coatings Used Under Exterior Insulation and Finish Systems (EIFS) or EIFS with Drainage
- 12. ASTM G154 Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Materials
- 13. CAN/ULC S716.1 Standard for Exterior Insulation and Finish Systems (EIFS) Materials and Systems
- 14. CAN/ULC S741 Standard for Air Barrier Materials Specification
- 15. DSC494 Dryvit AquaFlash® System Data Sheet
- 16. DSC196 Dryvit AquaFlash® System Application Instructions
- 17. Tremco Dymonic 100 Technical Data Sheet
- 18. Tremco Urethane Sealants Application Instructions

# 1.03 DEFINITIONS

- A. Contractor: The contractor that applies the Backstop NTX Texture and Smooth to the substrate.
- B. Sheathing: A substrate in sheet form.
- C. Substrate: The material to which the Backstop NTX is applied.
- D. Substrate System: The total wall assembly including the attached substrate to which the Backstop NTX is applied.
- E. Air/Water-Resistive Barrier Materials: A combination of Backstop NTX, AquaFlash Mesh, AquaFlash System and Dymonic 100.

#### 1.04 DESCRIPTION

- A. General: Dryvit Backstop NTX is available in Texture and Smooth and is a flexible polymer based, non-cementitious, protective coating used as an air/water-resistive barrier when applied over acceptable exterior substrates.
- B. Design Requirements
  - 1. Acceptable substrates for Backstop NTX include: (Refer to DSC181 for more specific requirements)
    - a. Exterior sheathing having a water-resistant core with fiberglass mat facers meeting ASTM C1177.
    - b. Exterior fiber reinforced cement (Standard Specification for non-asbestos fiber-mat reinforced cementitious backer units) or calcium silicate boards.
    - c. 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 meeting the requirements of CSA 0325...
    - d. APA Exterior or Exposure 1 Fire Retardant Treated (FRT) Plywood, Grade C-D or better, nominal 1/2 in (12.7 mm) minimum, installed with the C face out meeting the requirements of CSA 0325.
    - e. APA Exposure 1 Rated Oriented Strand Board (OSB) nominal 1/2 in (12.7 mm), minimum., meeting the requirements of CSA 0325.
    - f. Unpainted, unsealed concrete, CMU and brick.
  - 2. Backstop NTX is not intended to be used as waterproofing for exterior horizontal surfaces or below grade applications.
  - 3. 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 including any deterioration and/or damage to the sheathing/substrate material and repair prior to installation of the cladding.

C. Performance Requirements: Backstop NTX shall meet the following performance criteria:

TYPICAL PHYSICAL PROPERTIES			
PROPERTY	TEST METHOD	CRITERIA	RESULTS
Surface Burning Characteristics	ASTM E84	Flame Spread <25 Smoke Developed <450	Passed
Flexibility	ASTM D522 Method B	No ICC or ANSI/EIMA Criteria	No cracking at 2 mm diameter
Water Vapour Permeance	ASTM E96 Procedure A*	Vapour Permeable	Smooth: 88.7 ng/(Ps*s*m²) Texture: 42.3 ng/(Ps*s*m²)
Accelerated Weathering Resistance	ASTM G154*	No cracking, delamination, or flaking	Passed
Water Absorption Coefficient	CAN/ULC S716.1:2019	$<4.0 \text{ g/(m}^2*\text{s}^{1/2})$	Passed
Tensile Strength and Elongation	ASTM D412 Die C	No ICC or ANSI/EIMA Criteria	Tensile strength:199 psi Elongation: 250%
Nail Popping Resistance	CAN/ULC S716.1:2019	No cracking, delamination, or flaking	Passed
Air Permeance	CAN/ULC S716.1:2019	0.02 L(s*m²) @ 75 Pa	0.0013 L(s*m²) Texture 0.00135 L(s*m²) Smooth
Structural Performance	ASTM E1233 Procedure A**	Minimum 10 positive cycles at 1/240 deflection; No cracking in field, at joints or interface with flashing	Passed
Racking	ASTM E72**	No cracking in field; at joints or interface with flashing	Passed
Restrained Environmental	ICC-ES Procedure**	5 cycles; No cracking in field; at joints or interface with flashing.	Passed
Water Penetration	ASTM E331**	No water penetration beyond the inner-most plane of the wall after 15 minutes at 137 kPa (2.86 psf)	Passed
Bond Strength	CAN/ULC \$716.1:2019	Wet State: avg ≥ 80 kPa Initial & Dry State: avg ≥ 250 kPa	Passed. Substrates: OSB, fiberglass- faced exterior gypsum sheathing, exterior cement board, exterior gradu and fire-retardant treated plywood, concrete, masonry
Joint Durability	CAN/ULC S716.1:2019	No water transmission	Passed
voc	Regulatory	Meets South Coast Air Quality Management District (SCAQMD) Requirements	Less than 43 g/L
Volume Solids	Calculated	N/A	Smooth: 71% Texture: 75%
Weight/Pail (Smooth & Texture)	Calculated	N/A	28.6 kg (63 lb)

<sup>\*\*</sup> ASTM E2570 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

#### 1.05 SUBMITTALS

- A. Product Data The contractor shall submit to the owner/architect manufacturer's product data sheets describing products that will be used on this project.
- B. Samples As required.

# 1.06 QUALITY ASSURANCE

# A. Qualifications

- 1. Product Manufacturer: Shall be Tremco CPG, Inc. All materials shall be manufactured or sold by Dryvit/Tremco and shall be purchased from Dryvit or Tremco authorized distributors.
  - a. Materials shall be manufactured at a facility covered by a current ISO 9001:2015 and ISO 14001:2015 certification.
- 2. Contractor: Shall be experienced and competent in the waterproofing trade and application of liquid air and water-resistive barriers.

#### B. Certification

1. Backstop NTX shall be recognized for the intended use by the applicable building code(s).

# 1.07 DELIVERY, STORAGE, AND HANDLING

- A. All Dryvit and Tremco materials shall be delivered to the job site in the original, unopened packages with labels intact.
- B. Upon arrival, materials shall be inspected for physical damage, freezing, or overheating. Questionable materials shall not be used.
- C. Materials shall be stored at the job site and at all times in a cool, dry location, out of direct sunlight, protected from inclement weather and other sources of damage. Storage temperature shall be from 4 °C (40 °F) minimum to 38 °C (100 °F) maximum.

# 1.08 PROJECT CONDITIONS

- A. Environmental Requirements
  - 1. Application of wet materials shall not take place during inclement weather unless appropriate protection is provided. Protect materials from inclement weather until they are completely dry.
  - 2. At the time of application of Backstop NTX, the air and wall surface temperatures shall be from 4 °C (40 °F) minimum to 38 °C (100 °F) maximum. These temperatures shall be maintained, with adequate air ventilation and circulation, for a minimum of 24 hours thereafter, or until the products are completely dry.
- B. Existing Conditions: The contractor shall have access to electric power, clean water, and a clean work area at the location where the Dryvit Backstop NTX materials are to be applied.

# 1.09 SEQUENCING AND SCHEDULING

A. Installation of the Dryvit Backstop NTX shall be coordinated with other construction trades.

# 1.10 LIMITED MATERIALS WARRANTY

A. When used with a Dryvit EIFS, Backstop NTX is covered by and subject to the terms and conditions of Dryvit's written limited materials warranty applicable to the specific Dryvit system or products used. Dryvit makes no other warranties expressed or implied, including implied warranties of merchantability or fitness for a particular purpose.

# 1.11 DESIGN RESPONSIBILITY

A. It is the responsibility of both the specifier and the purchaser to determine if a product is suitable for its intended use. The designer selected by the purchaser shall be responsible for all decisions pertaining to design, detail, structural capability, attachment details, shop drawings, and the like. Dryvit has prepared guidelines in the form of specifications and product data sheets to facilitate the design process only. Dryvit is not liable for any errors or omissions in design, detail, structural capability, attachment details, shop drawings, or the like, whether based upon the information prepared by Dryvit or otherwise, or for any changes which purchasers, specifiers, designers, or their appointed representatives may make to Dryvit's published comments.

# **PART II PRODUCT**

# 2.01 MANUFACTURER

A. All materials shall be obtained from Dryvit/Tremco or its authorized distributors. Substitutions or additions of materials other than specified will void the warranty.

#### 2.02 COMPONENTS

- A. Air/Water-Resistive Barrier Components:
  - 1. Dryvit Backstop NTX: A flexible, polymer-based, non-cementitious, water-resistive membrane and air barrier available in Texture and Smooth.
- B. Joint Treatment
  - 1. Dryvit AquaFlash Mesh embedded in Backstop NTX
  - 2. Dryvit AquaFlash Mesh embedded in AquaFlash Liquid
  - 3. Tremco Dymonic 100
- C. Flashing Materials: Used to protect substrate edges at terminations.
  - 1. AguaFlash Liquid and AguaFlash Mesh
  - 2. Dymonic 100

# **PART III EXECUTION**

# 3.01 EXAMINATION

- A. Prior to application of Backstop NTX the contractor shall verify that the substrate:
  - 1. Is of a type listed in Section 1.04.B.1.
  - 2. Is flat within 6 mm (1/4 in) in a 2.4 m (8 ft) radius.
  - 3. Wood sheathings shall be installed leaving a 3.2 mm (1/8") space at joints following APA installation guidelines.
  - 4. Gaps do not exceed 6 mm (1/4 in). Larger gaps shall be corrected by replacing sheathing material.
  - 5. Is sound, dry, has no surface voids, projections, or other conditions that may interfere with the application of Backstop NTX.
  - 6. Is otherwise in conformance with Dryvit's Backstop NTX Data Sheet, DSC455, and Application Instructions, DSC181.
- B. Ambient and surface temperatures are minimum 4 °C (25 °F) to maximum 38 °C (100 °F).
- C. The contractor shall notify the general contractor and/or architect and/or owner of all discrepancies. Work shall not proceed until discrepancies have been corrected.
- D. All roof/wall intersections, decks, balconies and other attachments, as well as eaves, chimneys, mechanical equipment, signage etc. are properly flashed to divert water to the outside of the specified cladding.
- E. All openings and penetrations are properly flashed and wrapped with Tremco approved flashing to prevent water intrusion.

# 3.02 SURFACE PREPARATION

- A. The Backstop NTX materials shall be protected by permanent or temporary means from inclement weather and other sources of damage prior to, during, and following application until completely dry.
- B. Protect adjoining work and property during application of Backstop NTX.
- C. The substrate shall be prepared 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.

# 3.03 INSTALLATION

- A. Backstop NTX Texture
  - 1. General: Backstop NTX Texture shall be applied in accordance with current published Dryvit Backstop NTX Application Instructions, DSC181.
  - 2. Backstop NTX Texture 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 additive.
  - 3. Treat joints, including inside and outside corners, with materials listed in 2.02.B and illustrated in DSC840 Backstop NTX Air/Water-Resistive Barrier.
  - 4. Depending on the substrate, Backstop NTX Texture may be applied using a trowel or texture spray equipment and back troweled. Refer to Backstop NTX Application Instructions, DSC181, for complete details.
  - 5. Apply Backstop NTX Texture over the entire wall surface, including previously treated joints. 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 between coats. Refer to the chart on the Backstop NTX Product Data Sheet, DSC455, or Application Instructions, DSC181, for proper tools and respective coverage.
  - 6. If applied first, allow to dry a minimum of 4 hours prior to application of Dryvit AquaFlash System or Dymonic 100. Ensure all components are fully cured prior to the application of adhesively applied EPS insulation board. Cool and/or humid weather will require longer drying times.
  - 7. Install the specified Dryvit Exterior Insulation and Finish System or specified cladding per published installation instructions for the specific system or cladding being used.

- B. Backstop NTX Smooth (Roller Application)
  - General: Backstop NTX Smooth is used in conjunction with joint treatments listed in Section II.2.02.B and shall be applied in accordance with current, published Dryvit Backstop NTX Application Instructions, DSC181.
  - 2. Backstop NTX Smooth 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 including water.
  - 3. Prior to Backstop NTX Smooth application, sheathing joints, including inside and outside corners, shall be treated as listed in III.3.03.B.1.. All fastener heads shall also be spotted according to Backstop NTX Application Instructions, DSC181, for complete details. Allow to dry a minimum of 2 hours or until dry to the touch. Cool and/or humid conditions will require longer drying time.
  - 4. Apply Backstop NTX Smooth over the entire wall surface, including previously treated fasteners and sheathing joints. 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 between coats. Refer to the chart on the Backstop NTX Product Data Sheet, DSC455, or Application Instructions, DSC181, for proper tools and respective coverage.
  - 5. If applied first, allow to dry a minimum of 4 hours prior to application of Dryvit AquaFlash System or Dymonic 100. Ensure all components are fully cured prior to the application of adhesively applied EPS insulation board. Cool and/or humid weather will require longer drying times.
  - 6. Install the specified Dryvit Exterior Insulation and Finish.
- C. Backstop NTX Smooth (Spray Application)
  - 1. General: Backstop NTX Smooth shall be applied in accordance with current published Dryvit Backstop NTX Application Instructions, DSC181.
  - 2. Backstop NTX Smooth 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 additive.
  - 3. A maximum of 473 ml (16 oz) of clear potable water may be added if required to adjust workability.
  - 4. Prior to Backstop NTX Smooth application, sheathing joints, including inside and outside corners, shall be treated as listed in III.3.03.B.1.. All fastener heads shall also be spotted according to Backstop NTX Application Instructions, DSC181, for complete details. Allow to dry a minimum of 2 hours or until dry to the touch. Cool and/or humid conditions will require longer drying time.
  - 5. Backstop NTX Smooth may be applied using airless spray equipment. Refer to Backstop NTX Application Instructions, DSC181, for complete details.
  - 6. Apply Backstop NTX Smooth over the entire wall surface, including previously treated fasteners and sheathing joints. Refer to the chart on the Backstop NTX Product Data Sheet, DSC455, or Application Instructions, DSC181, for proper tools and respective coverage.
  - 7. If applied first, allow to dry a minimum of 4 hours prior to application of Dryvit AquaFlash System or Dymonic 100. Ensure all components are fully cured prior to the application of adhesively applied EPS insulation board. Cool and/or humid weather will require longer drying times.
  - 8. Install the specified Dryvit Exterior Insulation and Finish System or specified cladding per published installation instructions for the specific system or cladding being used.

# 3.04 FIELD QUALITY CONTROL

- A. The contractor shall be responsible for the proper storage and application of the Dryvit/Tremco materials.
- B. Dryvit assumes no responsibility for on-site inspections or application of its products.

# 3.05 CLEANING

- A. All excess Dryvit/Tremco materials shall be removed from the job site by the Contractor in accordance with contract provisions.
- B. All surrounding areas, where Dryvit/Tremco materials have been installed, shall be left free of debris and foreign substances resulting from the Contractor's work.

#### 3.06 PROTECTION

- A. The Dryvit/Tremco materials and the project shall be protected from damage and inclement weather until dry.
  - 1. The Dryvit Backstop NTX Texture or Smooth 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.

#### **DISCLAIMER**

Information contained in this specification conforms to standard detail and product recommendations for the installation of the Dryvit's Backstop NTX products as of the date of publication of this document and is presented in good faith. Tremco CPG, 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 Tremco CPG, Inc. at:

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\*The Trained Contractor Certificate indicates certain employees of the company have been instructed in the proper application of Dryvit products and have received copies of Dryvit's Application Instructions and Specifications. The Trained Contractor Program is not an apprenticeship. Each trained contractor is an independent company experienced in the trade and bears responsibility for its own workmanship. Tremco CPG, Inc. assumes no liability for the workmanship of a trained contractor.

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