BACKSTOP™ NT - VB

DSC830

A high performance, water-resistive membrane and air/vapour barrier

Backstop NT – VB Specifications for use behind Dryvit® EIFS

DRYVIT® SYSTEMS CANADA
MANUFACTURER'S SPECIFICATION
SECTION 07240
BACKSTOP NT – VB AIR AND MOISTURE BARRIER

PART I - GENERAL

1.1 SUMMARY

.1 This document contains the manufacturer's requirements for the proper design, use, and installation of the Dryvit Backstop NT - VB air/vapour and moisture barrier. This document is intended to be used in conjunction with:
- .1 DSC831 - Backstop NT - VB Application Instructions
- .2 DSC829 - Backstop NT - VB Product Sheet

1.2 DESCRIPTION

.1 General

The Backstop NT – VB is a non-cementitious, polymer-based, water resistant, protective coating used as a secondary weather barrier with air/vapour barrier function for use over approved exterior substrates, in conjunction with Dryvit's Outsulation®, Outsulation Plus, and Outsulation MD/PD/PE and Exsulation 5000 Exterior Insulation and Finish Systems.

.2 Design Requirements

.1 Acceptable surfaces for Backstop NT - VB include:
- .1 Fiberglass mat-faced exterior gypsum sheathing meeting ASTM C 1177
- .2 Exterior cement and calcium silicate sheathing
- .3 Concrete masonry block with mortar joints struck flush or made flush using Genesis™ material.
- .4 Poured in place or precast concrete
- .5 For other substrate materials, please contact Dryvit Systems Canada.

Spec Notes:

1) Due to surface irregularities of poured in place concrete and masonry block a test area of 1.8 m^2 shall be completed to insure proper coverage and determine surface preparation requirements, which may include the application of Genesis over porous surfaces and to make flush surface depressions and tooled mortar joints.

.2 Backstop NT - VB is not intended to be used as waterproofing for exterior horizontal surfaces or below grade applications.

.3 Backstop NT - VB shall not be exposed to weather for longer than 30 days prior to being covered.

.4 The substrate system shall be designed so that maximum deflections do not exceed L/240.

.5 Backstop NT-VB shall not be used on sheathing substrates where the intent is to leave the sheathing substrate exposed to freezing temperatures (i.e. unprotected). Where sheathing substrate is going to be left exposed over winter, it shall be treated in a manner consistent with sheathing manufacturer's requirements.

.3 Performance Requirements

Backstop NT – VB shall meet the following performance criteria:

Backstop NT-VB Testing			
Test	**Test Method**	**Criteria**	**Results**
Surface Burning Characteristics	ASTM E 84	ICC and ANSI/EIMA 99-A-2001 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 A (Dessicant Method)	ICC: Class I Vapor Retarder Less than 0.1 Perms	0.088 Perms[2] 5 Metric Perms
Freeze-Thaw Resistance	ASTM E 2485/ICC-ES Procedure (AC212)*	ICC: 10 cycles No deleterious effects[1]	Passed - 10 cycles: No deleterious effects[1]
Water Resistance	ASTM D 2247 ICC ES (AC212)*	ICC: 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
Air Leakage	ASTM E 283	No ICC or ANSI/EIMA Criteria	0.01 l/sec/m^2 (0.002 cfm/ft^2)
Air Permeance	ASTM E 2178	No ICC or ANSI/EIMA Criteria	0.0006 l/s/m^2 @ 75Pa ($1.2x10^{-4}$ cfm/ft^2 @ 1.6 psf)
Air Barrier Assembly	ASTM E 2357	No ICC or ANSI/EIMA Criteria	0.05 l/sec m^2 @300 Pa (<0.001 cfm/ft^2 @ 6.24 psf)
Structural Performance	ASTM E 1233 Procedure A ICC ES (AC212)*	ICC: Minimum 10 positive cycles at 1/240 deflection; No cracking in field, at joints or interface with flashing.	Passed
Racking	ASTM E 72 ICC ES (AC212)*	ICC: No cracking in field, at joints or interface with flashing at net deflection of 3.2 mm (1/8 in)	Passed
Restrained Environmental	ICC-ES Procedure ICC ES (AC212)*	ICC: 5 cycles; No cracking in field; at joints or interface with flashing	Passed
Water Penetration	ASTM E 331 ICC ES (AC212)*	ICC: No water penetration beyond the inner-most plane of the wall after 15 minutes at 137 kPa (2.86 psf)	Passed 75 minutes at 299 Pa (6.24 psf)
Tensile Bond	ASTM C 297/E 2134 (formerly EIMA 101.03) ICC ES (AC212)*	ICC and ANSI/EIMA 99-A-2001 Minimum 104 kPa (15 psi)	Substrates: Minimum 131 kPa (19 psi) Flashing: Minimum 2970 kPa (431 psi)
Weathering UV Exposure	ICC ES Proc. ICC ES (AC212)*	ICC: 210 hours of exposure	Passed
Accelerated Aging	ICC ES Proc. ICC ES (AC212)*	ICC: 25 cycles of wetting and drying	Passed
Hydrostatic Pressure Test	AATCC 127 ICC ES (AC212)*	ICC: 549 mm (21.6 in) water column for 5 hours	Passed

* (AC212 – Acceptance Criteria for Water-Resistive Coatings Used as Water-Resistive Barriers over Exterior Sheathing, also referred to as ASTM E 2570

1. No cracking, checking, rusting, crazing, erosion, blistering, peeling, or delamination when viewed under 5x magnification
2. Defined as a Class I vapour retarder per the 2009 IBC and IRC and a *vapour barrier* by The National Building Code of Canada

***** Tensile bond strength exceeds cohesive strength for gypsum sheathings. Samples tested following freeze-thaw cycling

1.3 SUBMITTALS

.1 Product Data - The contractor shall submit to the owner/architect manufacturer's product data sheets describing products that will be used on this project.
.2 Samples - As required for the specific Exterior Insulation and Finish System specified.

1.4 QUALITY ASSURANCE

.1 Qualifications

.1 Product Manufacturer: Shall be Dryvit Systems Canada. All materials shall be manufactured, or sold by Dryvit and shall be purchased from Dryvit, or its authorized distributor.
.1 Materials shall be manufactured at a facility covered by a current ISO 9001 and 14001 certification. Certification of the facility shall be done by a registrar accredited by the American National Standards Institute, Registrar Accreditation Board (ANSI-RAB).
.2 Contractor: Shall be experienced and competent in the application of the Dryvit Exterior Insulation and Finish Systems and recognized by Dryvit Systems Canada.

1.5 DELIVERY, STORAGE, AND HANDLING

.1 All Dryvit materials shall be delivered to the job site in the original, unopened packages with labels intact.
.2 Upon arrival, materials shall be inspected for physical damage, freezing, or overheating. Questionable materials shall not be used.
.3 Materials shall be stored at the job site in a cool, dry location, out of direct sunlight, protected from weather and other damage. Minimum storage temperature shall be 4 °C (40 °F).

1.6 PROJECT CONDITIONS

.1 Environmental Requirements

.1 At the time of application, the air and wall surface temperatures shall be minimum 4 °C (40 °F) and rising at the time of application of Backstop NT - VB. Applied material temperature shall also be maintained above this minimum level. These temperatures shall be maintained, with adequate air ventilation and circulation, for a minimum of 12 hours thereafter, or until the products are dry.
.2 Existing Conditions -The contractor shall have access to electric power, clean water, and a clean work area at the location where the Backstop NT - VB materials are to be applied.

1.7 SEQUENCING AND SCHEDULING

.1 Installation of the Backstop NT - VB shall be coordinated with other construction trades.
.2 Rough openings for windows, doorways et cetera shall be protected prior to the installation of said items.

1.8 LIMITED MATERIALS WARRANTY

.1 Backstop NT - VB is covered by and subject to the terms and conditions of Dryvit's limited materials warranty applicable to the specific Dryvit system used.

1.9 DESIGN RESPONSIBILITY

.1 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 owner 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 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

2.1 MANUFACTURER

.1 All materials shall be obtained from Dryvit or its authorized distributors.

2.2 COMPONENTS

.1 Backstop NT - VB: A fully formulated, non-cementitious, water-based material applied over approved substrates to provide water resistance and air/vapour barrier function.
.2 Dryvit Detail Mesh: A 241 mm (9.5 in) wide, open weave fiberglass mesh tape used to reinforce exposed edges of sheathing at outside corners and rough openings.
.3 Dryvit AquaFlash Mesh: 100 mm (4 in) wide netted woven mesh used to reinforce sheathing joints.
.4 Dryvit Grid Tape: 100 mm (4 in) wide self-adhesive open weave mesh used to reinforce **gypsum and/or cement board sheathing joints only**.
.5 Dryvit AquaFlash®: A liquid applied membrane for use at sill locations of openings and as transition type membrane. Use in conjunction with AquaFlash Mesh.

PART III-EXECUTION

3.1 EXAMINATION

.1 Prior to application of Backstop NT - VB, the contractor shall ensure that the substrate is of a type listed in Section 1.2.1, or have contacted Dryvit Systems Canada for approval.
.2 Ambient and surface temperatures are minimum 4 °C (40 °F) and rising.
.3 The substrate shall be flat within 6.4 mm (1/4 in) in a 1.2 m (4 ft) radius.
.4 Sheathing gaps shall not exceed 6.4 mm (1/4 in). Larger gaps shall be corrected by replacing sheathing material.
.5 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.

3.2 SURFACE PREPARATION

.1 The substrate shall be prepared so as to be free of foreign materials such as oil, dust, dirt, paint, wax, water repellents, efflorescence, moisture, frost and any other materials that inhibit adhesion.
.2 The sheathing board gaps shall not exceed 6.4 mm (1/4 in) and the surface must be flat within 6.4 mm (1/4 in) in any 1.2 m (4 ft) radius. Gaps greater the noted shall be corrected by replacement of the sheathing, not by prefilling.
.3 CMU mortar joints shall be struck flush. CMU shall be clean, unpainted and free of efflorescence. Tooled mortar joints and heavily VBd CMU, **not split faced**, shall be "skim coated" with Genesis™ or Genesis DM prior to application of Backstop NT - VB.

3.3 INSTALLATION

.1 General: Backstop NT - VB shall be applied in accordance with current, published Backstop NT - VB Application Instructions, DSC831.
.2 Backstop NT - VB is shipped in 19 L (5 gal) pails and is ready to use without additives.
.3 Using a Wind-lock BM-1 or BM-8 mixing blade, or equivalent, powered by a 13mm (1/2 in) drill, at 400-500 rpm, mix the Backstop NT - VB material to a smooth homogeneous consistency prior to use.
.4 Center Dryvit Grid Tape over dry sheathing joints and press firmly until adhered in place (Dryvit Detail Mesh required for outside and inside corners when using Grid Tape). Or embed AquaFlash Mesh at all sheathing joints, including inside and outside corners. Dryvit Detail Mesh may be used at rough openings.
.5 Apply two coats Backstop NT – VB at wet film thickness of (13 mils) minimum over field of sheathing. The first coat shall be allowed to dry before proceeding with the second coat.
.6 Backstop NT - VB may be applied using appropriate spray equipment and backrolled, rollers as described in DSC831, or by trowel. Follow printed Backstop NT - VB Application Instructions, DSC831, for specific requirements.
.7 While the Backstop NT - VB is still wet, using a trowel or spatula, smooth out the Backstop NT – VB around all window and door perimeters, and other areas that will receive AquaFlash System, or Dryvit transition membrane.
.8 Under ideal conditions, allow to dry a minimum of 6 hours prior to application of membranes and adhesively applied EPS insulation board. Cool damp weather will require longer drying times.
.9 Install the specified Exterior Insulation and Finish System per published installation instructions for the specific system being used.

3.4 FIELD QUALITY CONTROL

.1 The contractor shall be responsible for the proper application of the Dryvit materials.
.2 Dryvit has prepared specifications, application instructions and details to guide in the design and application of this product but will assume no responsibility for on-site inspections or misapplication of its products.

3.5 CLEANING

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

3.6 PROTECTION

.1 The Dryvit materials and the project shall be protected from damage and weather until dry.
.2 The Dryvit Backstop NT - VB shall not be exposed for longer than 30 days prior to being covered with the Exterior Insulation and Finish System.

DISCLAIMER

Information contained in this specification conforms to standard detail and product recommendations for the installation of the Backstop NT - VB product as of the date of publication of this document and is presented in good faith. Dryvit System Canada 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:

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