DELTA®-VENT S is a highly vapor permeable water-resistive barrier, allowing moisture within the building enclosure to escape through the membrane. Its high permeability and extreme air-tightness makes it an ideal air and water-resistive barrier membrane for energy efficient construction. DELTA®-VENT S is watertight, and will help protect the building enclosure from wind-driven rain and snow while providing a drainage plane to channel water harmlessly to the outside of the building.

SECTION 072800

WATER-RESISTIVE BARRIER

1. GENERAL
   * + 1. SUMMARY
          1. Provide a vapor-permeable air and water-resistive barrier and accessories for exterior enclosures. (DELTA®-VENT S) (DELTA®-VENT S PLUS with self-adhesive edge)
          2. Related Work: Coordinate with the following items which are specified in other sections:

Section 061600 - SHEATHNG for sheathing behind weather-resistive barrier.

Section 076200 - Sheet Metal Flashing and Trim for flashings, and other sheet metal work.

* + - 1. SUBMITTALS
         1. Product Data: Submit manufacturer’s product data, including installation instructions, detail drawings, test reports on physical and performance properties, and building code compliance reports.
         2. Verification Samples: Submit clearly labeled samples of each material specified.
         3. Warranty at Closeout: Submit manufacturer’s executed warranty form with authorized signatures and endorsements indicating date of Substantial Completion.
      2. QUALITY ASSURANCE
         1. Manufacturer: Minimum of 3 years experience manufacturing similar products.
         2. Installer: Minimum of 2 years experience installing similar products and acceptable to the manufacturer.
         3. Mock-Up: If required under Division 01, provide materials and labor for exterior wall mock-up.
         4. Pre-Installation Meeting: Conduct a pre-installation meeting a minimum of two weeks prior to commencing the Work of this Section.

Agenda shall include review of requirements and submittals for water resistive barrier, including surface preparation requirements specified under other sections, status of substrate work and preparation, compatibility of materials, special details and flashings, installation procedures, testing and inspection procedures, protection, and repairs.

Attendance by related trades is required.

* + - 1. DELIVERY, STORAGE AND HANDLING
         1. Deliver materials and products in unopened factory labeled packages. Store and handle in strict compliance with manufacturer's instructions and recommendations.
      2. WARRANTY
         1. Manufacturer’s Warranty: Submit manufacturer’s standard limited warranty for defects in materials.

1. PRODUCTS
   * + 1. MANUFACTURER
          1. Basis-of-Design: (DELTA®-VENT S) (DELTA®-VENT S PLUS) by Dörken Systems Inc., 4655 Delta Way, Beamsville, ON L0R 1B4, Canada. Toll Free: 888-4DELTA4 (433-5824) Phone: 905-563-3255. Fax: 905-563-5582. www.dorken.com.
          2. Water-Resistive Barrier: Provide vapor-permeable air and water-resistive barrier with the following characteristics:

Material: 3-layer, high-strength spun-bonded polypropylene membrane.

Color: Gray.

Vapor Permeance: 69 perms [grains/h/ft²/in Hg] ASTM E96, Proc. A; 120 perms [grains/h/ft²/in Hg] ASTM E96-05, Proc. B.

Water Vapor Transmission: 472 g/m²/24 h ASTM E96, Proc. A, 820 g/m²/24 h ASTM E96, Proc. B.

Air Permeance: Pass (< 0.2 L/(s•m²) @ 75 Pa) ASTM E2178.

Breaking Strength: MD 76 lbs/in CD 65.4 lbs/in ASTM D5035.

Elongation at Break: MD 25 % CD 65 % ASTM D5035.

Tear Resistance: MD 1078 g CD 1588 g ASTM D4533.

Fastener Pull-Through Force: 133 N ASTM D3462.

Water Penetration Resistance: 643 cm CAN/CGSB-4.2 #26.3-95

Flame Spread: 25 NFPA Class A; UBC Class 1 ASTM E84.

Smoke Developed: 145 NFPA Class A; IBC Class A ASTM E84.

Bent Test: Pass AC-38 3.3.4.

Temperature Range: -40° F to 176° F (-40° C to +80° C).

Maximum UV (Sunlight) Exposure: Always cover as soon as possible. Maximum exposure 6 weeks.

NFPA 285: Compliant.

* + - * 1. Accessory Products:

Adhesive Tape at Overlaps: DELTA®-MULTI-BAND.

Elastic Rubber Compound Sealant and Adhesive: DELTA®-THAN.

Preformed Corners: DELTA®-FAS-CORNER.

Flashing: DELTA®-FLASHING.

Butyl Rubber Tape at Penetrations: DELTA®-FLEXX BAND.

Fasteners: Manufacturer’s recommended corrosion-resistant screws with plastic caps or metal gasketed washers.

Air and Vapor Sheet Over Substrate When Required: DELTA®-REFLEX.

Through-wall Flashing: DELTA®-TW FLASHING.

1. EXECUTION
   * + 1. EXAMINATION
          1. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

Clean substrate of dirt and bond breaking substances prior to beginning installation.

* + - 1. INSTALLATION
         1. Install products in strict accordance with manufacturer’s instructions, approved submittals and the following:

Install water-resistive barrier prior to installation of windows and doors.

Overlap sheets to shed water, minimum 12 inches at exterior corners, 6 inches at vertical and horizontal seams.

Seal seams of water resistive barrier with approved seam tape at all vertical and horizontal overlapping seams.

Seal cuts and tears as recommended by manufacturer.

* + - 1. PROTECTION
         1. Protect installed water-resistive barrier from damage during application and remainder of construction period, according to manufacturer’s written instructions.
         2. Coordinate with installation of materials which cover the water-resistive barrier, to ensure exposure period does not exceed that recommended by the manufacturer.

END OF SECTION