
1 General

1.1 SECTION INCLUDES

- .1 Labour, Products equipment and services necessary for air barrier Work in accordance with the Contract Documents.

1.2 REFERENCES

- .1 ASTM C920, Specification for Elastomeric Joint Sealants.
- .2 ASTM C1193, Standard Guide for Use of Joint Sealants.
- .3 ASTM E-779, Standard Test Method for Determining Air Leakage Rate by Fan Pressurization.
- .4 ASTM E2178, Standard Test Method for Air Permeance of Building Materials.

1.3 DESIGN REQUIREMENTS

- .1 Design air barrier system to achieve a maximum air leakage rate of one air change per hour at a pressure of 50 Pa when tested in accordance with ASTM E-779.

1.4 SUBMITTALS

- .1 Product data: Submit manufacturer's Product data in accordance with Section 01 33 00 indicating installation details, physical properties and detailed application and installation instructions.
- .2 Certificates and reports:
- .1 Submit manufacturer's certification that air barrier system materials and accessories supplied are compatible and meet Specification requirements, including termination with adjacent materials.

1.5 QUALITY ASSURANCE

- .1 Provide all air barrier membranes and associated accessories from a single manufacturer to ensure material compatibility.
- .2 Installer's qualifications: Perform Work of this Section by company, approved by Product manufacturer and having 5 years recent experience in Work of comparable complexity and scope.
- .3 Pre-installation meeting: Arrange meeting on Site to be attended by Consultant, Contractor, and air barrier manufacturer's representative to review installation procedures, interfaces with adjacent work, conditions under which work will be performed, inspect the surfaces to receive the air barrier, and installation procedures 48 hours in advance of installation.

.4 Mock-up:

- .1 Construct one 3 m² mock-up of air barrier in location acceptable to Consultant indicating as a minimum one lap joint, one inside corner, one window interface, and one penetration.
- .2 Arrange for Consultant's review and acceptance.
- .3 Mock-up may remain as part of Work if accepted by Consultant. Remove and dispose of mock-ups which do not form part of Work.

1.6 **DELIVERY, STORAGE AND HANDLING**

- 1. Protect materials from direct exposure to sunlight and physical damage.

2 Products

2.1 **MATERIALS**

- .1 All materials under work of this Section, including but not limited to, primers and sealants are to be compatible and have low VOC content limits.
- .2 Vapour permeable air barrier (**AVP-1**): 23 mils thick, minimum water vapour permeance of 28 in accordance with ASTM E96, maximum air permeance 0.015 Lis m² in accordance with ASTM E2178, single-ply self adhering membrane consisting of engineered film and permeable adhesive with poly-release film; 'Blueskin VP160' by Henry Company Canada Inc. or approved alternative by Cosella-Dörken Products, Inc., or VaproShield.
- .3 Primer: Low VOC quick setting rubber based adhesive 'Blueskin LVC Adhesive' by Henry Company Canada Inc. or approved alternative by Cosella-Dörken Products, Inc. or VaproShield.
- .4 Sealant: ASTM C920, Type S, Grade NS, Class 25; Moisture sure, medium modulus polymer modified sealing compound 'HE925 BES' by Henry Company Canada Inc. or approved alternative by Cosella-Dörken Products, Inc. or VaproShield for their respective membranes.
- .5 Non-vapour-permeable air barrier transition membrane (**TRM-1**):
 - .1 Flashing membrane: 1.0 mm thick, single-ply, self adhering, self sealing, rubberised asphalt, bonded to a cross-laminated high density polyethylene film.
 - .1 'Blueskin SA' by Henry Company Canada Inc.
 - .2 'Air-Shield' by W. R. Meadows.
 - .2 Butyl flashing membrane (**BTL-1**): 100% solid, synthetic butyl, integrally laminated to polypropylene film; 'Blueskin Butyl Flash' by Henry Company Canada or approved alternative.
 - .3 Metal-clad flashing membrane: 1.0 mm thick, self adhering, self sealing, rubberised asphalt bonded to dual layers of polyolefin sheet with a metallic aluminum surface film; 'Blueskin Metal Clad' by Henry Company Canada or approved alternative.
- .6 Ensure compatibility with installed products under sections 07 26 00 and 07 11 00.

3 Execution

3.1 **EXAMINATION**

- .1 Verify condition of previously installed Work upon which this Section depends. Report defects to Consultant. Commencement of work of this Section means acceptance of existing conditions.

3.2 **APPLICATION**

- .1 Ensure surfaces to receive membrane are sound, dry, clean, and free from oil, grease, dirt, excess mortar or other contaminates.
- .2 Fill substrate voids, gaps, depressions, cracks, and joints with mastic or other approved fill material until continuous, smooth, substrate for air barrier is achieved.
- .3 Install mastic and sealant where required to ensure integrity of air barrier installation at protrusions and other complex details. Install sealant in accordance with ASTM C1193.
- .4 Install air barrier in accordance with reviewed shop drawings and manufacturer's instructions in locations indicated.
- .5 Lap air barrier ends and edges 50 mm minimum. Roll air barrier and laps for continuous adhesion over entire substrate area; use manufacturer's recommended roller.
- .6 Extend air barrier as required to connect to other components of work comprising air barrier system.
- .7 Provide end-dams and terminations fabricated from same material as air barrier or material recommended by membrane manufacturer at sills, lintels, openings, and where horizontal surfaces intersect with vertical surfaces to ensure moisture is shed to exterior.
- .8 Cut and fit air barrier as required for passage of protrusions, ensuring continuous adherence to substrate.
- .9 Seal around masonry reinforcing or ties and all penetrations.
- .10 At end of days' work, seal water cut-off along uppermost edge of incomplete air barrier assembly to prevent loss of adhesion and damage air barrier.
- .11 Do not expose air barrier to sunlight for more than 30 days prior to enclosure.

3.3 FIELD QUALITY CONTROL

- .1 Do not cover or permit to be covered any portion of the membranes until they have been inspected by the Consultant or by an inspection agency appointed by the Consultant.

END OF SECTION