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**SECTION 07 25 00**  
**WEATHER BARRIERS****PART 1 GENERAL****1.1 SECTION INCLUDES**

- A. Vapor Retarders: Materials to make exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls water vapor resistant and air tight.

**1.2 DEFINITIONS**

- A. Weather Barrier: Assemblies that form either water-resistive barriers, air barriers, or vapor retarders.
- B. Vapor Retarder: Air tight barrier made of material that is relatively water vapor impermeable, to the degree specified, with sealed seams and with sealed joints to adjacent surfaces.
  - 1. Water Vapor Permeance: For purposes of conversion,  $57.2 \text{ ng}/(\text{Pa s sq m}) = 1 \text{ perm}$ .

**1.3 REFERENCE STANDARDS**

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2013.
- C. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2014.

**1.4 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on material characteristics.
- C. Shop Drawings: Provide drawings of special joint conditions.

**1.5 MOCK-UP**

- A. Install air barrier, vapor retarder, and water-resistive barrier materials in mock-up specified in Section 04 20 00 - Unit Masonry.

**1.6 FIELD CONDITIONS**

- A. Maintain temperature and humidity recommended by the materials manufacturers before, during and after installation.

**PART 2 PRODUCTS****2.1 WEATHER BARRIER ASSEMBLIES**

- A. Exterior Vapor Retarder:
  - 1. On outside surface of inside wythe of masonry cavity wall use vapor retarder coating.
  - 2. On outside surface of sheathing use vapor retarder coating or sheet, self-adhesive type.
  - 3. On surface of steel members where indicated on drawings use vapor retarder coating or sheet, self-adhesive type. Verify that coating type is compatible with steel primer coat.

**2.2 VAPOR RETARDER MATERIALS (AIR BARRIER AND WATER-RESISTIVE)**

- A. Vapor Retarder Sheet: ASTM D1970/D1970M.
  - 1. Type: Rubberized asphalt bonded to thermoplastic sheet, self-adhesive.
  - 2. Thickness: 40 mil, 0.040 inch, nominal.

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3. Sheet Width: 18 inches, and 36 inches.
  4. Water Vapor Permeance: 0.05 perm, maximum, when tested in accordance with ASTM E96/E96M.
  5. Seam and Perimeter Tape: As recommended by sheet manufacturer.
  6. Manufacturers: Basis of Design Manufacturer: Carlisle Coatings and Waterproofing, Inc; CCW-705 Air and Vapor Barrier Sheet: [www.carlisleccw.com](http://www.carlisleccw.com).
    - a. Henry Company; Blueskin SA: [www.henry.com/#sle](http://www.henry.com/#sle).
    - b. W.R. Meadows, Inc; Air-Shield: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
- B. Vapor Retarder Coating: Liquid applied, resilient, UV-resistant coating and associated joint treatment.
1. Dry Film Thickness (DFT): As required by product manufacturer to meet project specifications.
  2. Water Vapor Permeance: 1.0 perm, maximum, when tested in accordance with ASTM E96/E96M.
  3. VOC Content: Less than 50 g per L when tested in accordance with 40 CFR 59, Subpart D (EPA Method 24).
  4. Suitable for use on concrete, masonry, plywood and gypsum sheathing.
  5. Joint Preparation Treatment: Coating manufacturer's recommended method, either tape or reinforcing mesh saturated with coating material.
  6. Manufacturers: Basis of Design Manufacturer: Carlisle Coatings and Waterproofing, Inc;
    - a. Barriseal-R: [www.carlisleccw.com](http://www.carlisleccw.com), or comparable products meeting project requirements by one of the following:.
    - b. Henry Company; Air-Bloc 32MR: [www.henry.com/#sle](http://www.henry.com/#sle).
    - c. Parex USA, Inc.; Parex USA WeatherBlock: [www.parexusa.com](http://www.parexusa.com).
    - d. W.R. Meadows, Inc; Air-Shield LM or Air-Shield LM (All Season): [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
  7. Joint Filler: As recommended by coating manufacturer and suitable to the substrate.

### **2.3 ACCESSORIES**

- A. Sealants, Tapes, Primers and Accessories for Sealing Weather Barrier and Sealing Weather Barrier to Adjacent Substrates: As specified or as recommended by weather barrier manufacturer.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Verify that surfaces and conditions are ready to accept the work of this section.

### **3.2 PREPARATION**

- A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.
- B. Clean and prime substrate surfaces to receive adhesives in accordance with manufacturer's instructions.

### **3.3 INSTALLATION**

- A. Install materials in accordance with manufacturer's instructions.
- B. Water-Resistive Barriers: Install continuous barrier over surfaces indicated, with sheets lapped to shed water but with seams not sealed.
- C. Vapor Retarders: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.

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- D. Apply sealants and adhesives within recommended application temperature ranges. Consult manufacturer if temperature is out of this range.
  - E. Self-Adhered Sheets:
    - 1. Prepare substrate in manner recommended by sheet manufacturer; fill and tape joints in substrate and between dissimilar materials.
    - 2. Lap sheets shingle-fashion to shed water and seal laps air tight.
    - 3. Once sheets are in place, press firmly into substrate with resilient hand roller; ensure that laps are firmly adhered with no gaps or fishmouths.
    - 4. Use same material, or other material approved by sheet manufacturer for the purpose, to seal to adjacent construction and as flashing.
    - 5. At wide joints, provide extra flexible membrane allowing joint movement.
  - F. Coatings:
    - 1. Prepare substrate in manner recommended by coating manufacturer; treat joints in substrate and between dissimilar materials as recommended by manufacturer.
    - 2. Where exterior masonry veneer is to be installed, install masonry anchors before installing weather barrier over masonry; seal around anchors air tight.
    - 3. Use flashing to seal to adjacent construction and to bridge joints.
  - G. Openings and Penetrations in Exterior Weather Barriers:
    - 1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches onto weather barrier and at least 6 inches up jambs; mechanically fasten stretched edges.
    - 2. At openings to be filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches wide; do not seal sill flange.
    - 3. At openings to be filled with non-flanged frames, seal weather barrier to each side of opening framing, using flashing at least 9 inches wide, covering entire depth of framing.
    - 4. At head of openings, install flashing under weather barrier extending at least 2 inches beyond face of jambs; seal weather barrier to flashing.
    - 5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
    - 6. Service and Other Penetrations: Form flashing around penetrating item and seal to weather barrier surface.

### **3.4 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.
- B. Do not cover installed weather barriers until required inspections have been completed.
- C. Obtain approval of installation procedures by the weather barrier manufacturer based on a mock-up installed in place, prior to proceeding with remainder of installation.
- D. Take digital photographs of each portion of the installation prior to covering up.

### **3.5 PROTECTION**

- A. Do not leave materials exposed to weather longer than recommended by manufacturer.

**END OF SECTION 07 25 00**