

SECTION 07 26 00  
VAPOR RETARDERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
  - 1. Underslab membrane vapor retarders.
- B. Coordinate the Work of this Section with all cast in place concrete and related items. Refer to Field Quality Control for required field services prior to placing concrete for all slabs on grade.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Require representatives of each entity directly concerned with vapor retarder installation to attend, including the following:
    - a. Contractor's superintendent.
    - b. Vapor retarder manufacturer.
    - c. Concrete Subcontractor.
  - 2. Review the following:
    - a. Construction joints, control joints, isolation joints, and joint-filler strips.
    - b. Vapor-retarder installation.
    - c. Termination of vapor retarder.
    - d. Sealing of vapor retarder penetrations.
    - e. Vapor retarder repair procedures.
    - f. Inspection of vapor retarder installation by manufacturer prior to concrete placement.

1.3 ACTION SUBMITTALS

- A. Product Data: Technical data for each type of product.

1.4 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: Submit reports for each product, for tests performed by a qualified testing agency.
- B. Manufacturer's Field Services Reports: Reports shall be furnished to the Architect to later than 48 hours following review.

## 1.5 COORDINATION

- A. Coordinate the Work of this Section with cast in place concrete and related items. Manufacturer field services are required to review and report on all slab on grade vapor retarder installations prior to placing concrete.
- B. Coordinate installation of vapor barrier to follow the installation items that penetrate the membrane.

## PART 2 - PRODUCTS

### 2.1 UNDERSLAB VAPOR RETARDERS

- A. Vapor Retarders: ASTM E 1745, 15 mil (0.37 mm) thick sheet, monolithic, polyethylene or polyolefin based resin, nonwoven, unreinforced membrane.
  - 1. Basis of Design: Provide Stego Wrap 15 mil Vapor Barrier by Stego Industries, LLC. Subject to compliance with requirements, other acceptable products include the following:
    - a. Barrier-Bac; Inteplast Group, Ltd.; VB-350.
    - b. Insulation Solutions Inc.; Viper VaporCheck 15 mil.
    - c. Poly-America, LP; 15 mil Husky Yellow Guard.
    - d. Raven Industries; VaporBlock 15.
    - e. W.R. Meadows; Perminator 15 Mil.
  - 2. Physical Properties;
    - a. Permeance Rating: Tested per ASTM E 154 with a maximum permeance rating of 0.01 perm [grains/(ft<sup>2</sup> · hr · inHg)] in accordance with mandatory conditioning tests per ASTM E 1745 Section 7.1.
    - b. Tensile Strength: Minimum 60.0 lbf/in. per ASTM E 154.
    - c. Puncture Resistance: Minimum 2250 grams per ASTM D 1709.

### 2.2 ACCESSORIES

- A. Vapor Retarder Tape: Pressure sensitive tape of type recommended by vapor retarder manufacturer for sealing joints and penetrations in vapor retarder.
- B. Adhesive for Vapor Retarders: Product recommended by vapor retarder manufacturer and has demonstrated capability to bond vapor retarders securely to substrates indicated.
- C. Mastic Adhesive: Compatible with membrane and recommended by vapor retarder manufacturer.
- D. Fire Retardant Self Adhesive Tape: White backed adhesive tape, 4 inch (25 mm) wide; 5 mils (0.125 mm) thickness.
- E. Vapor Retarder Fasteners: Pancake head, self tapping steel drill screws; with fender washers.

- F. Pipe Boots: Factory fabricated, recommended by vapor retarder manufacturer.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas to receive vapor retarder, and conditions for compliance with requirements and conditions affecting installation and performance.
  - 1. Verify that void carton substrate is flat, smooth, and ready to receive sheet membranes.
- B. Proceed with installation after correcting unsatisfactory conditions.

### 3.2 PREPARATION

- A. Clean substrates of substances that are harmful to vapor retarders, including removing projections capable of puncturing vapor retarders. Remove loose or foreign matter which might penetrate vapor retarder.
- B. Clean and prime substrate surfaces to receive adhesive in accordance with manufacturer's instructions.
- C. For underslab installation, layout sheet membrane parallel to direction of placement of concrete.

### 3.3 INSTALLATION

- A. Install vapor retarders in accordance with ASTM E 1643 and manufacturer's written instructions.
- B. Underslab Installation: Install vapor retarders continuously at locations under slab as indicated on the drawings. Ensure there are no discontinuities in vapor retarder at seams and penetrations. Install in largest practical widths. Ensure subgrade beneath vapor retarder is smooth, level, and compacted with no sharp projections.
  - 1. Extend vapor retarders to extremities of areas to protect from vapor transmission. Secure vapor retarders in place with adhesives, vapor retarder fasteners, or anchorage system recommended by manufacturer. Extend vapor retarders to cover miscellaneous voids in insulated substrates, including those filled with loose fiber insulation. At the point of termination, seal vapor barrier to the foundation wall, grade beam, or edge of slab itself using tape or mastic.
  - 2. Install vapor retarder parallel to direction of placement on smooth substrate to form continuous layer over sand base course.
  - 3. Lap sheets not less than 6 inches (150 mm); seal laps tight with mastic tape.
  - 4. Join sections of vapor retarder and seal penetrations with mastic tape. Ensure vapor retarder surfaces receiving mastic tape are clean and dry.
    - a. Ensure no moisture entrapment by vapor retarder due to rainfall or ground water intrusion.

5. Penetrations: Seal around pipes and penetrations in vapor retarder with pipe boots in accordance with manufacturer's instructions.
  - a. If non-permanent formwork stakes must be driven through vapor retarder, repair as recommended by vapor retarder manufacturer.
6. Repair damaged vapor retarder sheet prior to pouring concrete with pressure sensitive tape in accordance with manufacturer's recommendations.
  - a. Immediately repair holes in vapor retarder with self adhesive repair tape.

#### 3.4 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Engage manufacturer's technical representative to inspect vapor retarder materials, accessories, and installation for compliance with specified requirements prior to placement of concrete. Inspections include but are not limited to:
  1. Continuity of vapor retarder system.
  2. Continuous support of vapor retarder system.
  3. Laps in sheet materials comply with the minimum requirements with no fishmouths.
  4. Compatible materials have been used.
  5. Penetrations have been sealed.
  6. Perimeter of vapor retarder system has been terminated and sealed in accordance with manufacturer recommendations.
  7. A written report shall be provided to the Architect for all manufacturer's field services noting the condition of the vapor retarder installation, any issues of concern, and all repairs made prior to placing concrete floor slabs. Reports shall be furnished to the Architect to later than 48 hours following review.

#### 3.5 PROTECTION

- A. Protect vapor retarders from damage until concealed by permanent construction.

END OF SECTION