

SECTION 07190 - VAPOR BARRIER

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Vapor Barrier, seam tape, pipe boots, and detail strip for installation under concrete slabs.

B. Related Sections:

1. Division 3 Section Cast-In-Place Concrete for slab-on-grade construction.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM)

1. E 1745-97 Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs.
2. E 154-88 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs .
3. E 96-95 Standard Test Methods for Water Vapor Transmission of Materials.
4. E 1643-98 Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.

B. American Concrete Institute (ACI)

1. ACI 302.1R-96 Vapor Barrier Component (plastic membrane) is not less than 10 mils thick.

1.3 SUBMITTALS

A. Procedures - Refer to Specifications Section 1330 and the General Conditions for all submittal procedures and substitutions.

B. Product data: Submit manufacturer's product literature and installation instructions for vapor barrier material, mastic or tape, for placement, seaming and pipe boot installation.

C. Testing Agency's inspection report.

D. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

- A. Inspection Report: Owner shall engage an independent agency to test and inspect the installation of the vapor barrier.
 - 1. Agency shall provide a report on the installations compliance with ASTM E 1643-98 and with the manufacturer's recommendations.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in manufacturer's original packaging or containers.
- B. Store to prevent damage, deterioration or contamination.

1.6 WARRANTY

- A. Special Manufacturer's Warranty: Manufacturer's standard form in which the vapor barrier manufacturer agrees to repair or replace materials listed that fail or do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. All vapor barrier material and accessories.
 - 2. Warranty Period: 30 days from date of completed installation.
- B. Special Installers's Warranty: Manufacturer's standard form in which the vapor barrier installer agrees to repair or replace materials listed that fail or do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: 1 year from the date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Stego Industries; Stego Wrap Vapor Barrier.
 - 2. W.R. Meadows; Premolded Membrane with Plasmatic Core or Vapor Mat 15.
 - 3. Reef Industries; Griffolyn.
 - 4. Fortifiber; Moistop Ultra A.

2.2 MATERIALS

- A. General: Extremely low permeance vapor barriers for critically sensitive, low permeance floor coverings. Includes floor coverings of rubber, vinyl, urethane, epoxy and methyl methacrylate, as well as linoleum, wood, and cork.
- B. Vapor Barrier:
 - 1. Fifteen (15) mil thickness, polyethylene sheeting.
 - 2. Minimum WVTR as tested by ASTM E96 of 0.008.
- C. Seam Tape:
 - 1. Tape: High-density polyethylene tape with pressure sensitive adhesive.
 - 2. Width: 4-inches, min.
- D. Pipe Boots: Construct pipe boots from vapor barrier material and pressure sensitive tape per manufacturer's instructions.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Ensure that subsoil have been approved and ready for vapor barrier installation.
- B. Level and tamp or roll aggregate, sand or tamped earth base.

3.2 INSTALLATION

- A. Installation shall be in accordance with manufacturer's instructions and ASTM E 1643-98.
- B. Install vapor barrier over compacted, clean subgrade material, free of debris and protrusions.
- C. Lay vapor barrier over interior building area to receive concrete slab; lap edges 6" and seal with mastic or tape over entire lap. Apply membrane in minimum of 8'-0" widths. Lay membrane with seams perpendicular to and lapped in direction of pour. Turn edges of membrane up to within 1/2-inch of top of slab at intersection with vertical surfaces.
- D. Where expansion or control joints are indicated in slab, lay vapor barrier continuous under joint filler.
- E. Seal all penetrations (including pipes) with manufacturer's pipe boot, mastic, and tape.
- F. No penetration of the vapor barrier is allowed except for reinforcing steel and permanent utilities.
- G. Repair damaged areas by cutting patches of vapor barrier, overlapping damaged area 6 inches and taping all four sides with tape.

- H. Protect vapor barrier installation from damage until concrete slab is in place.

3.3 FIELD QUALITY CONTROL:

- A. Comply with requirements of Division 1 Sections on laboratory testing services and independent field inspection.
- B. Installation Inspection Report: Owner will engage a qualified independent testing and inspecting agency to perform vapor barrier tests and inspections and to prepare test reports.
 - 1. Notify Architect or Owner 48 hours in advance of date and time of inspection.
- C. Repair or remove and replace components of vapor barrier system where test results or inspections indicate that they do not comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements

END OF SECTION 07190