

SECTION 072616

UNDER-SLAB VAPOR RETARDERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Vapor barrier membranes under cast-in-place concrete slabs on grade, with sealed membrane joints and terminations.
- B. Related Sections:
 - 1. Division 03 Section "Cast-in-Place Concrete."

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. D1709 – Impact Resistance of Plastic Film by the Free-Falling Dart method.
 - 2. E96 – Water Vapor Transmission of Materials.
 - 3. E154 – Water Vapor Retarders Used in Contact With Earth under Concrete Slabs, on Walls, or as Ground Cover.
 - 4. E1643 – Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.
 - 5. E1745 – Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data for all materials to be used, stating physical properties of the materials. Include manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Company specializing in the manufacture of sheet membranes used as vapor retarders, with a minimum of five years of successful history and experience in this field.
- B. Installer Qualifications: Experienced in the installation of specified vapor retarders, with documented experience in this type of work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Under-Slab Vapor Retarder:
 - 1. Manufacturers: Subject to compliance with requirements, provide one of the following:
 - a. Fortifiber Corporation; Moistop Ultra.

- b. Stego Industries, LLC; Stego Wrap, 15 mils.
- c. Accepted equal.
- 2. Standards: Meeting ASTM E1745 and the following minimum requirements:

<u>Property</u>	<u>Test</u>	<u>Results</u>
Water Vapor Permeance	ASTM E96	Max. 0.30 perms.
Tensile Strength	ASTM E154	Min. 30.0 lbf/in.
Puncture Resistance	ASTM D1709, Method B	Min. 1700 grams

- B. Tape: As recommended by manufacturer of vapor retarder.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify items which penetrate surfaces to receive vapor retarder are rigidly installed. Verify surfaces of subgrade are uniform and free of large rocks, bumps, depressions, or projections which may be detrimental to successful installation.
- B. Coordinate the installation of vapor retarded with related trades and the Project schedule. Beginning of installation means the Contractor's acceptance of existing conditions.

3.2 INSTALLATION

- A. Install vapor retarder in accordance with ASTM E1643, unless otherwise instructed by manufacturer's written recommendations.
- B. Apply vapor retarder over entire area to receive concrete slabs.
- C. Lay membrane with seams perpendicular to, and lapped in the direction of, the concrete pour. Lap edges a minimum of 6 inches, unless otherwise instructed by the manufacturer, and seal with tape. At perimeters, turn edges up to top of slab or down to bottom of footings.
- D. Where expansion joints are indicated at adjacent vertical surfaces, extend vapor retarder beyond expansion joint filler, and turn up to top of slab. Where expansion joints are indicated within the slab, lay vapor retarder continuous under expansion joint filler.
- E. Tape vapor retarder tightly to pipes, conduits, and penetrations of vapor retarder. Allow no screed supports or other items to penetrate vapor retarder.

3.3 PROTECTION OF MEMBRANE

- A. Protect vapor retarder from damage until permanent covering is in place.
- B. Repair punctures and tears in vapor retarder using patches of the material which overlaps the puncture or tear a minimum of 6-inches. Seal with tape.

END OF SECTION 072616