

## **DIVISION 7 – THERMAL AND MOISTURE PROTECTION**

### **SECTION 07261**

#### **UNDER-SLAB VAPOR BARRIER**

##### **PART 1 – GENERAL**

###### **1.1 SUMMARY**

- A. Products supplied under this section:
  - 1. Vapor barrier and installation accessories for installation under concrete slabs.
- B. Related sections:
  - 1. Section 03300 Cast-in-Place Concrete

###### **1.2 REFERENCES**

- A. American Society for Testing and Materials (ASTM):
  - 1. ASTM E1745- 11Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs.
  - 2. ASTM E1643- 11Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.
- B. Technical Reference - American Concrete Institute (ACI):
  - 1. ACI 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.

###### **1.3 SUBMITTALS**

- A. Quality control/assurance:
  - 1. Summary of test results per paragraph 9.3 of ASTM E 1745.
  - 2. Manufacturer's samples and literature.
  - 3. Manufacturer's installation instructions for placement, seaming and penetration repair instructions.
  - 4. All mandatory ASTM E1745 testing must be performed on a single production roll per ASTM E1745 Section 8.1.

##### **PART 2 – PRODUCTS**

###### **2.1 MATERIALS**

- A. Vapor barrier shall have all of the following qualities:
  - 1. Maintain permeance of less than 0.01 Perms [grains/(ft<sup>2</sup> · hr · inHg)] as tested in accordance with mandatory conditioning tests per ASTM E1745 Section 7.1 (7.1.1-7.1.5).
  - 2. Other performance criteria:
    - a. Strength: ASTM E1745 Class A.
    - b. Thickness: 15 mils minimum
- B. Vapor barrier products:
  - 1. Basis of Design: Stego Wrap Vapor Barrier (15-mil) by Stego Industries LLC., (877) 464-7834 [www.stegoindustries.com](http://www.stegoindustries.com).
  - 2. Approved Alternate: Vaporguard by Reef Industries, 713-507-4250. [www.reefindustries.com](http://www.reefindustries.com).
  - 3. Approved Alternate: Sundance 15 mil Vapor Barrier by Sundance Inc., (855) 300-7156 [www.sundancepolymertech.com](http://www.sundancepolymertech.com).
  - 4. No substitutions.

###### **2.2 ACCESSORIES**

- A. Seams :
  - 1. Stego Tape by Stego Industries LLC.
- B. Penetrations of Vapor barrier:
  - 1. Stego Mastic by Stego Industries LLC.
  - 2. Stego Tape by Stego Industries LLC.

- C. Perimeter/edge seal:
  - 1. Stego Crete Claw by Stego Industries LLC.
  - 2. Stego Term Bar by Stego Industries LLC.
  - 3. StegoTack Tape (double sided) by Stego Industries LLC.

### PART 3 – EXECUTION

#### 3.1 PREPARATION

- A. Ensure that subsoil is approved by Architect or Geotechnical Engineer.
  - 1. Level and compact base material.

#### 3.2 INSTALLATION

- A. Install vapor barrier in accordance ASTM E1643.
  - 1. Unroll vapor barrier with the longest dimension parallel with the direction of the concrete placement and face laps away from the expected direction of the placement whenever possible.
  - 2. Extend vapor barrier over footings and grade beams to a distance acceptable to the architect/engineer or stop at impediments such as dowels and waterstops.
  - 3a. Seal vapor barrier to slab perimeter/edge using Stego Crete Claw and remove dirt, debris, and mud from Crete Claw prior to concrete placement.
    - OR
  - 3b. Seal vapor barrier to footing/grade beam with double sided tape, termination bar, or both.
  - 4. Overlap joints 6 inches and seal with manufacturer's tape.
  - 5. Apply tape/Crete Claw to a clean and dry vapor barrier.
  - 6. Seal all penetrations (including pipes) per manufacturer's instructions.
  - 7. No penetration of the vapor barrier is allowed except for reinforcing steel and permanent utilities.
  - 8. Repair damaged areas by cutting patches of vapor barrier, overlapping damaged area 6 inches and taping all sides with tape.

END OF SECTION - 07261