



Guide Specification

VB-250 (11mil) Vapor Retarder

UNDER-SLAB VAPOR RETARDER (033000&072600)

PART I – GENERAL

1.1 SUMMARY

A. Products Supplied Under This Section

1. Vapor Retarder, Seam Tape & Accessories for installation under concrete slabs

B. Related Sections

1. Section 033000 Cast-in-place Concrete
2. Section 072600 Vapor Retarder

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM)

1. ASTM E 1745-17 Standard Specification for Plastic Water Vapor Retarders used in Contact with Soil or Granular Fill under Concrete Slabs.
2. ASTM E 154 / E 154M-08 Standard Test Methods for Water Vapor Retarders used in Contact with Earth under Concrete Slabs, on Walls, or as Ground Cover.
3. ASTM E 96-16 Standard Test Methods for Water Vapor Transmission of Materials.
4. ASTM E 1643-18 Selection, Design, Installation, and Inspection of Water Vapor Retarders used in Contact with Earth or Granular Fill under Concrete Slabs.
5. ASTM F 1249-13 Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor.
6. ASTM D 1894 Standard Test Method for Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting.
7. K124/02/95 Method To Test Radon Diffusion Coefficient in Radon-Proof Membrane.

B. American Concrete Institute (ACI)

1. ACI 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials. Vapor Retarder component is not less than 10 mils thick.

1.3 SUBMITTALS

A. Quality Control / Assurance

1. Summary of test results as per paragraph 7 of ASTM E 1745.
2. Manufacturer's samples, literature.
3. Manufacturer's installation instructions for placement, seaming and penetration repair

PART II – PRODUCTS

2.1 MATERIALS

A. Vapor Retarder

1. Manufactured with proprietary polyolefin resins

a. Minimum 10 mil thick plastic geo-membrane

b. Water Vapor Retarder ASTM E 1745 meet or exceed Class A (Plastics)

c. Water Vapor Permeance ASTM E 96 0.020 Perms (US)

d. Puncture Resistance ASTM E 1745 Class A minimum 2400 grams



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- e. Tensile Strength ASTM D 1745 Class A minimum 50 lbf/in
- f. Coefficients of Friction ASTM D 1894 0.6
- g. Radon Diffusion Coefficient K124/02/95 2.5⁻¹¹m²/S

B. Approved Manufacturers

1. Barrier-Bac VB250 (11 mil) manufactured by Inteplast Group, 877-535-0555, www.BarrierBac.com
2. Vapor Block 10 manufactured by Raven Industries, 605-336-2750, www.ravenind.com
3. Griffolyn 10 mil manufactured by Reef Industries, 800-231-6074, www.reefindustries.com

2.2 ACCESSORIES

A. Seam Options

1. Tape manufactured and/or supplied by the approved manufacturers listed in section 2.1 Materials (B.)
 - a. Water Vapor Permeance ASTM E 96B 0.1 Perms(maximum)

B. Pipe Boots

1. Construct Pipe Boots from Vapor Retarder material and pressure sensitive tape per manufacturer's instructions.

C. Mastic

1. Mastic must have the following qualities:
 - a. Water Vapor Transmission ASTM E 96 0.1 perms or lower

PART III – EXECUTION

3.1 PREPARATION

A. Ensure that base material is approved by Architect or Geotechnical Engineer

1. Level and compact base material

3.2 INSTALLATION

A. Install vapor retarder in accordance with manufacturer's instructions and ASTM E 1643:

1. Unroll vapor retarder with the longest dimension parallel with the direction of the concrete placement.
2. Lap vapor retarder over footings and/or seal to foundation walls.
3. Overlap joints 6 inches and seal with manufacturer's tape.
4. Seal all penetrations (including pipes) per manufacturer's instructions.
5. No penetration of the vapor retarder is allowed except for reinforcing steel and permanent utilities.
7. Repair damaged areas by cutting patches of vapor retarder, overlapping damaged area 6 inches and taping all sides with tape.