



# Guide Specification

## VB-250 (11mil) Vapor Retarder

UNDER-SLAB VAPOR RETARDER (03300 & 07260)

### 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 03300 Cast-in-place Concrete
2. Section 072600 Vapor Retarder

#### 1.2 REFERENCES

##### A. American Society for Testing and Materials (ASTM)

1. ASTM E 1745-09 Standard Specification for Plastic Water Vapor Retarders used in Contact with Soil or Granular Fill under Concrete Slabs.
2. ASTM E 154-99 (2005) Standard Test Methods for Water Vapor Retarders used in Contact with Earth under Concrete Slabs, on Walls, or as Ground Cover.
3. ASTM E 96-05 Standard Test Methods for Water Vapor Transmission of Materials.
4. ASTM E 1643-09 Selection, Design, Installation, and Inspection of Water Vapor Retarders used in Contact with Earth or Granular Fill under Concrete Slabs.
5. ASTM D 903 Standard Test Method for Peel or Stripping Strength of Adhesive Bonds.
6. ASTM F 1249 Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor.

##### 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 8.3 of ASTM E 1745.
2. Manufacturer's samples, literature.
3. Manufacturer's installation instructions for placement, seaming and penetration repair instructions.

### PART II – PRODUCTS

#### 2.1 MATERIALS

##### A. Vapor Retarder

1. Must Be 100% Virgin Resin High Density Polyethylene Vapor Retarder
  - a. Minimum 10 mil thick plastic geo-membrane
  - b. Manufactured with prime high-grade 100% virgin polyolefin resins
  - c. Water Vapor Retarder ASTM E 1745 meet or exceed Class A (Plastics)
  - d. Water Vapor Permeance ASTM E 96 0.006 Perms (g/hr/m<sup>2</sup>)
  - e. Water Vapor Permeance ASTM E 96 0.020 Perms (US)
  - f. Puncture Resistance ASTM E 1745 Class A minimum 2200 grams
  - g. Tensile Strength ASTM D 1745 Class A minimum 45.0 lbf/in



IntePlus® XF FILM

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### B. Approved Manufacturers

1. Barrier-Bac VB250 (11 mil) manufactured by Inteplast Group, 877-535-0555, [www.BarrierBac.com](http://www.BarrierBac.com)
2. Vapor Block 10 manufactured by Raven Industries, 800-635-3456, [www.ravenind.com](http://www.ravenind.com)
3. Griffolyn 10 mil manufactured by Reef Industries, 800-231-6074, [www.reefindustries.com](http://www.reefindustries.com)
4. Moistop Ultra 10 manufactured by Fortifiber, 800-773-4777, [www.fortifiber.com](http://www.fortifiber.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      0.01 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      0.3 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.