



IntePlus® XF FILM

Guide Specification VBC-350(31mil) Composite 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 manufactured for installation under concrete slabs. (Acceptable) Vapor Retarder must have the following physical properties, qualities, and performance characteristics:
 - a. Manufactured with proprietary polyolefin resins
 - b. Minimum thickness of 15 mils for plastic membrane.
 - c. Manufactured in the USA; marketed and sold by a true manufacturer; (No Imported, Private Labeled, Outsourced, or Toll Manufactured products accepted)
 - d. Products from ISO 9001 Certified Manufacturers.
 - e. Products and accessories which are stocked, supplied and readily available as needed in project locale.
 - f. Manufactured for the following uses in protecting against – moisture, radon gas, methane gas and sulphates.
 - g. Water Vapor Permeance (WVP) equal to or less than 0.007 (US Perms) and Water Vapor Transmission (WVT) equal to or less than 0.002 (g/hr/m²) - Products with WVP higher than 0.007 (US Perms) will NOT be accepted.
 - h. Manufacturer that will provide current independent third (3rd) party testing results; third (3rd) party testing to be provided by the manufacturer; and NOT a marketing, private label or out-sourcing entity. The ACTUAL manufacturer name and address must be identified to the requesting party.
 - i. Manufacturer providing current “Letters of ISO 9001 Certification”.
 - j. Must provide a “Certificate of Origin” upon request.
2. Contact Inteplast Group for specific information on how Barrier-Bac contributes to project LEED rating, and/or ASTM E-2129 (Standard Practice for Data Collection for Sustainability Assessment of Building Products)

B. Related Sections

1. Section 03300 Cast-in-place Structural Concrete
2. Section 07260 Under-Slab 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 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs.
3. ASTM E 96 Standard Test Methods for Water Vapor Transmission of Materials.
4. ASTM E 1643 Standard Practice for Installation 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.



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B. American Concrete Institute (ACI)

1. ACI 302.2R-06 Vapor Barrier Component (plastic membrane) is not less than 10 mils thick.

1.3 SUBMITTALS

A. Quality Control / Assurance

1. Submit CURRENT Laboratory test results showing compliance with ASTM & ACI Standards.
2. Submit CURRENT Third Party test results.
3. Submit Manufacturers Product Samples & Literature.
4. Manufacturer's installation instructions for placement, seaming and pipe boot installation.
5. Products that DO NOT MEET ALL criteria in section (1.1A -1.) will not be accepted.
6. Provide all letters, certificates and documentation required in section (1.1A-1.) with submittals.

PART II – PRODUCTS

2.1 MATERIALS

A. Vapor Retarder

Specifier Note: For greater concrete peel adhesion (more than 4 lbs / in) when required by Architect & Engineer (1.) such as, post tension concrete, fiber reinforced concrete applications, shifting soil or sub-grade settlement conditions; (2.) when critical floor finish is needed (such as colored, stained or polished concrete); (3.) under gym floors, mechanical room or computer room floors; (4.) when being utilized in Brownfield Development Projects – Barrier-Bac VBC-350 (Composite) Membrane may be more suitable

1. Manufactured with proprietary polyolefin resins. Film thickness alone must be 15 mils or greater – reinforcing scrims or backing cannot be basis for minimum mil thickness.
 - a. Water Vapor Permeance ASTM E 96 0.007 Perms (US)
 - b. Water Vapor Permeance ASTM E 96 0.002 Perms (Metric)
 - c. Water Vapor Retarder ASTM E 1745 Meets Class A (Plastics)
 - d. Tensile Strength ASTM D 882 136 lbs/in
 - e. Puncture Resistance ASTM D 1709 5210 grams
 - f. Life Expectancy ASTM E 154 Indefinite
 - g. Chemical Resistance ASTM E 154 Unaffected
 - h. Peel Adhesion to Concrete ASTM D 903 8 lbs/in
2. Vapor Retarder Products
 - a. Barrier-Bac VBC-350 by Inteplast Group – 877-535-0555 – www.barrierbac.com
 - b. Underslab 2 by Polyguard Products – 800-541-4994 - www.polyguardproducts.com
 - c. Florprufe 120 by Grace Construction Products – www.na.graceconstruction.com

2.2 ACCESSORIES

A. Seam Options

1. Seam Tape must have the following qualities
 - a. Water Vapor Permeance ASTM E 96 0.01 Perms
 - b. Tensile Strength (lbs/in) ASTM D 1970 MD-20.09/TD-26.42



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- c. Peel Adhesion (lbs/in) ASTM C 794 5.55
- d. Elongation to Break ASTM D 412 320%
 (rubberized asphalt)
- e. Total Thickness 30 mil
- 2. Seam Tape
 - a. Barrier-Bac Seam Tape by Inteplast Group – 877-535-0555 - www.barrierbac.com
 - b. In case project design specifications require or it is needed to use additional adhesive to secure Barrier-Bac Seam Tape, we recommend using 3M™ Scotch-Weld™ HoldFast 70 Cylinder Spray Adhesive Clear to apply on the geo-textile surface overlap prior to tape application.
- 3. Seam Weilding
 - a. Seams may be heat welded if desired
 - b. Contact Inteplast at 877-535-0555 for heat welding assistance
- B. Pipe Boots
 - 1. Construct pipe boots from vapor barrier material & seam tape per manufacturer details.
- C. Multiple Penetrations (options based on specific jobsite conditions)
 - 1. Construct pipe boots from Barrier-Bac membrane material & seam tape per manufacturer details.
 - 2. Seal penetrations with waterproof seam tape per manufacturer details.
 - 3. Seal penetrations with liquid detail sealant (1-part or 2-part).
 - 4. Seal penetrations with self-leveling detail sealant (2-part).

PART III – EXECUTION

3.1 PREPARATION

A. Ensure that subsoil is approved by architect or geotechnical firm

- 1. Level and tamp or roll aggregate, sand or tamped earth base

3.2 INSTALLATION

A. Install Vapor Retarder:

- 1. Installation shall be in accordance with manufacturer's instructions and ASTM E 1643-98
 - a. Unroll Vapor Retarder w/ the longest dimension parallel with the direction of the pour.
 - b. Lap Vapor Retarder over footings and seal to foundation walls.
 - c. Overlap joints 6 inches and seal with manufacturer's tape.
 - d. Seal all penetrations (including pipes) per manufacturer's instructions.
 - e. No penetration of the Vapor Retarder is allowed except for reinforcing steel and permanent utilities.
 - f. Repair damaged areas by cutting patches of Vapor Retarder, overlapping damaged area 6 inches and taping all four sides with tape.