



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. ISO Certified 100% high-grade virgin polyolefin resins – No recycled polyethylene.
 - 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 0.009 (US Perms) and Water Vapor Transmission (WVT) equal to or less than 0.003 (g/hr/m²) - Products with WVP higher than 0.009 (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.

B. American Concrete Institute (ACI)

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



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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. Must be ISO Certified 100% high-grade virgin polyolefin resin (High Density Polyethylene - HDPE) vapor retarder film. 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	0.009 Perms (US)
b. Water Vapor Permeance	ASTM E 96	0.006 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



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2.2 ACCESSORIES

A. Seam Options

1. Seam Tape must have the following qualities

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|--|------------------------------|------------|
| a. Water Vapor Permeance | ASTM E 96 | 0.01 Perms |
| b. Tensile Strength (lbs/in) | ASTM D 1970MD-20.09/TD-26.42 | |
| c. Peel Adhesion (lbs/in) | ASTM C 794 | 5.55 |
| d. Elongation to Break
(rubberized asphalt) | ASTM D 412 | 320% |
| e. Total Thickness | 30 mil | |

2. Seam Tape

- a. Barrier-Bac Seam Tape by Inteplast Group – 877-535-0555 - www.barrierbac.com

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.