

GUIDE SPECIFICATION FOR PERMINATOR® 10 MIL UNDERSLAB VAPOR RETARDER

SECTION 07 26 16 / SECTION 07130

Below Grade Vapor Retarders

Specifier Notes: This guide specification is written according to the Construction Specifications Institute (CSI) format. The section must be carefully reviewed and edited by the architect or engineer to meet the requirements of the project. Coordinate this section with other specification sections and the drawings.

Specifier Notes: PERMINATOR underslab vapor retarder is a new generation of polyolefin-based resin/chemical technology. PERMINATOR provides the industry with a highly effective, economical choice for helping to reduce the penetration of moisture and water vapor through the slab into the structure, thereby helping to reduce fungus, mildew, and mold growth. PERMINATOR also helps reduce radon gas from entering the structure.

New resin technology allows dramatically greater puncture resistance while maintaining one of the lowest perm ratings in the market.

PERMINATOR is tough enough to withstand normal construction jobsite conditions and traffic. It will not crack, puncture, snag, split, or tear easily. PERMINATOR helps meet and maintain the maximum slab moisture transfer rate of 3 lb./1000 ft.²/24 hours (1.45 kg/100 m²/24 hours), as allowed by the flooring industry's specifications. PERMINATOR is available in 10 mil and 15 mil thicknesses and both versions are furnished in 200' (61 m) long rolls. PERMINATOR's 12' wide (15 mil) and 15' wide (10 mil) rolls require fewer seams in application.

PERMINATOR underslab vapor retarder is primarily designed for underslab construction, where the soil has been tamped and leveled or compacted fill has been applied. The 200' (61 m) long sheets are unrolled as is or cut to size and installed using the overlapping method. Overlaps are 6" (152.4 mm) wide and these seams are sealed using 4" (101.6 mm) wide PERMINATOR TAPE.

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Application of an underslab vapor retarder.

1.02 RELATED SECTIONS

Specifier Notes: Edit the list of related sections as required for the project. List other sections dealing with work directly related to this section.

- A. Section 03 30 00 - Concrete.
- B. Section 07 10 00 – Dampproofing and Waterproofing.
- C. Section 09 64 00 - Wood Flooring.
- D. Section 09 65 00 - Resilient Flooring.

1.03 REFERENCES

- A. ASTM D1709 - 09 Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method.

- B. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
- C. ASTM E154 - Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs.
- D. ASTM E1643 - Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.
- E. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs.
- F. ASTM F1249-01 Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor.

1.04 SUBMITTALS

- A. Comply with Section 01 33 00 - Submittal Procedures.
- B. Submit manufacturer's product data and application instructions.

1.05 QUALITY ASSURANCE

- A. Use an experienced installer and adequate number of skilled personnel who are thoroughly trained and experienced in the application of the vapor retarder.
- B. Obtain vapor retarder materials from a single manufacturer regularly engaged in manufacturing the product.
- C. Provide products which comply with all state and local regulations controlling use of volatile organic compounds (VOCs).

1.06 PRECONSTRUCTION MEETING

- A. Pre-Construction Meeting: Convene one week prior to installation of underslab vapour retarder. Attendees to be as follows: - Architect, Engineer, General Contractor, Vapor Retarder Installer, and Vapor Retarder Manufacturer to discuss the application in detail.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Store materials in a clean, dry area in accordance with manufacturer's instructions.
- C. Protect materials during handling and application to prevent damage or contamination.
- D. Ensure membrane is stamped with manufacturer's name, product name, and membrane thickness at intervals of no more than 85" (220 cm).

1.08 ENVIRONMENTAL REQUIREMENTS

- A. Product not intended for uses subject to abuse or permanent exposure to the elements.
- B. Do not apply on frozen ground.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. W. R. MEADOWS, INC., PO Box 338, Hampshire, Illinois 60140-0338. (800) 342-5976. (847) 683-4500. Fax (847) 683-4544. Web Site www.wrmeadows.com.

2.02 MATERIALS

- A. Plastic Vapor Retarder
1. Performance-Based Specification: Vapor retarder membrane shall be manufactured from virgin polyolefin resins and shall meet or exceed all requirements of ASTM E1745, Class A.
 - a. Maximum Water Vapor Permeance (ASTM E154 Sections 7, 8, 11, 12, 13, by ASTM E96, Method B or ASTM F1249)
 - i. As received: 0.0183 perms.
 - ii. After Wetting and Drying: 0.0219 perms.
 - iii. Resistance to Plastic Flow and Temperature: 0.0197 perms.
 - iv. Effect Low Temperature and Flexibility: 0.0212 perms
 - v. Resistance to Deterioration from Organisms and Substances in Contacting Soil: 0.0198 perms.
 - b. Puncture Resistance (ASTM D1709): >3,500 grams.
 - c. Tensile Strength ASTM E154, Section 9: 52 Lb. Force/Inch
 2. Proprietary-Based Specification:
 - a. PERMINATOR 10 mil by W. R. MEADOWS.
 - b. [XXXXXXXXXX]
 - c. [XXXXXXXXXX]

2.03 ACCESSORIES

- A. Seam Tape
1. High Density Polyethylene Tape with pressure sensitive adhesive. Minimum width 4" (100 mm).
 - a. Perminator Tape by W.R. Meadows.
- B. Pipe Collars
1. Construct pipe collars from vapor retarder material and pressure sensitive tape per manufacturer's instructions.

PART 3 EXECUTION

3.01 SURFACE PREPARATION

- A. Prepare surfaces in accordance with manufacturer's instructions.
- B. Level, tamp, or roll earth or granular material beneath the slab base.

3.02 EXAMINATION

- A. Examine surfaces to receive membrane. Notify architect if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.03 APPLICATION

- A. Install the vapor retarder membrane in accordance with manufacturer's instructions and ASTM E 1643-98.
- B. Unroll vapor retarder with the longest dimension parallel with the direction of the pour.
- C. Lap vapor retarder over footings and seal to foundation walls.

- D. Overlap joints 6" (152 mm) and seal with manufacturer's tape.
- E. Seal all penetrations (including pipes) with manufacturer's pipe boot.
- F. No penetration of the vapor retarder is allowed except for reinforcing steel and permanent utilities.
- G. Repair damaged areas by cutting patches of vapor barrier, overlapping damaged area 6" (152 mm) and taping all four sides with tape.

END OF SECTION