



8-MIL "CLASS A" VAPOR RETARDER

VERSION 20.0

## VAPOR RETARDERS

DIVISION  
033000, 072600

### PRODUCT NAME

Viper® II Platinum "Class A" Under-Slab Vapor Retarder

### MANUFACTURER

**ISI BUILDING PRODUCTS**  
401 Truck Haven Road  
East Peoria, IL 61611  
866.698.6562 / www.isibp.com

### PRODUCT DESCRIPTION

#### BASIC USE

Viper II Platinum is an under-slab vapor retarder specifically designed for preventing moisture migration through concrete slabs-on-grade. Viper II Platinum is the first of its kind able to achieve ASTM E 1745 Class A status for blown films under 10-mils thick. Viper II Platinum reduces water vapor emission transfer and moisture migration from entering the building envelope on commercial, industrial and residential applications. Viper II Platinum controls condensation, mold, mildew, degradation and prevents costly flooring failures and damage to moisture sensitive furnishings within a building's interior. Viper II Platinum may be used to reduce radon and methane gas migration and is resistant to other adverse soil conditions.

#### COMPOSITION & MATERIALS

Viper II Platinum is a co-extruded film manufactured and engineered from seven-layer extrusion technology using a unique virgin resin formulation. The seven-layer extrusion technology uses separate extruders to produce different layers of polymers. The layers join, in the liquid state, just before they are extruded. Co-extrusion manufacturing is desirable as it takes the best properties of different resins and links them together. The film structure is then engineered to perform better than its individual parts. The seven-layer extrusion process creates an excellent balance of high puncture and tensile strength while maintaining very low water vapor permeance characteristics. This product maintains (long-term) high performance and will not biodegrade/decompose when exposed to various soil types and below slab conditions.

#### SIZE

Standard Size: 14' x 210' rolls

#### WEIGHT

Approximately 113 lbs per roll

#### BENEFITS

- Manufactured using seven-layer co-extrusion technology from virgin resin
- Maintains long-term performance after exposure to adverse soil conditions

- Exceeds ASTM E 1745 "Class A" guidelines
- High puncture and tensile strength
- Greatly reduces moisture migration through slab-on-grade applications

### TECHNICAL DATA

#### APPLICABLE STANDARDS

*American Society for Testing & Materials (ASTM)*

**ASTM E 1745** Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs

**ASTM E 154** Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls or as Ground Cover

**ASTM D 1709** Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method

**ASTM D 882** Standard Test Method for Tensile Properties of Thin Plastic Sheeting

**ASTM F 1249** Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor

**ASTM E 96** Standard Test Methods for Water Vapor Transmission of Materials

**ASTM E 1643** Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs

**ACI 302.2R-06** Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials

NOTE: All Viper II Platinum testing is done by accredited, third-party testing agencies following stringent industry guidelines and testing standards.

#### ENVIRONMENTAL CONSIDERATIONS

Viper II Platinum can aid in controlling soil gas and poisons such as methane and radon.

#### PHYSICAL PROPERTIES

Viper II Platinum exceeds all ASTM E 1745 "Class A" requirements for under-slab vapor retarders.

### INSTALLATION

#### SUB-GRADE PREPARATION

Level and tamp or roll granular base as specified by the architectural or structural drawings.

#### VAPOR RETARDER PLACEMENT

Unroll Viper Platinum with the longest dimension parallel with the direction of the pour. Unfold to full width.

Extend Viper Platinum over footings and seal to foundation wall, grade beam or slab at an elevation consistent with the top of the slab or terminate at impediments, such as water stops or dowels. Use Viper Double Bond Tape or a combination of Viper Double Bond Tape and Viper Vapor Tape at such terminations.

**SEAMS AND PENETRATIONS**

Seal around pipes, support columns, or any other penetrations, with Viper VaporPatch, VaporCheck Mastic, or at a minimum, a combination of Viper II Platinum and Viper Vapor Tape. Doing so creates a monolithic membrane between the surface of the slab and moisture sources below.

Holes or openings through Viper II Platinum should be effectively sealed with Viper Vapor Tape, Viper VaporPatch or VaporCheck Mastic to maintain the integrity of the vapor barrier. Overlap joints a minimum of six inches. Seal overlap together with Viper Vapor Tape and/or Viper Double Bond Tape.

**PROTECTION**

When installing reinforcing steel and utilities, in addition to the placement of concrete, take precaution to protect Viper II Platinum. Carelessness during installation can damage the most puncture-resistant vapor retarders.

Avoid driving stakes through Viper II Platinum. If this cannot be avoided, each individual hole must be repaired. If a cushion or blotter layer is required in the design

between the vapor retarder and the slab, additional care should be taken, especially if sharp crushed rock is used. Washed rock will provide less chance of damage during placement.

These are general installation instructions. Instructions on architectural or structural drawings should be reviewed and followed. Detailed installation instructions can be obtained by calling the manufacturer at 866.698.6562 or visiting [www.isibp.com](http://www.isibp.com).

**WARRANTY**

Warranty information can be obtained by calling the manufacturer at 866.698.6562 or visiting [www.isibp.com](http://www.isibp.com).

**MAINTENANCE**

Requires no maintenance once installed.

**TECHNICAL SERVICES**

Technical information and detailed test results can be obtained by calling the manufacturer at 866.698.6562.

**FILING SYSTEMS**

Additional information can be obtained by calling the manufacturer at 866.698.6562 or visiting [www.isibp.com](http://www.isibp.com).

| PROPERTIES<br>TEST PROCEDURE (INDEPENDENT TEST FACILITY) | TEST METHOD<br>APPLICABLE STANDARDS | RESULTS<br>IP UNITS                 |
|--|-------------------------------------|-------------------------------------|
| THICKNESS (NOMINAL)                                      | N/A                                 | 8-mil                               |
| WEIGHT (PER ROLL)  | N/A                                 | 113 lbs                             |
| CLASSIFICATION   | ASTM E 1745                         | EXCEEDS CLASS A, B, C               |
| TENSILE STRENGTH   | ASTM E 154 SEC. 9 (D882)            | 52 lbf/in (MD), 48 LBF/in (TD)      |
| ELONGATION   | ASTM E 154 SEC. 9 (D882)            | 1100% (MD), 1100% (TD)              |
| PUNCTURE RESISTANCE                                      | ASTM D 1709 PROCEDURE B             | 2,207 grams                         |
| WATER VAPOR PERMEANCE (NEW MATERIAL)                     | ASTM F 1249                         | 0.032 perms*                        |
| WATER VAPOR TRANSMISSION RATE (WVTR)                     | ASTM F 1249                         | 0.0134 grains/(ft <sup>2</sup> *hr) |
| CHEMICAL RESISTANCE                                      | ASTM E 154                          | UNAFFECTED                          |
| LIFE EXPECTANCY  | ASTM E 154                          | INDEFINITE                          |
| OPERATING TEMPERATURE RANGE                              | N/A                                 | -70° F to 180° F                    |

\*grains/(ft<sup>2</sup>\*hr\*inHg)



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