

SPECIFICATION INFORMATION



VIPER®

16-mil "CLASS A"

Vapor Retarders
Division: 033000
Division: 072600

Revised: 02-10-09

1.0 Product Name

Viper® VaporCheck 16
Under-Slab Vapor Barrier.

2.0 Manufacturer



Insulation Solutions®

Insulation Solutions Inc.
401 Truck Haven Road.
East Peoria, IL 61611

Engineering Assistance
Toll Free: 866-698-6562
Fax: 309-698-0065

www.insulationsolutions.com

3.0 Product Description

3.1 Basic Use:

Viper® VaporCheck 16

is a high performance under-slab vapor barrier designed to retard moisture migration through concrete slabs-on-grade. **Viper® VaporCheck 16** helps to protect flooring and other moisture sensitive furnishings in a building's interior from moisture migration.

Viper® VaporCheck 16 can also reduce condensation, mold and degradation by controlling water vapor migration.

3.2 Composition & Materials:

Viper® VaporCheck 16 is a 16-mil triple ply, extrusion coated, virgin polyethylene membrane. **Viper® VaporCheck 16** is manufactured using woven high-density fibers yielding the highest strength to weight ratio, tensile strength, tear resistance, bursting strength and puncture resistance of any product produced of its kind.

3.3 Size:

Viper® VaporCheck 16 is available in 2400 sq. ft. rolls (12' X 200').

3.4 Weight:

Viper® VaporCheck 16 weighs approximately 47 lbs. per 1000 sq. ft.

4.0 Technical Data

4.1 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 5602 Standard Test Methods for Static Puncture Resistance of Roofing/Under Slab Membrane Specimens**
- **ASTM E 96 Standard Test Methods for Water Vapor Transmission of Materials**
- **ASTM D 882 / ASTM D 751 Standard Test Method for Coated Fabrics**
- **ASTM E 1643 Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs**

Note: To the best of our knowledge, these are typical property values and are intended as guides only, not as specification limits. Insulation Solutions Inc.® makes no warranties as to the fitness for a specific use or merchantability of products referred to, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage.

PROPERTIES	TEST METHOD	VIPER® VAPORCHECK 16	
		English	Metric
Test Results - Independent Test Facility			
Thickness, Nominal		16-mil	0.40 mm
Weight Per MSF	ASTM D 1910	47 lbs	21.3 kg
Classification	ASTM E 1745	CLASS A, B, & C	
Tensile Strength (New Material)	ASTM E 154, Sec. 9	167 lbf./in. (MD) 158 lbf./in. (TD)	75.7 kg 71.7 kg
Tensile Strength (After Soaking)	ASTM E 154, Sec. 9	165 lbf./in. (MD) 163 lbf./in. (TD)	74.8 kg 73.9 kg
Tear Strength	ASTM D 751 Tongue	62 lbs. (warp) 60 lbs. (weft)	28 kg 27.2 kg
Bursting Strength	ASTM D 751 Mullen	371 lbs.	168.3 kg
Puncture Resistance	ASTM D 1709	25,335 grams	
Puncture Resistance	ASTM D 5602	123 lbs.	55,792 g
Maximum Use Temperature		180° F	82° C
Minimum Use Temperature		-70° F	-57° C
Water Vapor Permeance	ASTM E 96 / 154 Sec. 7	.0015 perms .00055 WVTR	.00098 perms CLASS A

4.2 Environmental Considerations:

Viper® VaporCheck 16 can be used as a radon and methane gas barrier.

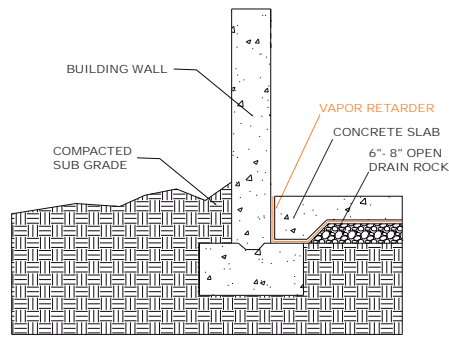
4.3 Physical Properties

Viper® VaporCheck 16 exceeds all ASTM E 1745 Class A, B and C requirements for under-slab vapor retarders.

5.0 Installation

VAPOR CHECK PLACEMENT

- 5.1 Level and tamp or roll granular base as specified by your architectural or structural drawings.
- 5.2 Unroll Viper® VaporCheck 16 with the longest dimension parallel with the direction of the pour and pull out the folds to the 12' width.
- 5.3 Lap Viper® VaporCheck 16 over the footings and seal to the vertical foundation walls with all weather Viper® VaporTape. Seal around pipes, support columns or any other penetration with Viper® VaporPatch or at minimum a combination of Viper® VaporCheck 16 and all weather Viper® VaporTape creating a monolithic membrane between the surface of the slab and moisture sources below and at the slab perimeter.
- 5.4 Holes or openings through Viper® VaporCheck 16 should be effectively sealed with all weather Viper® VaporTape, Viper® VaporPatch and/or mastic to maintain the integrity of the vapor barrier. Overlap joints a minimum of six inches. Seal overlap together with all weather Viper® VaporTape.



PROTECTION

- 5.5 When installing reinforcing steel and utilities in addition to the placement of concrete, take precaution to protect Viper® VaporCheck 16. Carelessness during installation can damage the most puncture-resistant retarder. Provide for additional protection in high-traffic areas.
- 5.6 Place standard reinforcing bar supports on Viper® VaporCheck 16. Viper® VaporCheck 16 will help guard against possible punctures caused by reinforcing bar supports.
- 5.7 Avoid driving stakes through Viper® VaporCheck 16. If this cannot be avoided, each individual hole must be repaired.
- 5.8 If a cushion or blotter layer is required in the design between the vapor barrier 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 very general installation instructions. Instructions on architectural or structural drawings should be reviewed and followed as well. Detailed installation instructions accompany each roll of Viper® VaporCheck 16. (ASTM E 1643 also provides valuable installation information.)

6.0 Availability & Cost

Viper® VaporCheck 16 is sold through construction supply houses across the United States and Canada.

Viper® VaporCheck 16 current cost information can be obtained by calling our corporate sales office at 866-698-6562.

7.0 Warranty

To the best of our knowledge, the specification chart on page one lists typical property values and are intended as guides only, not as specification limits. INSULATION SOLUTIONS INC. MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, NO GUARANTEE OF SATISFACTORY RESULTS FROM RELIANCE UPON CONTAINED INFORMATION OR RECOMMENDATIONS AND DISCLAIMS ALL LIABILITY FOR RESULTING LOSS OR DAMAGE.

8.0 Maintenance

Viper® VaporCheck 16 requires no maintenance once installed.

9.0 Technical Services

Technical Information and detailed test results can be obtained by calling our corporate office at 866-698-6562.

10.0 Filing Systems

Additional Information is available from the manufacturer.