TDS

VERSION 20.0

VIPER CSX

RADIANT CRAWL SPACE VAPOR BARRIER

CRAWL SPACE VAPOR BARRIER

DIVISION
070000

PRODUCT NAME

Viper• CSX Radiant Crawl Space Vapor Barrier

MANUFACTURER

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

PRODUCT DESCRIPTION

BASIC USE
Viper CSX is a high performance crawl space vapor barrier designed to prevent moisture migration from the soil into the crawl space. Viper CSX helps guard against mold, mildew, allergens, fungus, radon gas, methane gas, heat loss due to damp insulation, wood rot and overall degradation of the crawl space.

COMPOSITION & MATERIALS
Viper CSX is a white, triple-ply, extrusion coated, virgin polyethylene membrane laminated to a high-density flexible foam core and metalized film. Viper CSX is manufactured using woven high-density fibers yielding high strength-to-weight ratio, tensile strength and puncture resistance.

SIZE
Standard Sizes: 4' x 125', 6' x 125'

WEIGHT
Approximately 55 lbs per MSF

TECHNICAL DATA

APPLICABLE STANDARDS

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 Standard Test Method for Tensile Properties of Thin Plastic Sheeting

ASTM D 751 Standard Test Method for Coated Fabrics

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

ASTM D 6241 Standard Test Method for Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe

ASTM E 84-21 Standard Test Method for Surface Burning Characteristics of Building Materials

ENVIRONMENTAL CONSIDERATIONS
Viper CSX can aid in reducing soil gas and poisons, such as methane and radon.

PHYSICAL PROPERTIES
Viper CSX exceeds all ASTM E 1745 Class A, B and C requirements for under-slab vapor retarders.

INSTALLATION

PLACEMENT
If sump pump is present or is to be installed, slightly slope grade in the direction of the sump pit to allow for proper drainage. Tamp or roll subbase or granular base.

Unroll Viper CSX in correlation with the longest dimension of the crawl space area.

Install Viper CSX by means of Viper Double Bond Tape, mechanical fasteners, termination bar and/or high-grade construction adhesive to the upper portion of the block/concrete wall. Leave at least a three-inch gap from the sill to the top of the Viper CSX for future termite inspection. Seal top edge of Viper CSX with urethane caulk.

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

PROTECTION
Proper care should be taken when installing Viper CSX. Carelessness during installation can damage even the most puncture resistant vapor retarders.

Viper CSX will help guard against possible punctures and tears present from rigorous construction traffic.

Avoid driving stakes through Viper CSX. If this cannot be avoided, each individual hole must be repaired.

These are very general installation instructions. Instructions on architectural or structural drawings should be reviewed and followed. Detailed installation instructions can be obtained by calling our corporate office at 866.698.6562 or online at www.isibp.com.

WARRANTY

Warranty information can be obtained by calling the manufacturer at 866.698.6562 or visiting 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.

PROPERTIES **TEST PROCEDURE (INDEPENDENT TEST FACILITY)**	TEST METHOD **APPLICABLE STANDARDS**	RESULTS **IP UNITS**
TOTAL THICKNESS (NOMINAL)	N/A	0.09 in (90-mil)
FOIL THICKNESS (NOMINAL)	N/A	0.002 in (2-mil)
FOAM THICKNESS (NOMINAL)	N/A	0.0815 in (81.5-mil)
CROSS-WOVEN POLYETHYLENE THICKNESS (NOMINAL)	N/A	0.0065 in (6.5-mil)
WEIGHT (PER MSF)	N/A	55 lbs
CLASSIFICATION	ASTM E 1745	EXCEEDS CLASS A, B, C
TENSILE STRENGTH (NEW MATERIAL)	ASTM E 154 (SEC. 9)	69 lbf/in (MD), 68 lbf/in (TD)
TENSILE STRENGTH (AFTER SOAKING)	ASTM E 154 (SEC. 9)	69 lbf/in (MD), 73 lbf/in (TD)
TEAR STRENGTH	ASTM D 751 (TONGUE)	35 lbs (WARP), 30 lbs (WEFT)
* GRAB TENSILE	ASTM D 751	117 lbf (DIRECTIONAL AVERAGE)
BURSTING STRENGTH	ASTM D 751 (MULLEN)	210 lbs
PUNCTURE RESISTANCE (MAX WEIGHT SUSTAINED)	ASTM D 1709	8,825 grams
PUNCTURE RESISTANCE	ASTM D 5602	60 lbs
CBR PUNCTURE	ASTM D 6241	255 lbf
MAXIMUM USE TEMPERATURE	N/A	180°F
MINIMUM USE TEMPERATURE	N/A	-70°F
FLAME SPREAD/SMOKE DEVELOPED	ASTM E 84 - 21	CLASS A
WATER VAPOR PERMEANCE	ASTM E 96 / 154 (SEC. 7)	.0095 perms .0035 grains/ft^2*HR

*Tests are an average of machines and transverse directions

**VIper CSX performance data is derived from testing on the cross-woven polyethylene skin

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