



Moisture Vapor Emissions Systems

VAPORSOLVE 100

Technical Data Sheet

Product Description

VaporSolve 100 is a specially formulated 100% solids epoxy coating designed for use over concrete with high moisture levels for the purpose of isolating the concrete from moisture sensitive flooring. When used without a primer in a single coat application, it is referred to as the **ResinTek Moisture Vapor Emissions Systems**. This system should only be used over concrete that has never been treated with reactive silicate curing compounds or densifiers.

VaporSolve 100 has been formulated with low viscosity and excellent substrate wetting capabilities to promote penetration and adhesion. The special hydrophobic curing agent allows for adhesion to damp or wet concrete. This product will cure fully even when applied underwater. In addition, **VaporSolve 100** is based on Bisphenol F epoxy which gives the material enhanced chemical crosslinking over products based on standard Bisphenol A epoxy. More crosslinking helps to reduce the coating's moisture permeability and increases its long-term resistance to water and alkalinity.

The material contains no plasticizers, phenols or unreacted amines that could migrate out of the cured coating and trigger osmotic blistering. **VaporSolve 100** is available in a fast cure version when quicker turnaround is necessary. The product may be applied at temperatures between 40-100°F.

100% solids epoxies are more prone to adhesion failure than properly formulated water-based epoxies when applied to silicate contaminated concrete. If silicate materials have been previously applied to the concrete, or if the history of the concrete cannot be positively determined, use **VaporSolve Primer** underneath **VaporSolve 100**. The **VaporSolve** materials are designed to remediate all concrete moisture problems, regardless of severity. These systems may be used in new construction settings when a schedule must be met, yet the concrete is not dry enough to install moisture sensitive flooring. They can also be used over concrete with known moisture problems and over concrete that has been placed without a vapor retarder as a means of preventing future moisture problems.

CHEMICAL COMPOSITION

Modified Bisphenol F epoxy crosslinked with a hydrophobic amine curing agent. Cured product contains no unreacted, migrating components.

COLORS

Available in Clear, White, Wheat and Delta Fog. The pigmented material must be used over the **VaporSolve Primer**. Available in 1 and 3-gallon pre-measured kits only.

LIMITATIONS

- Must be applied over **VaporSolve Primer** if silicate contamination of the concrete is a possibility.
- Concrete must be clean and have a SCP profile of 3-4 (texture similar to 60-80 grit sandpaper).
- Must be applied at the specified film thickness.
- 100% solids epoxy coatings applied over shotblasted, unprimed concrete may exhibit outgassing bubbles. These bubbles are self-sealing and have been proven not to reduce the effectiveness of the coating.

PHYSICAL PROPERTIES

Mixing Ratio, by Volume	Supplied in pre-measured kits only
Solids Content	100%
Viscosity (cps, 77° F)	400
Hardness, Shore D (ASTM D-2240)	80
Volatile Organic Compounds	None
Pot Life Regular Cure (one-quart mass at 77° F)	30 minutes

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Cure Times **Regular Cure** (77° F)

- Dry to touch..... 6 hours
- Final flooring application 12 hours

Pot life is reduced by increasing temperature and/or mass. Cure times are shortened by higher temperatures and extended by cooler temperatures.

PHYSICAL PROPERTIES

Pot Life **Fast Cure** (one-quart mass at 77° F) 15 minutes

Cure Times **Fast Cure** (77° F)

- Dry to touch..... 3 hours
- Final flooring application 6 hours

Pot life is reduced by increasing temperatures and/or mass. Cure times are shortened by higher temperatures and extended by cooler temperatures.

PERFORMANCE PROPERTIES

Permeability, one coat over concrete at

100 sq. ft./gallon (ASTM E-96) 0.60 perms

Permeability/MVT, one coat over concrete at

100 sq. ft./gallon (ASTM E-96) 1.06 lbs./1,000 sq. ft./24 hrs.

Permeability, applied at 200 sq. ft./gallon over

VaporSolve Primer (ASTM E-96) 0.78 perms

Permeability/MVT, applied at 200 sq. ft./gallon over

VaporSolve Primer (ASTM E-96) 0.28 lbs./1,000 sq. ft./24 hrs.

Adhesion to concrete and concrete primed with

VaporSolve Primer (ASTM D-4541) 500 psi -concrete fails before loss of bond

Resistance to alkalinity, (ASTM D-1308)

(film exposed to 35% solutions of potassium

hydroxide and sodium hydroxide for 60 days). No visual change, 0.09% weight gain

General Information

SURFACE PREPARATION

Surface must be absolutely free of grease, oil and other contaminants. Remove these contaminants by scrubbing with Orange Clean using a floor machine and nylogrit brush. When surface is clean and dry, shotblast using a 50/50 blend of 280/330 shot. Floor must be cross-hatched (North-South, East-West) double blasted to achieve an CSP 3-4 profile (texture similar to 60-80 grit sandpaper). When shotblasting has been completed, vacuum surface thoroughly.

JOINT TREATMENT

Joint treatment may be done before or after the application of the coating. However joint preparation should be done as part of general surface preparation. Cracks wider than 1/16 inch should be routed out to ¼ inch width. After shotblasting and joint preparation have been completed, vacuum the entire surface thoroughly. Push the thickened **VaporSolve Joint Filler** into the joint with a putty knife or trowel until the material is flush with the surface. Material may also be put into a caulking gun and placed that way. Be sure the filler has been pushed as deeply as possible into the cracks and to the bottom of the joints. If filler sinks in the joint or crack, apply again to bring flush with the concrete. When application is made to control joints that have been cut ¼ inch wide by ½ inch deep, the joint filler will cover approximately 154 in. ft. per gallon.

Honor all moving joints and do not bridge with floor covering materials. When remediation is to be done under polymer flooring, mark all moving joints and recut after polymer flooring has been installed. Saw cuts must be a minimum of ¼ inch wide and 1 inch deep. Product usage on this type of joint configuration will be approximately 76 in. ft. per gallon.

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MIXING INSTRUCTIONS

VaporSolve 100 is packaged in pre-measured kits. **Proper proportioning and homogenization are critical for success.** The product is available in 1 gallon and 3-gallon kits. Do not attempt to mix partial kits. Pour the entire contents of Part B into the Part A container. Use a wooden stir stick to get all the Part B out of the container. Mix the two components for 2 full minutes **by the clock** using a mixing drill. **Do not attempt to hand mix.** Be sure to move the drill around the mixing container scraping the sidewalls and bottom.

APPLICATION INSTRUCTIONS

Pour material out of the pail immediately after mixing. Spread the product with a flat trowel or squeegee to achieve the coverage rate of no less than 100 sq. ft. per gallon if using the single coat system. Measuring off an area and mixing the appropriate amount of material for that area is helpful. A mechanic wearing spiked shoes must back roll the wet material to even out the distribution. Use a ½ or ¾ inch nap roller cover. Should it be discovered that not enough product has been applied to a certain area, the mechanic, with spiked shoes can pour additional product and distribute it with the roller. This coverage rate will leave a dry film thickness of 16 mils. If using over **VaporSolve Primer**, the coverage rate should be 200 sq. ft. per gallon as the finish coat.

HANDLING PRECAUTIONS

Use only with adequate ventilation. Appropriate cartridge-type respirator must be used during application in confined areas. Avoid contact with skin and wear protective gloves. Read Material Safety Data Sheet before using.

ResinTek guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. ResinTek MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. ResinTek shall not be liable for any injury incurred in a slip and fall accident. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product.