VaporSolve® 100

TECHNICAL DATA SHEET

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 VaporSolve® Basic System. 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.

USES:

- Remediation of concrete moisture
- For concrete with known moisture problem
- For concrete that has been placed without a vapor retarder
- Future moisture prevention

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.

MOISTURE VAPOR EMISSIONS PRECAUTIONS:

All concrete floors not poured over an effective moisture vapor retarder are subject to possible moisture vapor transmission that may lead to blistering and failure of the coating system. It is the coating applicator's responsibility to conduct calcium chloride testing in compliance with ASTM F1869, or relative humidity probe testing in compliance with ASTM-F2170, to determine if excessive levels of vapor emissions are present before applying any coatings. Arizona Polymer Flooring can supply moisture remediation products. Consult our technical service department. Arizona Polymer Flooring and its sales agents will not be responsible for coating failures due to undetected moisture vapor emissions.

Super-Krete Products is a Division of Arizona Polymer Flooring, Inc.

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THE CONCRETE OVERLAY EXPERTS™

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SURFACE PREPARATION:
Surface must be absolutely free of grease, oil and other contaminants. Remove these contaminants by scrubbing with S-12000 Heavy Duty Degreaser using a floor machine and nylogrit brush. When surface is clean and dry, shot-blast using a 50/50 blend of 280/330 shot. Floor must be cross-hatched (North-South, East-West) double blasted to achieve a CSP 3-4 profile (texture similar to 60-80 grit sandpaper). When shot-blasting has been completed, vacuum surface thoroughly.

MIXING:
VaporSolve 100 is packaged in pre-measured kits. **Proper proportioning and homogenization are absolutely 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 of 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 RECOMMENDATIONS & COVERAGE:
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.

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" should be routed out to ¼ inch width. After shot-blasting 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" wide by ½" deep, the joint filler will cover approximately 154 ft. per gallon.

SHELF LIFE:
VaporSolve 100 has a shelf life of 1 year when properly stored in an unopened container. Material should be stored at 55°-90° and no greater than 50% humidity. Ensure all lids are tightly sealed to ensure the longest lasting shelf-life.

PRECAUTIONS:
- *Handling Precautions:* Material is flammable. Extinguish all flames, pilot lights and electric motors until all vapors are gone and the coating is hard. The vapor is harmful. Use only with adequate ventilation or appropriate cartridge type respirator. Avoid contact with skin, wear protective gloves. Read Safety Data Sheet before using.
- *Slip and Fall Precautions***:** OSHA and the American Disabilities Act (ADA) have now set enforceable standards for slip-resistance on pedestrian surfaces. The current coefficient of friction required by ADA is .6 on level surfaces and .8 on ramps. Arizona Polymer Flooring recommends the use of angular slip-resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily or greasy conditions. It is the contractor and end users' responsibility to provide a flooring system that meets current safety standards. Arizona Polymer Flooring or its sales agents will not be responsible for injury incurred in a slip and fall accident.

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TECHNICAL INFORMATION:

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

Cure Times Regular Cure (77 degrees)	
Dry to Touch	6 hours
Final Flooring Application	12 hours
Cure Times Fast Cure (77 degrees)	
Dry to Touch	3 hours
Final Flooring Application	6 hours

** Pot life is reduced by increasing temperature 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

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 shot-blasted, unprimed concrete may exhibit outgassing bubbles. These bubbles are self-sealing and have been proven not to reduce the effectiveness of the coating.

WARRANTY:

Arizona Polymer Flooring 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. ARIZONA POLYMER FLOORING MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. Arizona Polymer Flooring shall not be liable for damages caused by application of its products over concrete with excessive moisture vapor transmission or alkalinity. Arizona Polymer Flooring 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.

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