



**VAPORSOLVE®**  
*Moisture Remediation Systems*

Formulated to Remedy All Levels of Concrete Moisture Intrusion  
[www.vaporsolve.com](http://www.vaporsolve.com)

# VAPORSOLVE®

Moisture Remediation Systems

VAPORSOLVE® Moisture Remediation Systems are highly specialized epoxy coating systems formulated to isolate moisture sensitive flooring from all levels of concrete moisture. VAPORSOLVE systems are used when concrete has a known moisture problem, when concrete dries too slowly to meet the construction schedule, and as a preventative measure when concrete doesn't have a vapor retarder in place and future moisture conditions cannot be predicted. Since 2007, VAPORSOLVE systems have proven successful in a wide range of application scenarios over millions of square feet.

## EXCESSIVE CONCRETE MOISTURE IS THE #1 CAUSE OF FLOORING FAILURES

### CONCRETE MOISTURE

In the early life of the concrete slab, water is present in abundance and must be retained during the initial curing period to produce high quality concrete. However, the concrete must give up most of its water during the subsequent drying period to become suitable for low permeability flooring.

When low permeability flooring is installed over concrete with unacceptably high moisture content, this moisture will migrate upward through the slab, dissolve alkalis inherently present in the concrete and transport this corrosive material to the concrete/flooring interface. The alkalinity will become concentrated and this moist, high pH environment at the flooring bond line can cause flooring failure. This failure may be evidenced by disbonding, adhesive breakdown, osmotic blisters, staining or microbial growth with the related reduction in indoor air quality.

Concrete moisture is the number one cause of flooring failure and accounts for billions of dollars of loss annually. Liability exposure for moisture related flooring failures may extend to several members of the construction team, including the flooring contractor, general contractor, flooring and adhesive manufacturers and the project architect.

### OTHER CONTRIBUTING FACTORS

- **LACK OF EFFECTIVE VAPOR RETARDER:** The sub-slab vapor retarder prevents ground moisture from entering the slab. It is often referred to as the first line of defense against concrete moisture problems. Unfortunately vapor retarders are often improperly placed or omitted from the concrete specification.
- **OVER WATERED CONCRETE:** Pours with excessive water of convenience (water added on site to facilitate placement) will result in overly permeable concrete with an extensive interconnected pore system. If no vapor retarder is in place, unlimited moisture will move through these pores carrying destructive alkalinity to the concrete/flooring interface.
- **LACK OF ACCURATE MOISTURE TESTING:** It is imperative that the concrete's moisture condition be determined before the installation of low permeability flooring. However, a clear understanding of these tests, as well as the proper execution of them has remained elusive to many in the flooring industry. Poor test methods → bad data → poor decisions → flooring failures.
- **FAST TRACK CONSTRUCTION:** "Time is Money!" In most construction projects, there is pressure for early completion. Curing compounds allow for quicker access to the slab but slow the concrete dry time. Accurate measurements of concrete moisture cannot be taken before the building is climatized and the HVAC system is operational. Too often the construction sequence calls for the flooring to be installed before the true moisture condition is known.



Photos courtesy of Concrete Constructives

# VAPORSOLVE®

## Moisture Remediation Systems

- Special formulations mean successful products
- More than 20 Million sq. ft. covered with over 99% success
- Effective regardless of concrete moisture levels
- Guaranteed adhesion over silicate contaminated concrete
- May be applied to freshly poured concrete



## LET US SOLVE YOUR MOISTURE ISSUES

### System 1

## VAPORSOLVE®

### Basic System

The VAPORSOLVE® Basic System is a single coat application of VAPORSOLVE® 100 applied at 16 mils dry over concrete that has never been treated with reactive silicate.

The single coat application improves the economics of your project by saving a trip to the job site.

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### System 2

## VAPORSOLVE®

### Ultra System

The VAPORSOLVE® Ultra System uses VAPORSOLVE® Primer, a deep penetrating water-based epoxy over the concrete and finishes with VAPORSOLVE® 100. System thickness is 12 mils.

This system must be used if reactive silicates have been previously applied to the concrete or if the history of the concrete cannot be positively determined.

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### System 3

## VAPORSOLVE®

### Fresh Concrete System

The VAPORSOLVE® Fresh Concrete System uses a unique water-based epoxy formulation to bond to 6 to 24 hour old concrete. The finish coat is VAPORSOLVE® 100 to give a system thickness of 12 mils.

VAPORSOLVE® Fresh Concrete virtually eliminates the evaporation of water from the top of the slab serving as the ultimate curing compound. The need for a sub-slab vapor retarder is eliminated. The concrete has been pre-primed and is ready for flooring without the need for further profiling.

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### System 4

## VAPORSOLVE®

### 100 LP System

The VAPORSOLVE® 100 LP System is a specially formulated 100% solids epoxy coating designed to comply with ASTM F-3010 and is 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.

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### Products

#### VAPORSOLVE® Primer

Water-based epoxy material with deep penetration and adhesion to concrete. Superior performance to 100% solids remediation materials over contaminated concrete. Eliminates or greatly reduces concrete outgassing.

#### VAPORSOLVE® 100

Low viscosity, hydrophobic resin system that cures on damp or wet concrete. Used as a single coat remediation system or as a top coat over VaporSolve® Primer.

#### VAPORSOLVE® Joint Filler

Non-shrinking, semi-rigid epoxy paste used for filling joints and cracks in concrete that will receive VaporSolve® Systems. Resists long term moisture and alkalinity.

#### VAPORSOLVE® Fresh Concrete

Unique water-based epoxy designed for use over freshly poured concrete. Cures completely in wet, highly alkaline conditions and acts as both a curing compound and moisture barrier.

#### VAPORSOLVE® 100 LP

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.

## Technical Data

### VAPORSOLVE® Basic System

#### PHYSICAL PROPERTIES

Solids Content .....	100%
Viscosity (cps, 77° F) .....	400
Hardness, Shore D (ASTM D-2240) .....	80
Volatile Organic Compounds.....	None
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

#### PERFORMANCE PROPERTIES

Adhesion to Damp Concrete (ASTM D 4541) .....	500 psi-concrete fails before loss of bond
Permeability (ASTM E-96).....	0.6 perms
Permeability/MVT (ASTM D-96).....	1.06 pounds/1,000 sq. ft./24 hours
Resistance to alkalinity (ASTM D-1308) casting immersed in 35% solutions of potassium hydroxide and sodium hydroxide for 60 days.....	No visual change, 0.09% weight gain

