



# SunVap Primer

## PRODUCT DESCRIPTION AND USE

SunVap Primer is a specially formulated water-based epoxy designed to provide superior adhesion over concrete with high levels of moisture vapor emissions. When used with the companion finish coat, 100% solids SunVap 100, a coating system is achieved that reduces moisture vapor emissions to acceptable levels for all flooring and maintains its bond under continuously moist, alkaline conditions. SunVap Primer is also an ideal primer over damp or green concrete. The product may be applied at temperatures between 40-100°F.

SunVap Primer is based on epoxy curing agent technology with over 30 years of success as a concrete primer. It has been formulated with very low viscosity and surface tension to ensure excellent substrate wetting, penetration and adhesion. Laboratory testing has shown that SunVap Primer penetrates 25-30% deeper into concrete than low viscosity (250 cps) 100% solids epoxy. This exceptional penetration and adhesion gives SunVap Primer a distinct advantage over 100% solids epoxies when coating concrete that has interior contamination that cannot be detected without laboratory analysis. It is especially useful as a primer over silicate contaminated concrete and greatly reduces the chances of outgassing in applications over porous concrete.

SunVap Primer is reacted with Bisphenol F epoxy rather than the standard Bisphenol A which results in more cross linking and a tighter coating film. This means less moisture vapor transmission and better resistance to alkaline water at the bond line. The material contains no plasticizers, phenols or unreacted amines that could migrate out of the cured coating and trigger bond failure.

Together, SunVap Primer and SunVap 100 form the SunVap Ultra System which is designed to remediate all concrete moisture problems, regardless of severity. SunVap may be used in new construction settings when a schedule must be met, yet the concrete is not dry enough to allow for the installation of moisture sensitive flooring. It can 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 cross linked with a water-soluble amine. System modified with a silane adhesion promoter.

### Limitations

- Concrete must be clean and have a CSP profile of 3-4 (texture similar to 60-80 grit sandpaper).
- Must be applied at specified film thickness.
- Concrete must remain sound for coating to stay permanently adhered.

T  
E  
C  
H  
-  
A  
P  
P  
S  
H  
E  
E  
T

## TECHNICAL DATA

### Physical Properties

Mixing Ratio, by Volume .....	Supplied in pre-measured kits only
Solids Content (as received) .....	46%
Solids Content (after water reduction) .....	34.5%
Viscosity (after water reduction) .....	25 cps
Volatile Organic Compounds .....	96 gms./ltr.
Pot Life (77°F) .....	2-3 hours
Cure Times (77°F)	
Recoat with SunVap Joint Filler or SunVap 100 .....	5-6 hours
The higher the temperature and the lower the humidity, the faster the cure.	
The lower the temperature and the higher the humidity, the slower the cure.	

### Performance Properties

Surface Tension (dynes/cm) .....	20
Adhesion to damp concrete (ASTM D-4541) .....	500 psi-concrete fails
Permeability, ASTM E-96 (with SunVap 100 top coat) .....	0.78 perms
Permeability/MVT, ASTM E-96 (with SunVap 100 top coat) .....	less than one pound/1,000 sq. ft./24 hours
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 SunClean 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).

### 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 1/4 inch width. After shot blasting and joint preparation have been completed, vacuum the entire surface thoroughly. Push the thickened SunVap 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 the 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 1/4 inch wide by 1/2 inch deep, the joint filler will cover approximately 154 ln. 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 1/4 inch wide and 1 inch deep. Product usage on this type of joint configuration will be approximately 76 ln. ft. per gallon.

## **Mixing Instructions**

SunVap Primer is packaged in pre-measured  $\frac{3}{4}$  gallon and 3 gallon kits. **Do not attempt to mix partial kits. Proper proportioning and homogenization are absolutely critical for success.** Pour the entire contents of Part B into the Part A container. Drill mix for 1 full minute **by the clock**. If mixing a 3 gallon kit, add 1 gallon of water. If mixing a  $\frac{3}{4}$  gallon kit, add 1 quart of water. **Do not add water before the initial product mix.** Mix again for 1 full minute. Be sure to move the drill around the mixing container scraping the sidewalls and bottom.

## **Application Instructions**

Pour material out of the pail within 5 minutes of mixing. If more than 5 minutes elapses, stir the material with a mixing stick to be sure that it is still homogenized. Spread the product with a flat trowel or squeegee to achieve the coverage rate of no less than 200 square feet per gallon, excluding any water added. If mixing a 3 gallon kit, one extra gallon of water is added for viscosity reduction. This gives 4 gallons of liquid to be spread over the 600 sq. ft. (3 mixed gallons x 200 sq. ft. per gallon). The water added is not factored into the target coverage rate. Measuring off an area and mixing the appropriate amount of material for that area is helpful. A mechanic wearing spiked shoes must backroll the wet material to even out the distribution and work the product into the substrate. **The material must be rolled twice to achieve optimal substrate wetting.** Use a  $\frac{3}{4}$  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. Finished film thickness will be 3.5-4.0 mils.

## **Application Over Green Concrete**

Concrete must be cured for 5 days and be shot blasted using a 50/50 blend of 230/280 shot. Floor shall be cross-hatched (North-South, East West) double blasted to achieve a CSP 2-3 profile (texture similar to 80 grit sandpaper). Vacuum well to remove all dust. Apply two coats at 200 sq. ft. per gallon per coat.

*If quicker application is required, the SunVap Fresh Concrete System can be applied 6 to 24 hours after final concrete placement.*

## **Handling Precautions**

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

## **WARRANTY INFORMATION**

Sundeck Products USA, Inc. 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. SUNDECK PRODUCTS USA, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. Sundeck Products USA, Inc. shall not be liable for damages caused by application of its products over concrete with excessive moisture vapor transmission or alkalinity. Sundeck Products USA, Inc. 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.