

## **EPOXY MOISTURE STOP PRIMER (EMS-P)**

### **PRODUCT DESCRIPTION AND USE**

EMS-P 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 EMS-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. EMS-P is also an ideal primer over damp or green concrete. The product may be applied at temperatures between 40-100°F.

EMS-P 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 insure excellent substrate wetting, penetration and adhesion. Laboratory testing has shown that EMS-P penetrates 25-30% deeper into concrete than low viscosity (250 cps) 100% solids epoxy. This exceptional penetration and adhesion gives EMS-P a distinct advantage over 100% solids epoxies when coating concrete that has interior contamination that cannot be detected without laboratory analysis.

EMS-P is reacted with Bisphenol F epoxy rather than the standard Bisphenol A. This results in more crosslinking 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.

EMS-P and EMS-100 together form the EMS moisture remediation system. The EMS system is designed to remediate all concrete moisture problems, regardless of severity. EMS may be used in new construction settings when the concrete is not dry enough to allow for the installation of moisture sensitive flooring and the construction schedule must be met. It can be used over concrete with known moisture problems and over concrete placed with no vapor retarder as a means for preventing future moisture problems.

### **Chemical Composition**

Modified Bisphenol F epoxy crosslinked 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.

### **WARRANTY INFORMATION**

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 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

### **SPECIALIZED FLOOR COATINGS & DECORATIVE CONCRETE SYSTEMS**

## **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 EMS Joint Filler or EMS-100 .....	5-6 hours

### **Performance Properties**

Surface Tension (dynes/cm) .....	20
Adhesion to damp concrete (ASTM D-4541) .....	500 psi-concrete fails
Permeability, ASTM E-96 (with EMS-100 top coat) .....	0.69 perms
Permeability/MVT, ASTM E-96 (with EMS-100 top coat) .....	0.28 pounds/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 APF Orange Clean 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 an CSP 3-4 profile (texture similar to 60-80 grit sandpaper).

### **Joint Treatment**

After EMS-P has cured tack free (5-6 hours) treat the joints with EMS joint filler. Cracks wider than 1/16 inch should be routed out to 1/4 inch width. Cracks and concrete joints should be filled flush with EMS joint filler. Pour the thickened material into the joint and smooth with a putty knife or trowel. Be sure the filler material has been pushed as deeply as possible into 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.

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.

### **Mixing Instructions**

EMS-P is packaged in pre-measured 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 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 not less than 200 square feet per gallon, excluding any water added. 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 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. 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 an CSP 3-4 profile (texture similar to 60-80 grit sandpaper). Vacuum well to remove all dust. Apply two coats at 200 sq. ft. per gallon per coat.

### **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.