

## **EMS 100 (EPOXY MOISTURE STOP)**

### **PRODUCT DESCRIPTION AND USE**

EMS 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. EMS 100 is used in a single coat application for moisture remediation over concrete that has never been treated with reactive silicate curing compounds or densifiers. EMS 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, EMS 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. The product may be applied at temperatures between 40-100 °F.

100% solids epoxies are more prone to adhesion failure if applied to silicate contaminated concrete than are properly formulated water-based epoxies. If silicate materials have been previously applied to the concrete, or if the history of the concrete cannot be positively determined, use EMS-P as a primer under EMS 100. The EMS materials are designed to remediate all concrete moisture problems, regardless of severity. These systems 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. They can be used over concrete with known moisture problems and over concrete placed with no 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 only.

### **Limitations**

- Must be applied over EMS-P 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.
- Concrete must maintain its integrity as a sound substrate 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.....	100%
Viscosity (cps, 77°F) .....	400
Volatile Organic Compounds .....	None
Pot Life (one quart mass at 77°F) .....	30 minutes
Cure Times (77°F)	
Dry to touch.....	6 hours
Recoat.....	8 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.

### **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 pounds/1,000 sq. ft./24 hours
Permeability, applied at 200 sq. ft./gallon over EMS-P (ASTM E-96) .....	0.78 perms
Permeability/MVT, applied at 200 sq. ft./gallon over EMS-P (ASTM E-96) .....	0.28 pounds/1,000 sq. ft./24 hours
Adhesion to concrete and concrete primed with EMS-P (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 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 surface preparation, treat joints and cracks with EMS Joint Filler. Cracks wider than 1/16 inch should be routed to ¼ inch width. 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 ¼ inch wide and 1 inch deep.

### **Mixing Instructions**

EMS 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 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 not less than 100 square feet per gallon. 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. Use a 1/2 or 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. This coverage rate will leave a dry film thickness of 16 mils. If using over EMS-P, the coverage rate should be 200 sq. ft. per gallon.

**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.