

## TECHNICAL DATA SHEET | Section 5.7

## POLYPRIME® FMB

Moisture Vapor Barrier Epoxy

## **Product Description**

Polyprime® FMB is a clear, two component,100% solids, low odor, low viscosity epoxy primer that is specifically formulated as a moisture barrier coating to treat new and existing concrete floors with high moisture and high pH. Polyprime® FMB can be used as a one-coat moisture vapor barrier coating suitable for various types of concrete. The low viscosity formula not only promotes deeper concrete penetration for superior substrate adhesion, but also generates higher propensity for sealing and blocking moisture drive than standard epoxy flooring product.

## **Features**

- 100% Solids, Low VOC, Low Odor
- Controlled Vapor Pressure up to 25lbs
- Excellent Concrete Adhesion
- Fast Drying Times
- Low Viscosity for Deeper Concrete Slab Penetration
- One-Coating Moisture Vapor Barrier
- Vapor Control for High Moisture and High pH Slabs

## **Typical Uses**

- Animal Care Areas
- Excellent Moisture Blocker
- Institution Facilities
- Laboratories
- Loading Docks
- Manufacturing & Warehouse Floors
- Mechanical Rooms
- Multiple-Unit Housing
- Pharmaceutical Plants
- Retail Stores
- Shop Floors
- Underneath any Coatings Showing Concrete Contamination
- Underneath Various Floorings

## **Packaging**

3-Gallon Kit	One 3.5 gallon pail, net fill 2 gallons (7.57 liters) of Side-A and One 1 gallon (3.78 liters) can of Side-B
15-Gallon Kit	Two 5 gallon (18.9 liters) pails of Side-A and One 5 gallon (18.9 liters) pail of Side-B

## Color

Clear

## Coverage

Approximately 100 sqft/gallon @ 16 mils.

Technical Data (Based on Draw Down Film)	
Components	2 Side
Visual Appearance	High Gloss
Density	9.0 lb/gal
VOC Content	<5g/l
Pot Life @ 70°F (21°C), 50% RH	10-15 Minutes
Equipment	Brush, Roller, & Flat Rubber Squeegee
Number of Coats	1 @ 16 mils
Theoretical Coverage	100 ft²/gal 16 mils WFT
Dry to Touch @ 70°F (21°C), 50% RH	3-4 Hours
Life Traffic	N/A
Full Cure	N/A
Recoat Time @ 70°F (21°C)	12 to 24 Hours
Min. Application Temp.	50°F

Mechanical Properties	
Surface Prep Requirements	ICRI CSP-3, Primed
Adhesion, ASTM D7234	>400psi, Concrete Failure
Hardness, Konig (15 mils) ASTM D4366	100
Tensile Strength, ASTM D2370	7500 psi
Tensile Elongation, ASTM D2370	1.5%
Compression, ASTM D695	10,000 psi
Hardness (Shore D), ASTM D2240	75-85
Water Absorption, ASTM D570	<0.1%
Flame Test, ASTM D648	Class 1
Abraision Resistance, ASTM D4060	30 mg loss
Coefficient of Friction, ASTM D2047	0.7 Smooth
Impact Resistance, ASTM D2794	160 in/lb
Permeance ASTM E96	0.022 (gr/ft2/hr/inHg) 100 sq.ft./gal @ 16 mils

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Chemical Data @ 70°F (21°C)	
рН	4 to 13
Inorganic Acids	Good
Organic Acids	Good
Alkali	Excellent
Solvents	Good

Note: Although testing is critical, it is not a guarantee against future problems. This is especially true if there is no vapor barrier or the vapor barrier is not functioning properly and/or you suspect you may have concrete contamination from oils, chemical spills or excessive salts



## Surface Preparation

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## **CHECK THE CONCRETE**

Concrete must be structurally sound and free of curing membrane, paint or other sealer. If you suspect that the concrete has been previously sealed, call Polycoat Products technical support for further instructions.

#### **CHECK FOR MOISTURE**

Concrete must be dry before application of this floor coating material. Concrete moisture testing must occur. Calcium chloride testing or "In-situ" relative humidity testing is recommended. Test methods can be purchased at www.astm. org, see ASTM F1869-11 or F2170-11, respectively or follow manufacturer's instructions. Readings must be below the defined threshold as specified for each Polycoat Products system to be installed directly to the concrete substrate. Please refer to the appropriate Technical Data Sheet for this information.

## **CHECK THE TEMPERATURE & HUMIDITY**

Floor temperature and materials should be between 65°F (18°C) and 90°F (32°C). Humidity must be less than 95%. DO NOT coat unless floor temperature is more than (5°F) over the dew point.

#### SURFACED PREPARATION

Requires ICRI CSP 3

This product requires proper surface profile to perform as expected. Substrate must be mechanically profiled (ASTM 4259-83), clean, sound, and dry.

## **Mixing**

The temperature of the (A) and (B) portions should be between 70°F and 80°F (20°-25°C). Mix them separately to ensure a uniform consistency. For a 3 gallon kit add (Side-B) into (Side-A) in a 3.5 gallon bucket. Mix contents thoroughly until all components are completely incorporated and no streaking is observed. Thinning is not recommended. The portions of each side is accurately measured to ensure optimum product performance. Pouring from one container to the other (boxing) during mixing is very helpful in ensuring complete mixing. Mix for 2 minutes.

## **Application**

## **APPLICATION EQUIPMENT**

Tools: 3" Disposable brush, low speed drill (450 rpm) with a 3.5" Jiffler blade, 3/8" nap non-shedding phenolic core roller, and flat rubber squeegee.

#### **ROLL ON**

After mixing all contents as instructed, immediately pour out into a ribbon on the surface. Squeegee the material out evenly and check for desired film thickness by using a wet-film thickness gauge. Back-rolling and then cross rolling is critical.

Allow to dry minimum of 12 hours before recoat.

## **Storage**

This product has a maximum shelf life of one year when stored off the ground in a dry area at 50° to 110°F, in the original sealed container.

## Clean-Up

Clean-up mixing station, tools and application equipment immediately after completion. Use suitable solvent as specified by Polycoat Products' Technical Services Team or if permissible by law, xylene, as a general over-the-counter solvent. Observe all fire hazards, legal, and health and safety precautions when handling or storing solvents, particularly in confined spaces. Make sure the working area is well ventilated at all times during application and curing times. Dispose all excess materials, packaging, and other waste in accordance with federal, state, and local regulations.

#### **Maintenance**

Occasionally inspect the installed floor by spot cleaning and spot repairing any damaged or cracked areas. To prolong the life of the flooring system, a daily cleaning maintenance program is highly recommended to ensure the floor is safe for its intended purpose.

## **First Aid**

Warning! Eye and skin irritant. May cause dermatitis and sensitization. In case of contact: Avoid contact with eyes, skin or clothing. Avoid breathing vapor, mist or spray. Use with good ventilation.

Eyes: Immediately flush with water for at least 15 minutes. Skin: Immediately remove from skin with dry cloth followed by thorough washing with soap and water.

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen.

Ingestion: Immediately call a Poison Center/Doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

#### Limitations

This product is best suited for application in temperatures between 60°F and 90°F. Do not use to grout coat over aggregate. [Certain colors appear white when scratched such as blue based.] Higher temperatures will result in faster dry times and/or poor workability. Color may vary due to batch-to-batch variation, especially in higher temperature. Do not apply over ponding water. Always read and understand the specific product data guide and SDS sheets before using this product. For more information contact Polycoat Products.

# USE PRODUCT AS DIRECTED. KEEP OUT OF THE REACH OF CHILDREN.

Limited Warranty: Please read all information in the General Guidelines, Technical Data Sheets, Guide Specifications and Safety Data Sheets (SDS) before applying material. These products are for professional use only and preferably applied by professionals who have prior experience with the Polycoat Products materials or have undergone training in application of Polycoat Products materials. Published technical data and instructions are subject to change without notice. Contact your local Polycoat Products representative or visit our website for current technical data, instructions, and project specific recommendations.

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