

# ULTRA-PRIME MVB

A TWO-COMPONENT, 100% SOLIDS, MOISTURE VAPOR BARRIER EPOXY WHICH CONTROLS MOISTURE VAPOR EMISSIONS UP TO 20 POUNDS

**ULTRA-PRIME MVB** is a two-component, clear, 100% solids epoxy that is specifically formulated to help control moisture vapor emission when applied over new or existing concrete floors which exhibit high moisture levels. Ultra-Prime MVB can help control vapor emission rates up to 20 pounds per 1000 ft<sup>2</sup> per 24 hours. An excellent product to use prior to applying epoxy, polyaspartic, and urethane topcoats as well as prior to installing a variety of flooring materials such as carpet, wood, rubber, vinyl, tile & linoleum.

## TYPICAL USES

- Warehouses
- Mechanical rooms
- Shop floors
- Retail stores
- Institutional facilities
- Kitchens
- Garages
- Laboratories
- Restrooms
- Kennels

## ADVANTAGES

- 100% solids formula
- Nearly no odor
- Low viscosity for deeper penetration
- Excellent adhesion to concrete
- One coat moisture vapor barrier
- Controls vapor pressure up to 20 lbs
- Meets ASTM F3010

## PACKAGING

**3 gallon kit:** Two 1 gallon (3.78 liters) cans of Side-A and one 1 gallon (3.78) can of Side-B.

**15 gallon kit:** Two 5 gallon (18.9 liter) pails of Side-A and one 5 gallon (18.9 liter) pail of Side-B.

## **Mixing Ratio by Volume:**

(2) Part-A: (1) Part-B

## SURFACE PREPARATION

All new concrete must cure for at least 28 days prior to application with a minimum compressive strength of 3,500 psi and a minimum tensile strength of 200 psi. New or existing concrete must be clean, sound and dry. Ultra-Prime MVB will not fill voids or bridge large cracks. All voids and cracks must be patched using Umaco Universal 1023 then allowed to cure. Remove all dirt, dust, spalling or loose concrete, oil, grease, wax, mildew, efflorescence, laitance, curing compounds, form release agents, paint or any other foreign material which might effect the bond. **SEE WARNING REGARDING PAINT REMOVAL.**

Umaco Ultra-Clean may be used to remove oil or grease stains from concrete surfaces. The concrete must have a surface profile of CSP3. Suitable preparation methods include dustless grinding, shot-blasting, scarification and etching using Umaco Ultra-Etch.

## **Concrete Moisture**

Moisture vapor transmission in the slab should be measured prior to application. Moisture emission must not exceed 20.0 pounds per 1,000 square feet per 24 hours. If moisture emissions exceed the limit, contact a Umaco representative to discuss other options.

## MIXING

Umaco Ultra-Prime MVB is sold as a kit, (2) Part-A Resin: (1) Part-B Hardener. Mix each individual component before using. Then pour Part-B into Part-A and mix using a paddle attached to a low speed drill (400-600 RPM) for approximately 90 seconds until the material is thoroughly mixed and streak free. Avoid whipping air into the liquids. The mixed material is now ready for immediate placement. Mix only enough material that can be applied within 25-35 minutes at 70° F.

## APPLICATION

Ultra-Prime MVB can be applied using a 1/4" nap roller, brush or by a suitable serrated squeegee then back-rolled as long as the appropriate thickness recommendations are maintained. When applying by serrated squeegee, back roll the material at a right angle to the direction of the squeegee application. Maintain recommended temperature and relative humidity during application and curing process. Do not use any heating equipment that would produce carbon dioxide. When using a roller, roll out the material in one direction and then back roll in the opposite direction making sure to work the material into the concrete. If concrete conditions or over aggressive mixing causes air entrapment, an air release roller tool should be used prior to the coating tacking off to remove the air entrapped in the coating. In areas where voids or pin holes develop, grind and sand off the residue. Make sure that the surface is dry then recoat. The moisture vapor barrier must be applied to form a continuous monolithic void free application. Thinner applications than recommended may result in insufficient moisture vapor protection.

## COVERING ULTRA-PRIME MVB

Do not apply any coatings, overlays or flooring until the Ultra-Prime MVB has sufficiently cured (approximately 12-16 hours at 70°F and you can firmly press your thumb down on the coating and leave no mark). Only use a product or primer suitable for application over a non-porous surface. Install mock up (minimum 100 ft<sup>2</sup>) using the same methods and equipment that will be used for the entire installation to determine that product compatibility and adhesion of the entire system is sufficient for the intended use.



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### **COVERAGE**

Approximate coverage is 94.4 per gallon at 17 mils.

### **CLEANUP**

Clean up mixing station, tools and equipment as required using denatured alcohol. Observe all legal, health and safety precautions when handling or storing solvents and materials particularly in confined spaces.

### **DISPOSAL**

Dispose of empty packaging and other waste in accordance with federal, state, provinces and local regulations

### **STORAGE**

Ultra-Prime MVB has a shelf life of one (1) year from date of manufacture in original, factory-sealed containers when stored indoors at a temperature between 60-90°F (15-32°C).

### **LIMITATIONS**

- All new concrete must cure for at least 10 days prior to application with a minimum compressive strength of 3,500 psi and a minimum tensile strength of 200 psi
- Concrete surfaces must be durable, clean, free of laitance and have a surface profile of CSP3
- Testing must be performed to confirm a moisture vapor emission rate below 20 lb/24hr/1000ft<sup>2</sup> per ASTM F1869 or between 75% and 95% for ASTM F2170.
- Substrate temperature must be 5° F above dew point
- After product is applied, do not expose to water until fully cured
- This product is not suitable for preventing hydrostatic or osmotic water conditions
- This product is not UV color stable
- Color stability may be affected by high humidity, chemical exposure, UV exposure or certain types of lighting
- Manufacturer is not responsible for entrapped moisture and/or water underneath applied coatings with a low rate of water transmission which can deteriorate concrete resulting in a

cohesive failure within the concrete surface

- Product will not prevent failures from insufficient surface preparation, improper application, alkaline silica reaction (ASR), ionic compounds or soluble salts in the concrete
- Manufacturer is not responsible for failure cause by cracks and pin holes or damage caused by use

### **MAINTENANCE**

For maximum life expectancy, routinely sweep and wash floors with appropriate cleaners and detergents such Umaco Cleaner & Degreaser. All chemicals or abrasive grit should be removed as soon as possible.

### **TECHNICAL DATA**

**Solids by Weight:** 100%

**Solids by Volume:** 100%

**VOC's:** Zero

**Color:** Clear (Gardner color 1-3)

**Recommended Film Thickness:**  
17 mils

**Coverage per Gallon (17 mils):**  
94.4 ft<sup>2</sup>/gal

**Compressive Strength (ASTM D695):**  
10,000 psi

**Tensile Strength (ASTM D683):**  
7,500 psi

**Adhesion (ASTM D7234):**  
>400 psi

(concrete failure, no delamination)

**Hardness (ASTM D2240):**  
Shore D = 75-80

**Water Absorption (ASTM D570):**  
< 0.1%

**Permeance (ASTM E96):**  
.017 (gr/ft<sup>2</sup>/hr/inHg 100 sqft/gal)

**Viscosity:** Mixed = 500-1000 cps (typical)

**Application Temperature:** 60-90°F

**Pot Life (150 gram mass):**  
28-38 minutes @ 70°F

**Tack Free (Dry to Touch):**  
6-10 hours @ 70°F

**Recoat or Topcoat:**  
12-16 hours @ 70°F

**Full Cure (Heavy Traffic):**  
3-7 days @ 70°F

### **WARNING**

Harmful if inhaled. Harmful if swallowed. May cause eye irritation. May cause allergic skin reaction. Before using, read the Safety Data Sheet and follow all precautions to prevent bodily harm.

**WARNING!** If you scrape, sand or remove old paint, you may release lead dust or fumes. **LEAD IS TOXIC. EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE.**

Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log onto [www.epa.gov/lead](http://www.epa.gov/lead). Wear a properly fitted respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Follow these instructions to control exposure to other hazardous substances that may be released during surface preparation.

**For technical assistance call  
978-453-8881.**

[www.umaco.com](http://www.umaco.com)

### **LIMITED WARRANTY**

*The manufacturer guarantees its products to be free of defects and the extent of its liability is limited to the purchase price of the materials only, if proved to be defective. Improper mixing, incorrect application or other factors beyond the control of the manufacturer or its dealers may produce unsatisfactory results and cannot be held to be the manufacturers or its dealers responsibility. There are no other guarantees either expressed or implied. (2021)*

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