MVB

PRODUCT DESCRIPTION

SIMIRON MVB is a 100% solids, two-component, epoxy primer designed for concrete floors with moisture vapor transmission (MVT) problems. This primer is applied directly to concrete to reduce the adhesion and blister effects of MVT. **Simiron MVB** is resistant to MVT up to 25 lbs. per 1000 sq. ft. in 24 hours per ASTM F1869 or 95% relative humidity (RH) per ASTM F2170. This product is also available in two cure speed options.

FEATURES & BENEFITS

- Reduces the effects of MVT
- Excellent Adhesion to Damp Concrete
- VOC Compliant Nationwide
- Low Odor
- Low Viscosity

RECOMMENDED USES

- Use under all Simiron coating systems where MVT resistance is desired.
- Broadcast **Decorative Chip** directly into **MVB**.
- New Concrete.
- Concrete slabs that have shown issues in applied polymer flooring.

PRODUCT INFORMATION

PRODUCT NAME	SIZE	COLOR/FINISH	ITEM NUMBER
MVB Base	2-Gallon	Clear	40004071
MVB Activator	1-Gallon	Clear	40009120
MVB Fast Activator	.86-Gallon	Clear	40011123

1.5 gallons MVB clear can be pigmented with 1 pint Simiron U-Tint in colors including: Haze Gray, Light Gray, Deck Gray, Sandstone, White, Black, & Tile Red.

TECHNICAL DATA

PHYSICAL DATA	
Components	2 (Base & Activator)
Color	Clear
Finish	Gloss
Mix Ratio (by volume)	2 Base: 1 Activator (Fast 2.33: 1)
Curing Mechanism	Chemical reaction between components
Solids by Volume	100%
Solids by Weight	100%
Mixed Viscosity	1500 cP
VOC (EPA Method 24)	0 g/L

THEORETICAL COVERAGE

Mixed **MVB** is applied at a nominal 16 mils (100 sq.ft. per gallon). A 1.5-Gallon Kit covers 150 sq.ft. and a 3-gallon mix covers 300 sq.ft. A 2.86-gallon mix of **MVB Fast** also covers 300 sq.ft. per gallon.

CURE TIMES	MVB	MVB FAST
Drying Schedule	72°F (25°C) 50% RH	72°F (25°C) 50% RH
Work Time	25-30 minutes*	15-20 minutes*
Tack Free	9 hours	6 hours
Light Foot Traffic	24 hours	6 hours
Full Cure	5 days	5 days
Minimum Recoat	5 hours	3 hours
Maximum Recoat	24 hours **	24 hours **

**Higher temperatures will shorten pot-life and working time.*
***Apply a second coat of MVB or the basecoat within 24 hours of the initial coat of MVB. If the re-coat window is missed, the coating system will need to be sanded.*

SIMIRON™

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PHYSICAL PERFORMANCE PROPERTIES

PHYSICAL PROPERTIES	TEST METHOD	RESULTS
Adhesion to Concrete	ASTM D7234	> 400 psi (100% Concrete Failure)
Compressive Strength	ASTM D695	11,600 psi
Flammability	–	Self-extinguishing over concrete
Flexural Strength	ASTM D790	12,800 psi
Gloss @ 60° Angle	ASTM D523	> 90
Hardness, Shore D (24 hours)	ASTM D2240	75
Tensile Strength	ASTM D638	9,600 psi
Water Vapor Transmission	ASTM E96	.064 perms (grains/hr/sq.ft.)

SURFACE PREPARATION

Concrete and coated concrete surfaces must be sound, clean, dry and free of contaminants such as dirt, dust, grease, oil, silicones and other contaminants that may negatively affect adhesion.

MOISTURE VAPOR BARRIER:

A suitable moisture barrier must be in place for concrete slabs on-grade. If a moisture barrier is not in place, seasonal variations in ground moisture can cause excessive moisture vapor transmission (MVT) regardless of results measured prior to coating application. 16 mils **MVB** is resistant to MVT up to 25 lbs. per 1000 sq. ft. in 24 hours per ASTM F1869 or 95% RH per ASTM F2170.

NEW/BARE CONCRETE:

Diamond grind or shotblast to a CSP 3 or greater surface profile, depending on total thickness of system. Refer to SSPC-SP13/NACE 6 or ICRI Technical Guideline No. 310.2.

New concrete must be cured a minimum of 28 days and should meet moisture vapor transmission (MVT) and relative humidity (RH) thresholds as described previously in Surface Preparation section.

PREVIOUSLY COATED SURFACES:

Clean surface to prevent any contaminants from being spread/redistributed to a greater area being prepared. Completely remove previous coatings, sealers, joint fillers, and patching materials. Diamond grind or shotblast to a CSP-3 or greater surface profile. Refer to SSPC-SP13 / NACE 6 or ICRI Technical Guideline No. 310.2.

TEMPERATURE

Air	60° – 85°F	16° – 29°C
Surface	60° – 85°F	16° – 29°C
Material	60° – 85°F	16° – 29°C

Higher temperatures will shorten pot-life and working time. Floor temperature must be at least 5 degrees over the current dew point. **MVB** with Fast Activator can be used down to 50F.

SAFETY AND TECHNICAL

Refer to the SDS sheet before use. Safety precautions must be strictly followed during storage, handling, and use. Personal Protective Equipment (PPE) should be worn at all times. PPE will include (but is not limited to): Safety glasses with side shields and high-quality nitrile gloves. To acquire additional information or technical and safety data, please visit: www.simiron.com.

PATCHING AND JOINTS

All previous joint filler and patching materials must be completely removed prior to **MVB** application. Cracks and holes should be cleaned out using a wire brush and vacuum. Larger cracks should be widened to a 1/4" width and depth. Prime the sidewalls with **MVB** and patch the void with thickened **MVB**. Sidewalls of moving joints that will be honored, should also be primed with **MVB** and allowed to cure before installing an appropriate joint material. Patching and joint materials may be installed after **MVB** application.

APPLICATION EQUIPMENT

Assemble all equipment. Equipment will include (but is not limited to):

- Drill and Jiffy® type mixing blade
- Spiked Shoes
- Flat metal spring blade or EPDM squeegee and notched EPDM.
- 3/8" shed-resistant woven roller covers with phenolic core.
- Edge rollers, chip brushes
- Painter's tape, duct tape, measuring and mixing containers

MVB

APPLICATION PROCEDURE

1.5-Gallon Kits of **MVB** should not be split Nominal 3-gallon units of **MVB Fast** cannot be split.

1. Pre-mix Base at low speed for 1 minute. Mix **U-Tint** into the Base at a rate of no more than 1 pint per gallon (1.5 gallons mixed epoxy). Then, add Activator and mix for three minutes until uniform. Do not mix more material than can be applied in 25 – 30 minutes (material will stiffen or tack-up).
2. Immediately pour all mixed **MVB** on the floor in a long bead approximately 8 – 12 inches wide. Do not attempt to roll material out of a bucket or roller pan.
3. Wearing spiked shoes, and using a notched squeegee, spread material evenly to cover 150 sq.ft for a 1.5-Gallon Kit or 300 sq.ft. for a nominal 3-gallon mix. A tight, thin coat of **MVB** applied as primer with no backroll is the best way to minimize outgassing bubbles. If using this approach, apply the balance of the material after the primer has set to total the coverage rates above.
4. Use a non-shed 3/8" roller and back-roll the primer evenly across the squeegee passes to minimize application lines and leave a consistent film thickness.
5. Before overcoating, inspect the applied and set **MVB** for pinholes or voids from displaced air or inadequate patching. Sand and recoat if needed. Thickened **MVB** may need to be used to patch more severe holes or cracks.
6. **Decorative Chip** can be broadcast into the thicker, build coat of **MVB** before it sets.

CLEAN UP & DISPOSAL

Clean up mixing and application equipment immediately after use. Use toluene, acetone or xylene; do not use alcohol. Follow solvent manufacturer's safety instructions. Be sure to follow all local, state and federal regulations when disposing of materials.

MAINTENANCE

To maintain the appearance and extend the life of the newly sealed surface, it is imperative to have a routine maintenance program. Dirt and debris that is tracked over a finished floor will quickly scratch and dull the surface. Place walk-off mats at entrances. Sweep and mop/scrub floors regularly using soft bristles/pads and a mild cleaner. Some cleaning products and equipment or improper use of these can damage a surface. Remove spills quickly to minimize damage and/or stains. For systems that support parked vehicles or other heavy items on rubber wheels, place a small piece of nonporous material, such as sheet metal or plexiglass between the tires and floor to prevent tire marks. Reapplication may be necessary in heavy traffic areas.

LIMITATIONS

- 16 total mils of **MVB** (15.3 mils **MVB Fast**) must be applied. to achieve MVT resistance up to 25 lbs. per 1000 sq. ft. in 24 hours per ASTM F1869 or 95% RH per ASTM F2170.
- **MVB** is not designed to be used as a stand-alone product. **MVB** must be over-coated with a more durable Simiron coating system.
- Concrete must have a minimum compressive strength of 3,500 psi and a tensile strength of 300 psi.
- This product will not prevent failures caused by Alkaline Silica Reaction (ASR) or contaminants left by previously applied hardeners/sealers.
- Do not apply at a temperature or thickness not recommended.
- Do not delay in pouring mixed material onto the floor.
- Do not apply over loose or unsound concrete, asphalt or bitumen substrates, glazed tile or nonporous brick and tile, magnesite, copper, metal, polyesters, or elastomeric membranes.
- Moving joints and shrinkage cracks may reflect through system. Joints that are designed to move may reflect through the finished flooring system if the are not honored.

SHELF LIFE AND STORAGE

24 months from date of manufacture when stored indoors in the original unopened container at 60°F – 85°F (16°C – 29°C) in a dry location with humidity below 65%.

- Do not allow materials to freeze.

TECHNICAL ASSISTANCE

Information is available by calling SIMIRON
Toll Free: **1.866.515.8775 / +1.248.686.3600**

LIMITED WARRANTY

SIMIRON warrants this product to be free from defect in the material that affects its performance for a period of one year (from date of purchase). To obtain MVB warranty related to function on applied material, MVT data must have been collected prior to coating in accordance with ASTM F1869 or ASTM F2170. In addition the current state of MVT after failure must also be determined using the same ASTM test. Surface preparation, patching, and joint filling procedures noted in the MVB PDS must be followed; 16 total mils of MVB must be applied. SIMIRON will replace at no charge the quantity of the Coating that SIMIRON determines has failed to perform, as the sole and exclusive remedy for any breach of this warranty and/or any other defect or failure of the coating. Proof of purchase is required. Cost of labor for application of any product specifically is excluded. Warranty is void if Simiron products are mixed with or used in conjunction with materials that are substituted for Simiron products. Warranty is nontransferable.

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PRODUCT DATA SHEET: 04/07/2025