Epoxy Flow MVB

MATRIX Products

High Performance Protective Coating
For Superior Moisture Vapor Locking Transmission Control

- 100% Solid Epoxy Resin
- Class I MVSS - Vapor Diffusion Retarder
- Low Viscosity
- 16-24 Hour Cure Time
- Excellent Gloss Retention
- Moisture & Chemical Resistance

DESCRIPTION
Epoxy Flow MVB is a 100% solids epoxy engineered for high-performance moisture vapor emission control. This two-part, 2:1 specialized formula is designed for use where elevated moisture conditions are present, providing a strong, reliable base for a variety of coating systems. MVB epoxy can serve as the primer layer in systems approved for industrial, commercial, and residential settings where moisture vapor emission rates are higher than standard conditions.

ADVANTAGES
- Low viscosity, great leveling properties
- Excellent adhesion to properly prepared concrete in elevated moisture conditions
- Can accept compatible pigments
- Can be used as a primer for a wide range of coating systems
- Moisture vapor emission tolerance of 25 lbs (Class I MVSS - Vapor Diffusion Retarder)

LIMITATIONS
- Not intended for use as a standalone wear surface without a protective topcoat
- Not designed for use in continuously submerged applications
- Will not perform as intended if substrate preparation is inadequate
- Lacks the long-term UV-stability of some other resin coating types

PACKAGING
Available in 3 gallon kits (2 gallons Part A + 1 gallon Part B)

COLORS
Available in clear, but able to accept compatible pigment packs

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AVAILABLE COMPANION /ALTERNATIVE PRODUCTS

Epoxy Flow MVB FAST - Fast curing Moisture Vapor Barrier epoxy that protects up to 25 lbs
Epoxy Flow LV - Low Viscosity epoxy formulated for decorative metallic coats
Epoxy Flow GEN FAST - General use epoxy
Epoxy Flow GEN FAST - Fast curing general use epoxy
Poly Flow 100X - 100% solids extended cure polyaspartic for UV-stable decorative metallic coats
Poly Flow 100 - 100% solids polyaspartic for general use
Poly Flow 90 - 90% solids polyaspartic for general use, excellent for flake and quartz topcoats

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PHYSICAL PROPERTIES @ 77F (25C)
7-DAY CURE (UNLESS OTHERWISE STATED)

VOC (Volatile Organic Compounds), (VOC Calculated Per ASTM 03960)	<5 gr.lt.
Mix Ratio, by Volume (A/B)	2:1
Minimum Application Surface Temperature	50F
Working Time, mins.	45 - 60
Pot life, 1 gallon (3. 79 liters) Mass, Pot Life is Reduced by Increases in Mass & Temperature, mins.	30 - 45
Dry to Touch at 75F (240C)	7 - 8 hours
Recoat Time	12 - 14 hours
Shelf life (shipped and stored) at 4o•F to 1oo•F (4.4C to 38C) Packaging 3 gal.	1 year
Compressive Strength, ASTM D695	10,500 psi
Tensile Strength, ASTM 0683	8,500 psi
Tensile Elongation, ASTM 0638	2.0%
Hardness (Shore 0), ASTM 02240	75 - 80
Adhesion, ASTM 07234	>400 psi
Water Absorption, 0570	NIL
Permeance, ASTM E96	0.017 (gr/ft2/hr/lnHg 80 sqft/gal)
Moisture Vapor Emission Rate, Fl869, Concrete Placed per ACI 302.2R ASTM El745	25 Pounds
Gloss Index	60GU

PEASE BE ADVISED TO READ ALL PRODUCT INFORMATION BEFORE USE (TDS & MSDS)

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SURFACE PREP

Proper surface preparation is critical to achieving long-term performance. Substrates must be structurally sound, clean, and dry prior to coating. Remove all contaminants including oils, curing compounds, loose coatings, laitance, dust, and surface moisture.

CONCRETE MUST BE CLEAN AND FREE OF DEBRIS

- **Profile**: Concrete should be mechanically profiled to a minimum CSP 2–3 (ICRI guidelines), typically achieved by diamond grinding or shot blasting.

- **Cracks & Repairs**: Address surface cracks, spalls, or divots with compatible moisture tolerant patching material. Honor all control joints as per project requirements.

- **Testing**: Perform adhesion testing when substrate condition is in question.

  Inferior concrete flooring slabs containing contaminants such as oil, stains, or other previous coatings will interfere with the bond.
  • Contaminants include, but are not limited to: organic hydrocarbon materials, calcium chlorides and aluminum stearates.
  • Concrete flooring slabs can lose their structural strength over time, caused by conditions beyond the control of the coating manufacturer or the installation contractor.
  • If the concrete substrate deteriorates sufficiently, It will no longer support the bond of the coating system.

MIXING

This is a two-component epoxy system. Thorough mixing is essential for product performance.

1. **Premix Part A** to re-incorporate any settled material.

2. If pigmenting the material, add pigment to Part A, and blend until completely incorporated. Do not over-pigment.

3. Combine Part A and Part B at a 2:1 mix ratio by volume.

4. Mix using a low-speed drill with a Jiffy-style paddle for **2–3 minutes**, scraping the sides and bottom of the container to ensure a uniform blend.

5. Avoid whipping air into the mixture. Do not exceed recommended mixing time.

6. Once fully mixed, immediately pour the material onto the floor in ribbons or working sections to maximize working time and reduce heat buildup in the bucket.

TYPICAL APPLICATION GUIDELINES

Apply only in conditions where substrate and ambient temperatures are within the recommended range (60–85°F) and rising.

- **Spread**: Use a notched squeegee or trowel to spread the product evenly to the necessary mil thickness. Coating must be applied at 80-100 sft /gallon.
  3 gallon kit yield:
  - 240-300 sft @ 80-100 sft /gallon

- **Backroll**: Immediately backroll with a 3/8” non-shedding roller to even out the surface and eliminate squeegee lines.

- **Pot Life**: Working time varies by temperature but is generally 45-60 minutes at 70°F. Do not apply material after it begins to thicken or set in the container.

- **Recoat Window**: If additional coats are required, recoat within 12–14 hours. If this window is exceeded, mechanical sanding or abrasion with 60-120 grit sanding screen may be necessary for proper intercoat adhesion.

- **Traffic Ready**: Light foot traffic may be allowed after 12–18 hours. Full cure is typically achieved in 5–7 days depending on temperature and humidity.

Note: This data is not a guarantee against future problems. This is especially true if there is not a positive side vapor barrier, or it is not functioning properly and/ or concrete has contamination from oils, chemical spills, excessive salts or other bond inhibitors.

CHECK CONCRETE MOISTURE
Concrete must be dry before application of this floor coating material. Concrete moisture tests are required, either ASTM F1869 (calcium chloride) or ASTM F2170 (in situ RH probe). However, environmental and structural conditions (including the original concrete placement, rainfall, site drainage, etc.) contribute to the moisture readings taken at any particular time, and moisture content /emissions can change with a shift in conditions.

Best practice is application of an epoxy moisture vapor barrier as the first coat on any coating system, even if moisture concerns are not present at the time of installation. Concrete with excessive moisture will require additional steps.

CHECK TEMPERATURE & HUMIDITY
Floor and material temperature must be at or above the published Technical Data Sheet. Dew Point must be 50F (30F) or more below the surface temperature. Do not apply if humidity is at or above 85%.

WARNING! Harmful if swallowed. In contact with skin or if inhaled, causes severe skin burns and damage. May cause an allergic skin reaction. Causes serious eye damage. Harmful to aquatic life with long lasting effects.

PRECAUTIONS: Do not breathe dust /fume /gas /mist /vapor /spray. Wash hands /nails /face thoroughly after handling. Do not eat, drink, or smoke when using this product. Use only outside or well-ventilated areas. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear gloves /protective clothing /gloves/eye protection /face protection.

FIRST AID TREATMENT: IF ON SKIN, wash with plenty of water. IF SKIN irritation or rash occurs, get medical attention. Take off contaminated clothing and wash it before reuse. IN IN EYES, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

ENVIRONMENT: Collect spillage.

IN CASE OF FIRE: Use supplier or the competent authority to specify appropriate safety measures.

DISPOSAL: Dispose content /container to an approved disposal plant in accordance with local or state regulations.

KEEP OUT OF REACH OF CHILDREN.

Limited Warranty: For a period of one (1) year from the date of manufacture, the Matrix brand warrants that this product is free from defects in material and manufacturing. Any implied warranty applies only to the material itself and does not extend to installation methods, workmanship, or site conditions. The Matrix brand shall not be liable for any installation issues, failures, or damages unless proven to result directly from a defect in manufacturing. All other causes, including but not limited to improper installation, surface preparation, or environmental factors, are the sole responsibility of the installer or end user.

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