FGP MOISTURE MITIGATION SYSTEM

ADVANCED MOISTURE VAPOR PROTECTION SYSTEM FOR FLOORING PERFORMANCE

NOMINAL THICKNESS: 18-20 Mils
FINISH: Smooth Gloss

SYSTEM DESCRIPTION

FGP Moisture Mitigation System is a high-performance epoxy vapor control system designed to reduce moisture vapor transmission from concrete substrates. It functions as a Class I vapor retarder in accordance with ASTM F3010 and is engineered to accommodate up to 25 lbs MVER per ASTM F1869. The system is installed based on in-slab relative humidity testing per ASTM F2170, with substrates typically required to be at or below 95% RH prior to application. It promotes strong adhesion and long-term performance of resinous flooring systems under elevated moisture conditions.

KEY FEATURES

- ☑ Class I vapor retarder in accordance with ASTM F3010
- ☑ Designed for concrete moisture vapor emission resistance up to 25 lbs MVER
- ☑ Validated substrate testing based on ASTM F2170 in-slab relative humidity (≤ 95% RH)
- ☑ High-performance epoxy formulation for moisture control and adhesion promotion
- ☑ Forms a dense, low-permeance barrier to limit vapor transmission

PERFORMANCE MATRIX

PROPERTY	RATING
LOW PERMEANCE	●●●●●
ABRASION RESISTANCE	●●●○○
UV RESISTANCE	●○○○○
THERMAL RESISTANCE	●●○○○
FLEXIBILITY	●○○○○
MVE RESISTANCE	●●●●●

SYSTEM STRUCTURE

1	**SUBSTRATE:** Concrete w/ CSP Level 3-5
2	**PRIMER:** MV 2112 Moisture Primer @ 80-90 Ft²/ Gal (18-20 Mils)

TYPICAL APPLICATIONS

- Concrete slabs with elevated MVE and RH
- Beneath decorative and functional resinous flooring systems
- Compatible beneath tile, wood, carpet, and resilient flooring systems
- Renovation and retrofit flooring over existing concrete

TECHNICAL PROPERTIES

HARDNESS	ASTM D2240	Shore D 80
FLEXURAL STRENGTH	ASTM D790	12,200 psi
ADHESION	ASTM D7234	350 psi | Concrete Failure
VAPOR RETARDER	ASTM E96	Class I
PERMEANCE	ASTM E96	<0.10 perms
MVE RESISTANCE	ASTM F1869	25 lbs/1,000 ft²/24 hrs
IN-SITU RH	ASTM F2170	95%
ABRASION RESISTANCE CS-17 WHEEL, 1000G LOAD, 500 CYCLES	ASTM D4060	36 mg loss
RECOAT		12-24 Hours
FULL CURE		5-7 Days

*The above physical properties were measured in accordance with the referenced standards. Results may vary based upon statistical variations on mixing methods, equipment, application methods, environment, actual site conditions, and curing conditions. All sample preparation and testing are conducted in a laboratory environment and actual performance on job site may vary from these values based on actual site conditions.

LIMITATIONS

- ☒ Not intended for use over actively leaking slabs or hydrostatic pressure conditions
- ☒ Does not bridge structural cracks, moving joints, or slab discontinuities
- ☒ Not a substitute for proper concrete curing, drainage, or vapor pressure relief systems
- ☒ Requires proper surface preparation and profile (CSP) for full performance
- ☒ Must be applied within specified coverage rate, substrate temperature and environmental conditions
- ☒ Not designed as a wear surface, receiving coat, or traffic-bearing finish coat
- ☒ Performance is dependent on accurate ASTM F2170 in-slab RH testing and proper installation
- ☒ Not designed to be pigmented or diluted

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REQUIREMENTS

1. Substrate Requirements (General Ranges)

- ☑ **Compressive Strength:** ≥ 3,000 psi (typical minimum)
- ☑ **Tensile Strength:** Sound, structurally stable concrete required
- ☑ **Surface Porosity:** Open, absorptive profile (CSP 2–5 typical depending on system)
- ☑ **Mohs Hardness:** Concrete substrate ~5–7 (no soft, friable surfaces permitted)
- ☑ **pH Range:** 7.0–10.0 (neutral to mildly alkaline acceptable range)
- ☑ **Moisture Vapor Emission (MVER):** 0–25 lbs/1,000 ft^2/24 hrs (system dependent)
- ☑ **In-Slab Relative Humidity:** ≤ 75–95% RH per ASTM F2170 (system dependent)
- ☑ **Contamination:** Free of oil, grease, curing compounds, sealers, and laitance

2. Environmental Conditions

- ☑ **Ambient Temperature:** 60°F – 85°F (ideal working range)
- ☑ **Substrate Temperature:** 50°F – 85°F
- ☑ **Product Temperature:** Condition materials to 65°F – 75°F before installation
- ☑ **Relative Humidity:** ≤ 80% recommended during application
- ☑ **Dew Point:** Substrate must be minimum 5°F above dew point
- ☑ **Ventilation:** Adequate air movement required; avoid stagnant air conditions

3. Surface Preparation Requirements

- ☑ Mechanically prepare substrate via shot blasting, grinding, or equivalent method Achieve specified CSP (Concrete Surface Profile) per system requirement (CSP 2-5 typical)
- ☑ Remove all weak, friable, or contaminated concrete
- ☑ Repair cracks, spalls, and voids prior to system installation
- ☑ Vacuum and remove all dust and debris prior to application

4. Testing & Verification (Recommended)

- ☑ **ASTM F2170** – In-slab relative humidity testing
- ☑ **ASTM F1869** – Calcium chloride MVER testing
- ☑ pH testing of concrete surface
- ☑ Porosity testing of concrete surface to ensure proper profile
- ☑ Mohs Scratch test to verify concrete hardness
- ☑ Infared Thermometer and Hygrometer to verify ambient, product and surface conditions

5. Safety Requirements (PPE & Handling)

- ☑ Wear appropriate PPE: gloves, safety glasses, long sleeves
- ☑ Use respiratory protection where ventilation is limited
- ☑ Avoid skin contact with uncured resins and hardeners
- ☑ Follow all SDS safety guidelines for each product component
- ☑ Keep away from ignition sources where applicable (solvent-based or reactive systems)
- ☑ Ensure adequate ventilation during mixing and application

6. Limitations (General)

- ☑ Review system and product limitations
- ☑ Ensure products and system applied is for designed purpose and suitable for environment
- ☑ Dynamic substrates require application of flexible membrane
- ☑ Performance varies based on substrate condition, environment, and installation quality
- ☑ Not a substitute for proper concrete design, drainage, or structural integrity

MIXING GUIDELINES

- All materials must be mixed in strict accordance with manufacturer-specified ratios.
- Pre-mix each component separately when required, then combine using a low-speed mechanical mixer to ensure uniform consistency without introducing excessive air.
- Mix until color and viscosity are fully homogeneous, scraping sides and bottom of the container during blending.
- Do not vary mix ratios, thin materials, or introduce unapproved additives.
- Only mix quantities that can be installed within the stated pot life.
- Mixed material should be used immediately and not re-tempered or reconstituted after initial gel or viscosity increase.

COVERAGE RATE, WORKING TIMES & POTLIFE GUIDELINES

Coverage Rate

- Theoretical coverage based on ideal substrate conditions
- Varies with surface profile (CSP), porosity, and absorption rate
- Affected by application method, film thickness, and installer technique
- Jobsite conditions may significantly reduce or increase actual yield
- Allow for appropriate waste factor and overage on projects

Working Time (Open Time)

- Usable application window after material is placed on substrate
- Temperature-dependent (higher temps = shorter working time)
- Humidity and substrate temperature accelerate set and cure
- Product must be placed and finished within working window
- Do not rework material once it begins to gel or lose flow

Pot Life

- Time mixed material remains usable in the container
- Highly dependent on ambient temperature and batch size
- Larger mix volumes reduce pot life due to exothermic heat buildup
- Material must be installed immediately after mixing
- Do not re-temper, re-thin, or attempt to extend pot life once reaction begins

General Disclaimer

- All values are approximate and for guidance only
- Field conditions will directly impact coverage, working time, and pot life
- Installer is responsible for monitoring material condition during application
- Exceeding pot life or working time may result in poor cure or adhesion failure
- Always follow technical data sheets and approved installation procedures
- Manufacturer is not responsible for failures due to improper mixing or installation practices

APPLICATION GUIDELINES

- Use only approved primers and system components
- Maintain proper coverage rates and film thickness by using specified tooling and application equipment
- Refer to individual product Technical Data Sheets (TDS) for specific application procedures, cure schedules, and installation requirements
- Do not exceed recommended recoat windows
- Ensure uniform application without puddling or dry spots
- Broadcast aggregates (if applicable) to rejection as specified after 10-15 minutes depending on temperatures
- Do not overwork product or exceed working time limits

CLEANING & MAINTENANCE GUIDELINES

- Use pH-neutral cleaners for routine maintenance
- Avoid harsh solvents, caustic cleaners, or abrasive pads unless approved
- Remove spills promptly to reduce staining or surface degradation
- Use non-metallic scrub pads or soft-bristle cleaning equipment where applicable
- Establish a routine cleaning schedule based on traffic and exposure conditions
- Avoid prolonged exposure to standing water, harsh chemicals, or abrasive debris
- Protective pads are recommended beneath heavy equipment or movable fixtures where applicable
- Periodic inspection and maintenance are recommended to preserve long-term appearance and performance
- Reapplication of finish or topcoat layers may be required over time due to traffic, abrasion, UV exposure, chemical exposure, or general wear to maintain coating performance and surface protection

SPECIFICATIONS

- Must be installed by trained and approved applicators
- All substrate conditions must meet specified requirements prior to installation
- Deviations from system design require written approval
- System performance is dependent on substrate preparation and environmental conditions

FIELD VARIABILITY

- Color, texture, gloss, and overall appearance may vary due to substrate conditions, application methods, ambient environment, and lighting.
- Minor variations between batches, production runs, or installation areas are inherent to resinous flooring systems and are not considered defects.
- Final appearance may also be influenced by concrete porosity, surface preparation, and jobsite conditions at the time of installation.

WARRANTY & LIABILITY DISCLAIMER

- System performance is dependent on proper installation and site conditions
- Manufacturer is not responsible for substrate failure or improper preparation
- No warranty is implied beyond published technical data
- Installer assumes responsibility for substrate evaluation and suitability
- Field conditions may affect final appearance and performance