POLYARMOR® MMC 8HR

Moisture Mitigation Control Epoxy Resin System

POLYARMOR® MMC 8HR is a two component "High Build Moisture Mitigation Control" 100% solids epoxy resin with a standard 8 hour cure cycle. Alkali-resistant **POLYARMOR® MMC 8HR** is used on concrete surfaces to reduce and control moisture vapor transition through the slab. It is supplied as a clear or optional pigment packed coating.

APPLICATION CHARACTERISTICS

STORAGE/SHELF LIFE:
Materials should be stored in original un-opened containers indoors between 65°F (18°C) and 90°F (32°C) and at or below 50% RH.
Shelf Life for Un-opened containers 1 year from date of manufacture.

PACKAGING KITS/ PART NUMBERS:
Volume Mix Ratio: 2A: 1B: .125C

POLYARMOR® MMC 8HR Clear 3.00 gallons
MMC 8HR-A/5SF,
MMC 8HR-B/1

POLYARMOR® MMC 8HR Pigmented 3.13 gallons
MMC 8HR-A/5SF,
MMC 8HR-B/1,
CP-U####/P

OPTIONS:
Color Pack: 0 VOC Color packs designated as **CP-U####**can be used with **POLYARMOR® MMC 8HR**. Many standard and custom colors are available; please refer to the price list for available colors. It is important to have a color consistent floor in a similar color before application of **POLYARMOR® MMC 8HR** or multiple coats may be required. Some deep base colors may require multiple coats or double color pack to obtain full hide.

LIMITATIONS:
Contamination and surface defects (fisheyes): If contaminates of oils, silicones, mold release agents and/or others are present, **POLYARMOR® MMC 8HR** may fisheye or crawl away from the surface. Surface contaminates should be removes with a suitable detergent prior to application. Solvent cleaning of silicone contaminates may make the situation worse; please contact the lab for additional recommendations. **POLYARMOR® MMC 8HR** May amber over time from UV exposure. Top coat with an aliphatic urethane to improve UV.

APPLICATION:
MIXING: Premix all components at slow speed prior to mixing together. Use a Jiffy® ES mix blade attach to a slow speed drill (using a paint stick to mix is not adequate). Mix only enough material at one time not to exceed the pot life. Note: Once this materials is opened and mixed it can't be resealed for later use.
COLORS: Premix designated color pack (if used) CP-U####. The color pack **should** be added last to the mixed coating POLYARMOR® MMC 8HR. MIX: Mix all components together for 2-3 minutes. Thin only to max VOC limit of 250 g/l with xylene or other suitable solvent.
APPLY POLYARMOR® MMC 8HR: at a rate of 10-20 mils to the floor surface using a notched squeegee or application tray. Back roll the wet coating using a ¼ inch nap mohair roller. Care should be taken to overlap and cross lap, but not over roll the coating introducing air to the surface.
SPREADING RATE: When POLYARMOR® MMC 8HR is applied as a primer, surface irregularities and porosity in the concrete may affect coverage rate. Be sure to plan accordingly as there may be a need for extra material to provide proper coverage. Material applied too heavy may blister or can be soft during curing. Too little material may produce a non-uniform look. The best practice is to measure and grid the floor to be sure of proper application rate.
CURING (DRYING): Allow the coating to cure (dry) for a minimum 24 hours after application at 75°F (24°C) and 50% RH before opening the floor to light traffic, allow more time for low temperatures and higher humidity or for heavier traffic. Full coating properties may take up to 7 days to develop.
TECHNICAL SUPPORT: For application questions, please contact your VISURON TECHNOLOGIES, INC. IM salesman or technical service.
DISPOSAL: Dispose in accordance with federal, state, and local regulations.

USES
Use as a primer to treat new or existing concrete floors with elevated moisture and/or alkaline conditions requiring reduction to provide a suitable surface to be top-coated.

ADVANTAGES
- Effectively treats concrete substrates with MVT up to 25 lbs per ASTM F-1869 or up to 100% RH per ASTM F-2170
- Alkaline resistant to prolonged exposure to pH 14 per ASTM D-1308
- LEED MR and IEQ credit qualifying
- Cost effective treatment on MVT in concrete as fresh as 7-14 days
- Single coat "High Build" application
- Low to No Odor
- Complies with VOC regulations for Industrial Maintenance Coatings in the OTC and CA*. (*excluding SCAQMD when thinned to max)

MATERIAL PROPERTIES*:

Properties	Test Method	Results
Flash Point	ASTM D3278	≥215 °F (102° C)
Volume Solids (mixed)	ASTM D2369	100 %
Mixed Viscosity	ASTM D2196	600-900 cPs
Pot Life Dry Time	ASTM D5895	15-20 Min @68-72 °F Tack Free 4-6 hr Dry 6-8hr Full Cure 7 days
VOC-Volatile Organic Compound	ASTM D3960	0 g/l clear & pigmented ≤250 g/l with max thinning

CURED PROPERTIES*:

Properties	Test Method	Results
Abrasion Resistance Tabor CS-17, mg loss/1000 cycles/1000g mass	ASTM D4060	75 mg
Coefficient if Friction- COF James Test	ASTM D2047	0.55 0.65(w/NS-36)
Tensile Strength	ASTM D2370	12,000 psi
Adhesion to Concrete	ASTM D4541	350 psi concrete failure
Impact	ASTM D2794	40 in.lbs Direct & Reverse
Hardness (Pencil)	ASTM D3363	2H
Dry Film Thickness	at 15 mils WFT	15 mils

*Properties and results are based on laboratory testing at 72°F (22°C) %50 RH, theoretical calculations and estimates. Typical properties, as stated, are to be considered as representative of current production and should not be treated as specifications.

VITECH™ VISURON TECHNOLOGIES, INC.

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RECOMMENDED APPLICATION

10-20 mils as a MVT treatment primer. Deeper penetration into dense concrete may require thinning with additional xylene solvent to the maximum VOC restriction in you area. Comply to all VOC restrictions.

Primer Applications:

Up to 1 quart of xylene solvent can be added per 3.00 gallons of resin (total 3.25 gallons) for a maximum **VOC=100 g/l**
Up to 1 gallon of xylene solvent can be added per 300 gallons of resin (total 4.00 gallons) for a maximum **VOC=250 g/l**

160 sq. ft. per gallon at 10 mils WFT. 3.9 sq. m, per liter at 254 microns.
One kit (3.00 gallons) of mixed **POLYARMOR® MMC 8HR (clear)** will cover 480 sq. ft. (44.6 sq. m) at 10 mils WFT (254 microns).
One kit (3.13 gallons) of mixed **POLYARMOR® MMC 8HR (pigmented)** will cover 500 sq. ft. (46.5 sq. m) at 10 mils WFT (254 microns).

Coating Applications Recommended Spreading Rate**:

MVT results per ASTM-F1869

3-10 lbs/1000 sq. ft/24hr
160 sq. ft/gal (10 mils WFT)*

10-15 lbs/1000 sq. ft/24hr
110 sq. ft/gal (15 mils WFT)*

15-25 lbs/1000 sq. ft/24hr
80 sq. ft/gal (20 mils WFT)*

RH results per ASTM-F2170

Up to 85%
160 sq. ft/gal (10 mils WFT)*

85% to 90%
110sq. ft/gal (15 mils WFT)*

90% to 100%
80-100sq. ft/gal (20 mils WFT)*

There is no correlation between MVT rate (ASTM F-1869) and RH (ASTM F-2420) test protocols. ASTM F-1869 measures MVT at the surface of the substrate. ASTM F-2420 measures RH inside the substrate. Spreading rate is determined by the test protocol. If more than one test protocols is used, the highest reading or measurement should be used to determine spreading rate.

* If the **MMC 8HR** is thinned with solvent, the WFT thickness must be increase to equal a 10 mil, 15 mil, and 20 mil DFT respectively.

**** Visuron does not provide a warranty for this product or application to protect against MVT without an approved contractor application and purchase of Moisture Mitigation Warranty.**

CHEMICAL RESISTANCE*:

MMC 8HR/MMC 8HRCR-B Clear	1 Day	7 Days
ACIDS, INORGANIC		
10% Hydrochloric	E	E
30% Hydrochloric	F	P
10% Nitric	E	E
50% Phosphoric	G	F
37% Sulfuric	E	E
ACIDS, ORGANIC		
10% Acetic	G	F
10 % Citric	E	G
Oleic	E	E
ALKALIES		
10% Ammonium Hydroxide	E	E
50% Sodium Hydroxide	E	E
SOLVENTS		
Ethylene Glycol	G	G
Isopropanol	E	E
Methanol	P	P
d-Limonene	E	E
Jet Fuel	E	E
Gasoline	G	F
Mineral Spirits	E	E
Xylene	E	G
Methylene Chloride	P	P
MEK	P	P
PMA	G	G
MISCELLANEOUS		
20% Ammonium Nitrate	E	E
Brake Fluid	E	E
Bleach	E	E
Motor Oil	E	E
Skydrol®500B	E	E
Skydrol®LD4	E	E
20% Sodium Chloride	E	E
10% TSP	E	E

*Based on spot testing of the clear coating after 14 days of cure. Pigmented versions may see reduced chemical resistance and staining.

Legend:
E- Excellent (Not Effected) - Recommended
G-Good (Limited Negative Effect) - Short Term Exposure
F-Fair (Moderate Negative Effect) - Not recommended
P-Poor (Unsatisfactory) - No Resistance to Exposure

INSPECTION AND APPLICATION:

Caution! Follow all precautions and instructions prior to installation.
CHECK THE SUBSTRATE CONCRETE: Substrate concrete must be free of curing membrane, silicate surface hardener, paint, or sealer and be structurally sound. If you suspect the concrete has been treated or sealed, prepare substrate for complete removal of treatment.
CHECK FOR MOISTURE: Concrete must be dry of free standing water. before applications of this floor coating. Test concrete for moisture vapor transmission (MVT) using calcium chloride testing ASTM F1869 or in-situ RH testing ASTM F2170.
EXCLUSION: Testing for MVT is critical, however it does not guarantee against future problems. If there is no vapor barrier or the vapor barrier is damaged, this to can contribute to floor failure. Contamination to concrete from oils, chemicals, excessive salts or Alkali Silica Reaction (ASR) may also contribute to floor failure.
CHECK THE TEMPERATURE AND HUMIDITY: During the application and cure of the coating, the substrate temperature, material temperature and room conditions should be maintained between 65°F (18°C) and 90°F (32°C). Relative Humidity (RH) should be limited to 30-80%. DO NOT apply coatings unless the floor temperature is more than five degree over the dew point.

APPLICATION EQUIPMENT:

Protective equipment and clothing as called for in the MSDS.
Jiffy® Mixer Blade model ES.
Clean container to mix materials in.
Low speed high torque drill motor.
High quality short nap roller covers ¼ inch mohair.
Application Squeegee or application trays.
Disc sanding equipment with 80-100 mesh sanding screens.
Vacuum equipment.

PREPARATION:

Surface dirt, grease, oil and contaminates must be removed by detergent scrubbing and rinsing with clean (clear) water.
Acid Etch (bare concrete): {Not recommended for MVT treatments}
Shot Blasting (bare concrete): Is a preferred method of surface preparation. Modify blaster to minimize too heavy of a surface profile and over-lap marks.
Diamond Grind (bare concrete): Results of grinding may vary depending on technique and the hardness of the concrete.
JOINTS: All non moving joints (control joints) can be filled with a semi-rigid joint compound such as **POLYARMOR® Sealant 25-000** or **45-000**. Construction joints may need to be re-built and re-cut and then filled with semi-rigid joint filler. Isolation or expansion joints must be filled with a flexible material designed for expansion and should not be coated over.
BARE CONCRETE APPLICATION: **POLYARMOR® MMC 8HR** MUST BE APPLIED as the only PRIMER product direct to the prepared concrete substrate.
RECOAT: **POLYARMOR® MMC 8HR** can be coated with other VISURON TECHNOLOGIES, INC. epoxy and urethanes. If the **MMC 8HR** the recoat window limit (max 48 hours), the cured coating surface must be sanded with 100 grit sand paper or sanding screen installed on a swing-type floor buffer. Sand to a uniform dulled surface. Remove all sanding debris with a vacuum and damp mop. Scrub with detergent and rinse with clean water. Surface must be dry before coating.

READ MATERIAL SAFETY DATA SHEET (MSDS) FOR SAFETY AND PRECAUTIONS. USE PRODUCT AS DIRECTED. FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.

MAINTENANCE GUIDELINES:

Allow floor coating to cure at least one week before cleaning by mechanical means (IE: sweeper, scrubber, disc buffer).

CARE: Increased life of the floor will be seen with proper maintenance and will help maintain a fresh appearance of your new VISURON TECHNOLOGIES, INC. floor. Regularly sweep your new floor as ground in dirt and grit can quickly dull the finish thus decreasing the life of the coating. Spills should be removed quickly as certain chemicals may stain and can permanently damage the finish.
Only soft nylon brushes or white pads should be used on your new floor coating. Premature loss of gloss can be caused by hard abrasive bristle POLYARMORpylene (Tynex®) bushes.
Use only neutral non butyl cleaning detergents on your floor coating. Test any new cleaning product on a non-conspicuous area prior to using to avoid damage to the floor.
CAUTION: Heavy objects dragged across the surface will scratch all floor coatings. Avoid gouging or scratching the surface.
Pointed items or heavy items dropped on the floor may cause chipping or concrete pop out damage. Plasticizer migration from rubber tires can permanently stain the floor coating. If a rubber tire is planned to set on the floor for a long period of time, place a piece of acrylic sheet between the tire and the floor to prevent tire staining. Rubber burns from quick stops and starts from lift trucks can heat the coating to its softening point causing permanent damage and marking.
REPAIR: Repair gouges, chip outs, and scratches as soon as possible to prevent moisture and chemical under cutting and permanent damage to the floor coating.

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