REVÊTEMENTS
MPC
COATINGS

TECHNICAL DATA SHEET

MPC-180

MOISTURE VAPOR BARRIER COATING, FAST CURE

PRODUCT DESCRIPTION

MPC-180 is a 100% solids, two component fast curing epoxy coating designed for controlling moisture vapor emissions on new or deteriorated concrete floors. This rapid curing coating is recommended to be applied as a primer coat under cold and humid conditions or on damp and poorly prepared surfaces. When applied at a thickness of 18 mils., it exceeds ASTM F3010 product requirements for vapor permeance. This coating will withstand moisture vapor emission rates not exceeding 6% by Tramex method, with residual moisture up to 100% or 25lbs. /1000 ft²/24 hrs. when applied properly. This product is also approved for direct contact with potable water.

AREAS OF APPLICATION

Residential Use – Entrances and hallways; basements; entertainment rooms; bathrooms; kitchens and living rooms; outdoors spaces and pool outlines.

Commercial Use - Shopping malls and boutiques; Hotels; Offices; Showrooms; Restaurants; Hospitals; Schools; Community centers.

Industrial Use - Garages; Warehouses; Airports and hangars; Processing and manufacturing plants.

ENVIRONMENTAL APPROVALS/ CERTFICATES

- Meets CFIA and USDA requirements for indirect food contact / use in food plants.
- Suitable for contact with potable water.
- Conforms with LEEDv4 EQ credit: Low emitting materials SCAQMD Method 304-91 for architectural coatings.
- VOC content <100 g/L

PACKAGING AND RECOMMENDED THICKNESS

MPC- 180 is offered in the following kit sizes:
2-gallon kit 3.78L resin (A) and 3.78L hardener (B)
Bulk packaging also available upon request

Available in clear, and pre-tint grey.
Color pigment packs are offered in 16 oz jars (1 jars / 2-gallon kit)

Recommended Film Thickness / Coverage
Primer coat: 18 mils / 178 sq. ft. / per 2-gallon kit

PRODUCT PROPERTIES

Mix Ratio:	1 parts resin A / 1 part hardener B by vol.		
Viscosity: **ASTM D445-06**	Resin 900 -1100 cps Hardener 1500-2000 cps		
Solids by wt.:	100%		
Shelf Life:	1 year when stored in original, unopened packaging. Store dry at temperatures between 15°C to 30°C (59 °F to 86 °F). **Two-part epoxies may exhibit non-permanent, reversible crystallization when exposed to cold temperatures or temperature cycling during transit and storage.**		
Working time on substrate:	5-10 minutes 21°C / 70°F @50% relative humidity		
Curing Schedule	10°C (50°F)	20°C (68°F)	30°C (86°F)
Recoat (max. 48 hrs)	5-7 hrs.	3-5 hrs.	~3 hrs.
Foot traffic	8-12 hrs.	6-8 hrs.	4-6 hrs.
Vehicular traffic	24-36 hrs.	24 hrs.	18-24 hrs.
Full Chemical Cure	~10 days	~7 days	~5 days
Product Application:	Apply using a rubber squeegee and back roll using a fine quality 10mm roller to obtain a uniform coating. Clean equipment with appropriate solvent. Once the product has hardened, it may only be removed mechanically.		

Curing times are subject to variations determined by the ambient conditions, including air and substrate temperature, as well as relative humidity. It is imperative to shield the coating from moisture, condensation, and direct water exposure during the initial 24-hour curing period. If the recommended recoating time has exceeded 48 hours, it becomes necessary to sand the prior coat using a screed mesh to eliminate any glossy finish. Moreover, thorough cleaning by vacuuming is essential to eradicate any dust particles. The surface should exhibit a consistent matte appearance, entirely devoid of any gloss, following the cleanup process, before proceeding to apply the next coat.

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SURFACE PREPARATION

Remove dust, dirt, grease, oil, and all other contaminants with proper cleaner/degreaser. Prepare the surface mechanically as per ICRI-CSP2 profile by diamond grinding to ensure removal of laitance, curing agents and sealers. The compressive strength of a newly poured concrete substrate must be at least 25 MPA (3635 psi) after 28 days of cure and at least 1.5 MPA (218 psi) tensile strength. All cracks, holes and irregularities must be repaired with a crack filler prior to applying the coating.

MIXING INSTRUCTIONS

Empty container B (hardener) and container A (resin) into a large mixing pail. Mechanically mix the combined product for a maximum of 1 minute using a low-speed drill (300-450rpm) to reduce air entrapment and to obtain a homogeneous mixture. Once the product is mixed proceed to application instructions. **Do not let the product sit in container as it will rapidly start to react and cure.**

MIX A&B | LOW SPEED 1MIN MAX

TECHNICAL PROPERTIES

Abrasion Resistance, ASTM D4060	**Taber abraser CS-17 calibrase wheel 1000 cycles/ 1000 g = 0.11 gram loss**
Flexural Strength, ASTM D790	**12,500 psi**
Compressive Strength, ASTM D695	**10,000 psi**
Tensile strength, ASTM D638	**6,800 psi**
Pull-Off Strength, ASTM D7234	**> 363 psi (substrate failure)**
Permeability to Water Vapor, ASTM E-96	**0.06 g/m² 24hr mmHg**
Hardness, Shore D ASTM D2240	**80-85**
VOC, ASTM D2369	**<20 g/L**

PRODUCT RESTRICTIONS

- Not recommended for application at temperatures below 5°C / 41°F or above 30°C / 86°F. An application below/above these temperatures will result in decreased product workability and cure times.
- The substrate temperature must be at least 3°C (5.5°F) above measured dew point.
- **This coating is not a replacement for a waterproofing membrane.**
- **This coating does not protect against areas of high hydrostatic pressure.**
- Surface discoloration of products will occur upon prolonged exposure to UV rays.
- Exposure during the curing stage of the coating to the by-products of propane combustion may cause discoloration (amine blushing).

DISCLAIMER AND WARRANTY

MPC warrants that our products are free from manufacture defects in accordance with our quality control procedures. Any products proven defective are limited to the replacement of defective products or refund of the purchase price as determined by MPC. Please contact your local MPC sales representative for more information and warranty requirements.

The information and recommendations contained in this technical data sheet are based on reliable test results according to MPC. The data mentioned are specific to the material indicated. If used in combination with other materials, the results may be different. It is the responsibility of the user to validate the information therein and to test the product before using it. MPC assumes no legal responsibility for the results obtained in such cases. MPC assumes no legal responsibility for any direct, indirect, consequential, economic or any other damages except to replace the product or to reimbursement the purchase price, as set out in the purchase contract.

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