

Plexicoat MMA Crack Sealer

MMA Crack Sealer for Concrete

MMA4000/05

Product Data

Description

Plexicoat MMA Crack Sealer Plus is a very low viscosity, low surface tension, rapid curing, methacrylate reactive resin used to repair and seal cracks in concrete structures. Cracks ranging from hairline width to 1/8" are easily penetrated. Plexicoat MMA Crack Sealer Plus also protects sound concrete against water and chloride ion ingress. Plexicoat MMA Crack Sealer Plus is mixed with Plexicoat MMA Powder Hardener and applied to properly prepared concrete surfaces. Cure times of 35 - 45 minutes can be maintained at temperatures ranging from 14° F to 104° F. The cured resin creates a barrier against water and water-borne contaminants entering the substrate thus preventing premature deterioration. In comparison with conventional sealers, Plexicoat MMA Crack Sealer Plus is solvent-free, fast-curing, enabling rapid turnaround, weather and aging resistant and compatible with methacrylate coatings and wearing course materials.

Yield

All coverage rates are approximate. Coverage rates will vary with the desired texture and porosity of substrate. Typically, a batch of Plexicoat MMA Crack Sealer Plus will achieve a coverage rate of 100 square feet.

Packaging

MMA4000/05 4.5 gallon pail
MMA4000/55 50 gallon drum

Color

Bluish, slightly turbid

Shelf Life

One year when properly stored

Features

- Fast curing
- UV resistance
- Weather and aging resistant
- Two component technology
- Compatible with other Plexicoat methacrylate systems
- Protects against water and chloride ion ingress
- Can be used at temperatures ranging from 14 to 104° F

Benefits

- On highway and bridge projects, allows fast return of traffic flow, contributing directly to worker and driver safety
- Exposure to sunlight does not affect product performance
- Provides long-lasting service life
- User friendly; ease of installation; shelf life stable
- Prevents premature deterioration

Where to Use

- Bridge decks
- Parking structures
- Civil engineering applications
- Penetrating flood coat sealer to prevent moisture and ion ingress into substrate

Please refer to the Plexicoat Installation Guide or individual Plexicoat Systems data sheets for application instructions.

Every Plexicoat Flooring Systems is a multiple component system that utilizes a methyl methacrylate (MMA) resin. It is critical that the instructions listed in the Material Safety Data Sheet and on the product label for every component of the system be read, understood and followed. MMA resins are flammable liquids in their uncured state.

Smoking, open flames or sparks should not be permitted during the handling of the product.

Explosion safe ventilation must be used during the application to minimize vapor collection in the installation area and to improve overall air quality for the crew. All foodstuffs must be removed during installation of the flooring system.

Limitations

- Minimum installation temperature is 40°F for standard formulation, -20°F for winter formulation
- Maximum installation temperature is 104°F for standard formulation and 80°F for winter “W” formulation
- Surface must be completely dry prior to application
- Apply only in well-ventilated areas
- For horizontal use only
- For use in non-moving cracks only
- When used neat, maximum crack width is 1/8 in. Extended with clean, dry quartz aggregate, maximum crack width is 1/4 in. (0.6 cm).
- Plexicoat MMA Crack Sealer Plus is designed to penetrate, but will leave a slight gloss finish that will wear over time

Surface Preparation

Concrete must be sound, clean, completely dry, and free of all contaminants that could impair product adhesion or performance. All cracks larger than 1/8 in., spalls, voids, pitting, and surface imperfections must be repaired prior to coating installation. Concrete should be a minimum of 28 days old and fully cured prior to coating application. Prepare surface by abrasive blasting or other mechanical means per SSPC-SP13/NACE 6 and ICRI Guideline 310.2 CSP2-3. Do not water blast as the added moisture will limit penetration. Remove preparation debris by vacuum or oil-free compressed air. Inspect the structure for cracks wider than 1/8 in. but less than 3/16 in. and treat by filling with clean, dry quartz aggregate and saturate with Plexicoat MMA Crack Sealer Plus, taking care to protect areas below elevated decks as Plexicoat MMA Crack Sealer Plus may penetrate through. Cracks wider than 3/16 in. but less than 1/4 in. should be filled with Plexicoat Flex Membrane Resin. Larger cracks require the use of an appropriate joint sealant such as Plexicoat FlexPatch.

Mixing

For optimal product performance, condition individual components to 70°F prior to use. Do not prepare more material than can be used in the pot life of the product. To the Plexicoat MMA Crack Sealer Plus add the appropriate amount of Powder Hardener and mix thoroughly with a low-speed (300–600 rpm) drill and mixing paddle for 30 seconds to 1 minute or until Powder Hardener is fully dissolved. Immediately apply.

Application

Pour properly mixed Plexicoat MMA Crack Sealer Plus onto surface to be treated and spread evenly with a squeegee, roller or brush. Do not allow the mixed batch to remain in the mixing vessel. Continue to work material to ensure all voids and cracks are filled, taking care not to leave puddles. While material is still wet, broadcast clean, dry quartz aggregate at the rate of 4 lb. per 100 ft.².

Physical Data

Color	Clear with bluish tint
Components	Resin plus Plexicoat MMA Powder Hardener
Recommended Thickness	10 – 12 mils
Coats	One
VOC	None

Application Data

Applied over	concrete
Primer	self priming
Method	Brush, Roller or Broom
Pot Life	7 – 15 minutes
Min Recoat	30 – 60 minutes
Max Recoat	none
Cure Time	60 minutes (full cure)
Temperature	14°F – 104°F See mixing chart
Clean Up	Plexicoat MMA Prep Cleaner

Typical Properties after 60 minutes

Percentage of Reative Resin	100%
Water Absorbtion (%24 hours) (ASTM D570)	0.60
Tensile Strength (ASTM D638)	4350 psi
Elongation @ Break (ASTM D638)	>12%
Compressive Strength (ASTM D638)	12800 psi
Flexural Strength (ASTM D2393)	11550 psi
Hardness (Shore D) (ASTM D2240)	>80
Viscosity (ASTM D2392)	5 - 15 cps

Bond Test

A bond test should be conducted to determine the adequacy of the surface preparation and the bond to substrate before proceeding with the application of the primer to the entire area. The bond of the primer to the substrate should be greater than the tensile strength of the substrate itself (adhesive bond of Plexicoat System to concrete should be stronger than cohesive bond of concrete itself); therefore, there should be fractured aggregate along the entire patty. If only a fine laitance or small amount of concrete is attached, additional mechanical preparation is required. The exact procedure for performing the bond test can be found in the sheet titled "The Bond Test," provided by Plexicoat.

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