

## PRODUCT DESCRIPTION

MC 9000 is a pure cement BASED blend of specialty aggregates and admixtures providing a rapid setting, high strength, durable concrete repair for use on airport runways, taxiways, concrete floors, highway pavements, livestock building floors and walls, bridge decks and other applications requiring early resumption of traffic or use. Unique non-slump formula. Formulated to meet the requirements of ASTM C928 Packaged, Dry, Rapid Hardening Cementitious Material for Concrete Repair.

MC 9000 is pre-mixed, requiring only the addition of potable water. This unique mortar provides outstanding results and enables the project to be completed more rapidly than with conventional patching & repair materials.

## INDUSTRY USES

MC 9000 is excellent for all types of concrete repair applications: bridge decks, concrete pavements, concrete joints, airport runways, livestock building floors and walls, industrial floors, loading docks, general concrete, dowel bar retrofit, pre-stressed and precast. MC 9000 is specifically designed for those applications requiring very rapid strength gain.

## FEATURES/BENEFITS

- Made in USA
- High early strength – open to traffic in 3 hours
- Extremely dense; Low permeability
- Non-corrosive
- Thermally compatible
- Increased durability and freeze-thaw resistance; excellent adhesion; improves flexural strength
- Aggregate extension: Up to 60 % on repairs greater than 2" (use clean dry pea gravel or small rock)
- Meets ASTM C 928: Specification for Very Rapid Hardening Cementitious Repair Materials
- Shrinkage compensation minimizes cracking from drying shrinkage
- Ready to use; easily mixed with water on the job-site
- Use with MC Acrylic Resin for increased bond and to minimize absorption (See MC Acrylic Resin data sheet)

## COVERAGE

Technical Data	
Laboratory Tests	Results
Initial Set time @ 72°F	45-60 minutes
Final Set time @ 72°F	70-90 minutes
Working time @ 72°F	45 minutes
Application temperature range	40°-90°F (4.4°-32°C)
Bond Strength	24 hours: 1500 psi (10MPa)
Length Change - Dry shrinkage	-0.12%
Compressive Strength:	3 hrs 3500 psi (24.1MPa)
ASTM C 109	1 day 5200 psi (35.0 MPa)
	28 days 8500 psi (58.0 MPa)

Approx. 0.45ft<sup>3</sup>/50 lb. bag

0.60ft<sup>3</sup>/50 lb. bag with 50 % extends on of 3/8" pea gravel.

## PACKAGING

50 lb./22.7 kg bag  
 50 lb./22.7 kg bag in pail (24/pallet)  
 3000 lb. bulk bags

**Shelf Life:** 1 year in original unopened container

**Storage Conditions:** Store in unopened container in a dry and cool area Application Temperature Range: 40°F – 90°F (5°C – 32°C).

## INSTRUCTIONS FOR USE

### MIXING

Use MC 9000 at a preconditioned temperature of 71 ± 5° F (22 ± 3°C). Use 4.75 – 5.25 (2.25 – 2.48L) pints of water per 50lb (27.2kg) bag. Mixing must be achieved mechanically using a slow-speed, ¾ inch (19mm) drill and mixing paddle. Mix while slowly adding the powder to the water or mixing liquids. Mix smaller batches for small repairs or repairs in tight areas. Mix up to 4 minutes to a uniform lump-free consistency. Avoid over mixing which could entrap air.

### APPLICATION

**Surface Preparation** (See ICRI guidelines)

1. Concrete must be sound and fully cured (28 days).
2. Saw cut the perimeter of the area being patched into a square with a minimum depth of 1/2" (12.5 mm).
3. Remove all unsound concrete and roughen the surface to min. 1/4" profile amplitude.
4. Remove all laitance, oil, grease, curing compounds, and other contaminants that could prevent adequate bond.
5. The concrete substrate should be saturated surface-dry (SSD), without standing water, before application.
6. Apply the mixed material onto the prepared saturated surface-dry (SSD) substrate by trowel or screed. Ensure proper consolidation of the mortar and compaction around reinforcing steel. Minimum application thickness is 1/2" based on a 3/8" max. coarse aggregate. Finish the completed repair, as required, taking care not to overwork the surface.
7. For repairs over 2" deep the material should be extended 50 % by weight with clean, SSD, 3/8" pea gravel conforming to ASTM C 33.
8. For enhanced bond and to minimize absorption, use MC Acrylic Resin (see data sheet).

### Reinforcing Steel

Remove all oxidation and scale from the exposed reinforcing steel in accordance with ICRI Technical Guideline No. 03730 "Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion."

### CLEAN UP

Clean tools and equipment with clean water immediately after use. Cured material must be removed mechanically.

**LIMITATIONS/WARNINGS**

- Apply only when the surface and ambient temperature are 45-50° F (7-10°C) and rising. See Cold Weather Application guidelines, per ACI, for applications in temperatures less than 50°F (10°C)
- Applications made during temperatures greater than 85°F (29°C) should follow Hot Weather Application guidelines, per ACI.
- The minimum required thickness is 1/2 inch (12.6mm) for best results. Do not add more water than specified.
- Do not add additional powder from other units. Do not over mix or retemper.
- Applying less than . inch reduces the ultimate strength of the mortar

**CAUTION****Safety Considerations**

- Use adequate ventilation.
- Use of NIOSH/MSHA approved dust vapor respirator, safety goggles and protective gloves are recommended.

**First Aid**

**EYE CONTACT:** Flush immediately with water for at least 15 minutes. Contact physician immediately.

**RESPIRATORY CONTACT:** Remove person to fresh air. If the discomfort persists, breathing difficulty occurs, or if swallowed seek medical attention.

**SKIN CONTACT:** Remove any contaminated clothing. Wash skin thoroughly with soap and water. If irritation persists, seek medical attention.

**KEEP CONTAINER TIGHTLY CLOSED – KEEP OUT OF REACH OF CHILDREN – NOT FOR INTERNAL CONSUMPTION – FOR INDUSTRIAL USE ONLY**

Limited Warranty: Subject to the conditions and limitations stated below, M-Chem Solutions LLC ("M-Chem") warrants this product to be free from manufacturing defects for a period of one (1) year from the date of purchase of the product. As conditions of this limited warranty, you may be required. At the option of M-Chem to provide proof of product purchase and use. **DISCLAIMER:** THIS LIMITED WARRANTY IS GIVEN IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES BASED ON SAMPLES OR ORAL STATEMENTS, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. **IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED.** **EXCLUSIVE REMEDY:** The sale and exclusive remedy for a breach of this limited warranty is replacement of the M-Chem product that is proven defective. In the event this sole and exclusive remedy fails of its essential purpose, the liability of M-Chem is limited to return of the original purchase price. **EXCLUSION:** M-Chem is not responsible for workmanship not in accordance with M-Chem instructions and industry standard guidelines. **M-Chem IS NOT LIABLE FOR ANY INCIDENTAL DAMAGES OR CONSEQUENTIAL DAMAGES, INCLUDING LOSSES DUE TO DELAYS, INCURRED BY THE PURCHASER OR ANY OTHER PARTY.**