

EUCO-SPEED MP

MAGNESIUM PHOSPHATE PATCHING MORTAR



DESCRIPTION

EUCO-SPEED MP is a rapid setting, very rapid hardening magnesium phosphate material for patching and repair of concrete and masonry surfaces. EUCO-SPEED MP requires only the addition of water and can be installed with standard tools, equipment and procedures. It bonds tenaciously to properly prepared concrete and provides a durable patch which is resistant to freeze/thaw cycling and deicing salts. For temperatures above 85°F (29°C), EUCO-SPEED MP Hot Weather should be used. For large placements use EUCO-SPEED MP HOT WEATHER extended with pea gravel.

PRIMARY APPLICATIONS

- Bridge decks
- Parking garages
- Walls (formed)
- Marine structures
- Ramps
- Floors
- Pavements
- Joint repairs

FEATURES/BENEFITS

- Rapid setting for quick repairs in less than one hour
- Extremely high early strength for quick turnaround time
- Easy to use one part system
- Suitable for both interior and exterior applications
- Durable under freeze/thaw cycling and salt exposure
- Versatility in thickness from 1/2" (13 mm) to 8" (203 mm) when extended with aggregate
- May be placed and cured at 0°F (-17°C)
- ▲ Can contribute to LEED points

TECHNICAL INFORMATION

Typical Engineering Data*

Compressive Strength ASTM C 109, 2" (50 mm) cubes @72°F (22°C)

Age	Strength
2 hours	3,500 psi (24 MPa)
3 hours	5,000 psi (35 MPa)
6 hours	5,500 psi (38 MPa)
1 day	6,000 psi (41 MPa)
3 days	6,500 psi (45 MPa)
7 days	7,000 psi (48 MPa)
28 days	7,500 psi (52 MPa)

Flexural Strength ASTM C 78

4 hours	400 psi (2.8 MPa)
3 days	500 psi (3.4 MPa)
28 days	-0.07%
56 days	-0.08%

Bond Strength ASTM C 882 (modified)

3 hours	1,000 psi (7 MPa)
1 day	1,300 psi (9 MPa)
3 days	1,500 psi (10 MPa)
7 days	1,600 psi (11 MPa)
28 days	1,700 psi (12 MPa)

Freeze/Thaw Resistance ASTM C-666 Procedure A*
500 Cycles..... 93% relative dynamic modulus

Wheel Traffic 1 to 2 hours

Setting Time (Gillmore Needles)

Initial Set 8 to 12 min.

Final Set 12 to 20 min.

* All testing was conducted on neat material under controlled laboratory conditions. Do not expect similar compressive strength results using cylinder type molds. Also, strengths will be affected by the amount and type of aggregate added to extend EUCO-SPEED MP.

EUCO-SPEED MP is a free flowing powder as packaged. After mixing and placing, the color may initially appear slightly darker than the surrounding concrete. While this color will lighten up substantially as the concrete cures and dries out, the repair may always appear somewhat darker than the surrounding concrete.

PACKAGING/YIELD

EUCO-SPEED MP is available in 50 lb (22.7 kg) bags or pails. **Yield:** Approximately 0.42 ft³ (0.012 m³) of mortar when mixed with 0.45 gal (1.7 L) of water. For areas deeper than 1" (25.4 mm), EUCO-SPEED MP must be extended with up to 30 lb (13.6 kg) of 3/8" (9.5 mm) pea gravel*. Yield will increase to approximately 0.57 ft³ (0.016 m³) per unit.* Use only dust free, properly graded hard aggregate. **Never extend EUCO-SPEED MP with limestone or aggregate containing limestone.**

SHELF LIFE

1 year in original, unopened package.

EUCO-SPEED MP
Magnesium Phosphate Patching Mortar

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SPECIFICATIONS/COMPLIANCES

ASTM C928, Standard Specifications for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repair.

COVERAGE

One unit of EUCO-SPEED MP will cover approximately 10 ft² (0.93 m²) when placed at an average depth of 1/2" (13 mm). When one unit of material is extended with 30 lb (13.6 kg) of 3/8" (9.5 mm) pea gravel, the mixed material will cover 13.7 ft² (1.3 m²) when placed at an average depth of 1/2" (13 mm).

DIRECTIONS FOR USE

Surface Preparation: The surface must be prepared mechanically, exposing coarse aggregate, giving a surface profile of a minimum 1/8" (3 mm) with all oil and unsound concrete removed. The final step in cleaning should be the complete removal of all residue with a vacuum cleaner or pressure washing.

Joints and Edges: Edges should be sawcut to 1/4" (6 mm) deeper than the patch thickness and should be notched at the edge of the repair to provide a locked in, reinforced edge. Moving joints as in the case of expansion joints should be brought up through the repair by sawcutting or with the use of a divider strip.

Bonding: EUCO-SPEED MP requires no bond coat.

Mixing: Small quantities may be mixed with a drill and "jiffy" mixer. Use a paddle type mortar mixer for large jobs. Add the appropriate amount of water for the batch size and then add the EUCO-SPEED MP. **The amount of water to be mixed with EUCO-SPEED MP is critical. Add between 0.4 to 0.5 gal (1.5 to 1.9 L) of water per 50 lb (22.7 kg) unit.** Mix material for about 2 minutes. The mixed material should be quickly transported to the repair area and placed immediately. For patches greater than 1" (25 mm) in depth, pea gravel must be used. Add the pea gravel [up to 30 lb (13.6 kg)] after the neat material has mixed, then mix for an additional 1 minute. In hot weather, 85°F+ (29°C+) the use of EUCO-SPEED MP HOT WEATHER is recommended. For large placements regardless of the temperature, EUCO-SPEED MP HOT WEATHER is recommended along with the use of cold water to extend setting time.

Placement: EUCO-SPEED MP requires a minimum depth of 1/2" (13 mm). Spread with a trowel, screed, come-a-long or square tipped shovel to a thickness that matches the surrounding concrete. EUCO-SPEED MP sets quickly, the time available for placement and finishing will be very limited.

Finishing: Finish EUCO-SPEED MP to the desired float or broom finish texture. Do not add additional water to the surface during the finishing operation.

Curing and Sealing: EUCO-SPEED MP is self-curing. Never wet cure this product.

CLEAN-UP

Clean tools and equipment with water before the material hardens.

PRECAUTIONS/LIMITATIONS

- The curing of EUCO-SPEED MP is a chemical reaction that gives off heat. Mixed and placed material must be maintained at or below 140°F (60°C) if satisfactory results are to be expected.
- Do not add sand or cement.
- Do not place EUCO-SPEED MP on an ice covered substrate.
- When mixing in an enclosed area, provide adequate ventilation.
- Do not featheredge.
- For patches deeper than 1" (25 mm), pea gravel must be used to extend the product.
- No heavy traffic until the product has reached a minimum of 2000 psi (13.8 MPa).
- Do not wet cure.
- Field testing of EUCO-SPEED MP should only be performed after consulting The Euclid Chemical technical department.
- Do not place over carbonated concrete. All carbonation must be removed to assure a good bond.
- In all cases, consult the Material Safety Data Sheet before use.

WARRANTY: The Euclid Chemical Company ("Euclid") solely and expressly warrants that its products shall be free from defects in materials and workmanship for one (1) year from the date of purchase. Unless authorized in writing by an officer of Euclid, no other representations or statements made by Euclid or its representatives, in writing or orally, shall alter this warranty. EUCLID MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. If any Euclid product fails to conform with this warranty, Euclid will replace the product at no cost to Buyer. Replacement of any product shall be the sole and exclusive remedy available and buyer shall have no claim for incidental or consequential damages. Any warranty claim must be made within one (1) year from the date of the claimed breach. Euclid does not authorize anyone on its behalf to make any written or oral statements which in any way alter Euclid's installation information or instructions in its product literature or on its packaging labels. Any installation of Euclid products which fails to conform with such installation information or instructions shall void this warranty. Product demonstrations, if any, are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining the suitability of Euclid's products for the Buyer's intended purposes.