



EUCLID CHEMICAL

EUCO-SPEED MP

MAGNESIUM PHOSPHATE REPAIR MORTAR

DESCRIPTION

EUCO-SPEED MP is a rapid-setting, rapid hardening, magnesium phosphate material used to repair concrete and masonry surfaces. EUCO-SPEED MP requires only the addition of water and can be installed with standard equipment and procedures. It bonds tenaciously to properly prepared concrete and provides a durable repair which is resistant to freeze-thaw cycles 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
- Hand rail grouting
- Marine structures
- Anchoring
- Floors
- Pavements
- Joint repairs

FEATURES/BENEFITS

- Rapid-setting for quick turnaround
- Suitable for both interior and exterior applications
- Durable under freeze-thaw cycles and salt exposure
- Versatility in thickness from 1/2" (12 mm) to 8" (20 cm) when extended with aggregate
- May be placed down to 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)
1 day	6,000 psi (41 MPa)
7 days	7,000 psi (48 MPa)
28 days	7,500 psi (52 MPa)

Flexural Strength ASTM C 78

7 days	400 psi (2.8 MPa)
28 days	500 psi (3.4 MPa)

Freeze/Thaw Resistance ASTM C-666 Procedure A
500 Cycles..... 90% relative dynamic modulus

Bond Strength ASTM C 882 (modified)

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

Wheel Traffic approx. 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.

Appearance: 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

SPECIFICATIONS/COMPLIANCES

ASTM C 928, Standard Specifications for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repair
Canadian Food Inspection Agency, MTQ, MTO

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: Concrete surfaces must be structurally sound, free of loose or deteriorated concrete and free of dust, dirt, paint, efflorescence, oil and all other contaminants. Mechanically abrade the surface to achieve a surface profile equal to CSP 5-7 in accordance with ICRI Guideline 310.2. Properly clean profiled area.

Priming: Clean and prime exposed steel using a spray or brush coat of DURAPREP A.C.

Bonding: EUCO-SPEED MP requires no bond coat.

Mixing: Single bags 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 as close to the repair site as possible. Quickly place in the repair area and float 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 1 additional minute. In hot weather, greater than 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; no curing is needed for this product.

CLEAN-UP

Clean tools and equipment with water before the material hardens.

PRECAUTIONS/LIMITATIONS

- DUE TO THE CHEMICAL NATURE OF EUCO-SPEED MP, DO NOT LET IT COME IN CONTACT WITH GALVANIZED STEEL.
- Do not overwater.
- As EUCO-SPEED MP cures, a chemical reaction generates excessive heat. Mixed material must be maintained at or below 180°F (82°C) if satisfactory results are to be expected.
- Although EUCO-SPEED MP may be used down to 0°F (-17°C), the material must be stored at a room temperature of 60°-70°F (16°-21°C) for at least 24 hours prior to use.
- Do not add sand or cement.
- Do not place EUCO-SPEED MP over an ice covered substrate.
- When mixing in an enclosed area, provide adequate ventilation.
- Do not featheredge.
- For repairs 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 2,000 psi (13.8 MPa).
- Do not place over carbonated concrete. All carbonation must be removed to assure a good bond.
- In all cases, consult the Safety Data Sheet before use.

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