

MasterEmaco® T 1060

Very rapid-setting cement-based concrete repair mortar

FORMERLY 10-60 RAPID MORTAR

PACKAGING

MasterEmaco T 1060
50 lb (22.6 kg) polyethylene-lined bags
3,000 lb (1,360 kg) bulk bags

MasterEmaco T 1060DR
50 lb (22.6 kg) polyethylene-lined bags

YIELD

0.43 ft³ (0.012 m³) per 50 lb (22.6 kg)
- WHEN EXTENDED 50%:
0.57 ft³ (0.016 m³)
- WHEN EXTENDED 100%:
0.77 ft³ (0.022 m³)

STORAGE

Store in unopened containers in cool, clean, dry conditions

SHELF LIFE

- 50 LB BAGS:
1 year when properly stored
- 3,000 LB BULK BAGS:
6 months when properly stored

VOC CONTENT

0 g/L less water and exempt solvents

DESCRIPTION

MasterEmaco T 1060 is a one-component, shrinkage-compensated, very rapid-setting, cement-based mortar. It is designed for repairing horizontal concrete surfaces where high early strength gain is required. MasterEmaco T 1060DR is a reduced dust version available separately.

PRODUCT HIGHLIGHTS

- Extra low permeability helps minimize chloride intrusion
- Very rapid-setting so that structures can be opened to vehicular traffic in 1 hour
- Low residual moisture, can be coated in as little as 4 hours
- Excellent resistance to freeze/thaw cycling
- Shrinkage-compensated, minimizing cracking from drying shrinkage, reducing stress at the bond line
- Can be extended up to 100% by weight, providing higher yields
- Proprietary cement blend bonds to carbonated and noncarbonated concrete substrates

APPLICATIONS

- Interior and exterior
- Horizontal surfaces
- Applications requiring high early-strength gain
- Structural concrete repairs
- Partial and full-depth repairs

SUBSTRATES

- Concrete

HOW TO APPLY

SURFACE PREPARATION CONCRETE

1. Concrete must be structurally sound and fully cured (28 days).
2. Saw cut the perimeter of the area being repaired into a square with a minimum depth of ½" (13 mm).
3. Refer to current ICRI Guideline no. 310.2R for surface prep requirements to permit proper bond.

REINFORCING STEEL

1. Remove all oxidation and scale from the exposed reinforcing steel in accordance with ICRI Technical Guideline No. 310.1R.
2. For additional protection from future corrosion, coat the prepared reinforcing steel with MasterProtect P 8100 AP.

Technical Data

Composition

MasterEmaco T 1060 is a blend of cement, graded aggregate, shrinkage-compensating agents, and set-control additives.

MasterEmaco T 1060DR is a blend of cement, graded aggregate, shrinkage-compensating agents, set-control and dust reducing additives.

Compliances

- ASTM C 928

Test Data

The following results were obtained with a water / powder ratio of 5.5 pints (2.6 L) of water to 50 lbs (22.7 kg) of MasterEmaco T 1060 and MasterEmaco T 1060DR at 73 °F (23 °C).

| PROPERTY | RESULTS | TEST METHOD |
|--|---|-----------------------------------|
| Fresh wet density , lb/ft ³ (kg/m ³) | 130 (2,082) | ASTM C 138 |
| Set time , min, at 72 °F (22 °C) | | ASTM C 191 |
| Initial | 16 | |
| Final | 28 | |
| Working time , min | 8 | |
| Length change , % (μstrain) | | ASTM C 928 |
| Drying shrinkage | -0.05 (-500) | |
| Wetting expansion | +0.03 (+300) | |
| Coefficient of thermal expansion , in/in/°F (cm/cm/°C) | 7.0 x 10 ⁻⁶ (12.6 x 10 ⁻⁶) | CRD C 39 |
| Modulus of elasticity , psi (GPa) | 4.4 x 10 ⁶ (19.5) | ASTM C 469 |
| Rapid chloride permeability , coulombs | < 300 | ASTM C 1202 |
| Freeze/thaw resistance , % RDM, at 300 cycles | 100 | ASTM C 666, (Procedure A) |
| Scaling resistance , at 25 cycles | 0 rating; no scaling | ASTM C 672 |
| Slant shear bond strength , psi (MPa) | | ASTM C 882, modified ¹ |
| 1 day | 2,300 (16) | |
| 28 days | 2,600 (18) | |
| Splitting tensile strength , psi (MPa) | | ASTM C 496 |
| 1 day | 400 (3) | |
| 28 days | 450 (3) | |
| Flexural strength , psi (MPa) | | ASTM C 348 |
| 1 day | 700 (5) | |
| 28 days | 850 (6) | |
| Compressive strength , psi (MPa), 2" cubes | | ASTM C 109 |
| 1 hr | 2,000 (14) | |
| 1 day | 4,000 (28) | |
| 28 days | 8,000 (55) | |
| Compressive strength , psi (MPa), 3 by 6" cylinders, at 28 days | 7,400 (51) | ASTM C 39 |
| Dust Reduction , % MasterEmaco T 1060DR vs. control | 75% | DIN 55992-2 |

¹No bonding agent used; mortar scrubbed into substrate.

All application and performance values are typical for the material, but may vary with test methods, conditions, and configurations.

MIXING

1. Precondition material to 70 °F ±5° (21 °C ±3°) before mixing.
2. Add 5½ pints (2.6 L) of potable water to the mixing container for each bag of MasterEmaco T 1060. If required, add the correct amount of aggregate to the mixer. Add the powder to the water while continuously mixing with a slow-speed drill and paddle, mortar mixer, or other forced action mixer.
3. Mix for a minimum of 3 minutes until fully homogeneous.

AGGREGATE EXTENSION

1. For repair areas 2–4" (51–102 mm) in depth, the minimum recommended addition is 15–25 lbs (6.8–11.4 kg) of ¾" (10 mm) washed, graded, rounded, SSD, low-absorption, high-density aggregate per 50 lb (22.6 kg) bag.
2. For areas greater than 4" (102 mm) in depth, the minimum recommended addition is 25–50 lbs (11.4–22.6 kg) of ¾" (10 mm) washed, graded, rounded, SSD, low-absorption, high-density aggregate per 50 lb bag.
3. The maximum aggregate extension is 50 lbs (22.6 kg) of pea gravel per bag.
4. Aggregate must comply with the requirements of ASTM C 33.

APPLICATION

1. After removing all standing water, thoroughly scrub a thin layer of bond coat into the saturated surface with a stiff-bristled broom or brush. Do not dilute the bond coat with water. Do not apply more of this bond coat than can be covered with mortar before the bond coat dries. Do not retemper the bond coat.
2. Immediately place the repair mortar from one side of the prepared area to the other. Work the material firmly into the bottom and sides of the patch to ensure good bond. Level the MasterEmaco T 1060 and screed it to the elevation of the existing concrete. Apply the appropriate finish.
3. Finish the completed repair, as required, taking care not to overwork the surface.
4. The recommended application range of MasterEmaco T 1060 is from 40 to 85 °F (4 to 29 °C). Follow ACI 305 and 306 for hot or cold weather.
5. A maximum of 15 minutes should be allowed to mix, place, and finish MasterEmaco T 1060 at 70 °F (21 °C).

CURING

Cure with an approved curing compound compliant with ASTM C 309 or preferably ASTM C 1315. Alternative curing options include application of a fine mist of water, wet burlap, or polyethylene sheeting for a minimum of 2 days.

CLEAN UP

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

FOR BEST PERFORMANCE

- Minimum ambient, surface, and material temperature is 40 °F (4 °C) and rising.
- Do not mix longer than 5 minutes.
- Minimum application thickness is ½" (13 mm).
- Neat MasterEmaco T 1060 can be applied to a minimum of ¼" (6 mm) if intended for use under deck membranes on balconies subject to pedestrian traffic.
- Consult coating supplier for overcoating requirements.
- Do not mix partial bags.
- Do not add plasticizers, accelerators, retarders, or other additives.
- For professional use only; not for sale to or use by the general public.
- Make certain the most current versions of product data sheet and SDS are being used; visit www.master-builders-solutions.BASF.us to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

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