

MasterEmaco® T 1060C

Very Rapid-Setting Cement-Based Concrete Repair Mortar

FORMERLY 10-60 C RAPID MORTAR

PACKAGING

2,500 lb (1,134 kg) bulk bags

YIELD

3.3 yd³ (2.5 m³) per 2,500 lb (1,134 kg) bulk bag, when mixed with the recommended amount of aggregate

STORAGE

Store in unopened containers in cool, clean, dry conditions

SHELF LIFE

- 2,500 LB BULK BAGS
3 MONTHS WHEN PROPERLY STORED

VOC CONTENT

0 g/L less water and exempt solvents

DESCRIPTION

MasterEmaco T 1060 C is a proprietary blend of cements and chemical additives. This concentrate is mixed with aggregate on site and used for large scale horizontal concrete repairs that require high early strength gain.

PRODUCT HIGHLIGHTS

- Fine and coarse aggregate are added locally
- 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
- 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 C is a proprietary blend of cement, shrinkage-compensating agents, and set-control 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 20 lbs (9.1 kg) of MasterEmaco T 1060 C and 30 lbs (13.6 kg) fine aggregate 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)	
2 hrs	3,000 (21)	
1 day	6,500 (45)	
28 days	8,000 (55)	
Compressive strength , psi (MPa), 3 by 6" cylinders, at 28 days	7,400 (51)	ASTM C 39

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. Conduct mixing in a mobile mix truck. Free-fall transit trucks are not recommended.
3. Typical mixing proportions are 750 lbs (340 kg) of MasterEmaco T 1060 C, 1,150 lbs (522 kg) of fine aggregate, 1,800 lbs (816 kg) of coarse aggregate, and 25 gallons (95 L) of water. Additional water may be added, but the total amount of water used should not exceed 30 gallons (114 L). Reduce the addition of mixing water to account for moisture content of aggregate.
4. Conduct field trials to verify proper slump, yield, and a thoroughly mixed product.

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 C 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 C 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 C at 70 °F (21 °C).
6. Minimum application thickness is 1½" (38 mm).

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

- When placing large quantities of MasterEmaco T 1060 C, use a suitable mobile mixer. Contact Technical Service for additional information.
- Minimum ambient, surface, and material temperature is 40 °F (4 °C) and rising.
- Minimum application thickness is 1½" (38 mm).
- Consult coating supplier for overcoating requirements.
- Do not mix partial bulk 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.com/en-us to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by Master Builders Solutions personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.com/en-us, e-mailing your request to mbsbscst@mbcc-group.com or calling +1 (800) 433-9517. Use only as directed.

IN CASE OF EMERGENCY: Call CHEMTEL +1 (800) 255-3924 or if outside the US or Canada, +1 (813) 248-0585.

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