

MasterEmaco[®] T 1061

Rapid-setting cement-based concrete repair mortar with extended working time

FORMERLY 10-61 RAPID MORTAR

PACKAGING

MasterEmaco T 1061
 50 lb (22.6 kg) polyethylene-lined bags
 2,500 lb (1,134 kg) bulk bags

MasterEmaco T 1061DR
 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
- 2,500 LB BULK BAGS:
6 months when properly stored

VOC CONTENT

0 g/L less water and exempt solvents

DESCRIPTION

MasterEmaco T 1061 is a one-component, shrinkage-compensated, cement-based mortar with an extended working time. It is designed for repairing horizontal concrete surfaces. MasterEmaco T 1061DR is a reduced dust version available separately.

PRODUCT HIGHLIGHTS

- Extended working time
- Extra low permeability helps minimize chloride intrusion
- Rapid-setting for quick turn-around repairs
- Low residual moisture, can be coated in as little as 6 hours
- Excellent resistance to freeze/thaw cycling
- Shrinkage compensated, minimizing cracking from drying shrinkage, reducing stress at the bond line
- Can be placed neat up to 2" (50 mm) thickness
- 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. Substrate 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 1061 is a proprietary blend of cement, graded aggregate, shrinkage-compensating agents, and set-control additives.

MasterEmaco T 1061DR is a proprietary 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 1061 and MasterEmaco T 1061DR at 73 °F (23 °C).

PROPERTY	RESULTS	TEST METHOD
Fresh wet density, lb/ft³ (kg/m³)	130 (2,082)	ASTM C 138
Set time, min, at 72 °F (22 °C)		ASTM C 191
Initial	50	
Final	80	
Working time, min	25	
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)	6.8 x 10 ⁻⁶ (12.6 x 10 ⁻⁶)	CRD C 39
Modulus of elasticity, psi (GPa)	4.6 x 10 ⁶ (32)	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
3 hr	3,000 (21)	
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 1061DR 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 1061. 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 1061 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 1061 is from 50 to 85 °F (10 to 29 °C). Follow ACI 305 and 306 for hot or cold weather.
5. A maximum of 25 minutes should be allowed to mix, place, and finish MasterEmaco T 1061 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 50 °F (10 °C) and rising.
- Do not mix longer than 5 minutes.
- Minimum application thickness is ½" (13 mm).
- Neat MasterEmaco T 1061 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.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 not for supervising or providing quality control on the jobsite.

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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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