

MORTAR-Crete-CI FULL DEPTH

Fully extended, pourable/pumpable, concrete mix with integral corrosion inhibitor

CSI Div. 03

03 01 00 Maintenance of Concrete

LEED Points

MR Credit 5.1, Regional Materials.....Up to 2 Points
 IEQ Credit 4.2, Low-Emitting Materials Paints and Coatings... 1 Point
Using this AQUAFIN product can help contribute to LEED certification of projects in the categories shown above.

Product Description:

MORTAR-Crete-CI is a one-component, high early strength, cementitious, structural repair concrete mix that is pourable and pumpable for full depth applications. A unique formulating design allows for application to be completed in depths from 1" (25.4 mm) to full depth (with proper steel reinforcement).

Typical Applications:

- Interior or exterior restoration work to new and existing structures
- Water and waste water treatment plants
- Bridges, highways, ramps and decks
- Tunnels, dams, industrial floors, etc.
- Footings, foundations, walls and floors
- Walkways, patios, steps, platforms and driveways

Advantages:

- Factory blended, quality controlled mix design
- Excellent workability with long application time
- Very easy to use on "form and pour" applications
- Ready to use, just add water
- Pre-extended with coarse aggregate: Eliminates risk of reactive aggregate.

Substrate Preparation:

- Concrete surfaces must be structurally sound, and free from laitance, dirt, dust, grease, oil, sealers, curing compounds, loose or deteriorated concrete and any other bond inhibiting foreign substances.
- Prepare surface by mechanical means to obtain a surface profile of CSP 5 - CSP 7 per ICRI Guideline No.310.2R-2013, Selecting and Specifying concrete surface preparation for Sealers, Coatings and Polymer Overlays and Concrete Repair.
- Concrete surfaces must be left in a saturated surface dry (SSD) condition with no standing water immediately prior to the application of MORTAR-Crete-CI.
- Repair areas should have saw-cut straight edges with a minimum of 3/8" (10 mm) depth.

Priming:

- All exposed steel reinforcement must be cleaned to a white metal finish and primed with 2 coats (20 mils per coat) of Aquafin REBAR PRIMER/BOND-CI (consult technical datasheet).
- Concrete should be primed with a spray or brush coat of Aquafin REBAR

Technical Properties:	
Meets or exceeds the requirements of ASTM C-387	
Physical state	Powder
Color	Gray
Initial Slump ASTM C-143	5" - 7"
Air Content ASTM C 231	3.5% Air shown is for lab samples mixed by hand. When materials are machine mixed, expect air content of 6% ± 1 1/2 %.
Compressive Strength ASTM C 39**	1 day: ~2,300 psi (13.8 MPa) 7 days: ~3,750 psi (27 MPa) 28 days: ~5,000 psi (38 MPa)
Length Change ASTM C 157	< -0.06% @ 28 days air cure +0.009% @ 28 days wet cure
Flexural Strength ASTM C 78	~750 psi @ 28 days
Slant Shear ASTM C 882	~2,500 psi @ 28 days
Application Time	~60 minutes
All data are average values obtained under laboratory conditions of 72°F and 50% RH. In practical use temperature, humidity and absorbance of the substrate may influence the above given values. ** Material mixed with potable water consistent to achieve a 5" slump @ 45°F and kept moist while curing will attain a compressive strength of 5,500 psi in 28 days. The temperature of material when placed should not exceed 85°F. Material should not be re-tempered at any time.	
Packaging & Coverage Rate:	
Available in 80 lb. and 50 lb* poly lined paper bags. 50 lb bag yields ~0.40 ft ³ *special order only, contact Aquafin 80 lb bag yields ~0.66 ft ³ • 10 lbs of material yields approx. 1 ft ² @ 1" thick (1'x 1'x 1").	

PRIMER/BOND-CI.

- Alternately, a Saturated Surface Dry (SSD) concrete substrate can be primed with scrub coat of MORTAR-Crete-CI (Do not allow scrub coat to dry)

Mixing:

- Mixing Ratio: 2.5 qts. (2.4 L) of water per 50 lb bag
 4.0 qts. (3.75 L) of water per 80 lb bag
- For 50 lb bag: measure ~2.0 quarts (1.9 L)
 For 80 lb bag: measure ~3.5 quarts (3.3 L) of clean, potable water into a suitable mixing container.
 - Gradually add MORTAR-Crete-CI powder to the water while mixing with a low speed, 1/2" (12 mm) drill (500 - 650 RPM), equipped with a low shear mixing paddle. This will be a stiff mix and will allow the addition of more liquid to the mix without over-watering.

MORTAR-Crete-CI FULL DEPTH

- Add remaining ~.5 quart (0.55 L) of water to achieve a fully wetted mix with the proper slump.

DO NOT OVERWATER! Exact amount of water will vary depending on desired slump and consistency. Do not mix longer than 5 minutes.

Application:

1. Apply MORTAR-Crete-CI into the wet scrub coat before it dries.
Material may be used in conjunction with a bonding agent (20 mil coat of REBAR PRIMER/BOND-CI)
2. Minimum layer thickness is 1" (25 mm).
3. Install MORTAR-Crete-CI at maximum layer thickness of 8" (200 mm).
A second lift may be applied as soon as the first lift has sufficiently hardened. Leave surface of first lift rough, to provide good mechanical bond. (May be installed at full depth with proper steel reinforcement.)

Curing

Allow newly placed material to set firmly, and then keep moist for 3 days by using burlap, polyethylene or a fine mist of water. If this is not practicable, damp cure for 6 hours, then coat with approved water based curing compound.

Limitations:

- Do not apply at temperatures below 40°F (5°C).
- Ensure substrate and ambient temperatures are between 40°F (5°C) and 90°F (32°C).
- Pre-condition material to 70°F (21°C) for 24 hours before using.
- Protect from freezing for 24 hours after application
- Cover with suitable sheeting to protect against rain.
- Do not re-temper.

Storage:

12 months when stored dry in the original unopened packaging.

Clean-up

Promptly wash hands and tools with water before material hardens. Cured material must be removed mechanically.

Note:

Proper application is the responsibility of the user. Field visits by AQUAFIN personnel are for the purpose of making technical recommendations and not for supervising or providing quality control on-site.

Safety:

Refer to SDS. For commercial use only. This product contains Portland cement and sand (crystalline silica) and is highly alkaline. Dust may cause respiratory tract irritation and/or delayed lung injury (silicosis). NTP lists free respirable crystalline silica as a suspect carcinogen. Avoid breathing dust. Avoid contact with skin and eyes. Wear rubber gloves and safety goggles during mixing and application. After contact with skin, wash with plenty of water. In case of eye contact, rinse immediately with plenty of water for 15 minutes and seek medical advice.
KEEP OUT OF REACH OF CHILDREN.

LIMITED WARRANTY: AQUAFIN, INC. warrants this product for a period of one year from the date of installation to be manufactured free of defects and to be consistent with its technical properties as stated in our current Technical Data Sheet. This product must be used as directed and within its stated shelf life. AQUAFIN INC. will replace or at our discretion refund the purchase price of any product, excluding cost of labor, which is proven to be defective. Our product recommendations are based on industry standards and testing procedures. It is the buyer's obligation to test the suitability of the product for an intended use prior to using it. We assume no warranties written, expressed or implied as to any specific methods of application or use of the product. AQUAFIN INC. MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. AQUAFIN, INC. shall not be liable for damages of any sort including remote or consequential damages, down time, or delay. Any claim for a defective product must be filed within 30 days of discovery of a problem, and must be submitted with written proof of purchase.

For Professional Use Only.