

MORTAR-Screed CI

Fiber-reinforced, polymer-modified, corrosion inhibitor and silica fume enhanced concrete screed and repair mortar

CSI Div. 03

03 01 30 Maintenance of Cast-in-Place 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-Screed CI is a one-component, fiber-reinforced, polymer-modified, corrosion inhibitor and silica fume enhanced repair mortar. It is designed for use as a concrete screed or repair mortar at depths of 3/8" - 6" (10 mm - 152 mm). This product offers normal set times and a mid-range slump for easy workability.

Typical Applications:

- Interior and exterior horizontal concrete slabs
- Balconies, sidewalks, curbs, parking decks and ramps
- To level concrete surfaces
- Deteriorated joint edges
- Can be used as a separation screed
- For overlays up to 5" (127 mm) neat
- For screed repairs up to 6" (152 mm) neat w/min. #4 bar

Advantages:

- Fiber-reinforced and polymer-modified
- No shrinkage when properly cured
- Corrosion inhibitor and silica fume enhanced
- One-component - just add water
- Accelerated cure - allows for installation of moisture sensitive toppings within 12 hours.
- Excellent bond to properly prepared concrete

Substrate Preparation:

- Concrete surfaces must be structurally sound, free of any loose or deteriorated concrete, dirt, dust, grease, oil, sealers, curing compounds and all other bond-inhibiting materials.
- Mechanically prepare surfaces to achieve a surface profile equal to CSP 5 - 7 as per ICRI Guideline No. 310.2R-13.
- Properly clean profiled area by water-blasting. All surfaces must be saturated surface dry (SSD) but with no standing water, immediately prior to application.
- Repair areas must have saw cut straight edges with a minimum 3/8" (10 mm) depth as per ICRI Guideline 310.1R - 2008.

Priming:

Steel: All exposed steel must be mechanically cleaned to a white metal finish and primed with 2 coats (20 mils per coat) of Aquafin's REBAR PRIMER/BOND-CI.

Concrete: Must be primed with scrub coat of MORTAR-Screed CI. Do not

Technical Properties:	
Physical state	Powder
Color	Gray
Flammability	Flame Spread: 0 Fuel Contribution: 0 Smoke Development: 0
MORTAR-Screed CI Mixed	
Mix ratio (water:powder)	2.5 - 2.75 qts. (2.4 - 2.6 L) : 50 lb powder
Application temp. range	40°F to 90°F (4°C to 32°C)
Working time	45 - 60 minutes
Physical Properties: The values stated are applicable with ambient temperatures of 73°F (23°C) and 50% relative air humidity. Higher temperatures shorten the processing time and lower temperatures extend processing times.	
Compressive Strength ASTM C109	2,500 psi after 24 hours 4,000 psi after 7 days 6,000 psi after 28 days
Slant Shear Bond Strength ASTM C928-M	440 psi after 24 hours 1,500 psi after 28 days
Flexural Strength ASTM C348	1,000 psi @ 28 days
Length Change ASTM C157	+0.007% @ 28 days wet cure
Approximate yield per 50 lb. bag: ~0.42 cubic ft.	
3/8" (9.5 mm)	~12 ft ² (1.11 m ²)
1/2" (12.7 mm)	~10 ft ² (.93 m ²)
1" (25.4 mm)	~5 ft ² (0.46 m ²)

allow scrub coat to dry before completing repair. Alternately, can be primed with a spray or brush coat of REBAR PRIMER/BOND-CI

Mixing:

- Mixing Ratio: 2.5 - 2.75 qts. (2.4 - 2.6 L) water per 50 lb. bag
- For best results, mechanically mix at slow speed with a 3/4" drill and "eggbeater" style mixing paddle. Use a paddle type mortar mixer for large jobs.
 - Add the appropriate amount of potable water into a clean mixing bucket. Gradually add powder while mixing continuously.
 - Mix at slow speeds to prevent entraining air for a minimum of 3 minutes until a lump-free consistency is achieved.
 - Only mix enough material that can be placed within 30 - 45 minutes.



MORTAR-Screed CI

DO NOT OVERWATER! If too much water is added, the mixture will segregate resulting in uneven surface strengths. Surfaces with reduced strength must be removed mechanically.

Application:

Read all instructions thoroughly prior to installation.

1. Only proceed with application when the temperatures remain between 40°F and 90°F (4°C and 32°C) and protect from freezing for 24 hours after application. For temperatures above 85°F (29°C), follow ACI hot-weather application guidelines to ensure a successful installation.
2. Immediately after mixing, place MORTAR-Screed CI onto the surface area and work it into the substrate to obtain a mechanical bond. Spread with a trowel, comealong concrete rake or screed to a thickness that matches pre-set elevation points. On large areas, use screed strips or forms. Screed to level with hand held straightedge or vibratory screed.
3. Finish material to desired finish texture (can be power troweled).
4. MORTAR-Screed CI can be placed in lifts up to 6" (152 mm) when used in situations where rebar matting/rebar cage configurations meet ASTM, ACI and ICRI Guidelines (Minimum #4 bar - upper and lower mat).
5. Follow ACI guidelines for hot and cold weather concreting.
6. Protect from freezing for 24 hours after application.
7. Always re-establish expansion and control joints when using this product.

Clean-up:

Clean all tools and equipment with water prior to the material hardening. Cured material must be removed mechanically.

Curing:

Begin curing as soon as the material has set by keeping surface moist as per ACI recommendations for portland cement concrete, using burlap, polyethylene or a fine mist of water. If this is not practical, then coat with approved water based curing compound.

Limitations:

- Do not use solvent based curing compounds.
- Do not add cement or any admixtures to material.
- Do not extend with additional aggregate.
- Do not featheredge.

Storage & Shelf Life:

Store in a cool dry area. Shelf life is 12 months in original, unopened package.

Packaging:

50 lb. (22.7 kg) bags

Note:

Installer is responsible for proper product application. Site visits by Aquafin personnel or representatives are solely for the purpose of making technical recommendations, not for providing supervision or quality control.

Safety:

Refer to SDS.

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.

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