

MORTAR-Screed CI

One part, polymer-modified, corrosion inhibitor enhanced concrete screed and repair mortar

CSI Div. 03

03 01 30.71 Rehabilitation of Cast-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 enhanced cementitious repair mortar designed for use as a concrete repair or screed mortar at depths of 3/8" - 6" (10 mm - 152 mm). MORTAR-Screed CI has an accelerated cure, allowing for installation of tile flooring within 12 hours of installation. Additionally, MORTAR-Screed CI is enhanced with a migrating corrosion inhibitor which helps protect localized and adjacent reinforcing steel.

Typical Applications:

- Interior and exterior horizontal concrete slabs
- Balconies, sidewalks, curbs, parking decks and ramps
- Deteriorated joint edges
- 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
- Low shrinkage
- Enhanced with a migrating corrosion inhibitor to help protect localized and adjacent reinforcing steel.
- One component - just add water
- Wide consistency range from semi-dry to plastic

Substrate Preparation:

- Substrates must be of load bearing capacity, and free from all potential bond breakers such as dirt, dust, grease, oil, sealers, curing compounds, laitance, loose or deteriorated concrete and any bond-inhibiting foreign substances.
- Mechanically prepare surfaces to achieve a surface profile equal to CSP 5 - 7. Concrete Surface Profile as per ICRI Guideline No. 310.2-1997 (Formerly Guideline No. 03732)
- All surfaces to be repaired should be saturated surface dry (SSD) but have no standing water. Hot surfaces should be cooled and shaded while cold surfaces should be heated and sheltered. Mechanically remove all loose materials by suitable means such as chipping hammer, chisel, sandblast, high pressure water blast (>5000 psi), or similar methods.
- Repair areas should have saw-cut straight edges with a minimum of 3/8" (10 mm) depth (avoid featheredging).
- Only proceed with application when the temperatures remain between 40°F and 90°F (4°C and 32°C) and protect from freezing for

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 - 2.6L) : 50 lb powder
Application temp. range	45°F to 90°F (7°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 C 109	~ 2500 psi after 24 hours ~ 4000 psi after 7 days ~ 6000 psi after 28 days
Slant Shear Bond Strength ASTM C 928-M	~ 440 psi after 24 hours ~ 1500 psi after 28 days
Flexural Strength ASTM C 348	~ 1,000 psi @ 28 days
Length Strength ASTM C 157	+0.007% @ 28 days wet cure
Storage / Shelf Life / Packaging	
Cool and dry / 12 months in original sealed packaging / 50 lb. (22.7 kg) bags	
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)

24 hours after application. For temperatures above 85°F (29°C), follow ACI hot-weather application guidelines to ensure a successful installation.

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 anti-corrosion coating.
- Concrete should be primed with a spray or brush coat of Aquafin

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REBAR PRIMER/BOND-CI. Alternately, a Saturated Surface Dry (SSD) concrete substrate can be primed with scrub coat of MORTAR-Screed CI (Do not allow scrub coat to dry)

Mixing:

Mixing Ratio: 2.5 – 2.75 qts. (2.4 – 2.6 L) water per 50 lb. bag

- Precondition MORTAR-Screed CI to ~70°F (21 °C) prior to mixing.
- For best results, mechanically mix at slow speed with a 3/4" drill and "Jiffy" 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 1/3 at a time while mixing continuously.
- Mix at slow speeds to prevent entraining air for a minimum of 3 minutes until a lump-free consistency is achieved.

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

Application:

Read all instructions thoroughly prior to installation.

1. Place onto properly prepared concrete substrate and spread with trowel, come-a-long or screed to a thickness that matches the surrounding concrete. On large jobs use screed strips with vibratory screeding to level.
2. Finish material to desired finish texture. Material can be finished with a towel, broom. (can be power troweled).
3. Working time is ~45 – 60 minutes at 70° F (21 °C).

Note: MORTAR-Screed CI can be placed in single lift thicknesses up to 6" (152 mm) when used in situations where rebar matting / rebar cage configurations meet ASTM, ACI and ICRI Guidelines for steel reinforcement in concrete structures. (Minimum #4 bar - upper and lower mat)

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, damp cure for 6 hours, 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.
- Follow ACI guidelines for hot and cold weather concreting.
- Protect from freezing for 24 hours after application.
- Always re-establish expansion and control joints when using this product.
- Do not extend with additional aggregate.

Clean-up:

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

Shelf Life:

12 months in unopened, dry, undamaged 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.

KEEP OUT OF REACH OF CHILDREN.

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