

MORTAR-LN

One-part, polymer-modified, waterproof lining mortar

CSI Div. 03

03 01 30.61 Resurfacing 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-LN is a cementitious, inorganic, one component, ready-mixed, surface lining waterproof barrier mortar with hydrophobic (water repellent) properties. MORTAR-LN prevents water infiltration or exfiltration through the application.

Typical Applications:

- Horizontal, vertical and overhead applications to concrete, masonry and brick by troweling or spraying (guniting), to new or old structures
- Repairing and reprofiling of spalled and honey combed surfaces
- Patching and filling of routed out cracks, faulty construction joints and sealing of tie holes
- Installation of seal strips (reglets and fillets/coves) at floor/wall joints

Advantages:

- Slow Setting
- Waterproof/Water impermeable
- NSF/ANSI Standard 61 potable water certified (www.wqa.org)
- Horizontal - Vertical - Overhead
- Resists hydrostatic pressure
- Applied to damp (moist) substrates
- Applied to the positive or negative water pressure side of a structure
- Not a vapor barrier, lets substrate "breathe"
- Easy to use - needs only to be mixed with water
- Applied by glove pointing, trowel or low pressure air-spraying (guniting)
- No odor - No fumes - Environmentally friendly

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, Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair.
- Properly clean profiled area by water-blasting. All surfaces must be saturated surface dry (SSD) but with no standing water, immediately prior to application.
- 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.

Physical and Technical Data	
Aggregate State:	Powder
Color:	Concrete gray
Bulk Density:	~ 100 lb/ft³ (~ 1.6 kg/dm³)
VOC:	0 g/L
Compressive Strength: ASTM C-109 EN 196/1	24 hrs.: 700 psi 3 days: 2100 7 days: 4700 psi 28 days: 6000 psi
Flexural Strength: ASTM C-348 EN 196/1	24 hrs.: 30 psi 3 days: 620 7 days: 870 psi 28 days: 1160 psi
Shrinkage:	28 days: 0.023%
Adhesion: ASTM C-321	28 days: >220 psi (>1.5 MPa)
Water Permeability: control LN @ 1/8" thickness LN @ 1/8" thickness	1.58 x 10 ⁻⁷ cm/s @ 3 d 3.60 x 10 ⁻⁹ cm/s @ 3 d 2.36 x 10 ⁻¹⁰ cm/s @ 28 d Note: 100 psi (234 ft. head pressure) positive side
Application time: Setting Time:	Approx. 30 minutes Approx. 5-6 hours
Potable water certified:	NSF/ANSI 61: www.wqa.org

Consumption & Yield of 50 lb (22.7 kg) bag			
PATCHING AND REPAIR			
	Size Inch (mm)	Consumption lb/ft (kg/m)	~Yield/Bag ft (m)
Cracks, U Shape	1x1 (25x25)	1.0 (1.3)	50 (15.3)
Reglets (seal strips)	1x1 (25x25)	1.0 (1.3)	50 (15.3)
Coves, Triangle Shape	1.5x1.5 (38x38)	1.0 (1.3)	50 (15.3)
Patching Approximately 0.42 ft³ (0.012 m³) / bag			
LINING (PARGING), SEALING AND WATERPROOFING			
	Layer thickness inch (mm)	Consumption lb/y² (kg/m²)	~Yield / bag ft² (m²)
	minimum 1/8" (3)	11.0 (6.0)	40 (3.8)
	1/4" (6)	22.0 (12.0)	20 (1.9)
	5/16" (8)	29.5 (16)	15 (1.4)
	3/8" (10)	37.0 (20)	12 (1.1)
	1/2" (12.7)	46.9 (25.4)	10 (0.9)
	1" (25.4)	94.0 (50.8)	5 (0.5)
All data are average values obtained under laboratory conditions. In practical use temperature, humidity and absorbency of the substrate may influence the above given values			

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- Active water leakages must be stopped with AQUAFIN MORTAR-PLUG. Chemical grout may be required where severe water infiltration exists
- Cracks should be routed out to a U-shaped configuration, appx. 3/4" (20 mm) wide and a minimum of 1" (25 mm) deep
- Tie holes should be roughened prior to filling

Mixing:

Mixing Ratio: 0.8 - 1.1 gallon water per 50-lb. bag.

(3.0 - 4.1 L water to 22.7 kg powder)

Precondition MORTAR-LN to ~70°F (21 °C) prior to mixing.

- For best results, mechanically mix at slow speed with a 3/4" (20 mm) 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 or until a lump-free consistency is achieved.
- Adjust water using small quantities until proper consistency is achieved.

NOTE: Due to the MORTAR-LN hydrophobic characteristics, it takes up to 30 (thirty) seconds for mixing water to combine with the dry powder mix.

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:

Do not apply MORTAR-LN at temperatures below 40°F (5 °C). At high temperatures faster setting is possible. This product is not recommended for use in expansion or contraction joints. Read all instructions thoroughly prior to installation.

Cracks/Reglets (seal strips)/Tie holes/Faulty construction joints/ Brick-mortar joints:

- Fill prepared cavity flush to surface with MORTAR- LN.
- For added protection prime cavity surface with AQUAFIN-1K.

Spalled and honeycombed areas:

- Apply in thick mortar consistency to required profile.
- Apply in lifts from min. 1/8" to max. 1" (3 - 25 mm) as required.
- Leave surface rough for subsequent layers or surface treatments to bond.

Lining/ Surface Applications:

- Horizontal: Pour MORTAR-LN in one working cycle at 1/4" - 1" (6 - 25 mm) over horizontal surfaces, then compact and strike off.
- Vertical and/or overhead: Apply MORTAR- LN to desired surfaces in a parge (stucco) coat by trowel or suitable mortar spray (gunite) equipment in single lift of 1/8" - 1" (3 - 25 mm) depending on substrate condition. Apply a scratch coat first when troweling
- Multiple lifts: Can be carried out as soon as the underlying lift has set (~5-6 hrs). Underlying surface should be screeded and left open textured for mechanical bond and maximum intercoat adhesion of next layer or top coating.

Surface finish: Final layer may be troweled smooth/flat, broomed to increase non-skid quality, or sprayed with orange peel texture.

Top coating: Where specified or desired AQUAFIN-IC, 1K or 2K/M can be applied as soon as MORTAR-LN has set (~5-6 hours). Subsequent coatings such as paint or epoxies can be applied after the curing period. Before material hardens, thoroughly clean tools with water after use.

Curing:

Curing is required as per ACI recommendations for portland cement concrete. Moist cure using wet burlap, polyethylene, a fine mist of water or with approved water based curing compound. For potable water use, allow to cure for at least 7 days. **NOTE:** Curing compounds may adversely affect following lifts of mortar or protective coatings.

Limitations:

- Do not use below 40°F (4 °C) or over 90°F (32 °C)
- Do not extend with additional aggregate.
- Do not add accelerators, retarders, or any additional admixture.
- Do not use solvent based curing compounds.
- Store material at temperatures between 55°F - 90°F (10 °C - 32 °C)
- Protect from freezing for 24 hours after application.
- Always re-establish expansion and control joints when using this product.
- Do not use as a structural repair mortar. Contact Aquafin Technical Department for proper recommendations.

Storage, Shelf Life & Packaging:

12 months when stored dry in the original, unopened 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. This product contains portland cement and sand (crystalline silica) and is highly alkaline (irritant) in contact with water. Avoid breathing dust. May cause delayed lung injury (silicosis). Use rubber gloves and goggles during mixing and application. Protect skin and eyes. After contact with skin, wash with plenty of water. In case of eye contact, rinse immediately with plenty of cool water 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.

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