

Corrosion Resistant Repairing & Lining Mortar

- ☑ Calcium aluminate formula for severe H₂S corrosion environments
- ☑ Water impermeable
- ☑ Contains no fibers - no leakage

Product Description

AQUAFIN® MORTAR-CA is a factory blended, cementitious, one component, repair and surface lining waterproof barrier mortar. It consists of calcium aluminate cement, well-graded acid resistant aggregates and special chemicals of an inorganic, hydrophobic (water repellent) nature which resist strong hydrostatic pressure (positive and negative side pressure).

MORTAR-CA is a special formulation providing structural integrity and protecting concrete, masonry and brick substrates against biogenic corrosion in strong hydrogen sulfide gas (H₂S) environments.

The absence of fibers in MORTAR-CA guarantees it will prevent water infiltration or exfiltration in sewer manholes or tank structures at minimum thickness of 3/8" (10 mm).

Typical Applications

- Horizontal and vertical applications to concrete, masonry and brick by troweling or low pressure spraying (wet guniting).

Especially suited for the rehabilitation of:

- Sewer Manholes ■ Sewage treatment tanks
- Sewer lift stations ■ Large diameter trunk lines.

Advantages

- Highly corrosion resistant
- Resists strong hydrostatic pressure - prevents infiltration and/or exfiltration - no need for vacuum testing in manholes
- Resists abrasion and mechanical wear
- Forms a protective membrane barrier with no pinholes ■ Freeze/ thaw resistant
- Easy to use -- needs only to be mixed with water
- Applied by trowel or low pressure air-spraying
- Applied to the positive or negative water pressure side of a structure
- Applied to damp substrate ■ Non flammable
- No odor -- No fumes -- Environmentally friendly.

Preparation of Substrate

The substrate has to be firm, free from voids and larger cracks, and its surface open-pored to provide mechanical bond (ICRI CSP 5-7 profile). Bitumen, oil, grease, dirt, cement laitance, loose particles, previous coatings, etc. must be removed by means of high pressure water blasting or other suitable mechanical means.

Typical Data for MORTAR-CA

Aggregate State: Powder Color: Concrete gray Bulk Density: ~130 lb/ft³ (~2.1 kg/dm³)

Test	Results	Test Method
Compressive Strength:	28 Days: >6000 psi (>41 Mpa)	EN 196/1 (ASTM C-109)
Flexural Strength:	28 Days: >1000 psi (>7 MPa)	EN 196/1 (ASTM C-348)
Bond (Adhesion):	28 Days: >220 psi (>1.5 MPa)	(ASTM C-321)
Shrinkage:	28 Days: 0.01%	(ASTM C-596)
Water Permeability: at 1/2" (12 mm) thickness	No measurable leakage up to 230 ft (70 m) head pressure (positive side)	DIN 1046
Application Time:	Approx. 30 minutes	

All data are average values obtained under laboratory conditions. In practical use temperature, humidity and absorbance of the substrate may influence the above given values.

Substrates should be well prewatered and slightly damp at the time of application (SSD (saturated surface dry)). Clean or replace exposed rebars or mesh as directed by the engineer. Active water leakages must be stopped with rapid-set AQUAFIN PLUG-IC or FIX 10-S. Use hydrophobic polyurethane injection grout where severe water infiltration exists.

Mixing

Measure approximately

**0.7 - 0.9 gal water per 50 lb bag
(2.7 - 3.2 L per 22.7 kg)**

Add MORTAR-CA powder to water and mix thoroughly for at least 3 minutes with a mechanical mixer to a thick batter for troweled applications, and a pumpable consistency for spray applications. Adjust water using small quantities until proper consistency is obtained.

Note: it takes approximately 30 (thirty) seconds for mixing water to combine with the dry powder mix.

Application

NOTE: Do not apply MORTAR-CA at temperatures below 40° F (5° C) or to a frozen substrate.

Do not lubricate spray hoses and equipment with regular cement slurry. MORTAR-CA may instantly set and harden as a result.

◆ Vertical applications:

Apply MORTAR-CA to desired surfaces in a parge coat by trowel or suitable mortar spray (wet gunite) equipment. Apply in single lift of 1/4"- 1/2" (6 - 12 mm) thickness, depending on depth of corrosion and substrate condition. Trowel to smooth surface.

◆ Horizontal applications:

Pour MORTAR-CA in one working cycle over horizontal surfaces, then compact and strike off. After initial hardening it can be briefly treated with a plasterer's float, or provided with a broom finish to increase the non-skid quality.

Curing

Where necessary a 2nd layer of 1/2" (12 mm) thickness can be applied as soon as 1st layer has reached initial set and can not be damaged. Provide protection against extreme weather

conditions during the setting period. Self curing in cool areas with high humidity. Where rapid evaporation is anticipated the application of a curing compound (ASTM C309) is recommended.

Yield

One 50 lb (22.7 kg) bag of MORTAR-CA yields approximately:

- 0.42 ft³ (0.012 m³), or cover
- 10 ft² (0.9 m²) at 1/2" (12 mm) thickness

Storage, Shelf Life & Packaging

Store in a dry, enclosed area off the ground. Shelf life in unopened, undamaged bags is 12 months. MORTAR-CA is supplied in 50 lb (22.7 kg) bags.

Safety

Refer to MSDS. This product contains cement and sand (crystalline silica) and is highly alkaline. Dust may cause respiratory tract irritation. Avoid breathing dust. The use of rubber gloves and goggles during mixing and application is recommended. In enclosed areas, such as manholes, a respirator mask is recommended during spray applications. Avoid contact with eyes and skin. 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 1 year from installation to be manufactured free of defects and to be consistent with its standard high quality. We will replace or, at our election, refund the purchase price of, any product which is proven to be defective, provided that the product was properly applied. Our product recommendations are based on Industry Standards and testing procedures. We assume no warranties either 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 without limitation indirect or consequential damages, down time, or delay.

AQUAFIN, Inc.
505 Blue Ball Rd., #160 Elkton, MD 21921
Phone (410) 392 - 2300 Fax (410) 392 - 2324
TOLL FREE 1 - 866 - AQUAFIN (1-866-278-2346)

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E-mail: info@aquafin.net
http://www.aquafin.us
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