

# AQUAFIN®-1K

## Cementitious Waterproofing & Protective Coating

**CSI Div. 07**

07 16 13 POLYMER MODIFIED CEMENT WATERPROOFING

**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:**

AQUAFIN-1K is a cement-based, polymer modified, waterproof coating. Mixed with water it forms a dense, rigid surface barrier. It consists of portland cement, well graded quartz sand and polymer enhanced chemical ingredients.

**Typical Applications:**

- Concrete, brick and block foundations and retaining walls
- As a waterproof coating for potable water and open wastewater tanks
- Applied interior/exterior, above or below grade, positive or negative water pressure side.
- Base coat for Aquafin 2K/M

**Advantages:**

- One-Component, just mix with water
- Stand-alone coating or in combination with AQUAFIN-2K/M
- Polymer modified
- Potable water certified as per NSF/ANSI Standard 61
- Resists strong hydrostatic pressure
- Not a vapor barrier - lets concrete "breathe"
- Excellent freeze/thaw resistance
- Can be applied to moist concrete/substrate
- Non flammable - no odor - non toxic.

**Substrate Preparation:**

The substrate must be structurally sound, free of any loose or deteriorated concrete, dirt, dust, grease, oil, sealers, curing compounds and all other bond-inhibiting materials.

- Stop active water leaks using MORTAR-PLUG before application of "1K"
- Mechanically prepare surfaces to achieve a surface profile equal to CSP 3-5 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.
- Repair static cracks and spalled concrete using MORTAR-LN or MORTAR-V/O CI.
- Form coves 1.5" x 1.5" (38 x 38 mm) at floor - wall joints using

Physical and Technical Data	
Aggregate State:	Powder
Color:	Gray or White
Bulk Density:	88 lb/ft <sup>3</sup> (1.4 kg/L) dry; 116 lb/ft <sup>3</sup> (1.85 kg/L) wet
VOC:	0% (0 g/L)
Drying Time	~2 to 4 hours at 68°F (20°C)
Compressive Strength: ASTM C109	3,000 psi (20.7 MPa) @ 28 days. Gray and White
Flexural Strength: EN 196/1 ASTM C348 modified	300 psi (2.07 MPa) @ 28 days. Gray and White
Shrinkage: ASTM C596	28 days: -0.014%
Vapor Permeability: Permeance - ASTM E96	Permeance: 8 perms (untreated control: 10 perms)
Potable water certified: NSF/ANSI Standard 61 by WQA	For a copy of approval go to www.wqa.org
Microbiological growth: DVGW-W270 Germany	not supported
Permeability: +/- side water head. DIN 1048 sample 80 mils (2.0 mm) thick	No water ingress with: 50 ft (15 m) (1.5 bar) hydrostatic pressure.
All data are averages of several tests under laboratory conditions. In practice, climatic variations such as temperature, humidity and porosity of substrate may affect these values.	

Consumption & Yield of 50 lb (22.7 kg) bag			
Application (2 coats)	Total application thickness (2 coats) (wet film) inch mils (mm)	Application rate: (dry powder) lb/y <sup>2</sup> (kg/m <sup>2</sup> )	Appx. yield per bag ft <sup>2</sup> (m <sup>2</sup> )
Dampproofing	1/16" 60 (1.6)	4.6 (2.5)	98 (9.1)
Waterproofing	1/10" 100 (2.5)	7.4 (4.0)	60 (5.6)
All above values theoretical. Variations may apply due to substrate conditions. Thickness per application or lift, up to 50 mils (1.25 mm).			

**MORTAR-LN.**

- Pre-water the substrate extremely well with clean water. Pay particular attention to substrates with excessive absorption such as CMU-block walls and any substrate during hot/windy conditions.

**Mixing:**

Approximate mixing ratio (by volume) is: 5 parts powder to 2 parts water or 50 lb powder to 1.6 - 1.7 gal water (22.7 kg to 6.0 - 6.4 L) (Spray application up to 2.0 gal (7.6 L)). Add the "1K" powder to water and

# AQUAFIN®-1K

mix for at least 3 minutes with a mechanical mixer to a creamy slurry consistency for brush or broom and to a pumpable consistency for spray applications.

## Application:

- Protect application from direct sun and wind to prevent premature surface drying and shrinkage cracks.
- Apply material in 2 (two) coats minimum.
- All surfaces must be saturated surface dry (SSD) but with no standing water, immediately prior to application. Free surface water can inhibit bonding and weaken the coating.
- Apply using a tampico fibered brush, broom or masonry brush, broom or appropriate compressed-air spray equipment such as hopper gun, peristaltic pump (i.e. Quikspray carousel pump) or rotor-stator pump (i.e. Hy-Flex "Spray Buddy"). Do not use roller.
- Application thickness per coat maximum 50 mils (1.25 mm) in areas exposed to the elements.
- Apply the second coat as soon as the first coat has set, but still "green". (Normally 4 - 6 hrs. indoors at 68°F (20°C), 60% rH.)
- "1K" can be left as a brushed finish, or it can be troweled up by a skilled plasterer to a relatively smooth cementitious finish.

## Limitations:

- Do not apply to frozen or frost filled surfaces or at temperatures below 40°F (5°C) within 24 hours after application.
- Protect from rain for 4 hrs. for vertical surfaces, and 8 hrs. for horizontal surfaces.
- Protect from wind and direct sunlight during application.
- Protect from foot traffic for a minimum 24 hours
- Do not expose to hydrostatic pressure for approx. 7 days
- Do not back fill for 3 days
- Do not top coat with AQUAFIN-2K/M for 24 hrs. minimum.
- Protect and seal alkali sensitive metal substrates such as copper, aluminum, galvanized or zinc treated metal with a primer (i.e. KRYLON Primer, or equal) prior to applying (over-coating) "1K".

## Curing:

Keep moist for at least 3 days in hot and/or dry environments and 7 days for use in contact with potable water. Provide air circulation for 24 hrs. following the "1K" treatment in poorly ventilated areas and deep pits, etc. Stagnant air will prolong the setting time and/or proper hardening. Use de-humidifiers in indoor areas where condensation exists or appears until "1K" has properly set. During winter time, do not use un-controlled direct air blowing gas or oil heaters to keep air warm.

## Packaging:

"1K" (gray or white) is supplied in 50 lbs. (22.7 kg) bags or pails.

## Storage and Shelf Life:

"1K" must be stored in a dry enclosed area off the ground. Shelf life in unopened, undamaged bags is 12 months.

## Clean-up:

Clean tools and equipment with water immediately after use. Cured material can only be removed mechanically.

## Decoration & Tiling:

"1K" is waterproof and highly vapor permeable (lets the concrete "breathe"). The surface should be cleaned with a stiff, dry brush prior to painting or coating. Vapor permeable, alkali resistant paints can be applied after 3 days provided that the AQUAFIN treatment is dry. Tile mortars can be applied after 3 days.

## 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.

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 EXPRESSED 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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