



Structural Repair Mortar

- ☑ Shrinkage compensated
- ☑ One-Component
- ☑ NSF/ANSI Std. 61 potable water certified
- ☑ Trowelable & Sprayable
- ☑ Up to 1½" Vertical application
- ☑ Up to 4" Horizontal application
- ☑ Contributes to LEED (EQ 4.2)



Product Description

AQUAFIN MORTAR-40 is a one component, polymer modified, shrinkage compensated, high early strength, patching mortar that can be troweled or sprayed for use in structurally or cosmetically repairing concrete and masonry surfaces.

A unique formulating design allows layering of up to 1½" (40 mm) per application vertically and up to 4" (100 mm) horizontally without sagging or slumping.

Typical Applications

- Exterior and interior applications, above and below grade, old and new structures
- Spalled concrete ■ Restoration work
- Water & wastewater treatment plants
- Weather damaged concrete ■ Bridges
- Manholes ■ Parking garages
- Tunnels, dams, industrial plants, etc.

Advantages

- Quality controlled blending for uniform results
- Approved/certified for use in contact with potable water (NSF/ANSI Standard 61)
- Easy-to-use; just add water
- Non flammable, non-toxic
- Not a vapor barrier ■ Sprayable (wet).

Substrate Preparation

All surfaces to be repaired must be clean, structurally sound, free of bond breakers (oil, grease, paint, etc.) and brushed free of any powdered or disintegrated materials. All repair sections must be made square or undercut (dovetailed). DO NOT "V" or shallow cut holes. Pay particular attention to sufficiently roughen slab and wall substrates to ICRI CSP 5 to 7 profile. All surfaces to be repaired should be damp (SSD (saturated surface dry)) but have no standing water. Hot surfaces should be cooled and shaded while cold surfaces should be heated and sheltered.

Mixing

Measure, approximately

0.9 - 1.2 gal (3.4 - 4.5 liters)

of clean, potable water into a suitable mixing container. Gradually add 50 lb (22.7 kg) MORTAR-40 powder to the water while mixing with a low speed, 1/2" (12 mm) drill (500 - 650 RPM), equipped with a low shear

mixing paddle. Mix until lump free and smooth in consistency. Do not overwater.

NOTE: Do not mix longer than 4 minutes.

Application

Do not apply at temperatures below 40°F (5° C).

- ◆ **Priming:** Apply a slurry coat of MORTAR-40 (1 part powder : 3 parts water) to the concrete substrate by "scrubbing" generously into surface.
- ◆ Apply MORTAR-40 into the wet scrub coat before it dries. MORTAR-40 may be used in connection with a bonding agent (acrylic or epoxy).
- ◆ Minimum layer thickness is ¼" (6 mm).
- ◆ Trowel or spray apply MORTAR-40 at maximum layer thickness of 1½" (40 mm) for vertical and horizontal surfaces.
- ◆ A 2nd layer may be applied as soon as the 1st layer has sufficiently hardened. Leave surface of 1st layer rough, to provide good mechanical bond for 2nd layer.
- ◆ **If stand-alone:** finish final layer with steel trowel or sponge float. MORTAR-40 can be screeded or shaped to a reasonably smooth finish. Use MORTAR-10 as a final coat if a smoother finish is required.
- ◆ **If top-coated** (i.e. AQUAFIN-1K, 2K/M, etc.): leave MORTAR-40 surface rough to provide good mechanical bond for subsequent coating.
- ◆ Discard material if it has begun to set prior to placing. DO NOT RE-TEMPER.

MORTAR-40 Concrete:

For applications greater than 1½" depth, add washed 3/8" coarse aggregate (pea gravel) at an addition rate of maximum 32 lbs aggregate/bag MORTAR-40. Water may be varied to achieve desired consistency. Do not overwater.

	Minimum	Maximum in one lift
Neat	¼" (6 mm)	1½" (40 mm)
Extended	1 ½" (40 mm)	4" (100 mm)

Note: Physical properties of MORTAR-40 may change when extended with coarse aggregate.

Curing

Begin curing as soon as the patch 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 practicable, damp cure for 6 hours, then coat with an approved water based curing compound. However, curing compound may adversely affect following lifts of mortar, leveling mortar or protective coatings.

Physical & Technical Data

Aggregate State:	Powder
Color:	Concrete gray
Bulk Density:	~105 lb/ft ³ (-1.7 kg/dm ³)
VOC:	0 g/L
Compressive Strength: ASTM C-109	24 Hrs: 3000 psi (20.7 MPa) 7 Days: 4500 psi (31 MPa) 28 Days: 5500 psi (38 MPa)
Adhesion: ASTM C-321	28 Days: >220 psi (>1.5 MPa)
Shrinkage: ASTM C-596	28 Days: -0.01%
Application Time:	Approx. 30 minutes
Potable Water Certified:	NSF/ANSI 61: www.wqa.org

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.

Packaging

50 lb. (22.7 kg) multi-wall, plastic lined bag.

Yield

Neat: approximately 0.42 ft³ (0.012 m³) or 10 ft² (0.9 m²) at 1/2" (12.7 mm) thickness.

Extended: with 3/8" pea-gravel (32 lb max.): approximately 0.62 ft³ (0.018 m³).

Shelf Life

12 months in unopened, dry, undamaged bags.

Safety

Refer to MSDS. For commercial use only. This product contains Portland cement and sand (crystalline silica) and is highly alkaline. Dust may cause respiratory tract irritation and/or delayed lung injury (silicosis). NTP lists free respirable crystalline silica as a suspect carcinogen. Avoid breathing dust. Avoid contact with skin and eyes. Wear rubber gloves and safety goggles during mixing and application. 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 one 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 remote or consequential damages, down time, or delay.

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