

AQUAFIN Inc.
 505 Blue Ball Rd. #160
 Elkton, MD 21921
 p: 410-392-2300
 f: 410-392-2324
 e: info@aquafin.net
 w: www.aquafin.net



Technical Datasheet

MORTAR-IC

Fast Setting Waterproof Repair & Sealing Mortar

CSI Div. 03

03 00 00 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-IC is a cementitious, ready-mixed waterproof repairing and sealing mortar. It consists of rapid setting Portland cement, specially treated quartz sand and a compound of active chemicals which resist positive or negative side water pressure.

MORTAR-IC contains active waterproofing chemicals which react with moisture and free lime in the mortar and concrete, creating insoluble crystalline complexes. These crystalline complexes, similar to a gel which grows in the presence of water, block the capillaries of the MORTAR-IC and minor shrinkage cracks, thus preventing water ingress. Chemical activation begins when the MORTAR-IC powder is mixed with water and may take several days to completely block the capillaries depending on ambient temperature and environmental conditions. The waterproofing chemicals remain active for the life of the structure, permanently sealing it from water penetration.

Typical Applications:

Applied in conjunction with AQUAFIN-IC for:

- Installation of seal strips (reglets and coves) at joints to assure water tightness.
- Patching of tie holes and faulty construction joints.
- Filling of routed out cracks.
- Waterproof sacking of concrete „bugholes.“
- Repairing of spalled and honeycombed areas.

Advantages:

- NSF/ANSI Standard 61 approved for potable water
- Applied to the positive or negative water pressure side of a structure
- Resists strong hydrostatic pressure
- Post sealing effect of shrinkage cracks up to 1/64" (0.4mm) together with AQUAFIN-IC
- Easy to use - needs only to be mixed with water prior to application
- Not a vapor barrier, lets concrete "breathe"
- Can be skim coated or feather edged
- Applied to moist concrete
- No odor - no fumes, inorganic - no polymers.

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.

Physical and Technical Data	
Aggregate State:	Powder
Color:	Concrete gray
Bulk Density:	~93 lbs/ft ³ (1.5 kg/dm ³)
VOC:	0 g/L
Pot Life:	30 - 40 minutes
Compressive Strength: ASTM C-109	24 hrs.: 2,400 psi (17MPa) 28 days: 4,000 psi (27 MPa)
Flexural Strength: ASTM C-348	24 hrs: 660 psi (4.6 MPa) 28 days: 820 psi (5.7 MPa)
Shrinkage: ASTM C-596	28 days: 0.04% (0.4 mm/m)
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.	

Yield:	Neat: ~0.42 ft ³ (0.012 m ³) or 10 ft ² (0.9 m ²) @ 1/2" (12.7 mm) thickness
Coverage:	~24ft ² at 1/4" thickness per 50lb bag

- 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 24 hours after application. For temperatures above 85°F (29°C), follow ACI hot-weather application guidelines to ensure a successful installation.
- Active water leakages must be stopped using AQUAFIN FIX 10-S.
- Cracks should be routed out to a U-shaped configuration, approx. 3/4" (20 mm) wide and a minimum of 1" (25 mm) deep.
- Tie holes should be roughened prior to filling.
- Spalled and honeycombed areas must be thoroughly cleaned and chiseled back to sound concrete prior to repair.

Mixing:

Mechanically mix with clean water to a trowelable mortar consistency. Approximate mixing ratio is: 50 lb powder to 0.9 - 1.0 gal water (22.7 kg to 3.4 - 3.8 L). For glove pointing add small amount of water. **NOTE:** Mix only as much material as can be used within 30 minutes.

MORTAR-IC

Application:

Cracks / Seal strips (Reglets & Coves):

- After proper surface preparation and routing to appropriate configuration, prime areas to be patched or repaired with a slurry coat of AQUAFIN-IC and while "green" (tacky), fill cavity flush to surface with MORTAR-IC in mortar consistency. Properties of MORTAR-40 may change when extended with coarse aggregate.

Spalled and Honey Combed Areas:

- Prepare surface and chisel back to sound concrete. Prime areas to be repaired with a slurry coat of AQUAFIN-IC and while "green" (tacky), apply MORTAR-IC in layers of 1/2" (12.7 mm) until desired profile is obtained.

NOTE: AQUAFIN-IC should be applied as a surface treatment as soon as the MORTAR-IC has set (approx. 1 - 2 hours). If this is not practical, leave surface rough for subsequent surface treatment to bond.

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 six 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.

Packaging:

50 lb. (22.7 kg) bags

Storage and Shelf Life:

12 months when stored dry in the original, unopened packaging.

Clean up:

Before material hardens, thoroughly clean tools with water after use.

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.

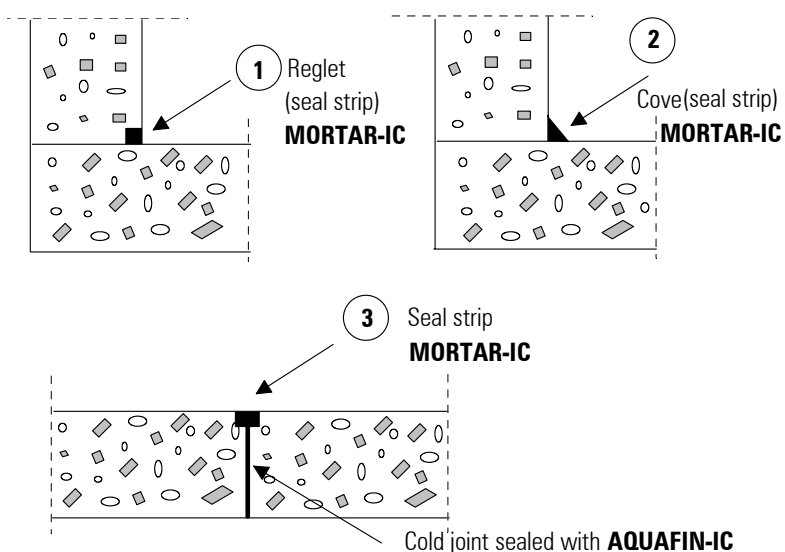
KEEP OUT OF REACH OF CHILDREN.

Proposition 65:

This product contains material listed by the state of California as known to cause cancer, birth defects, or other reproductive harm.

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. **For Professional Use Only.**

Typical detail sealing of construction joints



Typical detail crack repair

