

# AQUAFIN®-IC

## CRYSTALLINE WATERPROOF SLURRY

### Properties:

- Penetrates the capillaries in concrete.
- Continually active.
- Can be applied to a damp substrate.
- Chloride free.
- Resists high level of hydrostatic pressure.
- Carbonatisation barrier.
- Waterproofs retrospective cracks up to 0.4mm.
- Test certificates to German DVGW worksheets W347 and 270 are available.

### Area of Application:

- Exterior and interior waterproofing in cellars, lift shaft foundations, and retaining walls.
- Waterproofing containers for drinking and service water, retaining basins, water treatment plants, garages, tunnels etc.

An analysis of the water is necessary where the hardness degree is  $<3^{\circ}$  dH AQUAFIN®-IC is resistant to strong chemical attacks (exposure class XA to DIN 4030).

### Technical Data:

Basic	: sand/cement.
Colour	: additives grey.
Bulk density	: 1.1 kg/l
Ratio	: 25kg AQUAFIN®-IC to 6.75 water.
Mixing time	: (drill with 500-700 rpm) 30 to 60 minutes.

Pot life	: (at+23°C/60%).
Substrate application temperature	: min. +5° C to the max. +35° C Lower temperatures extend and higher temperatures reduce curing times.

Packaging	: 25kg bags
Cleaning of tools	: With water when in the fresh state, remove dried material opened packaging promptly.

Compressive Strength	: approx. 18 N/mm <sup>2</sup> at 7 days. approx. 21 N/mm <sup>2</sup> at 14 days. approx. 25 N/mm <sup>2</sup> at 28 days.
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Flexural strength	: approx. 6 N/mm <sup>2</sup> (ASTM D 454 1:2002)
Water impermeability:	min. 13 bar negative Or positive side (CRD-C 48-92, US)

### Material Consumption:

Dry film thickness	: min. 0.8mm-1.5mm
Ground moisture/ non-standing drainage water	: 0.75kg/m <sup>2</sup> in one coat
Non-hydrostatic Pressure	: 1.2kg/m <sup>2</sup> in one coat
Rising damp/ Pressure water	: 1.52kg/m <sup>2</sup> in one coat



\*Consumption may increase on uneven substrates

Ready for exposure at +20° C and 60% relative humidity:

- to rain after approx. 24 hours
- to foot traffic after approx. 5 hours
- backfilling the building trench after 3 days
- filling containers after approx. 7 days

### Substrate Preparation:

The substrate must be sound, clean and have an open capillary structure. The surface must be porous and permit good surface adhesion so that the chemicals can penetrate well into the concrete. Horizontal areas should have a rough surface. Smooth surfaces must be mechanically abraded in order to achieve good penetration.

1. All adhesion-inhibiting substances such as dirt, cement laitance, mould oil, hardeners, loose components, paints etc. must be removed by sandblasting, water jetting or other mechanical methods.
2. Eradicate all ridges, gravel pockets and other damaged areas. Poor joints and visible cracks (non-dynamic) above 0.4mm should be chased out 20mm wide by 25mm deep and repaired with ASOCRET-IM. Anchoring holes should be roughened.
3. Plug water leaks with FIX 10-S or Fix 20-T plugging cement.
4. Repair damaged areas with ASOCRET®-BIS-system or ASOCRETE®-IM depending on the area of application.
5. Pretreat all connecting joints and construction joints with ASO®-Joint-Tape-2000-S and AQUAFIN-RS300 or AQUAFIN®-2k/m (please see respective Technical Data Sheet).
6. Thoroughly pre-wetting all surfaces before application of AQUAFIN®-IC with clean water is recommended. Repeated dampening may be

necessary to ensure complete saturation, which promotes deeper penetrating crystalline growth. The substrate should be matt damp, without puddles or standing water.

### Product Preparation:

Pour 6.75 to 8.0 litres of clean water into a clean mixing bucket and mix in sufficient dry mortar while mechanically stirring (drill at 500-700rpm) until a lump-free, homogenous fluid or sprayable consistency is achieved. Only mix as much material as can be used Within the pol life. After a maturing time of a minimum of 3 minutes, stir again.

### Application:

Dry shake application:  
AQUAFIN®-IC must be broadcast at the coverage rate appropriate for the expected water exposure (see under Material consumption") on to freshly poured concrete. It is recommended that the floor be marked into bays with known area for large areas. Sufficient AQUAFIN®-IC should then be laid out to meet the recommended spread rate. Once the concrete has started initial setting (light floor traffic imprint of 3-5mm) apply AQUAFIN®-IC immediately. When AQUAFIN®-IC absorbs the concrete moisture entirely and uniform darkening of colour takes place, start troweling of the surface (helicopter smoothing).

### Application By Brush:

Spread two coats of AQUAFIN®-IC at the required quantity in a slurry consistency with a roofer's brush or builder's brush. Brush thoroughly and evenly, working into the substrate. Apply the second coat whilst the first coat is still tacky and hasn't dried out.

**Spray Application:**

AQUAFIN®-IC can be applied with the aid of suitable compressed air spray equipment, e.g. with the HighPump M8 (peristaltic pump), Highpump Small or HighPuump Pictor (spiral pump) from HIGH TECH, Berlin. Dependent on the installation spray's final wet duty, apply one or two coats in a circular motion. Apply the second coat whilst the first coat is still tacky and hasn't dried out.

**Curing And Protection:**

- A. In exterior or exposed areas: keep AQUAFIN®-IC damp for min. 3 days. Protect areas exposed to the water from sun, wind and frost. Re-wet the area in intervals with water, starting 1 day after application, if not covered with polythene. The fresh coating should be protected from rain for a minimum of 24 hours. Backfilling can take place 3 days after the last coat.
- B. Interiors: In areas with high humidity the material cures very well. In relatively dry areas keep the coating damp for min. 3 days. Ensure that there is adequate ventilation.
- C. Containers and tanks: Filling is possible after 3 days. In the case of drinking water storage, the container must be thoroughly rinsed with drinking water before filling. When properly installed, AQUAFIN®-IC is permanently active.

**Important Advice:**

- Protect areas not to be treated with AQUAFIN®-IC from its effects.
- AQUAFIN®-IC cannot be used as an additive for concrete or renders.
- The reaction between AQUAFIN®-IC and free lime in concrete can lead to minor efflorescence. This is not detrimental and can be removed with a brush.
- AQUAFIN®-IC may need up to one month to achieve its maximum waterproofing properties, influencing factors are ambient temperature,

- With concrete containing fly ash it is possible that successive coats of AQUAFIN-IC may discolour and there may be an impaired reaction. The fly ash component according to ASTM C-618 type C maybe only be max. 30% of the binder. The minimum quantity of CaO in the fly ash should not be below 15%. Please contact the technical department regarding particular specifications for concretes with the C fly-ash low CaO content, type F or other.
- Pozzolanic concrete additives
- A loading-bearing surface is necessary for a long-lasting bond between the surface and the coating system. Adhesion-inhibiting materials have to be removed completely. High-pressure (>400 bar) or ultra-high pressure (>2000 bar) water blasting and blasting with sold abrasives are suitable procedures. The final cleaning has to be carried out with water blasting.
- To increase pot life/working time at higher temperatures store material in a cool environment above +5° C and only expose to warm temperatures shortly before mixing. Additionally, the use of cold water can also increase pot life/working time, if water addition is necessary.

Please observe a valid Eu health and safety data sheets GISCOD: ZP1