

Technical Data Sheet

AQUAFIN®-1K

One component mineral-based waterproof slurry

Art.-No. 2 04248

Properties:

- Rigid waterproof slurry
- Sulphate resistant
- For interior and exterior use
- For wall and floor
- Water impermeable
- Suitable for all load-bearing conventional building substrates
- Hydraulic cure
- Easy efficient application
- Can be brushed, trowelled or sprayed with suitable equipment
- Bonds to matt damp substrates without priming
- Vapour permeable, resistant to frost and ageing
- Application schedule against negative hydrostatic pressure
- Application schedule against aqueous solutions aggressive to concrete in accordance with DIN 4030

Areas Of Application:

Waterproofing of new and existing buildings in ground covered areas against ground moisture, seepage water and water under pressure, water pressure from the inside, retrospective internal waterproofing against damp penetrating from the exterior as well as a horizontal membrane within and beneath walls and in building plinth areas. Weathered or greenery covered, concrete cold roofs above underground garages, prefabricated garages, service water containers, waste water containers and pipes, retaining walls and sluices. For use on wall or floor surfaces and for retrospective treatment of substrates not at risk of cracking. When using in containers or where there is exposure to soft water with a hardness < 30 mg CaO/l then an analysis of the water is a fundamental requirement. Evaluation of the aggressiveness towards concrete is carried out in accordance with DIN 4030. AQUAFIN-1K is resistant up to attack grading "highly aggressive" (exposure class XA2).

Technical Data:

Basis: sand/cement,
polymer modified

Density of mixed mortar: approx. 1.85 g/cm³

Mixing:	approx. 6.7 liters water per 25 kg AQUAFIN-1K approx. 1.6 liters water per 6 kg AQUAFIN-1K approx. 60 min.
Pot life *):	60 min.
Substrate /application temp:	+5° C to +35° C
Water impermeability, In accordance with DIN 12390-8	
28 days, 1.5 bar:	passed
Impermeability to water under negative hydrostatic pressure:	1.5 bar
Impermeability to water in situ (10 m water column):	passed
Adhesive strength:	> 0.5 N/mm ² (ASTM D 4541:2002)
Shore hardness D:	approx. 65 (ASTM D 2240:05)
Comp . strength 28d:	approx. 15 N/mm ² (ASTM C 579)
Rapid chloride permeability:	approx. 25% reduction (ASTM C 1202.97)
Initial surface absorption:	Nil (BS 1881 Part 208:96)
Exposure class /material consumption / dry film thickness:	
• Ground moisture/water:	3.5 kg/m ² /approx. 2.0 mm
• Seepage water / water under pressure:	4.5 kg/m ² /approx. 2.5 mm
It is necessary to apply 1.1 mm as a wet coat for every mm dry film.	
Exposure *):	Rainproof on surfaces to falls after approx. 8hrs, avoid exposure to standing water,foot traffic after 1 day Against hydrostatic pressure after 7 days with water whilst still fresh, difficult to remove once dried
Cleaning tools:	
Packaging:	25 kg bags, 6 kg bags

AQUAFIN®-1K

Storage:

12 months when stored dry in the original unopened packaging. Use opened packaging promptly *) at +20° C and 60% relative humidity.

Substrate preparation:

The substrate must be load-bearing, largely flat with an open pored texture and a closed surface finish. It must be free from gravel pockets, cavities, gaping cracks and ridges, dust and free from adhesion inhibiting substances such as e.g. oil, paint, laitance and loose areas. It may be damp but not wet. Substrates which are suitable are tight jointed concrete, render PII and PIII, flush pointed masonry work. Smooth out open textured substrates such as pre-cast concrete blocks and dense concrete blocks and uneven masonry work, with a cement-based mortar.

Pre-wet the substrate so that it is matt damp at the time of application. Prime very porous substrates such as aerated concrete or those containing gypsum with ASO-Unigrund-GE or ASO-Unigrund-K to improve adhesion. Pre-slurry the base slab/wall transition and corners with AQUAFIN-1K and construct a coved fillet, of min. side length of approx. 4 cm, onto the wet slurry coat with either ASOCRET-RN or a cement mortar modified with ASOPLAST-MZ.

Product application:

- Prepare the substrate appropriate to its requirements.
- Place approx. 1.6 or 6.7 litres of clean water into a clean mixing bucket, mix in as much powder until a homogenous lump free mix is achieved. With a mechanical mixer (approx. 500-700 rpm) a mixing time of approx. 2-3 minutes is necessary.
- Apply two coats of AQUAFIN-1K by brush or trowel. Only apply the second and successive coats once the one beneath will not be damaged by foot traffic or during application (approx. 4-6 hours at +20° C/ 60%RH). An even thickness is achieved by using a 4 to 6 mm notched trowel followed by smoothing flat. Avoid applying thicknesses greater than 2 kg/m² as a single coat as there is a risk of cracks appearing in the waterproof layer due to the high binder content.

Alternatively AQUAFIN-1K can be spray applied with suitable equipment such as e.g. HighPump M8 (Peristaltic pump), HighPump Small or HighPump Pictor (screw feed pump). Information on the above can be obtained from HTG HIGH TECH Germany, GmbH, Berlin - www.hightechspray.de.

Drainage and protection boards in building sections covered with earth:

Protect waterproof membranes from weathering and mechanical damage through suitable protective measures. Only install protective layers once the membrane has fully dried, suitable protective

and drainage boards can be fixed on dabs with COMBIDIC-1K with perimeter insulation being fully bedded with tight joints using COMBIDIC-2K.

Advice:

- Protect areas not being treated from AQUAFIN-1K.
- The substrate must be matt damp. Avoid puddle formation.
- Once the coating has hardened, keep the surface damp for at least 24 hours.
- Protect the fresh coating from rain, wind, frost and direct sunlight.
- In strong sunshine, work in the shade against the direction of the sun.
- A load-bearing sound substrate is a prerequisite for a permanent bond between the substrate and the coating system. Poorly bonded substances and those destructive to the bond must be completely removed. High pressure jet washing (> 400 bar), very high pressure jet washing (up to 2000 bar) and abrasive blast techniques with solid abrasive media are suitable methods. The final work process must involve cleaning by pressure washing.
- In service water containers temperatures mostly around +10° C to +15° C are to be expected. In order to ensure a full hydration of the cement, keep the coating damp for an adequate amount of time (constant relative humidity > 80%) and protect from drying out. In general 7 days will suffice.

AQUAFIN[®]-1K

At the same time avoid the formation of condensation or standing water during this time span after application. Where there is risk of dropping below the dew point (condensation) install a dehumidifier until the mortar has cured. Under no circumstances blow in uncontrolled warm air or use direct heat sources (e.g. gas or oil heaters).

- Do not attempt to re-life mortar that has already started to stiffen by adding more water or fresh mortar as there is a risk of inadequate strength development.
- If there is a risk of cracking in the substrate following application then, dependent on the area of application, use AQUAFIN-2K, AQUAFIN-RS300 or AQUAFIN-2K/M.
- Observe current valid regulations.

Please observe a current valid EU Health & Safety data sheet.