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SCHOMBURG

Technical Data Sheet

AQUAFIN®-F

Art.-No. 2 04247

Silification solution for construction waterproofing

Properties:

- Ready to use.
- Hydrophobic.
- Pore restricting.
- Vapour permeable.
- Against capillary rising damp.
- Over 40 years practical experience.
- Solvent free.
- Tested to the WTA (Association for Science and Technology of Building Maintenance and Monuments Preservation) data sheet 4-4-04/D to 95% moisture saturation.

Areas of application:

For the production of retrospective horizontal moisture barriers in accordance with the WTA data sheet 4-4-04/D with capillary rising damp in walls.
The capillary porosity of the construction material (blockwork/concrete) is interrupted by the combination of active agents (capillary restriction/hydrophobicity).

Technical Data: [1])

Basis:	alkali silicate-siliconate
Colour:	clear
Specific gravity:	1.3 g/cm³
pH value:	12.2
Cleaning:	with water when in the fresh state
Consumption:	dependent on the porosity of the brickwork (determined with a trial bore hole). Min. 15 kg/m² wall cross section, e.g. 36 cm thick wall = min. 5.5 kg per linear metre
Packaging:	6, 12, 30, 250 kg
Storage:	frost free, 24 months in the original unopened container. Use opened containers promptly.

[1]) The quoted data was determined under standard conditions. Under other conditions of application varying values may result.

Product preparation:

I.Low pressure injection method:
Particularly suitable when the wall to be treated is already considerably or completely saturated with water. The borehole arrangement is determined by the type and condition of the wall. The borehole diameter is determined by the application method. Borehole spacing is as a rule 10 – 12.5 cm from hole centre to hole centre. The boreholes are placed horizontally in the pointing mortar or at an angle of up to 45°. The depth of the borehole is about 5cm less than the thickness of the wall. With dense weakly absorbent brickwork as well as horizontal boreholes, chose a double row borehole arrangement. Here the vertical offset should be < 8 cm. With porous natural stone walling place the boreholes in the stone and with dense quarry stone walling in the joints. For wall thicknesses greater than 60 cm and on corners boreholes should be drilled from both sides. Before saturating remove drilling dust. Application of AQUAFIN-1K to both sides of the wall around the borehole barrier prevents the AQUAFIN-F from escaping. Insert injection packers in the holes. Walls with large voids, hollow blocks, cracks and open joints up to 5mm should be repaired with ASOCRET-BM before carrying out the injection process. Subsequently inject AQUAFIN-F at a pressure of < 10 bar. Sustain the injection until the neighbouring joint is filled to a satin appearance with AQUAFIN-F. After approx. 24 hours remove the packers and close off the holes with ASOCRET-BM.

Example of bore hole arrangement – pressure injection

AQUAFIN®-F

For information about suitable injection equipment, e.g. HighPump low or HighPump duo of HTG HIGHTECH Germany GmbH, Berlin, see www.hightechspray.de

II. Injection without pressure equipment:
Position 30 mm boreholes at a distance of between 10 – 12.5 cm apart, at an angle of between 45° and 30°. The depth of the borehole is approx. 5 cm less than the thickness of the wall. When arranging the bore angles, ensure that at least one horizontal joint (two joints in thicker walls) is included. It is recommended to place the boreholes in two planes. The distance between borehole centres is determined by the porosity of the wall. The closer together the boreholes are, the greater the success of the procedure. Electro-pneumatic drills that work with minimum vibration (e.g. Hilti) with appropriate drill bits are suitable.

Example of borehole arrangement – injection without pressure

For wall thicknesses greater than 60 cm and on corners boreholes should be drilled from both sides. Before saturating remove drilling dust. Subsequently insert AQUAFIN-F into the boreholes. It is practical to inject from a storage vessel (hopper with pressure plugs). Saturation time should be a minimum of 24 hours Inject until complete saturation. Afterwards seal the boreholes with ASOCRET-BM. For sealing open joints, cracks or voids use the same procedure as for the low pressure application method.

III. Supporting measures
After implementation of the wall injection with AQUAFIN-F to combat rising damp additional suitable supporting measures are necessary. This is essentially the refurbishment of renders with the THERMOPAL renovation render system, vertical waterproofing of the external areas in contact with the ground with AQUAFIN-2K/M or COMBIFLEX-EL as well as the incorporation of drainage to DIN 4095 and the elimination of structural defects.

Waterproofing the area:
Impregnate the cleaned area in a minimum of one application until saturated. Apply AQUAFIN-1K whilst the impregnator is still wet in a minimum of two applications in order to achieve the minimum dry film thickness of 2.0 mm. Once the waterproofing slurry is dry, spray apply a thorough coating of THERMOPAL SP (alternatively: Cement mortar MGIII with the addition of ASOPLAST-MZ (1:3 with gauging water)). Subsequently apply THERMOPAL-SR44 to prevent condensation effects.

Important advice:
- AQUAFIN-F is not suitable for exposed surfaces such as concrete, brickwork, render etc.
- The WTA data sheet 4-4-04/D forms the basis of the renovation measures against capillary rising damp. Generally exploratory tests (e.g. moisture balance, salts analysis) are necessary.
- Protect areas not to be treated with AQUAFIN-F from its effects.

Please observe a valid EU health and safety data sheet!