

Torggler

AQUATECH

Single-component liquid waterproofing sheath in water emulsion.

- High elasticity
- Resistant to water stagnation
- Good treadable surface
- Can be covered with ceramic tiles
- High initial solar reflectance index (SRI) for white version
- According to DIN 18534: for wall and floor surfaces in water exposure classes W0-I and W1-I as well as, together with Tile 250 or Tile 480 adhesives, on wall surfaces in zone W2-I (without Class C)
- With "General Building Authority Test Certificate".

FEATURES

Aquatech is a liquid waterproofing sheath in the form of a water emulsion based on styrene-acrylic elastomers. It can be applied by brush, roller, long-handled scrubbing brush, trowel or by airless pump. Once dried, it becomes an elastic, waterproof, UV-resistant and water-resistant membrane that can be walked on for inspection and maintenance work. Aquatech is classified according to EN 14891 as waterproofing product type DM 01 P to be used under ceramic tiles bonded with type C2 adhesives according to EN 12004. Aquatech is certified by GEV as EC1 Plus for its very low emissions of volatile organic compounds. Once installed, the product meets the requirements for class E construction materials according to DIN EN 13501-1.



APPLICATION AREA

- Waterproofing and protection of all types of building coverings: roofs, canopies, balconies, terraces, as well as eaves, ledges, chimneys.
- Protection and waterproofing of all kinds of vertical elements: foundation walls, earth retaining walls, facades, walls (see Warnings).
- Waterproofing of humid environments (bathrooms) with subsequent covering with ceramic tiles.
- Waterproofing of old bituminous coverings only possible after using the appropriate Primer Aquatech.
- Waterproofing of old ceramic floorings, applying suitable reinforcing Tessuto NT 50 between the coats.

TYPES OF SUBSTRATE

- Porous mineral substrates (concrete, screeds, plasters) and pre-existing waterproofing made with liquid sheaths.
- Bituminous, crumbling, porous and metallic substrates after treatment with Primer Aquatech.
Note: For ferrous metal substrates with evidence of corrosion, the initial application of an anti-corrosion primer is recommended.)

TYPE OF MATERIAL TO BE APPLIED

Once dried, Aquatech forms a waterproof elastomeric film that does not require additional protection. In bathrooms and humid environments it is possible to cover the dried layer of Aquatech with ceramic tiles in accordance with EN 14891.

ACHIEVABLE THICKNESSES

Aquatech can be applied using a roller, brush, trowel or by airless pump. Regardless of the application method, Aquatech must always be applied in at least 2 coats, possibly of different colours, in an amount of approx. 300-500 g/m² each coat, in order to guarantee a minimum quantity of applied product equal to or greater than 1.0 kg/m², which guarantees a minimum dried thickness of 0.5 mm. Once installed, the product meets the requirements for class E construction materials according to DIN EN 13501-1.

WARNINGS

- Aquatech is not suitable as a final coating for swimming pools.
- Old bituminous coverings or non-porous metal substrates must be pre-treated with Primer Aquatech, a product that does not contain anti-corrosive additives.
- Aquatech must be applied at temperatures above +5 °C. This minimum temperature must be also guaranteed for the drying period. Do not apply the product in the presence of fog or when rain is imminent.
- The Aquatech film, if not completely dried, is damaged by the action of water.
- Do not apply on bituminous sheaths installed from less than 2 years.

NOTE:

When used as protection and waterproofing of all types of vertical elements: Depending on exposure, Aquatech may be subject to slight surface colour changes, which do not compromise the waterproofing and protective properties of the dried layer.

PREPARATION FOR USE

Surfaces to be waterproofed must have a sufficient slope to ensure water runoff, although occasional water stagnation may be tolerated. There is therefore no need to even out any slight imperfections in the substrate. Coarse irregularities, however, must be eliminated.

Cementitious substrates must be completely hardened (at least 28 days old) and/or have a residual moisture content, determined by calcium carbide hygrometer, of less than 4% by weight. Higher humidity values can cause bubbles and detachment. The substrate must be clean and dry, free of brittle parts. It is recommended to brush vigorously with a steel brush and then dust thoroughly.

A vapour barrier and vents must be provided for the roofs of inhabited environments.

For intensely cracked surfaces it is recommended to reinforce Aquatech with suitable reinforcement tissue Torggler Tessuto NT 50.

In this case it is recommended to apply a large amount of the previous coat of product, making sure that, when the fabric is applied, the material is still fresh and sufficient to guarantee a total wetting of the fabric, also thanks to the necessary compression operation, with the help of suitable equipment, to allow a perfect integration of the fabric with the product. In this way it is possible to avoid detachment phenomena caused by insufficient contact area and lack of integration of the Tessuto NT 50 tissue into the waterproofing material.

Expansion joints and, in any case, all cracks or fissures due to periodic movements of the substrate must be sealed after the application of the waterproofer with Silicone Low Modulus from the Torggler range or insulated by applying elastic reinforced overlapping tapes between them, incorporating them between the two coats of Aquatech. For perimeter connections and connections to chimneys, vents, etc., it is recommended to use our self-adhesive Perimeter Tape 0.10 (4x15 m).

PRODUCT PREPARATION

Mix Aquatech properly before use.

To improve adhesion on porous substrates, it is recommended to perform a pre-treatment based on Aquatech diluted with about 50% of water, depending on the porosity of the substrate. Consumption of pure Aquatech: approx. 150 g/m².

INSTRUCTIONS FOR APPLICATION

When the anchor base can be walked on (depending on the environmental conditions, it is necessary to wait from 2 to 10 hours), apply Aquatech, with brush, roller, long-handled scrubbing brush, trowel or airless pump in at least two crossed coats. For roller application it is recommended to use a medium hair roller. Aquatech must be applied as is, undiluted at least 1 kg/m², in order to obtain a dried layer of about 0.5 mm. Each coat must be applied only after the previous one can be walked on. Aquatech is available in three colours - white, grey and brick red - to allow the application of two coats, of different colours, on the whole surface to be treated.

The airless pump must be equipped with nozzles of suitable size (indicatively between 0.023 and 0.039 inches or 0.58 and 0.99 millimetres, taking care not to use vaporizer nozzles larger than the ones supported by the pump).

CLEANING

Clean the tools used with water immediately after use. The dried product must be removed with solvents (mineral spirit, nitro solvent, etc.).

Example of application

According to DIN 18534: for wall and floor surfaces in water exposure classes W0-I and W1-I on wall surfaces in zone W2-I.

Ready-to-use, fast-drying, solvent-free liquid waterproofing film applied to walls and interior floor surfaces, in wet and damp environments, under ceramic and natural stone tiling, including bathroom floor surfaces without floor drains with shower tray or bathtub and wall surfaces in sanitary rooms in public and commercial areas with floor drains without chemical exposure.

Types of substrate

Depending on the moisture stress classes or type of substrate, mineral substrates made of concrete, lightweight concrete, aerated concrete, cement and lime and cementitious plasters, gypsum plaster and gypsum fibreboard, gypsum plaster and wall binding agent, solid joint masonry, also masonry (not mixed masonry) are suitable. For cement screeds, calcium sulphate screeds (anhydrite and anhydrite sliding screeds), dry screeds, cement-bonded dry construction panels, metal substrates (for treatment of metal substrates), contact the Technical Assistance Service.

Application and implementation

The substrate must be pre-treated with Tile Primer (acrylic styrene polymer based primer in water dispersion) or Multigrip (one-component adhesion promoter), applied in one coat with roller or brush. Install the various accessories such as through-hoses with Flex Pipe Collars 22-37, 50-75 and 93-146, the polypropylene reinforcement tape with side perforations - transversely extendible and longitudinally stable, type PP Tape 120 MM-50, the Corner Tissue 90° and the Corner Tissue 270°, with products from the Torggler range such as Tile 250 (white or grey) or Tile 480 (white or grey) or Aquatech.

Proceed by installing between the first and second layer of Aquatech liquid waterproofer the self-adhesive butyl collar for floor drains type Floor Collar.

Depending on the water exposure class, perform the waterproofing with Aquatech applied in several layers using a roller or brush. The total thickness of the dry film must not exceed 0.5 mm.

The waterproofing can be performed only in combination with Tile 250 (white/grey) and Tile 480 (white/grey) tile adhesives.

WAITING TIMES

When using Primer Aquatech wait approx. 2 to 6 hours before applying the first coat of Aquatech, or until the transparent film has lost its stickiness. Do not wait more than 8 hours before applying the waterproofing sheath.

Waiting time between one coat and the next of Aquatech: approx. 4 to 6 hours.

Time required before applying the next ceramic covering: approx. 3 days.

In the first days after application, the dried layer may be slightly sticky. This characteristic progressively disappears, but it can also be easily eliminated by spreading impalpable powder (talc, limestone powder, etc.) on the dried film and eliminating the excess immediately afterwards. In the case of a waterproofing to be covered by a ceramic covering (bathrooms, swimming pools, terraces), the tiles can be installed on the dried Aquatech layer, preferably using a two-component, flexible cementitious adhesive type EN 12004 C2 S1 (such as our T 50 mixed with Flex diluted 1:1 with water or alternatively a single-component, flexible cementitious adhesive type C2 S1 such as Tile 480, Tile 700). For indoor applications, it is also possible to use class C2 adhesives such as Tile 350 for installing ceramic tiles.

TECHNICAL DATA

| PARAMETER | VALUES |
|---|--|
| Colour | white, grey, brick red |
| Application temperature | +5 °C to +40 °C |
| Operating temperature | -40 °C to +120 °C |
| Density according to ISO 1184-1/B | 1.36 g/ml |
| Viscosity | 26 Pa*s |
| Dry content | 70% |
| Waterproofing according to EOTA TR 003 | test passed |
| Mass water absorption | 4% at 24 h 6% at 48 h |
| Liquid water permeability according to EN 1062/3 | < 0.01 kg/(m ² *h0 ⁵) |
| Permeability to water vapour according to ISO 7783 | $\mu = 1500$ $S_d (1 \text{ mm}) = 1.5 \text{ m}$ |
| Ultimate tensile strength according to DIN 53455 S3 | 1.7 MPa |
| Elongation percentage at break according to DIN 53455 S3 | 300% |
| Shore A hardness according to ISO 868 | Shore A/15: 42 Shore A/max: 80 |
| PARAMETER | |
| Initial tensile adhesion strength* (according to EN 14891 A.6.2 - $\geq 0.5 \text{ N/mm}^2$) | 1.7 N/mm ² |
| Tensile adhesion after immersion in water* (according to EN 14891 A.6.4 - $\geq 0.5 \text{ N/mm}^2$) | 0.9 N/mm ² |
| Tensile adhesion after exposure to heat* (according to EN 14891 A.6.5 - $\geq 0.5 \text{ N/mm}^2$) | 2.2 N/mm ² |
| Tensile adhesion after freeze-thaw cycles* (EN 14891 A.6.6 - $\geq 0.5 \text{ N/mm}^2$) | 0.8 N/mm ² |
| Shear adhesion after immersion in lime water* (EN 14891 A.6.9 - $\geq 0.5 \text{ N/mm}^2$) | 1.3 N/mm ² |
| Waterproofing (according to EN 14891 A.7 - no penetration. Weight increase $\leq 20 \text{ g}$) | No penetration. Weight increase: 0 g |
| Crack bridging ability under standard conditions (according to EN 14891 A.8.2 - $\geq 0.75 \text{ mm}$) | 3.83 mm |

| | |
|--|-----------------------|
| Tensile adhesion after immersion in chlorinated water* (according to EN 14891 A.6.8 - $\geq 0.5 \text{ N/mm}^2$) | 1.2 N/mm ² |
| Crack bridging ability at low temperatures (according to EN 14891 A.8.3 - $\geq 0.75 \text{ N/mm}$) | 2.5 mm (-5 °C) |
| Classification according to EN 14891 | DM 01 P |

* Values obtained with cementitious adhesive type C2 according to EN 12004 (T 50 + Flex)
1 N/mm² equals 1 MPa.

CONSUMPTION

Aquatech consumption varies depending on the substrate from 0.3 to 1 kg/m² of Aquatech each coat. On porous substrates it is advisable to apply a first coat of Aquatech primer diluted 1:1 with water. In this case the consumption of the pure product is around 150-200 g/m².

STORAGE

Aquatech is stable for at least 12 months if stored in the original packaging, in a cool place (at temperatures between +5 °C and +30 °C). PROTECT FROM FROST.

PACKAGES

Aquatech 6 and 15 kg plastic containers.

CERTIFICATIONS

Certified as EC1 Plus by GEV.

Product certified by Materialprüfanstalt für das Bauwesen in Braunschweig, Notified body No. 0761, for impermeability and crack-bridging ability according to EN 14891.

CLASSIFICATION LEGEND ACCORDING TO EN 14891

TYPES

CM = Waterproofing product for liquid cementitious modified-polymer application

DM = Waterproofing product for liquid dispersion application

RM = Waterproofing product for liquid application based on reactive resins

CLASSES

01 = Waterproofing product applied liquid with crack bridging capacity at -5 °C

02 = Waterproofing product applied liquid with crack bridging capacity at -20 °C

P = Waterproofing product applied liquid resistant to contact with chlorinated water

SPECIFICATION

Elastic waterproofing treatment based on styrene-acrylic elastomers in water dispersion, type Aquatech by Torggler S.r.l. The application must be carried out in two coats on suitably prepared substrates, with a total thickness of at least 0.5 mm. Indicative consumption of kg/m².

The information contained in this document is reported on the basis of our experience and knowledge; therefore, any recommendations and suggestions made are without any guarantee and must be verified before using the product by those who intend to use it, who assume all responsibility that may result from its use since the conditions of use are not under our direct control. In case of doubt, it is always advisable to make preliminary tests and/or ask for the intervention of our technicians. Torggler reserves the right to modify, replace and/or delete the items, as well as to change the product data in this document without prior notice; in this case the indications given here may no longer be valid. Always refer to the latest version of the data sheet, available at www.torggler.com. Version 09.2020.