

# AQUAZIP FAST

## DATA SHEET

Two-component elastic cement membrane, quick drying even at low temperatures, for waterproofing and protecting concrete and masonry structures, terraces and balconies subject to positive or negative hydrostatic pressure



Interior/Exterior



Interior/exterior flooring



In pools



Two-component product



Metal trowel



Spray



Roller



Brush

## Composition

Two-component waterproofing agent, quick drying, resistant to positive or negative hydrostatic pressure, made from cement binders, fine graded aggregate, chemical additives and special alkali-resistant synthetic polymers designed to improve workability, adhesion and elasticity of the membrane, even at low temperatures.

## Supply

- 36 kg kit (A+B):
  - Component A: special sacks with protection against moisture, approx. 20 kg
  - Component B: approx. 16 kg cans

## Use

- Waterproofing terraces and balconies before laying new ceramic or similar tiles.
- Waterproofing of hydraulic structures such as pools, tanks, canals and reservoirs.
- Waterproofing of surfaces exposed to the weather and treated with products suitable for resisting sunlight.
- Waterproofing and protection of concrete walls subject to positive and negative hydrostatic pressure.
- Waterproofing and protection against carbonation of concrete structures subject to moderate structural stress and bending deformation.
- Waterproofing protection of horizontal and/or vertical surfaces and/or surfaces with complex geometries subject to moderate structural stress and/or bending deformation.

## Specifications

- Excellent adhesion on various types of substrate (concrete, mortar, screeds, existing flooring, stone, ceramic, brick and marine plywood).
- Waterproofing agent applied in liquid form, classified CM-O1P in accordance with EN 14891, to be used under ceramic tiles bonded with adhesives.
- Suitable for protection (PI) of concrete structures (principle 1 of EN 1504-9:2008) against the risk of penetration of carbon dioxide.
- Suitable for moisture control (MC) of concrete structures (principle 2 of EN 1504-9:2008).
- Suitable for increasing the resistivity (IR) of concrete structures (principle 8 of EN 1504-9:2008).
- Crack-bridging ability by embedding FASSANET 160 alkali resistant fibreglass mesh into the first layer of still-wet material.
- Tiles can be applied after around 4 hours from application of the final coat, at a temperature of +20°C or higher, and within 24 hours at low temperatures, down to +5°C.
- Also suitable for new substrates that are still damp, as long as they have cured.
- Can be exposed to rain after a just few hours, even at low temperatures (down to +5°C) and with high humidity.

## Certifications and regulations

AQUAZIP FAST meets the performance requirements for class CM-O1P of EN 14891:2012 - (Liquid-applied water impermeable products for use beneath ceramic tiling bonded with adhesives).

AQUAZIP FAST complies with the principles defined by EN 1504-9:2009 ("Products and systems for the protection and repair of concrete structures. Definitions, requirements, quality control and evaluation of conformity") and the requirements of EN 1504-2 ("Products and systems for the protection and repair of concrete structures"), protection against ingress (PI), moisture control (MC) and increasing resistivity (IR). AQUAZIP FAST has obtained GEV EMICODE EC 1Plus classification, a voluntary mark relating to emissions of volatile and semi volatile organic compounds (VOC and SVOC) issued by GEV (Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte), which attests the product's very low emissions of volatile organic compounds.

## Substrate preparation

Before applying AQUAZIP FAST, the application surface must be cured, level and flat, intact, without stagnant water, dimensionally stable and mechanically resistant. Any traces of oil, grease, wax, paints, varnishes, efflorescence etc. must be removed beforehand, as well as any crumbling or loose parts.

Before proceeding with the waterproofing work, all critical points must be treated beforehand, such as:

- any cracks in the substrate;
- corners, edges and vertical overlaps;
- expansion joints and/or structural joints;
- conduits, drains, grills;
- gutter joints, pipe unions and drain pipes;
- steps and thresholds;
- skylights;
- system piping and through elements.

## Concrete

The concrete substrate must guarantee a minimum compressive strength of 25 MPa and a tensile strength of at least 1.5 MPa. For new casts, the substrate must be sufficiently dry and cured (at least 28 days).

Any areas or sections of deteriorated concrete must be repaired beforehand using suitable Fassa Bortolo structural mortars.

The substrates must be prepared beforehand by shot peening, sand blasting, scarifying or mechanical abrasion cycles (diamond abrasive disc) in order to remove any roughness, traces of dirt, loose parts, encrustations, concretions, traces of paints, cement crusts or other contaminants, in order to make the substrate slightly rough and absorbent and not jeopardise adhesion of the subsequent waterproofing cycle.

To smooth over or repair voids, to correct slopes or areas of depression (dips and imperfections) use GAPER 3.30; for applications subject to high stress (for example tanks, swimming pools, etc.), treat the surfaces using GAPER 3.30, mixed with water and AG 15 diluted 1:3 (1 part AG 15 to 3 parts water).



### Existing flooring

Verify adhesion of the old flooring to the substrate by tapping the surface. Any detached and/or partly detached tiles must be removed, and the voids must be repaired using GAPER 3.30.

If missing or badly damaged, the grout in the joints on the existing flooring must be repaired.

To clean the old flooring, abrade mechanically using a diamond grinding disc in order to remove any traces of dirt, loose parts, encrustations, concretions, traces of paints, cement crusts or other contaminants, make the substrate slightly rough and absorbent and improve and increase adhesion of the subsequent waterproof coating. Immediately after cleaning, remove the dust from the substrates using a suitable industrial vacuum cleaner.



**It is recommended not to use a high-pressure washer to clean the old flooring, as this will lead to more water in the underlying substrate.**



After cleaning, the slope lines must be checked and verified. In fact, any imperfections and/or irregularities present on the substrate, such as dips or depressions, may lead to areas where rainwater stagnates. To repair these areas, treat the surfaces with FASSA EPOXY 400 and then apply GAPER 3.30 before this dries.

### Cement substrates (mortars and screeds)

Evaluate the conditions of the application surface beforehand; this must be suitably cured and have a uniform finish, without cement crusts, loose parts, encrustations, concretions, traces of paints or other contaminants, in order to not jeopardise adhesion of the subsequent waterproofing cycle.

It is preferable not to wash the surfaces using water, so as to avoid adding more water to the underlying substrate.

Make sure that the screed is mechanically resistant, dimensionally stable, compact with good surface hardness, cured, clean, free of cracks and stagnant water on the surface.

Any cracks or recasting on the screed must be structurally sealed using FASSA EPOXY 300, following the procedures described on the datasheet.

For screeds or surfaces with low superficial strength, scarify beforehand using an abrasive disc until obtaining a strong base and, after careful cleaning, if necessary treat the substrate with PRO-MST primer.

Use GAPER 3.30 to level or smooth off the surfaces and correct the slopes.

Before applying the AQUAZIP FAST system on substrates exposed to strong sunlight, it is recommended to slightly moisten the application surfaces, avoiding the formation of stagnant surface water.

**Masonry**

Completely remove any layers of plaster, render or other finishes on the surface so as to expose the masonry. Then evaluate the conditions of the masonry wall surface; this must be solid, mechanically resistant, perfectly clean and free of any traces of varnishes, paints or parts that are crumbling or coming loose that may compromise adhesion of AQUAZIP FAST. Carry out any repairs on the masonry wall using suitable structural mortar.

Before applying AQUAZIP FAST, repair any cracks, cavities or gaps between bricks and blocks, making the substrate as uniform as possible. The surface must also be levelled off and/or consolidated using a thick layer of suitable structural mortar (follow the instructions on the datasheet for the product used) and connecting the corners between adjacent walls and between walls and floor using suitable coverings.

**Old coatings**

If applying the AQUAZIP FAST system on vertical surfaces, it is recommended to remove from the surfaces any traces of resinous paints or coatings that are degraded and/or coming loose. Ensure that the substrates are clean and free of grease or contaminants that may affect adhesion of the AQUAZIP FAST waterproofing system.

It is always recommended to carry out preliminary tests to verify adhesion of the waterproofing system to existing substrates.

**Swimming pools, cisterns and/or tanks**

All discontinuities, recastings, any through elements or pipes and systems present on the application surfaces must always be sealed beforehand using suitable products. The concrete must be properly prepared as described under "concrete". Smooth off vertical and horizontal surfaces using GAPER 3.30, mixed with water and AG 15 diluted 1:3 (1 part AG 15 to 3 parts water).

For waterproofing swimming pools, all critical points such as internal corners, external corners, divisions, connections between vertical-horizontal and vertical-vertical surfaces etc. must be treated using AQUAZIP ELASTOBAND.

For waterproofing tanks, tubs and/or cisterns, it is recommended to pre-fabricate the connecting elements along all the joints between horizontal/vertical surfaces and in the corners between walls; these elements will be made using GAPER 3.30, mixed with water and AG 15 diluted 1:3 (1 part AG15 to 3 parts water).

**Bituminous substrates (bituminous membranes, asphalt, etc.)**

When waterproofing old bituminous substrates, first verify that these are intact and watertight. Then apply to the repaired and restored bituminous surface a separating layer comprising a macro-perforated LDPE sheet (min thickness 0.10 mm – diameter of the holes  $\geq$  40 mm with perforations covering  $\geq$  15% of the surface), and on top of this apply a micro-perforated LDPE sheet. Then create a fast-drying mesh-reinforced cement screed (for example SV 472 P). The thickness of the screed must not be less than 5 cm.







## Vertical overlaps

Before starting the waterproofing work on horizontal surfaces, near masonry and parapets, making openings to an appropriate depth so as create a lodging for the vertical overlaps of the new waterproofing system. The openings must be at least 15-20 cm high compared to the new flooring. The openings must be levelled off using GAPER 3.30.



The AQUAZIP ELASTOBAND will be positioned along the connections between the horizontal plane and the vertical overlaps. The strip must be laid continuously on the application surfaces, first applying an at least 2 mm thick layer of AQUAZIP FAST waterproofing membrane, to a width exceeding the strip and making sure to leave the centre part free. For perfect sealing of the corners, use the appropriate preformed elements.

In the event of vertical overlaps in prefabricated polymer-modified bitumen membranes, the ADHESIVE STRIP FOR AQUAZIP SYSTEMS can also be used, consisting of a self-adhesive elastic sealing tape made from butyl rubber, and lined on both sides by polypropylene fibre non-woven fabric.

The adhesive strip must be applied directly to the substrate, free of dust and above all perfectly dry. For the treatment of the corners, simply cut the strip up to the centre and fold it over. For application it is recommended to remove half of the protective film and then apply the tape to the substrate. At the same time, the other part of protective film must be removed and strong pressure applied on the tape, also using a small spiked roller.

If the substrates are not perfectly dry, it is recommended to apply the strip on a perfectly-dry first layer of AQUAZIP FAST waterproofing material.



The AQUAZIP fast waterproofing system will also be applied on the vertical overlaps, and after suitable curing will be covered with a coat of KI7 or KZ 35, lime and cement base coat plasters/renders for exteriors and interiors, mixed with a solution of water and AG 15 (1 part AG 15 to 3 parts water), dispersion of synthetic resins for cement-based products. The base coat plaster must be fine-float finished, embedding wide-weave synthetic plaster reinforcing mesh during application.

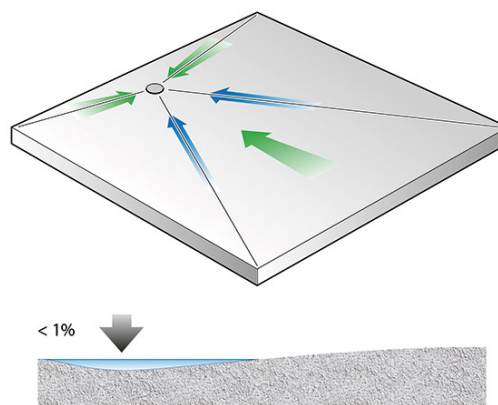


## Slope lines

To avoid the formation of stagnant water on the application surface and guarantee the performance and durability of the waterproofing system, the screeds must be suitably prepared, in particular ensuring an adequate slope.

For terraces, balconies and exterior paving, the application surface must be developed and/or checked so that the slope towards the rainwater drains is not less than 1.5%. This value, in order to ensure the correct flow of water, is generally considered sufficient even in the event of possible settling of the different layers.

It is not recommended to create slopes of less than 1%, as depressions and stagnation of rainwater may form on the surface, with possible infiltration.



## Joints

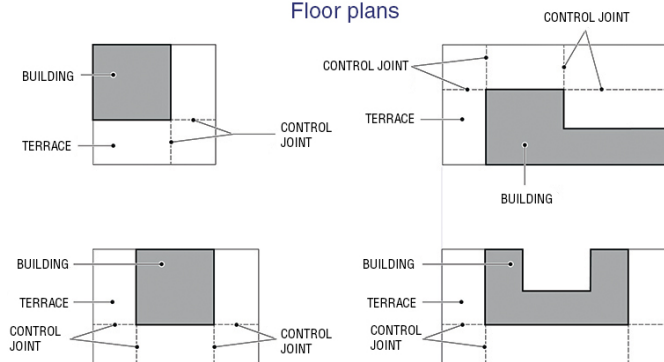
In accordance with EN 13548, movement joints in floor screeds are obligatory and must extend above the new flooring. The joints must subdivide the surface into square or rectangular blocks, and therefore be made at protrusions or in irregularly-shaped environments (i.e. "L", "U", etc.). For exterior environments, the maximum surface area that can be produced without dividing the screed is 9-10 m<sup>2</sup>, as specified by application standard UNI 11493-1 (point 7.11.1.2). If, due to the tile format used, continuity of the joints cannot be ensured in any other way, the tiles must be cut.

Any expansion joints present on the surface in question, as well as other critical points (joints between floors and vertical surfaces, internal and external corners, skylights, through pipes, grills, gutter and downpipe joints, railing balusters, etc.) must be suitably treated by the combined use of AQUAZIP FAST with the various accessories for AQUAZIP systems (strip, corner, edge, etc.).

At structural joints, on the other hand, FASSA TPE 170, a waterproof strip made from thermoplastic elastomer on polypropylene non-woven fabric, must be used. The FASSA TPE 170 strip will be fixed to the substrates using FASSA EPOXY 400, interrupting the waterproofing system at the joints.

### Control joints: positioning

#### Floor plans





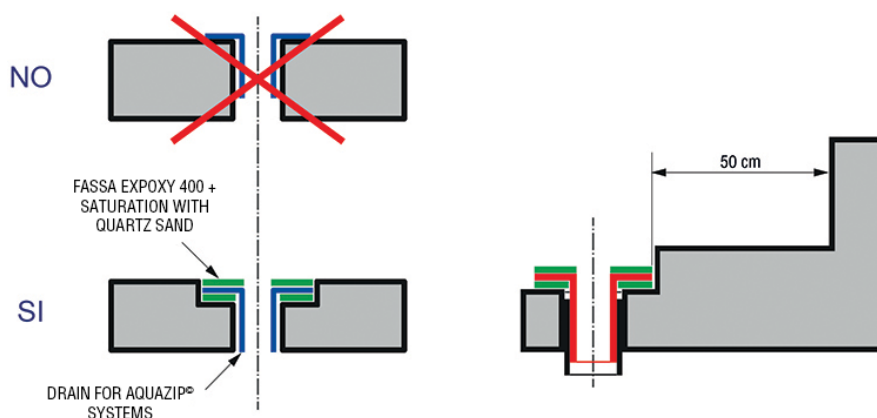
## Rainwater drains

To allow adequate flow of rainwater, place the new drains inside a lodging that is suitably lowered from the application surface. The drains must have a suitable volume/capacity based on the surface area.

For further information on this subject, refer to the specific standard UNI EN 12056-3:2001 (Gravity drainage systems inside buildings - roof drainage, layout and calculation).

For correct application of rainwater drainage systems, refer to the product datasheets for FRONT DRAIN and VERTICAL DRAIN FOR AQUAZIP SYSTEMS.

### Drains



## Application

### Mixing ratio

Component A: Component B = 20: 16 by weight.

- Component A: special sacks with protection against moisture, approx. 20 kg.
- Component B: approx. 16 kg cans

### Mixing

AQUAZIP FAST must be mixed using a mechanical mixer at low speed (~500 rpm). Carefully mix component B before use and then slowly add component A, continuing to mix thoroughly for around 3 minutes, until obtaining a uniform and smooth mixture.

Let stand for a few minutes in order to vent the incorporated air.

Do not add water or other additives to the mixture.

The mixture should be prepared using a complete package of component A and one of component B, in order to guarantee the correct proportions between the two components.



### Application

AQUAZIP FAST must be applied to the substrate in several coats, using a metal trowel, brush, roller or by machine. The total application thickness should be at least 3 mm in 2 layers.

For application by trowel, use a notched metal trowel (4x4 mm). Use the smooth part of the trowel to apply the waterproof coating, pressing hard on the substrate to ensure maximum adhesion, then go over the waterproof coating using the notched part of the trowel.

For spray application of AQUAZIP FAST, use a suitably-equipped plaster sprayer (for more information, contact Fassa Technical Service at [area.tecnica@fassabortolo.it](mailto:area.tecnica@fassabortolo.it)).

Apply FASSANET 160 alkali-resistant fibreglass mesh onto the first layer of AQUAZIP FAST before this has dried, making sure that it is completely embedded, avoiding the formation of voids in the waterproof coating. Immediately afterwards, smooth over AQUAZIP FAST with the flat side of the metal trowel, so as to obtain a uniform thickness. Use of the mesh in areas subject to high stress or with large cracks minimises the appearance over time of hairline cracks, which may compromise the seal of the waterproof coating. The reinforcing mesh must be cut to measure beforehand and overlap by at least 10 cm at the joints.

Never overlap the reinforcing mesh on vertical overlaps.

Once the first layer set (about 2 hours at +20°C and 65% RH), apply a second coat of AQUAZIP FAST, making sure to create a continuous and uniform layer that covers the first coat perfectly, always working in the same direction, preferably crosswise to the first layer, to ensure complete coverage of the substrate.

### Application conditions

- substrate temperature: min. + 5°C / max. + 35°C;
- ambient temperature: min. + 5°C / max. + 35°C.

The total application thickness must be not less than 3 mm, with a maximum recommended thickness for each coat of 2 mm.

Typical consumption about 1.45 kg/m<sup>2</sup> for each 1 mm thickness.

### Applying the covering

For application of ceramic or stone coverings, it is recommended to use highly-elastic cement adhesives classified S1 or S2 in compliance with EN 12004, such as AD 8 with FASSACOL LATEX S2, AZ 59 FLEX, AT 99 MAXYFLEX or FASSACOL EASY LIGHT S2 additives. If quick setting products are required, RAPID MAXI S1 can be used.

In accordance with application standard UNI 11493-1, the adhesive must be spread on both surfaces in general, in situations where the compactness of the layer of adhesive and the absence of cavities or discontinuities underneath the tiles are important objectives that may be hard to achieve with the conventional method of application on one surface only. Spreading on both surfaces is required in the presence of high mechanical stress and/or stress due to temperature-humidity (for example, exterior tiling, swimming pools, etc.), in the presence of particular types and sizes of tiles, or where there are specific requirements in terms of durability and safety.

For sealing joints, it is recommended to use FASSAFILL cementitious grouts, or if high chemical resistance is required, epoxy-based sealants such as FE 838 or FASSAFILL EPOXY.

It must be remembered that application standard UNI 11493-1 does not allow for "closed joints" (joint width less than 2 mm) for exterior tiling. For all floors, open joint application must always be specified, with joints at least 5 mm wide, as this is the most effective solution to prevent the risks associated with high stress due to temperature and humidity on the tiles in outdoor environments.

### Elastic sealing of skirting board

The strong stresses that exterior paving is subject to may cause problems near the skirting board. The solution to solve this problem involves applying a strip of elastic sealant against the floor, thus detaching the skirting board by a few millimetres from the surface (at least 2 mm in accordance with UNI 11493-1). This joint has the task of preventing the formation of a rigid connection with the flooring, drastically reducing the stresses exerted on the floor due to changes in temperature or structural settling of the building.

If the skirting board is not detached and indeed is grouted to the floor, isolation of the floor-skirting system becomes ineffective.

For elastic sealing of the skirting board, use FASSALASTIC TIXO PU 40, a thixotropic one-component polyurethane sealant with low modulus of elasticity, after having applied FASSA PRIMER 100 or, alternatively, FASSASIL NTR PLUS, a high-performance neutral cross-linking silicone sealant. The gaps both above the skirting and between the skirting and the tiles will also be sealed using either FASSALASTIC TIXO PU 40 or FASSASIL NTR PLUS elastic sealant.





## Drying times

AQUAZIP FAST must be completely hardened before being covered.

After application of the second coat, wait 4 to 24 hours for the product to cure, depending on the humidity and temperature conditions, before applying the new ceramic covering.

## Cleaning the equipment

Immediately after using AQUAZIP FAST, clean all tools and equipment with water before the product hardens. The hardened material can only be removed mechanically.

## Warnings

- Product for professional use.
- Do not use AQUAZIP FAST:
  - on substrates saturated with water;
  - on bituminous and/or mineral asphalt surfaces;
  - on insulating materials (lightweight substrates, foamed concrete, expanded or extruded polystyrene panels, etc.);
  - on drivable or walkable surfaces without ceramic and/or stone coverings or subject to structural stresses;
  - on vertical surfaces to be left exposed, if not protected with suitable products able to guarantee resistance to UV radiation;
  - in direct contact with chlorinated pool water; apply a tile or mosaic covering;
  - in the event of imminent rain;
  - in the presence of strong ventilation or substrates exposed to direct sunlight; in this case, protect the waterproofed surface with damp cloths.
- Immediately after application of AQUAZIP FAST, protect the treated surface against rain for at least 24 hours.
- Immediately after application of AQUAZIP FAST, protect the treated surface against rain, frost and/or quick drying for at least 48 hours.
- AQUAZIP FAST cannot be float-finished and therefore, in the event of possible imperfections on the resulting surface, after complete hardening, the surface can be abraded slightly to remove any irregularities. Any abrasions on AQUAZIP FAST before it has completely hardened could cause damage to the waterproofing system, limiting its characteristics.
- The hardening of AQUAZIP FAST is slower in the presence of high humidity.
- If needing to coat the waterproofing system with paints or solvent-based products, preliminary tests must be carried out to verify that the solvent does not affect the integrity of the waterproof coating.
- For correct application, please see the technical documents for each individual product specified.
- As per the requirements of standard UNI 11493-1, if using inside swimming pools, water-tightness of the pool must be checked before installing the tiles.
- Do not use as a sealing element on flat roofs; in this case, please refer to the stratigraphies proposed by standard UNI 8178-2.
- Thresholds must be installed, without exception, only after having laid the waterproofing sheet under the threshold. Otherwise the water-tightness of the threshold cannot be ensured. If the interior floor screed has already been created, its thickness can be used as a raised retaining element for fixing the AQUAZIP ELASTOBAND. If the screed has not yet been laid, use an "L" profile. A water drip profile must be created at the bottom of the outside section of the threshold step.
- The fronts of terraces and the drainage edges of exterior tiled surfaces may run the risk of retaining the water in contact with the edge of the tiling, with consequent durability problems due to penetration of water into the substrate underneath the tiling. To prevent this risk, special ceramic pieces equipped with drip guard systems must be used.

**AQUAZIP FAST it must be used in its original state without the addition of foreign materials.**

## Safety rules

Always refer to the safety datasheet containing the physical, toxicological and other data relating to operator safety.

Apply the product with suitable ventilation and away from sources of heat.

AQUAZIP FAST must only be used for the specified purposes in the manners described, and is intended exclusively for professional use.



## Disposal and ecology

Do not dispose of the product and empty containers in the environment.  
For further information, see the most recent safety datasheet.

## Maintenance work to be carried out on terraces and balconies

The following is a list of operations concerning periodic maintenance activities to be carried out at least twice a year (spring and autumn) on the surfaces of terraces, in order to prevent any problems from arising:

- remove any accumulated material (foliage, branches, various debris) from the surface, above all cleaning out the drains and gutters. The removed material must be taken away and not washed into drains;
- remove any vegetation that may have developed on the surface (paving, waterproof coatings, etc.);
- remove any growing branches from plants near the perimeter of the roof, to prevent falling leaves from obstructing drains. Branches or plants must be at least one metre from the end of the roof;
- check that all of the drains are fitted with suitable leaf strainers or gravel grids, making sure that these are not obstructed and that the water can flow freely, without obstructions or other impediments;
- make sure that the mechanical fixing elements for systems or machinery, if used, are not fixed to the surface interacting with the waterproofing system;
- periodically check the perfect tightness of expansion and/or structural joints on the surface, checking for any deterioration or detachment. In the event of problems, carry out the necessary repairs to the damaged areas;
- prepare a special logbook for recording all the inspections or repairs carried out and any other work performed;

If the waterproofed surface requires cleaning, this must be done as follows:

- wash manually with a solution of lukewarm water and suitable detergent;
- wash at low pressure with lukewarm or cold water and a suitable detergent;
- the spray nozzle must be kept at least 50 cm away from the surface being cleaned, avoiding excessive pressure;
- rinse with clean and cold water;
- the water temperature must not exceed 50°C;
- use only detergents or degreasers that when discharged are not harmful to flora and marine life.

Make sure that any metal guttering or other mechanical fixings systems applied vertically are perfectly anchored and sealed. Otherwise, carry out appropriate repairs or replacement of damaged items

## Storage

Component A: store in its original packaging, in suitable, dry places, for no longer than 6 months.

Component B: store in its original packaging, in suitable, dry places, for no longer than 12 months. Protect from frost.

## Quality

AQUAZIP FAST is subjected to accurate and constant checks in our laboratories. The raw materials used are rigorously selected and controlled.



Technical Data	
Yield	approx. 1.45 kg/m <sup>2</sup> per mm in thickness
Specific weight of the mix	approx. 1,400 kg/m <sup>3</sup>
pH of the mixture	> 12
Mix ratio	100 parts Comp. A and 80 part of Comp. B
Application temperature	from +5°C to +35°C
Workability time of the mix	approx. 45 minutes
Waiting time before applying tiles	Approx. 4 hours at +20°C and 65% relative humidity
Maximum thickness per coat	2 mm
LEED V4.1 protocol	The product meets the requirements for obtaining the EQ Credit: Low-Emitting Materials
GEV Classification	GEV EMICODE EC 1Plus - very low emission

	Component A	Component B
Appearance	Grey powder	White latex
Specific weight	1,200 g/l	1,020 g/l
Dry residue	100%	53%

Standard EN 14891	Normative requirements	Product performance
Impermeability to water under pressure (1.5 bars of positive pressure for 7 days)	No penetration	No penetration
Crack bridging ability at +23°C (mm)	≥ 0.75	≥ 0.8
Crack bridging ability at -5°C (mm)	≥ 0.75	≥ 0.75
Initial adhesion strength (N/mm <sup>2</sup> )	≥ 0.5	≥ 1.2
Adhesion strength after water immersion (N/mm <sup>2</sup> )	≥ 0.5	≥ 1.0
Adhesion strength after heat action (N/mm <sup>2</sup> )	≥ 0.5	≥ 2.0
Adhesion strength after freeze-thaw cycles (N/mm <sup>2</sup> )	≥ 0.5	≥ 0.8
Adhesion strength after contact with lime water (N/mm <sup>2</sup> )	≥ 0.5	≥ 0.9
Adhesion strength after immersion in chlorinated water (N/mm <sup>2</sup> )	≥ 0.5	≥ 1.0

Standard EN 1504-2 (PI-MC-IR)	Normative requirements	Product performance
Measurement of direct tensile adhesion strength, EN 1542 (N/mm <sup>2</sup> )	Flexible systems without traffic ≥ 0.8 N/mm <sup>2</sup>	≥ 1.0
	Flexible systems with traffic ≥ 1.5 N/mm <sup>2</sup>	
Measurement of direct tensile adhesion strength after freeze-thaw cycles, EN 13681 (N/mm <sup>2</sup> )	Flexible systems without traffic ≥ 0.8 N/mm <sup>2</sup>	≥ 1.0
	Flexible systems with traffic ≥ 1.5 N/mm <sup>2</sup>	
Static crack bridging, EN 1062-7 (mm)	From class A1 (0.1mm) to class A5 (2.5mm)	Class A3
Carbon dioxide permeability, EN 1062-6 (m)	Declared value	S <sub>d</sub> = 229
Water permeability, EN 1062-3 (kg/m <sup>2</sup> ·h <sup>0.5</sup> )	< 0.1	< 0.05
Water vapour permeability, EN ISO 7783 (m)	Class I S <sub>d</sub> < 5 m (permeable to vapour)	S <sub>d</sub> = 2.68



Other performance specifications	Normative requirements	Product performance
Adhesion to concrete after 24 hours at +5°C and 50% RH (N/mm <sup>2</sup> )	Not required	≥ 0.4
Adhesion to concrete after 7 days at +20°C and 50% RH and 21 days in water (N/mm <sup>2</sup> )	Not required	≥ 0.7
Adhesion to concrete on a very wet surface (N/mm <sup>2</sup> )	Not required	≥ 1.2
Adhesion to gres after 7 days at +20°C and 65% RH (N/mm <sup>2</sup> )	Not required	≥ 1.6
Adhesion to gres after 28 days at +20°C and 65% RH (N/mm <sup>2</sup> )	Not required	≥ 2
Adhesion to marble after 28 days at +20°C and 65% RH (N/mm <sup>2</sup> )	Not required	≥ 1
Adhesion to cement tiles after 28 days at +20°C and 65% RH (N/mm <sup>2</sup> )	Not required	≥ 1.4
Impermeability to water under pressure (1.5 bars of negative pressure for 7 days)	Not required	No permeation

The above information refers to laboratory testing; it is possible that in practical applications on site these may differ considerably according to the conditions in which the material is applied. In any case the user must check that the product is suitable for the intended application, taking all responsibility for its use. Fassa reserves the right to make technical modifications without notice.

Technical specifications regarding the use of Fassa Bortolo products for structural or fire prevention applications will only be officially valid if provided by Fassa Bortolo's "Technical Service" and "Research, Development and Quality System". If necessary, contact Technical Service in your country of reference (IT: [area.tecnica@fassabortolo.com](mailto:area.tecnica@fassabortolo.com), ES: [asistencia.tecnica@fassabortolo.com](mailto:asistencia.tecnica@fassabortolo.com), PT: [assistencia.tecnica@fassabortolo.com](mailto:assistencia.tecnica@fassabortolo.com), FR: [bureau.technique@fassabortolo.fr](mailto:bureau.technique@fassabortolo.fr), UK: [technical.assistance@fassabortolo.com](mailto:technical.assistance@fassabortolo.com)).

Please note that for the aforementioned products, the assessment is required by the appointed professional, in accordance with regulations in force.