

Torggler

Waterproofing

FLEXISTAR RAPID

Single component, flexible, fibre-reinforced, cementitious, polymer waterproofing membrane with fast hardening.



- Fast hardening
- Highly adhesive to the substrate
- Excellent workability
- Applicable with roller, brush and trowel
- Waterproof even under pressure
- Resistant to freeze-thaw cycles
- Good treadable surface



APPLICATION AREAS

- Medium-sized terraces, balconies, horizontal surfaces and swimming pools on mineral screeds, monolithic cementitious screeds, cement plasters and cement mortars, cured concrete.
- Flexible waterproofing of external and internal surface, underground and above ground, of cementitious supports and masonry.
- Flexible waterproof skimming of micro-cracked plasters.
- Waterproofing of cracked tanks, swimming pools and water containers in cracked concrete.
- Flexible renovation and waterproofing under the ceramic covering of balconies and terraces of medium surfaces (always respecting the expansion joints).
- Liquid-applied waterproofing type CM P to be used under ceramic tiles bonded with adhesives.
- Protective coating of concrete surfaces following principle 1.3 (C) (protection against penetration risks – PI), 2.3 (C) (moisture control – MC) and 8.3 (C) (increased resistivity – IR) according to EN 1504-9.
- Prefabricated and cast concrete.
- Well cured screeds, mortars and cementitious plasters.

MAXIMUM ATTAINABLE THICKNESSES

1-2 mm each coat, up to a total of 3 mm.

WARNINGS

- Never mix Flexistar Rapid with other binders such as cement, hydraulic lime, gypsum, etc.
- Do not add water and stop using the mixed product when it is firm.
- Never apply Flexistar Rapid in thickness greater than 2 mm each coat.
- Do not use Flexistar Rapid on cementitious substrates and screeds completely impregnated with water that are subject to continuous rising water or damp and do not apply the product on substrates with a residual moisture content of more than 5%.
- Do not apply on metal or wooden substrates, on bituminous sheaths to waterproof exposed surfaces that can be walked on, on lightened screeds, on inverted roof insulation made with insulation panels or lightened materials. It is recommended to use forced ventilation systems, if possible.
- Never apply Flexistar Rapid at temperatures below +5 °C or above +30 °C.
- Do not apply on screeds which are not sufficiently compact, homogeneous and flat, that must be suitable for treatment with thin-layer coatings and waterproofing, with mechanical strength appropriate to the intended use and reasonably with values in terms of tear resistance in the order of 1 N/mm².
- Protect against runoff, rain and night-time condensation between the coats, and at least 24 hours after the application.
- In dry climatic conditions, in the presence of direct sunlight, with high temperatures and ventilation, protect the surface with drop cloths for at least 24 hours to prevent too rapid evaporation of the mixing water.
- In conditions of high relative humidity and/or low temperatures (applications in basements, closed rooms or in critical weather conditions), Flexistar Rapid takes more time to harden.

INSTRUCTIONS FOR USE

Preparation for use

Substrates must be damp, solid and regular but sufficiently roughened, clean and sound, free of oil and grease, dust, crumbly material and dirt in general, and free of residues of paint film, and must be suitably cured and free of significant shrinkage. Any sign of efflorescence must be carefully removed from the surface by mechanical cleaning. Imperfections and surface irregularities such as gravel nests, eroded or deteriorated points, spacer holes in the reinforcement formworks, must be repaired beforehand and evened out with a suitable mortar, e.g. Multimix Evo. Where an elastic connection is not necessary, round off the wall-floor connections in a concave (shell) shape. Just moisten the surface to be waterproofed, taking care to remove any film of surface water with a dry sponge.

Product preparation

Depending on the type of application used, mix Flexistar Rapid with the following amounts of clean water:

Roller and brush application: approx. 30% (equivalent to approx. 6.0 litres per 20 kg bag).

Trowel application: approx. 25% (equivalent to 5.0 litres per 20 kg bag).

In a special container pour all the mixture water, then pour the powder product slowly using a mechanical stirrer (low-speed drill with a specific propeller). Once the powder has been completely poured mix until the mixture is homogeneous and free of lumps. Allow to stand for approx. 5 minutes, then mix briefly and, if necessary, correct the consistency with a small addition of water. The mix thus prepared remains workable for about 30 minutes under normal conditions (at 20 °C); at higher temperatures the workability time is shortened, at lower temperatures the workability time is extended.

Instructions for application

Roller application: apply the product in at least 2-3 coats, waiting between one coat and the other long enough to allow the previous coat to harden (about 2-3 hours at 20 °C). For roller application it is recommended to use a medium hair roller. Brush application: apply the product in at least 2-3 coats, crossing the direction of application of each coat with respect to the previous one and waiting between one coat and the other long enough to allow the previous coat to harden (about 2-3 hours at 20 °C).

Trowel application: apply the product in at least two coats, waiting between one coat and the other long enough to allow the previous coat to harden (about 2 hours at 20 °C). In the presence of pre-existing perimeter joints, expansion joints or connection joints, apply the appropriate coats of Flexistar Rapid to the edges and first millimetres of the sides of the joint, avoiding clogging, possibly with the help of a polystyrene and/or polyurethane strip. After sufficient hardening of the last coat of the waterproofer, remove the strip, clean and remove the residues, if any, from the joint and then seal it. It is advisable and, in cases of highly stressed joints and/or in situations where adhesion may be critical, it is necessary to primer the sides of the joint with primer, before applying the sealant, in order to guarantee maximum performance in terms of mechanical seal and waterproofing of the system. Particular attention must be paid to waterproofing at corners and/or floor-wall connections if these, even in the absence of expansion joints, are characterised by a certain mobility; in this case,

before applying the various coats of Flexistar Rapid, it is necessary to install a tape on top and along the line at the connection. The area adjacent to the connecting line must be sufficiently regular and uniform to ensure adequate positioning and correct adhesion of the self-adhesive tape; if this is not possible, the area should first be regularised with other mortars and/or skimming such as Rinnova, Monorasante, Multifinish or Multimix Evo, choosing the most suitable product according to the nature and condition of the substrate, the level of irregularity and the mechanical strength guaranteed by it. The surface waterproofed with Flexistar Rapid, while having good mechanical resistance, is not suitable to withstand the continuous traffic of people and/or vehicles and its impact resistance is limited, so if the surface has to be regularly used, it will be necessary to install a ceramic covering or other protective flooring. On the surface waterproofed with Flexistar Rapid, ceramic floor and/or wall tiles can be bonded with Tile 900, Tile 700, Tile 480, Tile 450, Tile 350, Tile 250 or with adhesives from the Ekor range. When installing ceramic floor and wall tiles, it will be necessary to respect the joints and fittings by sealing the ceramic elements matching them, after appropriate curing of the cementitious grouting of the joints, with silicone sealants from the Torggler Silicone line. In case of doubt about the most appropriate adhesive and/or sealant and/or for further processing, contact the Torggler Technical Assistance Service. The tools used for applying Flexistar Rapid can be cleaned with water before the material hardens; afterwards cleaning can only be carried out by mechanical removal.

Waiting time between coats: approx. 2-3 hours depending on the porosity of the substrate and environmental conditions. After the application of Flexistar Rapid wait at least 6 hours for curing before installing the ceramic tiles.

TECHNICAL SPECIFICATIONS

Powder product variations	
Consistency	Powder
Bulk density (according to EN 2811)	920 kg/m ³
Particle size (EN 12192-1)	0 – 0.15 mm
Ash content (EN 3451-1)	71.6%
Fresh mixture variations	
Mixing water: Roller and brush application	approx. 30 % (approx. 6.0 litres per 20 kg bag)
Mixing water: Trowel application	approx. 25 % (approx. 5.0 litres per 20 kg bag)
Mixture consistency	Plastic workable with trowel or fluid
mixture pH	> 12
Mixture density (EN 1015-6)	approx. 1,380 kg/m ³
Mixture workability time	> 30 minutes
Waiting time for setting between coats	approx. 2 hours depending on the porosity of the substrate and the environmental conditions
Full curing time	28 days
Application temperature	from +5 °C to +35 °C
Operating temperature	from -20 °C to +90 °C

Determinations on hardened product according to EN 1504-2* - Requirement/limit/class		
Permeability to water vapour (EN 7783)	SD =1.22 m (thickness 2 mm)	Class I (SD < 5m, permeable)
Liquid water transmission rate (EN 1062-3)	w = 0.05 kg/(m ² *h ^{0.5})	w < 0.1 kg/m ² *h ^{0.5}
Adherence force for direct traction (EN 1542-1)	2.3 MPa (on dry concrete)	Vertical and horizontal application without mechanical load: ≥ 1.0 MPa (0.7 MPa)

Permeability to CO ₂ (EN 1062-6 method A)	SD (CO ₂) = 139 m	> 50 m
Cracking capacity (EN 1062-7 method A; static)	0.580 mm (23 °C); 0.617 mm (-10 °C)	Class A3 (23 °C); Class A3 (-10 °C)
Cracking capacity (EN 1062-7 method B; dynamic)	No cracking after 1000 cycles, maximum width 0.150 mm	Class B2 (23 °C)
Exposure to artificial atmospheric agents (EN 1062-11)	No swelling, cracking and delamination. Colour change (lighter). Chalking	No swelling, cracking, flaking. Slight colour change, loss of gloss and chalking can be accepted, but they must be described.

Determinations on hardened product according to EN 14891 – Requirement		
Adhesion by initial traction** (EN 14891 A.6.2)	1.9 N/mm ²	≥ 0.5 N/mm ²
Tensile adhesion after immersion in water** (EN 14891 A.6.4)	1.5 N/mm ²	≥ 0.5 N/mm ²
Tensile adhesion after exposure to heat** (EN 14891 A.6.5)	2.5 N/mm ²	≥ 0.5 N/mm ²
Tensile adhesion after freeze-thaw cycles** (EN 14891 A.6.6)	1.3 N/mm ²	≥ 0.5 N/mm ²
Tensile adhesion after immersion in lime water** (EN 14891 A.6.9)	1.4 N/mm ²	≥ 0.5 N/mm ²
Waterproofing (EN 14891 A.7)	No penetration; Weight increase 3 g	No penetration, Weight increase ≤ 20 g
Crack bridging ability under standard conditions (EN 14891 A.8.2)	≥ 0,75 mm	≥ 0,75 mm
Tensile adhesion after immersion in chlorinated water** (EN 14891 A.6.8)	1.5 N/mm ²	≥ 0.5 N/mm ²
Classification according to EN 14891	CM P	
Reaction to fire classification (EN 13501-1)	B-s1,d0	
Consumption	approx. 1.2 kg/m ² each mm of thickness	
Maximum achievable thickness	3 mm	

Packaging size	20kg
Color	Grey
Pallet	50 bags
Packaging	bag

CONSUMPTION

The total requirement for a minimum total thickness of 2 mm is 2.4-2.6 kg/m².

STORAGE

Flexistar Rapid must be stored in a dry and sheltered place. In the original closed bags it is kept for at least 9 months.

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 30.03.2022.