

TECHNICAL SPECIFICATIONS

Measured on powder product

Colour:	grey
Consistency:	powder
Apparent density (according to MIT 13)*:	1.15 kg/litre
Grain size (according to MIT 10)*:	0 - 0.5 mm

Measured on fresh mix

Mixing water:	15 - 16% equivalent to 3.75 - 4.00 litres per 25 kg bag
Mixing water to obtain consistency equal to 21 cm (according to DIN 18555/2)**:	15.0% equivalent to 3.75 litres per 25 kg bag
Mix consistency:	plastic - trowelled
Density of mix when fresh (according to DIN 18555/2)**:	1.650 Kg/litre
Mix pot life:	approximately 1 hour under normal conditions (at +20 °C)
Delay between application of one coat and the next:	from 4 to 6 hours depending on the porosity of the substrate and environmental conditions.
Total curing time:	28 days
Application temperature:	from +5°C to +30°C
Operating temperature:	from -20°C to +90°C

Measured on hardened product

Tear resistance - adhesion by direct traction (according to DIN 24624)**:	0.8 N/mm ²
Breaking load by traction at 23 °C and 50% relative humidity (according to DIN 53455) - after 7 days: - after 28 days:	0.80 N/mm ² 1.00 N/mm ²
Breaking load by traction - 7 days at 23 °C and 50% relative humidity + 21 days Immersion in water (according to DIN 53455) after 28 days:	0.40 N/mm ²
Lengthening % to breaking at 23°C and 50% relative humidity (according to DIN 53455) - after 7 days: - after 28 days:	12.0% 10.0%
Lengthening % to breaking - 7 days at 23 °C and 50% relative humidity + 21 days Immersion in water (according to DIN 53455) - after 28 days:	4.0%
Percentage reduction in ultimate elongation after 2000 hours of exposure to UV light (as per EN 1062-11):	0%
Change in appearance after 2000 hours of exposure to UV light (as per EN 1062-11):	No formation of blisters or cracks or flaking. Variation in colour of exposed area.
Covering capacity (not reinforced) (according to IBH Directives):	0.6 mm
Permeability to water vapour - μ (according to EN 1015-19):	270
Waterproofing (according to DIN 1048)** - 28 days at 1.5 bar of positive hydrostatic pressure: - maximum load under positive hydrostatic pressure: - maximum load under negative hydrostatic pressure:	resists 3.0 bar 0.5 bar
Consumption:	1.4 Kg/m ² per mm of thickness - minimum consumption: 2.8-3.0 Kg/m ²
Max attainable thickness:	2 mm per coat (up to 4 mm in total)

(*) Torggler Internal Methods (MIT) are available on request

(**) In accordance with the specifications the parameters were measured with a quantity of water needed to obtain a consistency of 21 ± 1 cm (consistency for trowelling).

ANTOL WATERPROOFING CEMENT MORTARS



Antol
Flex 1k **NEW**

SINGLE COMPONENT FLEXIBLE FIBRE-REINFORCED WATERPROOFING CEMENT MORTAR

- Flexible single-component product
- New improved formula with latest generation fibres
- Excellent workability and ease of application
- Excellent adhesion to substrate
- Impermeable to water even under pressure
- Resists freezing/thawing cycles.

Single component flexible fibre-reinforced waterproofing cement mortar for flexible waterproofing and protective smoothing of cement substrates. Good resistance to ultraviolet rays.

APPLICATIONS

- Flexible waterproof coatings indoors and outdoors, below and above ground, for cement surfaces and masonry.
- Flexible waterproof surface smoothing for rendering with micro-cracks.
- Waterproofing of cracked concrete tanks and water containers.
- Renovation and waterproofing under tiles on balconies and medium-sized terraces.

TYPES OF SUBSTRATE

- Prefabricated concrete laid on site.
- Cured cement screeds.
- Cement mortars.
- Cement renderings.

MAX ATTAINABLE THICKNESS

2 mm per coat (up to 4 mm in total).

To the best of our knowledge and belief, the contents of this data sheet are correct and accurate, but we cannot guarantee all the recommendations and suggestions given as these depend on the conditions of use which are beyond our control. When in doubt, it is always a good idea to make preliminary tests and/or consult our specialized staff. This data sheet replaces all previous ones.

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Torggler
Chimica

Technological products for building

Via Prati Nuovi, 9
39020 Marengo (BZ) - ITALIA
Tel. +39 0473 282500 - Fax +39 0473 282501
www.torggler.com - info@torggler.com



Torggler
Chimica

Technology leaders
for over 140 years
in the field of chemicals
for the building industry.

FEATURES

ANTOL FLEX 1K is a single component ready-to-use grey cement mortar made from cement, selected fine grain aggregates, special flexible acrylic polymers, fibres and special additives. An extremely workable mix is created when the product is mixed with water. The mix is easy to apply using a paddle, including vertically without sagging or chips, and ensures excellent adhesion to the substrate. The product is very flexible and can withstand cracks on the substrate up to 0.6 mm. Resistant to freezing/thawing cycles and thawing salts and also ensures very good resistance to CO₂. Maintains good elasticity even at low temperatures.

IMPORTANT

- Do not mix **ANTOL FLEX 1K** with other binders such as cement, hydraulic lime, gypsum, etc.
- The mix cannot be diluted with water once it has started setting.
- Do not use the mixed product when it has already started to set. Therefore, always prepare quantities of mix which can be used within the pot life.
- Do not apply **ANTOL FLEX 1K** in thicknesses greater than 2 mm per coat.
- Do not apply **ANTOL FLEX 1K** on large surfaces. Use **ANTOL FLEX 2K** instead.
- Do not use **ANTOL FLEX 1K** on cement substrates or screeds saturated with water or subject to continuous rising damp.
- Do not apply **ANTOL FLEX 1K** when the temperature is less than +5 °C and more than +30 °C.
- Protect against scouring, rain and night-time condensation between coats and for at least 24 hours after application.
- In dry, hot or windy conditions or in the presence of direct sunlight, protect the surface against very rapid mixture evaporation for at least 24 hours using a tarpaulin.

INSTRUCTIONS FOR USE

The surfaces to be covered must not be seeping, solid and regular yet sufficiently rough, clean and free of oils and greases, dust, loose material, dirt of any kind and any traces of old paint. The surfaces must also be sufficiently cured and free of significant shrinkage. Any surface blooming must be carefully removed using mechanical cleaning equipment. Surface irregularities such as gravel pockets, eroded or deteriorated points and reinforcement formwork spacer holes must be repaired and filled out using a special mortar such as **ANTOL UMAFIX**, **ANTOL CLS SYSTEM KOSMETIC** or **ANTOL CLS SYSTEM MONORASANTE**. Where possible smooth the joints between the floor and walls to make them concave and shell-like. Wet the surface to be waterproofed then remove excess water using a sponge. Make sure any surface water film is removed.

Mix **ANTOL FLEX 1K** with 15-16% clean water (3.75-4.00 litres per 25 kg bag). You are advised to make the mix as follows: pour all the water into a special container then pour in the powder slowly whilst mixing all the time using a mechanical device (low-speed drill with mixer attachment). Mix until a uniform mixture without lumps is made. Make sure any lumps on the sides or the bottom of the container are mixed in properly. Allow the mixture to stand for 10 minutes then mix again briefly. If necessary adjust the consistency by adding a little more water. The mix has a pot-life of 1 hour under normal conditions (20 °C). The pot-life is shortened at higher temperatures and lengthened at lower ones.

Apply the product in two coats with a maximum thickness of 2 mm per coat using a paddle. Make sure the first coat is hard before applying the second one (approximately 4-6 hours at 20 °C).

For applications with micro-cracks on the substrate, when waterproofing water tanks and in all external applications, you are advised to embed a synthetic or glass fibre square mesh reinforcing sheet between the first and second coats. This must be resistant to alkaline and have a weight not less than 150 g/m².

Special care must be taken when waterproofing corners and floor-wall joints. In these cases, when the second coat of **ANTOL FLEX 1K** has hardened, you are advised - if perimeter joints are not fitted - to cut the corner or floor-wall joint with a diamond-dressed disc to create an oblique joint



looking like a swallow tail. Clean the joint carefully and then seal using **SITOL SILICON BASSO MODULO**. Alternatively, if the structure is not subject to any significant movement or heat expansion, you can use **REINFORCED COVERING STRIPS**, as follows. Incorporate the fabric part of the strip and the first few millimetres of the rubber insert in the first coat of **ANTOL FLEX 1K** when still wet. Lay the strip carefully with the help of a smooth paddle taking care to avoid air bubbles and wrinkles. Apply the second coat in the same way but covering the fabric part of the strip and the first few millimetres of the rubber insert. Cover by at least 20 cm any joints between two pieces of **REINFORCED COVERING STRIP** and glue them together using a silicon sealant from the **SITOL SILICON** line.

If there are any existing expansion or coupling joints, make sure the sealant is still in good condition, sufficiently elastic and able to withstand the movement of the structure. Cover the joint with **REINFORCED COVERING STRIP** using the same laying method as described for the angles and floor-wall joints. If this is not the case remove the old sealant and clean the joint thoroughly. Apply **ANTOL FLEX 1K** up to the edges and on the first few millimetres on the sides of the joint. After hardening (at least 3 days) seal the joint using **SITOL SILICON BASSO MODULO**.

Surfaces waterproofed using **ANTOL FLEX 1K** have good mechanical resistance but are not designed to withstand continuous movement of people and vehicles and resistance to impact is limited. Therefore any surfaces intended to be walked on by people must be protected using tiles or other protective flooring. On surfaces waterproofed using **ANTOL FLEX 1K** and hardened for at least 7 days, flooring and/or tiles can be laid using **X-TILE 2000**, **X-TILE 1000**, **X-TILE 900**, **X-TILE 700**, **X-TILE 500 E** **X-TILE 400**, or **X-TILE 200** or **PIASTRELLITE MASTER PLUS** mixed using **PIASTRELLITE ELASTIC**. Conform to existing expansion joints when laying floors and tiles. Contact the Torggler Chimica S.p.A. Technical Office if you require further information concerning the most suitable adhesive.

Contact the Torggler Chimica S.p.A. Technical Office in the event of further intervention.

The tools used for applying the mortar may be cleaned with water before it hardens. Once hardened, the mortar must be scraped off.

SETTING/HARDENING TIME

Delay between one coat and the next: 4-6 hours depending on the porosity of the substrate and environmental conditions.

Delay before use: at least 7 days.

CONSUMPTION

Consumption of **ANTOL FLEX 1K** is approximately 1.4 Kg/m². per cm of thickness. The total required for a minimum thickness of 2 mm is 2.8-3.0 Kg/m².

STORAGE

ANTOL FLEX 1K must be stored in a dry place. Unopened in its original bags, the product can be stored for at least 12 months.

PACKAGING

25 kg valve bags.

CERTIFICATION

Resistance to ultraviolet light is documented in the test reports nos. 417/09 and 419/09 issued by Elletipi S.r.l., Ferrara, Italy; the test reports are available on requests.

SPECIFICATIONS

ANTOL FLEX 1K

Elastic waterproofing treatment for concrete manufactures, prefabricated concrete, cement mortars and cement rendering, using a single component flexible fibre-reinforced waterproofing cement mortar, such as

***ANTOL FLEX 1K** from Torggler Chimica S.p.A. The application must involve two coats with a total thickness of at least 2 mm on suitably prepared substrates. For applications with micro-cracks on the substrate, when waterproofing water tanks and in all external applications, you are advised to embed a synthetic or glass fibre square mesh reinforcing sheet between the first and second coats. This must be resistant to alkaline and have a weight not less than 150 g/m². Approximate consumption of kg/m²*