

WATERPROOFING DRINKING WATER TANKS, FOOD LIQUIDS OR AGGRESSIVE PRODUCTS

Waterproofing of tanks and retaining wall

APPLICATION DATA SHEET

Waterproofing drinking water tanks, food liquids or aggressive products, by:

1. Cleaning of the substrate;
2. preliminary checks.
3. Waterproofing
4. completion of operations

1) CLEANING OF THE SUBSTRATE

The cleaning operations are aimed at the total elimination of inconsistent parts, which are detached and not equipped with sufficient mechanical characteristics, dust, grease, rust, release agents, paint and varnish, cement slurry and any other substance or material that may affect the adherence of subsequent coatings.

2) PRELIMINARY CHECKS

For retaining walls, elevator shafts and structures subject to positive and negative hydraulic pressures, proceed as follows:

- verify the presence of sealing elements in correspondence with connecting and fractioning joints;
- eliminate any obstacles (walls, metal guides, etc.) that could prevent the continuity of the waterproofing coating;
- create connecting gutters, collection and evacuation systems in correspondence with water coming-in points (to be treated after the creation, at the exit point of water, of a dovetail opening and its subsequent closure with Betonfix WW);
- apply mortar Betonfix WW directly on the surface in the case of widespread exudation on the surface.

3) WATERPROOFING

Soak the mesh by applying, with a trowel, mortar Betonfix 300, mixed with 35% by weight of Kimitech ELASTOFIX with a mortar consumption of about 1,5 kg/m².

In order to prepare the mixture, stir the product for about 5 minutes with a cement mixer or, in case of small quantities, with drill and whisk. Add 3/4 of Kimitech ELASTOFIX and then, gradually, the remaining product until you get the right consistency.

Once obtained a homogeneous mixture free of lumps, make it rest for 10 minutes.

Once the first layer has cured, not before 24 hours have passed, apply with a trowel a second layer of mortar Betonfix 300 mixed with 35% by weight of Kimitech ELASTOFIX with a mortar consumption of about 2 kg/m².

In order to allow the correct curing of the mortar, in the case of procedures inside closed tanks, it is essential to ensure adequate forced ventilation (if the structure has 2 openings quite far from each other, typically, we suggest that you place a suction pipe at an opening, letting the air enter the other side. If there is only one opening, the suction pipe is placed into the tank, leaving the suction nozzle at the bottom of it, on the opposite side of the opening).

4) COMPLETION OF OPERATIONS

4A) CONTACT WITH DRINKING WATER

After at least 7 days, apply a double coat of Kimitech K40 AP White, non-toxic, solvent-free two-component epoxy resin with a brush or roller, suitable for contact with drinking water. Respect the consumption rates indicated in the Technical Data Sheet.

4B) CONTACT WITH FOOD LIQUIDS

After at least 7 days, apply a double coat of non-toxic two-component epoxy resin Kimitech K40 AP GIALLO with a brush or roller, suitable for contact with drinking water and

food liquids. Respect the consumption rates indicated in the Technical Data Sheet.

4C) CONTACT WITH AGGRESSIVE PRODUCTS

After at least 7 days, apply a double coat of Kimicover 301 NF two-component aliphatic polyurethane resin with excellent resistance to chemical aggression and wear. Respect the consumption rates as per the Technical Data Sheet.

In the case of sewage or very aggressive products, it is advisable to create a sacrificial coating consisting of a jet of Kimitech EP-IN epoxy resin reinforced with Kimitech S100 glass fiber mat.

NOTE

The basic legislative reference, still valid today, relating to materials intended to come into contact with drinking water is the Italian Ministerial Decree 1973. This latter decree indicates the verification methods (global and/or specific assignment) and the list of materials that may come into contact with drinking water (there are no cement products among the materials provided). A subsequent Ministerial Decree (174/04) allowed the use of cement products. But its provisions are "applicable to the materials making up the pipes, fittings, gaskets and accessories". However, there are manufacturers that promote the use of cementitious materials also for waterproofing tanks, taking advantage of the ambiguity provided by Article 1 of Ministerial Decree 174/04 (based on which it would seem that the standards refer to all fixed collection and water distribution systems). They do not ensure compliance with the law, and in the case of water pollution, there are criminal consequences for the designer, the applicator and the manufacturer.