

## Preparation of substrates to be waterproofed

LV80\_SA\_EN\_R2-0617

### APPLICATION DATA SHEET

Whatever the type of waterproofing chosen and the structure to be waterproofed, it is appropriate to perform, in order:

1. **cleaning of the substrate;**
2. **preliminary checks;**
3. **preparation of the surface;**
4. **check and restoration of joints and connecting gutters;**
5. **waterproofing of joints and drains.**

#### 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

In the case of structures not intended for permanent contact with liquids (**balconies, terraces and coverings**), check:

- the correctness of the slopes (if appropriate, perform interventions aimed at correcting them);
- the presence and adequacy of floor water collection systems (which should be equipped with adequate leaf protection systems) and the suitability of the devices used to guarantee the disposal of water (if the balcony or terrace is bounded by walls, make through holes and place special drip bars);
- the absence of elements that could hinder the continuity of the subsequent waterproofing (which must be adequately turned up on the walls and / or perimeter walls), proceeding with the removal and / or lifting from the ground of each machine (splitters and other plant elements) and non-structural element (any metal flashings, skirting boards etc).

In case of walls **against ground, elevator shafts and structures subject to positive and negative hydraulic pressures** proceed with:

- the check of the presence of sealing elements in correspondence with the connection and fraction joints;
- the elimination of any obstacles (walls, metal

tracks, etc.) that could prevent the continuity of the waterproofing coating;

- the creation of gutters and rainwater collection and drainage systems, in areas where the water comes in, (to be treated after creation at the exit point of the water of a dovetail opening and its subsequent closure with **Betonfix WW**);
- the application, directly on the surface, of mortar **Betonfix WW** in the presence of general seepage of the substrate;
- the creation of junction roundings.

#### 3) PREPARATION OF THE SURFACE

In the presence of **bituminous membrane**, bear in mind that the waterproofing system must be applied on panels with substrates having homogeneous characteristics. Consequently it must be evaluated from time to time whether to proceed:

- with the removal of the membrane (this is convenient if the majority of the existing membrane has deteriorated);
- with localized restoration of the membrane.

In case you decide to remove the membrane, once removed, perform a thorough cleaning of the substrate aimed at eliminating dust, grease, inconsistent parts, detached and not equipped with sufficient mechanical characteristics, and any other material that may compromise good anchoring of the subsequent procedures. Repair any deep and extensive irregularities (segregations in concrete, overflow between the pourings etc) with suitable mortar, after priming.

If you decide to leave the membrane: check the correct adherence of the membrane; attaching to the substrate through heat treatment the non-degraded detached parts; remove any excessively deteriorated portion and place a new membrane to seal the missing / removed parts; any protective coating, if of an acrylic nature, well adherent and not flaky, may not be removed, in all other cases (reflective and / or deteriorated paints) will be removed with suitable techniques (mechanical / chemical or thermal treatments: consult the Technical Data Sheets of the materials used); acid wash the entire surface with Solution P.

In the case of waterproofing of **already tiled surfaces**:

- remove the first row of wall tiles to a height of about 20 cm;

- check the adherence of the tiles to the bottom;
- repair any holes or irregularities in the substrate with suitable Kimia products;
- acid wash the surface with **Solution P** with suitable manual or mechanized technique (working mechanically with a monobrush equipped with a fiber brush, suck up the resulting liquid and rinse thoroughly).

#### In the case of concrete substrates:

Ensure that they are properly cured and structurally sound (the pull-off tensile strength of the concrete must be > 1.5 MPa).

Check the presence and depth of any cortical degradation and proceed with an adequate restoring cycle.

Remove any metal spacers and fill the holes.

Any deep and extensive irregularities (segregation in concrete, overflow between the pourings, excessive roughness of not properly floated bottoms, etc.) must be previously skimmed with **Betonfix RS** after priming the substrates with **Kimicover FIX**.

In the case of waterproofing newly constructed screeds and / or laid on old membranes, between 8 and 24 hours before the start of the waterproofing, proceed with priming by brush or roller with **Kimicover FIX MV** (consumption of 0.2 - 0.4 Kg / sqm) of the entire surface to be treated.

#### 4) CHECK AND RESTORATION OF JOINTS AND CONNECTING GUTTERS

If, in the construction phase of the structure, an adequate network of static (connection and fraction) and dynamic (expansion, seismic) **artificial joints**, properly reported in any overlying coatings (screeds, flooring), has been created, proceed, if necessary, to restore the edges and / or replace any preformed system already applied in correspondence with the joints, if they are damaged.

In the case of **natural joints**, formed due to incorrect sizing / non-construction of joints:

- if they have a straight or pseudo-rectilinear course, open them with flex to guarantee a width of at least 5 mm;
- in case of widespread and irregular cracks, consult the Technical Office.

In the case of **tiled substrates without joints** but big enough to necessitate them, it will be advisable to recreate the joints (making an incision with the grinder in correspondence of the grout lines):

- carefully checking any damage to the coating;
- making the joints on the areas that, depending on the roof frame, could tend to behave as dynamic joints.

The contact points between the screed and the collection gutters will be treated by the following processing steps: tile removal, cleaning, possible reconstruction of the outer edges of the joints.

#### 5) WATERPROOFING OF JOINTS AND DRAINS

The joints will be waterproofed by:

- placement of the closed cell polyethylene substrate **Ethafoam** as a foundation for the polyurethane sealant **Tecnoseal 88** or **Tecnoseal 130** in the case of joints larger than 5 mm;
- application of **Kimicover JOINT** and laying of the reinforcement mesh **Kimitech 120** to be saturated with the chosen mortar or resin for the subsequent overall waterproofing of the surface (use the reinforcement mesh **Kimitech 350** if a coating with **Kimitech ECF** is intended).

The contact points between the screed and the collection gutters should be treated by applying **Kimicover JOINT P**, turned up inside the drain.

On the self-adhesive membrane proceed with the laying of the reinforcement mesh **Kimitech 120** to be saturated with the chosen mortar or resin for the subsequent overall waterproofing of the surface.