# INSTALLATION GUIDELINES

# IKO TANETECH BALCONY

These installation instructions have been produced according to the current technical standards. Any directives, standards, rules or national regulations, which are stricter than these installation instructions, must be respected.

In circumstances that defer from the above, please contact IKO.

## DESCRIPTION

IKO tanetech Balcony is a single-component liquid waterproofing system based on aliphatic PU polymers. It is used for waterproofing balconies, terraces, stairs and walkways, both on new buildings and for renovation work.

## ADVANTAGES

IKO tanetech Balcony has the following advantages:

- Seamless membrane
- Very limited construction height
- Choice of decorative finishes
- Concentrated load resistance
- Rapid, flame-free application
- Easy to use for precision work in difficult areas
- Compatible with IKO enertherm and other insulation materials

## TECHNICAL SUPPORT

IKO assists its construction partners during all stages of the construction process, from the specifications, through the installation to the delivery of the project and after-care.

In terms of project follow-up, IKO provides technical expertise and advice, in the form of measurements, inspections and presence on site while work is conducted.

For technical assistance before, during or after your project, please contact the IKO project manager or technical support.

# SYSTEM BUILD IP

Waterproofing system without a decorative finish:

**5** IKO tanetech BT
**4** IKO glass Fleece 225
**3** IKO tanetech BT
**2** Primer
**1** Substrate

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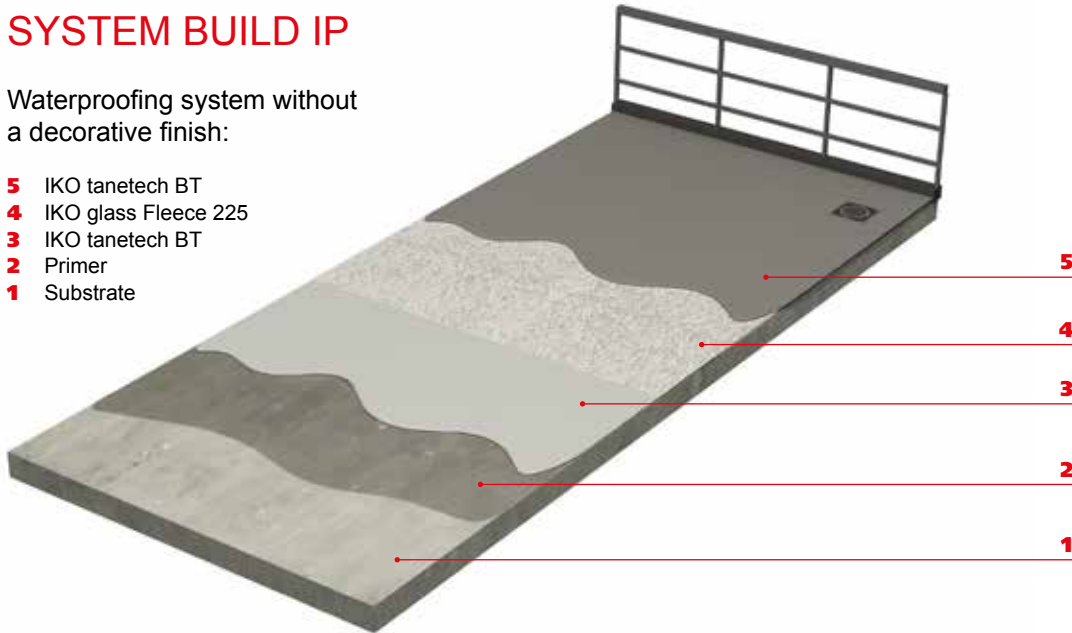
Insulated waterproofing system without a decorative finish:

**10** IKO tanetech BT
**9** IKO glass Fleece 225
**8** IKO tanetech BT
**7** Primer
**6** Load dispersing panel
**5** IKO pro PU Adhesive
**4** IKO enertherm ALU TG PIR
**3** IKO pro PU Adhesive
**2** IKO vapour barrier
**1** Substrate

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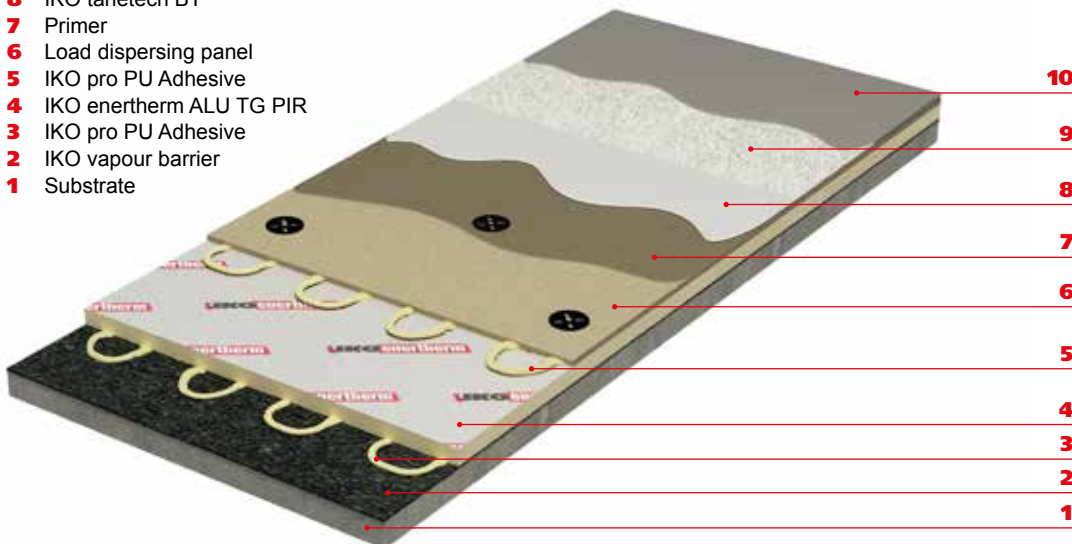
# PREPARATION

## 1 - Working with IKO tanetech Balcony

IKO tanetech BT is a single-component resin based on polyurethane. The drying time of the resin depends on the relative air humidity and ambient temperature. With a relative humidity level of 50% at 20°C, IKO tanetech BT is rainproof after 60 - 120 minutes and 2 mm of IKO tanetech BT fully cures within 24h.

Before use, mix IKO tanetech BT gently and evenly with a wooden spatula. A mixer must not be used under any circumstances.

It is important to clean tools immediately after use with IKO tech Cleaner.

Once the tin of IKO tanetech BT has been opened and the product has not been fully used, it is normal that a skin forms on the product surface. Before using the product, you will need to cut the skin with the tip of a Stanley knife and remove it from the product. Above all, do not mix the skin into the product.

IKO tanetech Balcony can be used:
• If the air, substrate temperature and resin temperatures are between the minimum and maximum level, as defined in Table 1.
• With a relative humidity level lower than 85%.
• If it is not raining or foggy.
• On a dry substrate, which is not frozen.
• On a substrate that is not affected by rising damp (for example, water vapour from inside the building due to the absence of a vapour barrier or rising damp on a ground floor terrace due to the absence of a moisture barrier under the concrete).

Table 1: **Acceptable temperatures when using IKO tanetech Balcony**

| Product | Temperature in °C | | |
|---|---|---|---|
| | Ambient | Substrate | Product |
| IKO tanetech BT | +5°C - +35°C | +5°C - +30°C | +5°C - +30°C |

The temperature of the substrate must be at least 3°C above the dew point during application and curing.

## 2 - Checking and preparing the substrate

IKO tanetech Balcony can only be applied to a substrate that is clean, dry and free of dust, as well as loose particles. The maximum moisture content of the substrate must measure 18% on the wood scale using a Protimeter or a maximum of 6% measured using a Tramex / Doser. The slope of the substrate must be at least 1.5% towards the water drains in order to prevent any water from stagnating. Cracks, blisters, expansion joints and finishes on existing substrate edges must be checked and, if necessary, repaired or replaced.

Table 2 shows the compatibility of IKO tanetech Balcony with several substrates, as well as the necessary preparation of these substrates.

Please contact IKO for information about any substrates that are not mentioned in this table.

Table 2: **Compatibility of IKO tanetech Balcony**

| Substrate | Preparation | Primer | Comments |
|---|---|---|---|
| **1 - Waterproofing membranes** | | | |
| APP bitumen | Remove all loose particles (talc, sand, flakes) using a stiff brush. | IKO tech Non-Porous Primer | The membrane must adhere sufficiently to the substrate. Any cracks and blisters must first be repaired. Adhesion to a sanded APP bitumen membrane must first be checked. |
| SBS bitumen | Remove all loose particles (chipping, aggregate) using a stiff brush. | IKO tech Non-Porous Primer | The membrane must adhere sufficiently to the substrate. Any localised cracks and blisters must first be repaired. |
| PVC | | | Not compatible |
| EPDM | | | Please contact IKO. |
| Resitrix | | | Please contact IKO. |
| TPO | | | Not compatible |
| TPE | | | Please contact IKO. |
| PIB | | | Not compatible |
| ECB | | | Not compatible |
| PE | | | Not compatible |
| **2 - Cured liquid waterproofing** | | | |
| 1K PU | Clean the substrate. | IKO tech Non-Porous Primer | |
| 1K Hybrid | Clean the substrate. | None | |
| 2K PMMA | | | Not compatible |
| **3 - Insulation panels** | | | |
| PIR/ PUR/ EPS/ PF | Prepare roofs by applying a self-adhesive carrier membrane (IKO base stick T/SA). Prepare accessible substrates subject to foot traffic, by applying a load dispersing panel made from fibre-reinforced cement. | | Please contact IKO. |
| **4 - Mineral substrates** | | | |
| Concrete and mortar | First abrade the waxed concrete. | IKO tanetech Porous Primer | The substrate must have been in place for at least 28 days. Remove any laitance from the cement. It must have a compressive strength of at least 25 N/mm² and a tensile strength of at least 1.5 N/mm². |
| Sound tiling | First abrade the substrate. | IKO tanetech Porous Primer | Remove any loose or damaged tiling and repair in order to obtain a sound substrate (resin mortar reinforced with polypropylene fibres, new tiling). First dry out any pockets of water under the tiling. |
| Mastic asphalt | | | Not compatible |
| Bituminous asphalt mixture | | | Not compatible |
| **5 - Metals** | | | |
| Ferrous metals (steel) | First sand the metallic substrate in order to clean it. All rust must be removed from rusty substrates. First clean using the IKO tech Cleaner solvent. | IKO tech Non-Porous Primer | |
| Non-ferrous metals (aluminium, copper, lead, zinc) | First and the metallic substrate in order to clean it. All rust must be removed from rusty substrates. First clean using the IKO tech Cleaner solvent. | IKO tech Non-Porous Primer | |

Table 2: **Compatibility of IKO tanetech Balcony**

| Substrate | Preparation | Primer | Comments |
|---|---|---|---|
| **6 - Hard plastics** | | | |
| PVC | First sand the substrate in order to make it rough. First clean using the IKO tech Cleaner solvent. | IKO tech Non-Porous Primer | |
| Polyester | First sand the substrate in order to make it rough. First clean using the IKO tech Cleaner solvent. | IKO tech Non-Porous Primer | |
| PE and PP | | | Not compatible |
| **7 - Wood** | | | |
| Treated wood | | IKO tech Non-Porous Primer | Must first be treated for all outdoor applications. Chipboard panels must be water-resistant. |
| **8 - Glass** | | | |
| Mineral glass | | | Not compatible |
| Acrylic glass | | | Not compatible |

## 2.1 - Fitting a spitter / water spout for vertical surfaces

IKO drip Strip can be applied to the edge of the balcony using an adhesive or hybrid kit.

## 2.2 - Applying the primer

Activate the IKO tanetech Porous Primer: Thoroughly mix each component separately. Pour the 2 components in one after the other and mix everything together until you obtain a homogeneous mixture. It is advisable to use a mechanical mixer.

Apply the primer (IKO tanetech CPorous Primer or IKO tech Non-Porous Primer) with a brush or short nap roller, using 0.1 – 0.2 L/m². Leave the IKO tanetech Porous Primer to dry and wait until it becomes transparent and is no longer sticky (± 3 hours). Leave the IKO tech Non-Porous Primer to dry for 30 minutes.

If the layer of IKO tanetech BT is not applied within 2 days, repeat this treatment.

# INSULATION  (OPTIONAL)

Add a vapour barrier, if there is not already one present.

Fit IKO enertherm ALU TG PIR insulation panels of the required thickness using IKO pro PU Adhesive, IKO pro Fix gun or IKO pro Sprayfast adhesive or mechanical fasteners.

If necessary, saw the load dispersing panels (fibre cement construction panels with a lateral groove for mechanical loads and a minimum thickness of 18mm) to the correct dimensions and bond to the insulation panels in half-bond pattern using IKO pro PU Adhesive, IKO pro Fix gun or IKO pro Sprayfast adhesive.

Place the first construction panel in a corner. Clean the grooves in the panel that has just been laid using a wet brush. This ensures that the components adhere properly. Apply IKO pro PU Adhesive, IKO pro Fix gun or IKO pro Sprayfast to the edges of the panel, just below the groove, if possible, using a special application nozzle. The adhesive forms a wide but thin strip and therefore covers the groove. Repeat this treatment with the next panels. Slide the panels into each other, both lengthways and widthways. The pre-applied adhesive will come to the surface.

Place the last load dispersing panel, by holding it at an angle and allowing it to fall. Press this sheet onto the others until the adhesive comes to the substrate.

After the IKO pro PU Adhesive, IKO pro Fix gun or IKO pro Sprayfast has hardened, remove any excess adhesive immediately using a cutter. Sand down any bumps on the panel that are higher than 3 mm. No open panel joints should be left in the substrate. After the IKO pro PU Adhesive, IKO pro Fix gun or IKO pro Sprayfast has hardened, it will be possible to walk on the substrate and it can be treated.

As well as securing the load dispersing panels with adhesive, it is also advisable to use mechanical fasteners.

Activate the IKO tanetech Poous Primer: Thoroughly mix each component separately. Pour the 2 components in one after the other and mix everything together until you obtain a homogeneous mixture. It is advisable to use a mechanical mixer.

Apply the IKO tanetech Porous Primer with a brush or short nap roller, using 0.1 – 0.2 L/m². Leave the IKO tanetech Porous Primer to dry and wait until it is transparent and no longer sticky (± 3 hours).

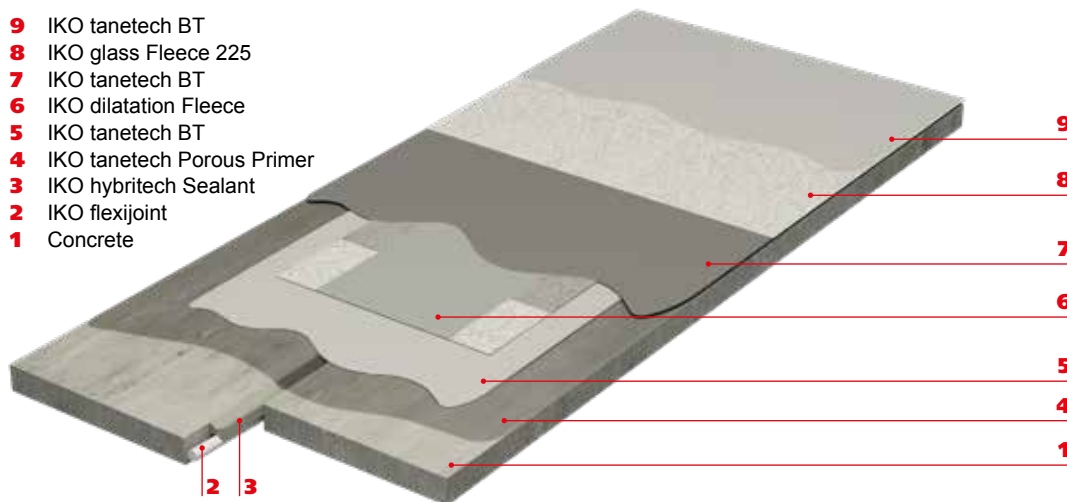# APPLYING THE WATERPROOFING

**General:**

If you wait more than 2 days before applying a layer of IKO tanetech BT to a treated substrate, the substrate must be cleaned and treated with IKO tech Non-Porous Primer as a reactivation primer.

**1. Movement joints / expansion joints**

For balconies, allow an expansion joint every 5 m.

Start by filling deep and wide movement joints with IKO flexijoint, which is an extruded open cell poly-ethylene foam. Fill the joint cavity using the hybrid compound IKO hybritech Sealant. Lightly coat the joint edges with IKO tanetech BT and apply the IKO dilatation Fleece, lightly pressing the grey-coloured strip inside the joint.

It is vital that no wearing layer or decorative finish layer is applied over the movement joint/ expansion joint. The part that needs to be kept clear has a slightly greater width than the actual IKO dilatation Fleece (allowing 1 - 2 cm on each side).

**9**   IKO tanetech BT
**8**   IKO glass Fleece 225
**7**   IKO tanetech BT
**6**   IKO dilatation Fleece
**5**   IKO tanetech BT
**4**   IKO tanetech Porous Primer
**3**   IKO hybritech Sealant
**2**   IKO flexijoint
**1**   Concrete

**2. Detail connections**

Apply a first layer of IKO tanetech BT using 1.1 L/m², with a brush or short nap roller. Place a piece of reinforcement fleece (IKO glass Fleece 225 made from 225 g/m² glass fibres) on the wet coating, press the fleece into the first layer using a dry roller and make sure that the fleece is fully saturated with IKO tanetech BT. There must not be any air bubbles between the first layer and the reinforcement fleece. Make sure that you leave a 5 cm overlap on the edges of the reinforcement fleece.

Once the first layer has cured, apply a second layer of IKO tanetech BT using 0.65 L/m², with a brush or short nap roller.

For high flashings and balustrade bases, it is advised to replace IKO tanetech BT with the viscous resin IKO tanetech Detail.

### 3. Main section

Apply a first layer of IKO tanetech BT, using 1.1 L/m², with a brush or short nap roller. Roll the reinforcement fleece (IKO glass Fleece 225 made from 225 g/m² glass fibres) on the wet coating, press the fleece into the first layer using a dry roller and make sure that the fleece is fully saturated with IKO tanetech BT. There must not be any air bubbles between the first layer and reinforcement fleece. Make sure that you leave a 5 cm overlap on the edges of the reinforcement fleece.

Once the first layer has cured, apply a second layer of IKO tanetech BT, using 0.65 L/m², with a brush or short nap roller. The decorative finish can be applied when the second layer has cured.


## DECORATIVE FINISHES

The following decorative finishes are available:
• IKO deco Chips
• IKO micro Chips
• IKO quartzsand 0.3-0.6
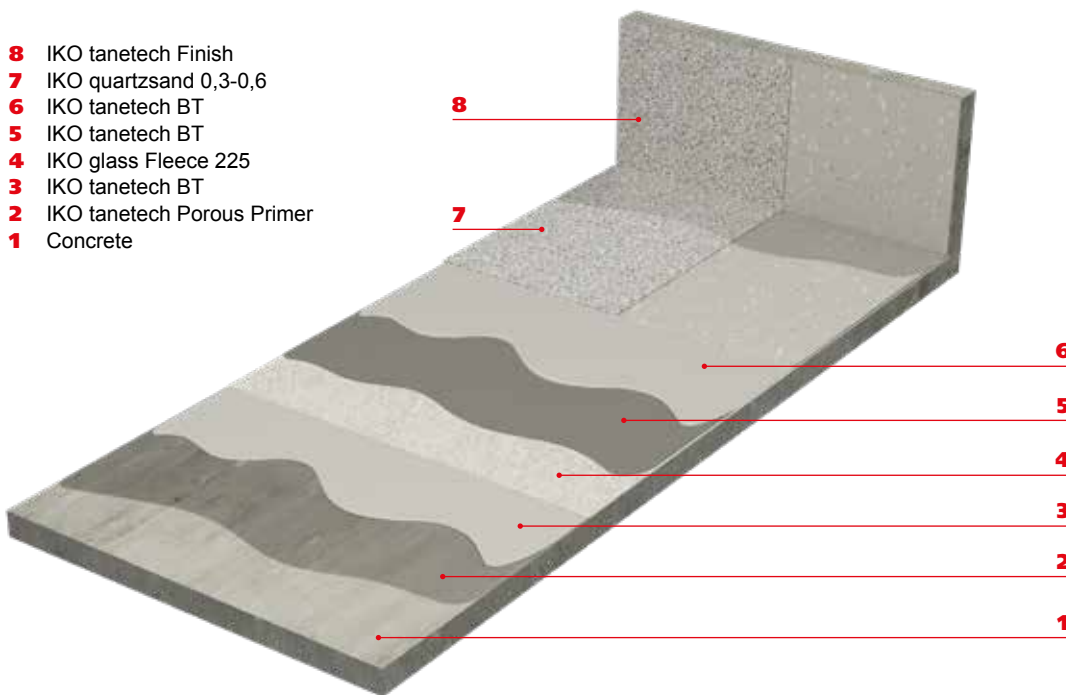• Quartz mortar
• Design
• Tiling applied with adhesive


**Broadcast IKO deco Chips**
Apply an additional layer of IKO tanetech BT, using 0.3 L/m², with a brush or short nap roller. Immediately sprinkle partially with IKO deco Chips (0.05 – 0.3 kg/m²). Once the resin has cured, remove any excess chips using a brush or industrial vacuum and lightly sand the resulting substrate. Apply a layer of IKO tanetech Finish, using 0.4 L/m², with a brush or short nap roller as a protective sealer.

In order to increase the anti-slip effect, IKO tanetech Finish can first be mixed with IKO anti Slip Powder. The dosage depends on the required degree of slip resistance and should not be higher than15% IKO anti Slip Powder. Mix frequently in order to prevent sedimentation.

**8**   IKO tanetech Finish
**7**   IKO deco Chips
**6**   IKO tanetech BT
**5**   IKO tanetech BT
**4**   IKO glass Fleece 225
**3**   IKO tanetech BT
**2**   IKO tanetech Porous Primer
**1**   Concrete
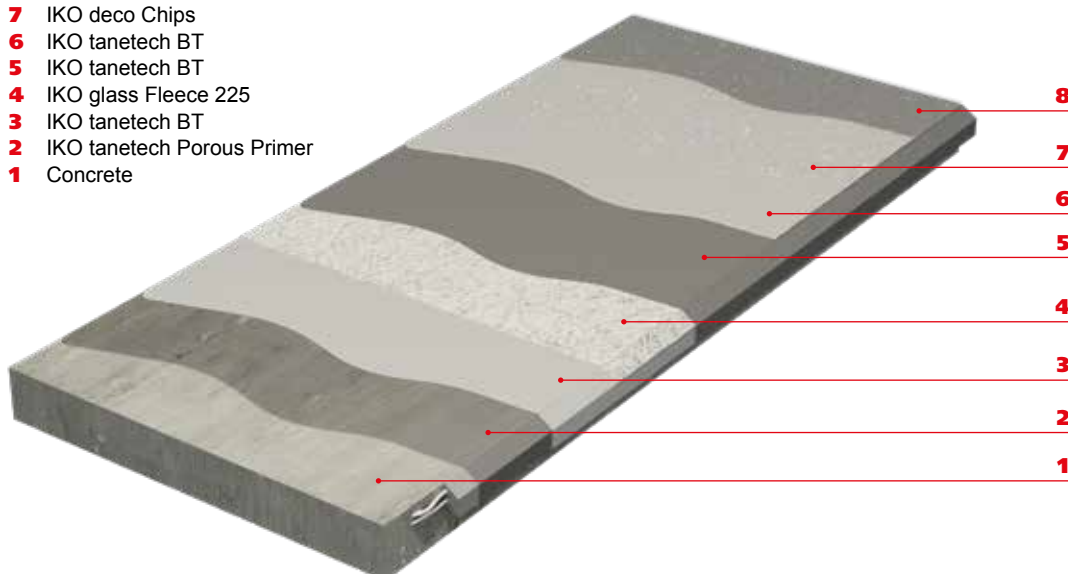
**Broadcast IKO micro Chips**

Apply an additional layer of IKO tanetech BT, using 0.3 L/m², with a brush or short nap roller. Immediately sprinkle with IKO micro Chips until saturated (0.7 kg/m²). Once the resin has cured, remove any excess chips using a brush or industrial vacuum and lightly sand the resulting substrate. Apply a layer of IKO tanetech Finish, using 0.4 L/m², with a brush or short nap roller as a protective sealer.

In order to increase the anti-slip effect, IKO tanetech Finish can first be mixed with IKO anti Slip Powder. The dosage depends on the required degree of slip resistance and should not be higher than15% IKO anti Slip Powder. Mix frequently in order to prevent sedimentation.

**Broadcast IKO quartzsand 0.3-0.6**

Apply an additional layer of IKO tanetech BT, using 0.3 L/m², with a brush or short nap roller. Immediately sprinkle until saturated with IKO quartzsand 0.3-0.6, using 2 kg/m². Once the resin has cured, remove any excess quartz using a brush or industrial vacuum. Apply a layer of IKO tanetech Finish, using 0.4 L/m², with a brush or short nap roller, as a protective sealer.

**8**    IKO tanetech Finish
**7**    IKO quartzsand 0,3-0,6
**6**    IKO tanetech BT
**5**    IKO tanetech BT
**4**    IKO glass Fleece 225
**3**    IKO tanetech BT
**2**    IKO tanetech Porous Primer
**1**    Concrete

**Quartz mortar**

Preparing the IKO quartzsand mortar: Mix the IKO tanetech Quartz Binder gently and evenly using a wooden spatula. Mix 6 parts of coloured IKO quartzsand (0.6 – 1.2 mm) with 1 part of IKO tanetech Quartz Binder for at least 2 minutes, using a double helix mechanical mixer. You should use ± 5 kg/m² (3 mm thick coating).

Apply a layer of IKO tanetech Quartz Binder as a 50 cm strip using 0.1 L/m², with a brush or short nap roller. Apply the mortar using a plasterer's trowel, making sure to seal the mortar in order to obtain a smooth and firm substrate. The plasterer's trowel must be cleaned regularly using a cloth soaked in IKO tech Cleaner solvent, in order to prevent the mixture from sticking to the plasterer's trowel. At 20°C, wait at least 72 hours before placing it under any strain.

Use an aluminium profile in order to finish, protect and decorate the protruding edges in the IKO quartzsand covering. This type of profile should also be used to create a gap in the IKO quartzsand morter in transition areas and expansion joints.

After the quartz mortar has cured, apply a layer of IKO tanetech Finish, using 0.4 L/m², with a brush or short nap roller.

**8** IKO tanetech Finish
**7** IKO quartzsand 0,6-1,2
**6** IKO tanetech Quartz Binder
**5** IKO tanetech BT
**4** IKO glass Fleece 225
**3** IKO tanetech BT
**2** IKO tanetech Porous Primer
**1** Concrete
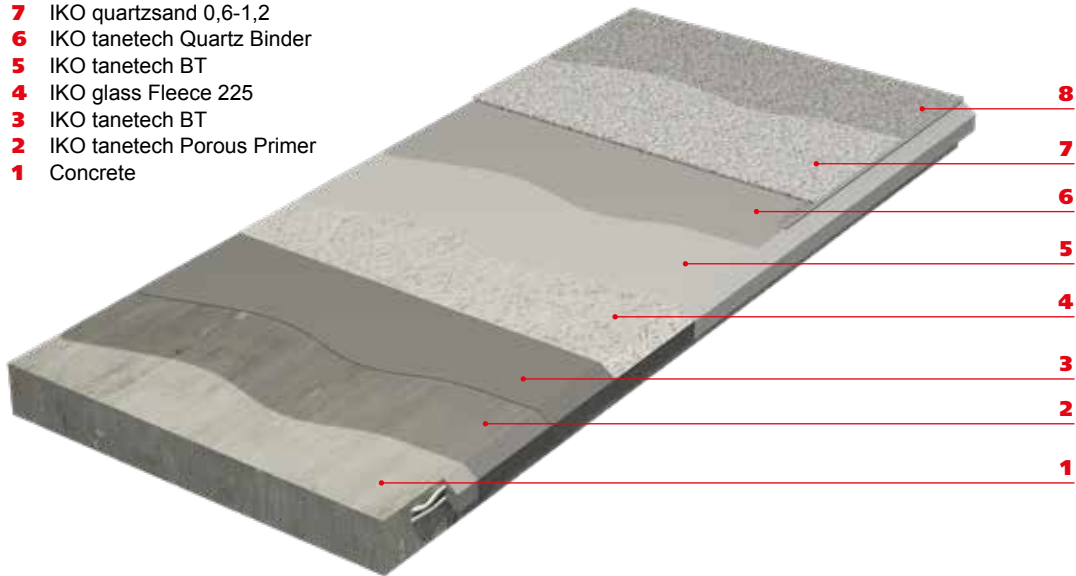


### Design
First mix IKO tanetech Finish with IKO anti Slip Powder. The dosage depends on the required degree of slip resistance and should not be higher than15% IKO anti Slip Powder. Mix frequently in order to prevent sedimentation. Apply this mixture, using 0.4 L/m², on the second layer of cured IKO tanetech BT.

### Tiling bonded with adhesive
No sooner than 7 days after applying the waterproofing system, the latter can be covered with tiles, which must be bonded using a cement-based adhesive designed for outdoor use. Please contact IKO for a list of suitable adhesives, class C2 according to EN12004.

**8** Tiling
**7** Tiles on supports
**6** Cement-based tile adhesive
**5** IKO tanetech BT
**4** IKO glass Fleece 225
**3** IKO tanetech BT
**2** IKO tanetech Porous Primer
**1** Concrete
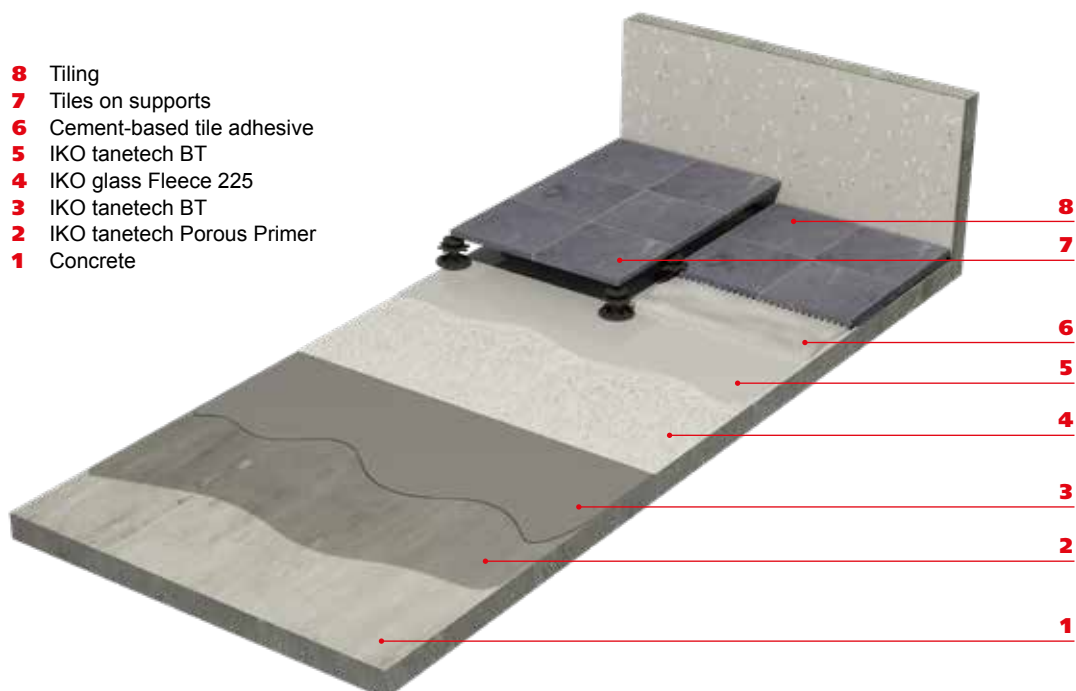
# DETAILED TECHNICAL DRAWINGS

Please contact IKO.

# MAINTENANCE

The durability of the waterproofing can be guaranteed, provided:
• The waterproofing is not subject to ponding water for an extended period.
• The surfaces are regularly maintained according to the current regulations.
• The waterproofing is used for its initially intended purpose.

Compliance with the following maintenance instructions determines the life span of the waterproofing system.

Maintenance begins as soon as the work is accepted. It consists of regular inspections and at least one annual visit, which must be conducted before the end of autumn.
Maintenance tasks include:
• Keeping the (rain) water drainage system in a good state of repair.
• Regular removal of grass, moss and vegetation.
• Removal of fallen leaves at the end of autumn.
• Keeping the small accessories (flashings, joints) and large structures (drain profiles, plinths, gutters, etc.) in a good state.
• Repair of any cracks detected.

Advice for use:
• Do not attach anything to the treated surface.
• Do not pour any aggressive products onto the surface, even if they are emptied directly into the drains.
• Do not make any changes without consulting an IKO specialist.

# IKO PRODUCTS USED IN THIS SYSTEM

**IKO flexia:**     - IKO antislip Powder
- IKO deco Chips
- IKO dilatation Fleece
- IKO drip Strip
- IKO flexijoint
- IKO glass Fleece 225
- IKO hybritech Sealant
- IKO micro Chips
- IKO tech Non-Porous Primer
- IKO tanetech BT
- IKO tanetech Porous Primer
- IKO tanetech Detail
- IKO tanetech Finish
- IKO tanetech Quarz Binder
- IKO tech Cleaner
- IKO quartzsand 0,3-0,6
- IKO quartzsand 0,6-1,2

**IKO pro:**     - IKO pro Colle PU
- IKO pro Fix gun
- IKO pro Sprayfast

**IKO enertherm:** - IKO enertherm ALU TG

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