

**KiILTO
PRO**

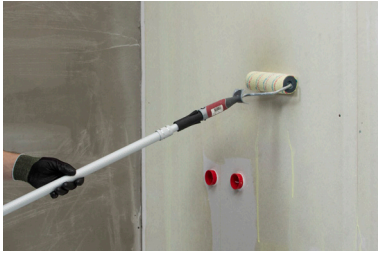


KIILTO KERAFIBER

WATERPROOFING SYSTEM
INSTRUCTIONS



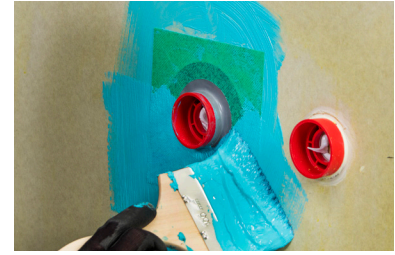
WALLS



1. Ensure that the surface is dust-free and prime it using either Kiilto Keraprimer or Kiilto PrimerOne. Dilute the primer in accordance with the product-specific instructions. Allow the primer to dry for at least 30 to 60 minutes before beginning the waterproofing.



2. Mix the waterproofing agent thoroughly before use. Reinforce corners, seam and any points where two different materials meet with Kiilto Nurkkavahvike corner reinforcement tape. The tape is applied immediately after Kerafiber is applied. Instead of the tape, you may also use the Kiilto Pro XPU Adhesive and reinforcement sealant. If you decide to use Kiilto XPU, please note that the seams must be filled completely with the product. The surface of the applied mass must reach from one material surface to the other and slightly overlap on both of the reinforced material surfaces.



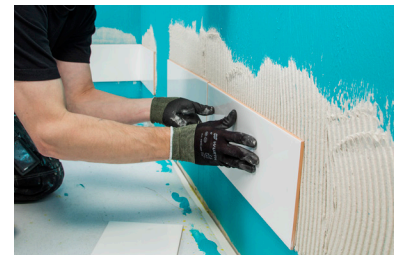
3. When reinforcing pipe channels, you may opt to use either prefabricated reinforcement pieces or pieces of Kiilto Nurkkavahvike corner reinforcement tape. Install the reinforcement pieces onto wet Kerafiber and brush Kerafiber over it to ensure wetting. Ensure that each piece is thoroughly saturated by brushing them with waterproofing agent. Channels can also be sealed using Kiilto Pro XPU Adhesive and reinforcement sealant before they are waterproofed.



4. Use a roller to apply Kerafiber over the entire wall surface and allow the product to dry for at least 2 hours or until the colour changes.



5. Apply another layer of Kerafiber and allow it to dry for 6 to 12 hours or until the colour changes before you begin tiling the surface. Ensure that the surface is sealed. Seal any thin and/or porous surface areas with Kerafiber and allow the product to dry thoroughly before continuing onto the next working phase. The total consumption of the substance should be at least 0.6 l per m² and the thickness of the applied layer should be at least 0.4 mm.



6. Fix wall tiles with Kiilto Superfix DF. Kiilto Flexfix or Kiilto Kerapid DF.

FLOORS



1. Ensure that the surface is dust-free and and prime it using either Kiilto Keraprimer or Kiilto PrimerOne. Dilute the primer in accordance with the product-specific instructions. Allow the primer to dry for at least 30 to 60 minutes before beginning the waterproofing work.



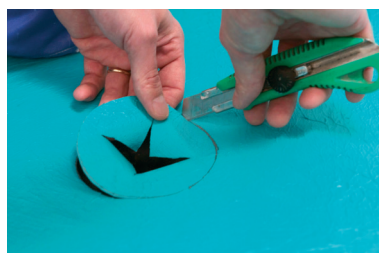
2. Reinforce corners, seams and any points where two different materials meet with Kiilto Nurkkavahvike corner reinforcement tape. Install the tape onto wet Kerafiber and brush Kerafiber over the tape to ensure wetting. You can also opt to use prefabricated corner pieces for the inner and outer corners. Instead of the tape, you may also use the Kiilto Pro XPU Adhesive and reinforcement sealant. In the event that you decide to use Kiilto XPU, please note that the seams must be filled completely with the product. The surface of the applied mass must reach from one material surface to the another and slightly overlap both of the reinforced material surfaces.



3. The floor drain can be waterproofed with two Kiilto Lattiakaivovahvike floordrain patches. Place one floor drain patch on the floor and brush Kerafiber over it. Place the other patch over the first patch crosswise and brush Kerafiber over it



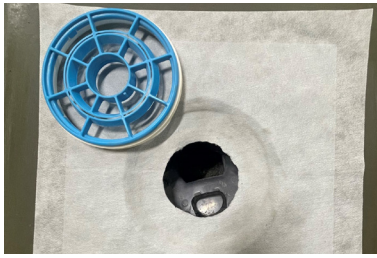
4. Apply waterproofing membrane around the floor drain (approx. 40 x 40 cm area), and turn the prepared floordrain patch over the drain. When using a separate sealing flange, contact our technical support or consult your drain supplier for instructions.



5. After the waterproofing membrane has dried, cut a round hole for the floor drain: ensure that the diameter of the hole is at least 40 mm smaller than the diameter of the floor drain, so that the rim of the Kerafiber layer stretches over the seal in the drain (follow the drain manufacturer's instructions). The thickness of the Kerafiber layer around the floor drain should be a minimum of 1.2 mm.



6. Press a suitable tension ring into position. Cut off any excess Kerafiber under the ring.



7. You can also seal the floor drain with a self-adherent Kiilto Easy Kaivolaippa reinforcement. Place Kiilto Easy Kaivolaippa on a dry, primed surface and press carefully into position. Cut a hole into it according to the drain manufacturer's instructions and press the tension ring into position.



8. Make sure that the tension ring is properly seated and cut off the edge of reinforcement sheet protruding from underneath.



9. Apply Kiilto Kerapiber on the reinforcement sheets on all sides of Kiilto Easy kaivolaippa. Apply Kerapiber to the entire area.



10. Seal the junction between the tension ring and the floor drain with Kiilto Pro Masa sealant. Kiilto Easy Kaivolaippa has been tested and approved in terms of its compatibility with the most common floor drain types.



11. Roll Kerapiber over the entire floor area and allow to dry for at least 2 h/ color change.



12. Roll a second coat of Kerapiber and allow to dry for 6-12 h/color change before tiling. Check the thickness of the Kerapiber layer. Add Kerapiber on top of thin and/or porous spots and allow to dry properly. The total consumption of Kerapiber should be at least 0.8 l/m² and the layer thickness 0.5 mm.



13. Fix the floor tiles with Kiilto Superfix DF, Kiilto Flexfix or Kiilto Kerapid DF. Attach the square cover centrally into the drain with tile adhesive. If there is still some waterproofing membrane visible between the drain and the cover, ensure protection by applying tile adhesive.



14. Apply Kiilto Pro Floor tile grout with a squeegee. Press the product firmly into each joint, ensuring that they are completely filled with the product. Wash off excess grout with a sponge 15 to 30 minutes after application. To ensure that the colour of the seams remains uniform, sponge should only be minimally moist. The seams between tiles can be shaped using a thick electrical wire.



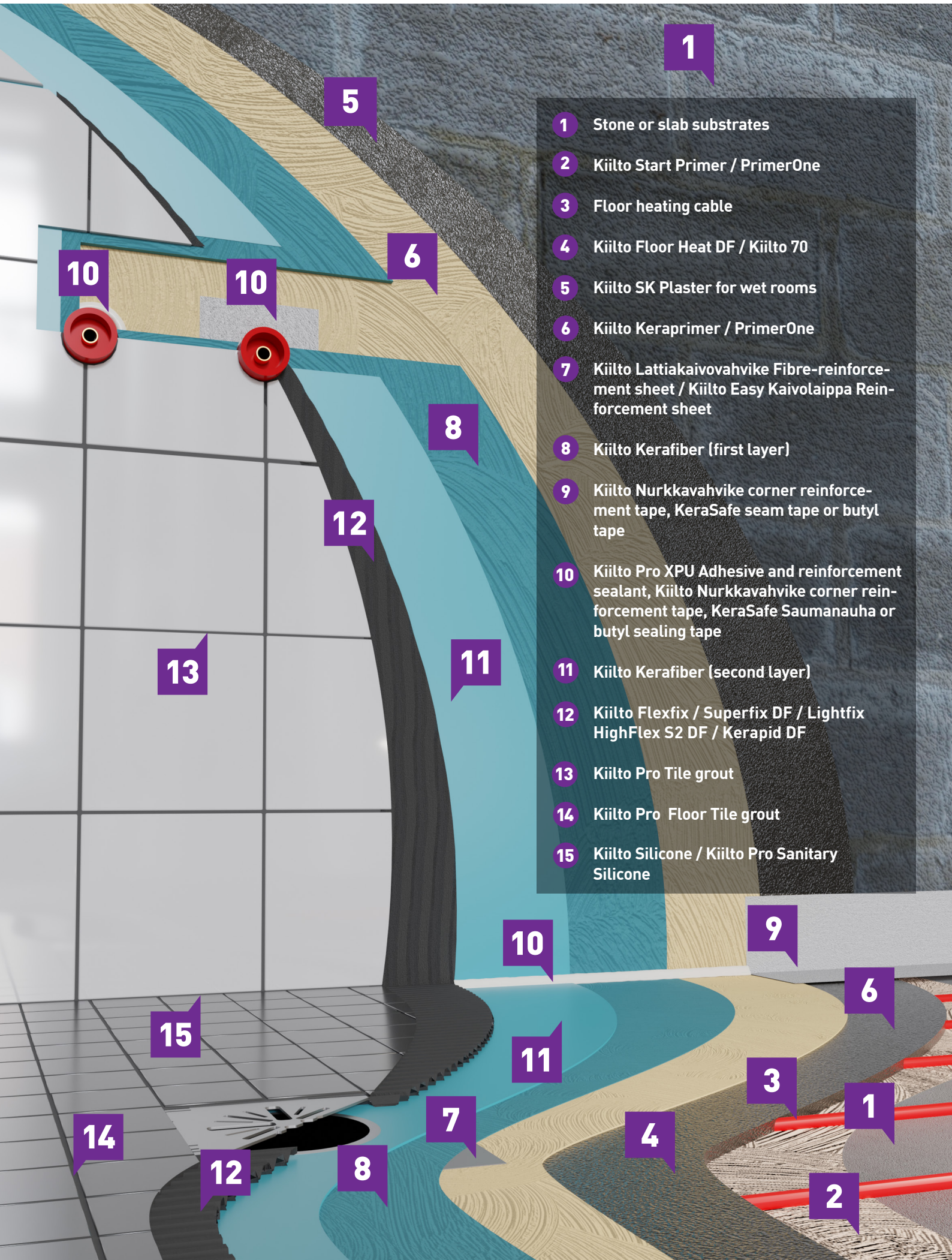
15. Remove any excess grout in the corners. Seal corners and channels or penetrations with Kiilto Pro Sanitary silicone or Kiilto Pro Silicone E. The wet room is ready for use on the following day. However, any heating elements in the floor can only be used a full week after the seams have been finished.

KIILTO KERAFIBER

- Single-component
- microfibre-reinforced
- easy to use



EXAMPLE SYSTEM STRUCTURE



- 1 Stone or slab substrates
- 2 Kiilto Start Primer / PrimerOne
- 3 Floor heating cable
- 4 Kiilto Floor Heat DF / Kiilto 70
- 5 Kiilto SK Plaster for wet rooms
- 6 Kiilto Keraprimmer / PrimerOne
- 7 Kiilto Lattiakaivovahvike Fibre-reinforcement sheet / Kiilto Easy Kaivolaippa Reinforcement sheet
- 8 Kiilto Kerafiber (first layer)
- 9 Kiilto Nurkkavahvike corner reinforcement tape, KeraSafe seam tape or butyl tape
- 10 Kiilto Pro XPU Adhesive and reinforcement sealant, Kiilto Nurkkavahvike corner reinforcement tape, KeraSafe Saumanauha or butyl sealing tape
- 11 Kiilto Kerafiber (second layer)
- 12 Kiilto Flexfix / Superfix DF / Lightfix HighFlex S2 DF / Kerapid DF
- 13 Kiilto Pro Tile grout
- 14 Kiilto Pro Floor Tile grout
- 15 Kiilto Silicone / Kiilto Pro Sanitary Silicone

KIILTO KERAFIBER SYSTEM

INSTRUCTIONS

POSSIBLE APPLICATIONS

Waterproofing of wall and floor surfaces of wet rooms covered with ceramic tiles. Kiilto Kerafiber is not suitable for surfaces that are constantly under water, such as swimming pool surfaces. The finished membrane can resist temperatures up to 70 °C, which must be taken into account if a wood-burning sauna stove is installed in the location. The product may also be used in combination with other Kiilto waterproofing systems (see separate instruction).

SUBSTRATE:

Suitable substrates are a strong aggregate base or construction board that has been tested and approved for wet area applications. The surface must correspond to a wood floated surface that is free of old coatings, cement skin, dust and other impurities that might reduce adhesion. If the substrate is made of concrete, its relative humidity should not exceed 90%. Ground-supported structures must feature a moisture barrier that prevents capillary damp from spreading. Uneven surfaces must be sanded down and/or levelled with a cement-based Kiilto compound. When installing underfloor heating in renovated floors, we recommend Kiilto Floor Heat DF over cables and for building falls. Always install the heating system below the waterproofing membrane in accordance with the manufacturer's instructions. Before levelling, the substrate must be primed in accordance with a separate instruction. Always ensure that the substrate structure is suitable for waterproofing and tiling.

REINFORCING

Reinforce corners, penetrations and channels, as well as any seams between building boards and other wall surface materials with Kiilto Nurkkavahvike corner reinforcement tape. For corners, you may choose between tape widths of 10 or 20 cm. For any other seams, a tape with a width of 10 cm is sufficient. For seams between floor and wall surfaces, the reinforcement tape must extend at least 5 cm onto the horizontal surface. Instead of the tape, you may also use the Kiilto Pro XPU Adhesive and reinforcement sealant. For external and internal corners, as well as any channels or penetrations, you can also opt to use prefabricated reinforcement elements. Instead of the tape, you may also use the Kiilto Pro XPU Adhesive and reinforcement sealant. In the event that you decide to use Kiilto XPU, please note that the seams must be filled completely with the product. The surface of the applied mass must reach from one material surface to the other and slightly overlap on both of the reinforced material surfaces. The reinforcement method for floor drains is determined by the drain type. All reinforcement sheets or elements are attached to freshly applied Kerafiber by rubbing their surface with either a roller, brush or a smooth plastic spatula or trowel. Ensure that all reinforcement sheets and/or other elements are thoroughly saturated by applying Kerafiber on their top surfaces with a brush. Any reinforcement fabric pieces must intersect by at least 30 mm. The self-adhesive Kiilto Easy reinforcement sheet must be installed on a pre-primed

surface. Kiilto Kerafiber's suitability for the most common floor drain types has been ensured through various tests and approvals. Please contact Kiilto's technical support services or your drain supplier to make sure that the product is suitable for the intended application.

CONSUMPTION

Wall surfaces, at least two layers: approx. 0.6 l per m² = dry film thickness 0.4 mm. Floor surfaces, at least two layers: approx. 0.8 l per m² = dry film thickness 0.5 mm.

WORKING CONDITIONS

During waterproofing work, the air and construction temperature must be +15–25 °C. Conditions should be stable (no humidity and temperature variations) during the work to avoid dimension alterations in the materials. Under-floor heating should be turned off 2 days before the work commences and brought up to its operating temperature gradually around one week after grouting. Effective ventilation can be used to speed up the drying of Kiilto Kerafiber, but do not use extra heaters.

TOOLS

A roller, sprayer, brush, flat plastic trowel and trimming knife. Tools and fresh stains can be washed off with water, dry stains must be removed by mechanical means.

PRIMING SURFACES BEFORE THE APPLICATION OF KIILTO KERAFIBER

Substrate:	Primer
Concrete surfaces or surfaces that have been treated with a levelling compound	Kiilto PrimerOne (undiluted) Kiilto Keraprimer (diluted with water, ratio: 1:1)
Gypsum plasterboard	Kiilto PrimerOne (undiluted) Kiilto Keraprimer (undiluted)
Other boards: absorbent	Kiilto PrimerOne (undiluted) Kiilto Keraprimer (diluted with water, ratio: 1:1)
non-absorbent	Kiilto PrimerOne (undiluted) Kiilto Keraprimer (undiluted)
Rough concrete or masonry	Level the surface with a cement-based Kiilto levelling compound

- Any loose particles and any surface parts not firm enough to withstand processing must be removed
- Any layers of old substances that may weaken the adhesive capacity of the product, such as old cement paste, must be carefully removed
- The surface must be clean and dust-free
- If used on a porous surface, PrimerOne may be diluted with water to a ratio of 1:1

For more detailed instructions on preparing surfaces to be renovated, please contact our technical support services.

SYSTEM PRODUCTS:

FOR LEVELLING WALL SURFACES.



Kiilto TM DF: A quick-to-apply, lightweight filling compound for interior wall surfaces in both wet and dry areas. Ideal for purposes such as filling chases. Can be used for filling out holes or chases ranging from 5 mm to 70 mm in depth, and levelling over to a depth of 5 mm to 20 mm. Waterproofing membrane can be applied after 1 day. Contains a cementitious binder.

Kiilto OT Light: Lightweight levelling compound for dry and wet areas. Well suited for purposes such as filling out surface dents or holes. Can be applied by spraying. Very low drying shrinkage. Also suitable for outdoor applications if coated. Layer thickness for partial levelling: 5 mm to 50 mm, coating: 5 mm to 30 mm. Contains a cementitious binder.

Kiilto OT: A fibre-reinforced levelling and patching compound. Well suited for purposes such as filling depressions and holes. Suitable for wall surfaces in both dry and wet environments. Also suitable for outdoor applications if coated. Contains a cementitious binder.

Kiilto TT: A levelling compound for masonry surfaces and a patching compound for levelling walls in both wet and dry environments. Also suitable for outdoor applications. Contains a cementitious binder.

Kiilto SR DF: Extremely quick to use, low-dust levelling compound for wall and ceiling surfaces in wet areas. Especially well suited for levelling concrete or block walls prior to waterproofing and tiling. Contains a cementitious binder.

Kiilto SK: A levelling compound for wall and ceiling surfaces in wet areas. Especially well suited for levelling concrete or block walls prior to waterproofing and tiling. Also suitable for outdoor applications. Contains a cementitious binder.

FOR LEVELLING FLOOR SURFACES



Kiilto Start Primer: A quick-drying primer to improve the adhesion between the levelling compound and the application surface. Can be diluted with water.

Kiilto PrimerOne: A quick-drying primer to improve the adhesion between concrete or board surfaces and levelled surfaces suitable for wet rooms and Kiilto waterproofing membranes. Can be diluted with water.

Kiilto 60: A fast-setting and quick-drying floor levelling screed for casting, filling out depressions or holes and for constructing slopes in indoor applications. Each bag contains approximately 11 litres of ready-to-use screed. Low-alkali, contains a cementitious binder.

Kiilto 70: A high-strength floor levelling screed for casting, filling out depressions or holes and for constructing slopes in both indoor and outdoor applications. Easily grindable. Each bag contains approximately 11 litres of ready-to-use screed. Low-alkali. Contains a cementitious binder.

Kiilto 80: Straightening compound for correcting unwanted floor surface inclinations. Suitable for both indoor and outdoor applications. Each bag contains approximately 12 litres of ready-to-use compound. Low-alkali. Contains a cementitious binder.

Kiilto Floor Heat DF: A low-dust, fibre-reinforced tilted-floor screed for floors that are to be fitted with either air-to-water floor heating or a floor heating system with electric cables. Also suitable for general levelling applications. Each bag contains approximately 12 litres of ready-to-use screed. Low-alkali. Contains a cementitious binder.

Kiilto TopPlan DF: Low-dust, excellent self-levelling properties, particularly for levelling floors set to be coated later on. Forms a hard and smooth surface when cured. Also suitable for levelling floors set to be painted. Pumpable. Low-alkali. Contains a cementitious binder.

Kiilto 97 DF: Easy-to-spread compound for precision levelling floor surfaces prior to the installation of floor covering. Pumpable. Low-alkali. Contains a cementitious binder.

Kiilto Maxirapid: Easy-to-use quick levelling screed for correcting floor surfaces, filling and patching up dents and building slopes. The floor can be covered as early as 2 hours after levelling. Also suitable for outdoor applications. Can be painted. Low-alkali. Contains a cementitious binder.

Kiilto Pro Easyrapid: Extremely quick-to-use levelling compound for finishing indoor floor surfaces. Can be used for patching depressions or holes up to 10 mm in diameter. Walkable within approximately 45 minutes of application. Can be coated within 1 to 2 hours of application. No priming required if applied on a concrete or screed surface. Low-alkali.

FOR WATERPROOFING



Kiilto PrimerOne: A quick-drying primer to improve the adhesion between concrete or board surfaces and levelled surfaces suitable for wet rooms and Kiilto waterproofing membranes. Can be diluted with water.

Kiilto Keraprim: A quick-drying primer to improve the adhesion between brushable concrete or board surfaces and levelled surfaces suitable for wet rooms and Kiilto waterproofing membranes. Can be diluted with water.

Kiilto Kerafiber Waterproofing membrane: A microfibre-reinforced, single-component waterproofing membrane for tiled surfaces in indoor wet areas. Can be applied by spraying. CE marked, ETA approved, VTT Vedeneristysjärjestelmäsertifikaatti waterproofing system certificate 141/00.

FOR FASTENING CERAMIC TILES



Kiilto Superfix DF: A low-dust, light-coloured, non-drip and economical, light-fill renovation plaster for attaching ceramic tiles. Especially well suited for attaching large wall tiles. Extended open time. Also suitable for outdoor applications. C2TES1. C2ES2 with Kiilto Fixbinder additive.

Kiilto Pro Lightfix: A non-drip, light-coloured and economical light-fill renovation plaster for attaching ceramic tiles. Also suitable for outdoor applications. C2TES1.

Kiilto Flexfix: A multi-purpose, non-drip renovation plaster for attaching ceramic tiles. Long open time. Also suitable for outdoor applications. C2TES1. C2ES2 with Kiilto Fixbinder additive.

Kiilto Kerapid DF: A low-dust, quick-to-apply tile adhesive for attaching ceramic tiles and natural stone. Can be grouted within 2 to 4 hours of application. Also suitable for outdoor applications. C2FTES1. C2ES2 with Kiilto Fixbinder additive.

Kiilto HighFlex S2 DF: A low-dust, extremely lightweight white tile adhesive with good deformation properties. Unusual tiling applications, such as glass mosaic tiles or natural stone (e.g. marble), sauna stove installation sites and prefabricated sheet element bathrooms. C2TES2. Also suitable for outdoor applications. Contains a cementitious binder.

Kiilto Floorfix DF Rapid: A fast-to-apply, low-dust grout. Thanks to its plasticity, this grout is specially suitable for attaching large ceramic tiles and stones to floor surfaces in both dry and wet areas. Can be grouted within 5 hours of application. Also suitable for outdoor applications. C2FES1. C2ES2 with Kiilto Fixbinder additive.

Kiilto Floorfix DF: A low-dust, high-plasticity tile adhesive especially well suited for attaching larger floor tiles in both dry and wet areas. Not suitable for materials sensitive to moisture. Can be grouted within 16 hours of application. Also suitable for outdoor applications. C2ES1. C2ES2 with Kiilto Fixbinder additive.

FOR GROUTING



Kiilto Pro Tile grout: A general-purpose grout for grouting tile and clinker tile surfaces. CG2-rated with a wide range of colour options.

Kiilto Pro Floor Tile grout: A quick-to-apply grout for grouting clinker tiles and stone. Also suitable for outdoor applications. Grout width: 2 mm to 12 mm. Contains a cementitious binder.

Kiilto Pro Sanitary Silicone: A mould-resistant, odourless and neutral silicone adhesive sealant for joints that are susceptible to mechanical wear and tear and sealing of joints. The colour options correspond to the colours for Kiilto grouts. Also suitable for outdoor applications. Not suitable for aquariums.

Kiilto Pro Silicone E: A mould-resistant, acetic acid-based silicone adhesive sealant sealing for joints that are susceptible to mechanical wear and tear, joints between wall and floor surfaces and other material boundaries, as well as penetrations and channels in wet areas. Also suitable for outdoor applications. Not suitable for aquariums.

Kiilto Pro Masa: A single-component adhesive and sealant for attaching and sealing mouldings, building boards, metal and glass fibre components, and different grades of plastics. Suitable for construction, marine, boat and transport industry applications. Also suitable for joints that are susceptible to mechanical wear and tear.

Kiilto Pro XPU: An extremely elastic adhesive sealant for indoor and outdoor applications. Ideal for wet areas. Solvent-free. Suitable for sealing channels or penetrations when used with Kiilto's single-component waterproofing membranes. Reinforced with polyurethane.