



European Technical Assessment

ETA 16/0876
of 26/01/2022

General Part

Technical Assessment Body issuing the ETA	Eurofins Expert Services Oy
Trade name of the construction product	Kiilto Keramix A+X Watertight covering kit
Product family to which the construction product belongs	Liquid applied waterproofing kit for wet room floors and walls
Manufacturer	Kiilto Oy P.O. Box 250 FI-33101 Tampere Finland
Manufacturing plant	Kiilto Oy Tampereentie 408 FI-33880 Lempäälä Finland
This European Technical Assessment contains	6 pages including 2 Annexes which form an integral part of this assessment.
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	European Assessment Document (EAD) 030352-00-0503 - Liquid applied watertight covering kits for wet room floors and/or walls
This version replaces	ETA 16/0876, issued on 06/08/2018

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full (excepted the confidential Annex(es), where relevant).

Specific Part

1 Technical description of the product

Kiilto Keramix A+X is a liquid applied water proofing kit. The kit is used as watertight covering for wet room floors and walls beneath a wearing surface.

The kits consist of the following components:

Primers

Kiilto Keraprimer, Kiilto PrimerOne and Kiilto Fibergum primer are polymer dispersion primers used to improve the adhesion of the waterproofing kit to the substrate. On different substrates the primers are applied according to the manufacturer's instructions. Wet consumption of primer (when undiluted) is 125 g/m².

Membrane

The Kiilto Keramix A+X waterproofing is a two-component liquid applied waterproofing membrane. Keramix A is the water-based liquid component and Keramix X is the cement-based powder component. The minimum dry film thickness of waterproofing on walls and floor is 0,8 mm. The dry film thickness on a smooth, non-porous substrate treated with the primer is achieved with two applications and with minimum consumption of 1,5 kg/m². On porous substrates and when installing reinforcements the wet amount of waterproofing to achieve the minimum dry film thickness increases.

Reinforcements

The reinforcements belonging to the kit and used in floor gully penetrations are:

- Kiilto Kaivolaippa (dimensions 33 cm x 33 cm or 37 cm x 37 cm)

The reinforcements belonging to the kit and used in joints, connections between floor and wall and in corners are:

- Kiilto Nurkkavahvike tape
- Kiilto Butyltape
- Kiilto KeraSafe sealing tape
- Kiilto Sisänurkkavahvike
- Kiilto Ulkonurkkavahvike

The reinforcements belonging to the kit and used in penetrations on walls are:

- Keramix A+X fillmass (mixing ratio liquid:powder 3,5:5)
- Kiilto Nurkkavahvike tape
- Kiilto Läpivientivahvike 10 - 16 mm (dimensions 9,5 cm x 9,5 cm)
- Kiilto Läpivientivahvike 18 - 34 mm (dimensions 11,2 cm x 11,2 cm)
- Kiilto Läpivientivahvike 34 - 50 mm (dimensions 14,5 cm x 14,5 cm)

The reinforcements belonging to the kit and used in penetrations of floor pipes are:

- Keramix A+X fillmass (mixing ratio liquid:powder 4,25:5)
- Kiilto Nurkkavahvike tape

Adhesives

Adhesives for tile fixings covered by this ETA are:

- Kiilto Flexfix
- Kiilto Kerapid DF
- Kiilto Superfix DF
- Kiilto Lightfix
- Kiilto HighFlex S2 DF
- Kiilto Pro Fix
- Kiilto Ultra Fix
- Kiilto Floorfix DF
- Kiilto Floorfix DF Rapid

2 Specification of the intended uses in accordance with the applicable European Assessment Document, EAD

The intended use of the covering kit is:

1. To act as watertight covering for use beneath a wearing surface, normally in form of ceramic tiles, on substrates of gypsum board, XPS board coated with glass fibre net reinforced cement-based plaster, fibre-cement boards, cement bonded boards, masonry smoothed with cement-based screed, lightweight concrete and concrete. The substrates may be moisture sensitive, flexible, with joints and susceptible for cracking or not.

The kit can be used with following type of floor gullies:

- PP floor gully with clamping ring
 - Stainless steel gully with or without clamping ring.
2. Indoor applications, where the in the liquid form applied kit is not exposed to temperatures (i.e. temperature of the structure) below 5 °C or above 40 °C, in the following uses:
 - Floors and walls in ordinary dwellings
 - Floors and walls in public wet rooms, schools and sport facilities (excluding swimming halls).

The provisions made in this European Technical Assessment are based on an assumed intended working life of the kit of 25 years, provided that the kit is subject to appropriate installation, use and maintenance.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or assessment body, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

Basic work requirement Essential characteristic	EAD Clause	Performance
BWR 2. Safety in case of fire		
Reaction to fire	2.2.1	No performance assessed
BWR 3. Hygiene, health and the environment		
Content, emission and/or release of dangerous substances	2.2.2	No performance assessed
Vapour permeability	2.2.3	W = 90 · 10⁻¹² kg/m²Pa Z = 81 960 s/m s_d = 2,2 m
Water tightness	2.2.4	Watertight
Crack bridging ability	2.2.5	Assessment category 1 , Crack width 0,4 mm
Bond strength	2.2.6	Assessment category 2 : Bond strength ≥ 0,5 MPa on concrete substrate Assessment category 1 : Bond strength ≥ 0,3 MPa on following substrates: - gypsum board - cement based board - fibre-cement board - XPS board coated with glass fibre net reinforced cement-based plaster
Scratching resistance	2.2.7	No performance assessed
Joint bridging ability	2.2.8	Assessment category 2 : Watertight
Water tightness around penetrations	2.2.9	Assessment category 2 : Watertight With Kilito reinforcements according to clause 1*
Resistance to temperature	2.2.10	Assessment category 2 : Bond strength ≥ 0,5 MPa on concrete substrate. Requirement for crack bridging ability is fulfilled

Resistance to water	2.2.11	Assessment category 2: Bond strength $\geq 0,5$ MPa on concrete substrate
Resistance to alkalinity	2.2.12	Assessment category 2: Bond strength $\geq 0,5$ MPa on concrete substrate
Resistance to mechanical wear	2.2.13	Not relevant
BWR 4. Safety in use		
Slipperiness of floors	2.2.14	No performance assessed
Reparability	2.2.15	Repairable
Thickness	2.2.16	The required weight (wet) of Kiilto Keramix A+X waterproofing is 2 kg/m ² per mm. The minimum thickness of the waterproofing shall be 0,8 mm.

*The kit has been tested with the following floor gully types: circular PP gully with Kiilto Kaivolaippa, circular stainless steel gully Kiilto Kaivolaippa and rectangular stainless steel gully without flange.

4 Assessment and verification of constancy of performance (hereinafter AVCP)

According to the decision 2003/655/EC of the European Commission, the system of assessment and verification of constancy of performance is 2+.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

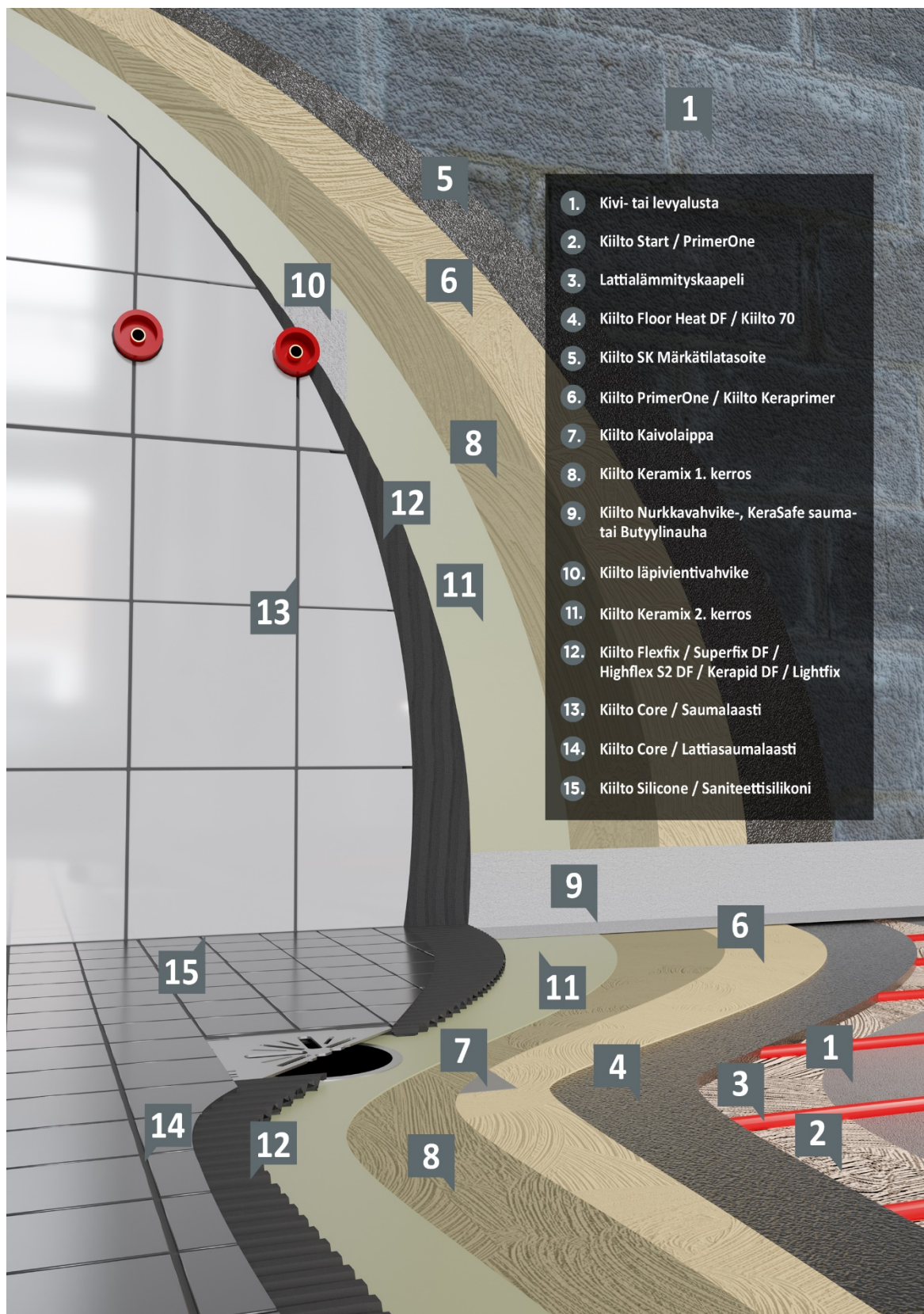
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at Eurofins Expert Services Oy.

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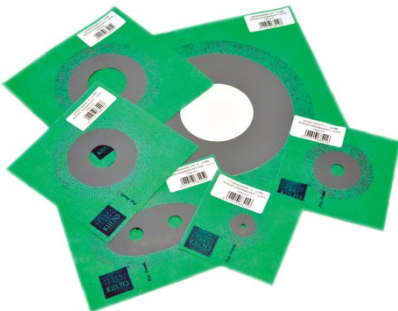


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Principal build-up of Kiilto Keramix A+X Watertight covering kit



Kiilto Keramix A+X Watertight covering kit reinforcements and sealing components

	<p>Kiilto Nurkkavahvike tape Material polypropylene Width 100 mm</p>																				
	<p>Kiilto KeraSafe Sealing tape Core layer modified polyethylene, cover polypropylene Width 100 mm</p>																				
	<p>Kiilto Butyltape Core layer butylgum, cover polypropylene Width 100 mm</p>																				
	<p>Kiilto Kaivolaippa Core layer butylgum, cover polypropylene Dimensions 33 cm x 33 cm or 37 cm x 37 cm</p>																				
	<p>Kiilto Läpivientivahvike Core layer PUR, cover polypropylene Dimensions:</p> <table border="1" data-bbox="708 1099 1278 1301"> <thead> <tr> <th rowspan="2">Pipe outer diameter</th> <th colspan="2">Läpivientivahvike</th> </tr> <tr> <th>Dimensions, mm</th> <th>Ø, mm</th> </tr> </thead> <tbody> <tr> <td>10-16 mm</td> <td>95 x 95</td> <td>4</td> </tr> <tr> <td>18-34 mm</td> <td>110 x 110</td> <td>13</td> </tr> <tr> <td>34-55 mm</td> <td>145 x 145</td> <td>28</td> </tr> <tr> <td>55-75 mm</td> <td>170 x 170</td> <td>43</td> </tr> <tr> <td>100-140 mm</td> <td>255 x 255</td> <td>78</td> </tr> </tbody> </table>	Pipe outer diameter	Läpivientivahvike		Dimensions, mm	Ø, mm	10-16 mm	95 x 95	4	18-34 mm	110 x 110	13	34-55 mm	145 x 145	28	55-75 mm	170 x 170	43	100-140 mm	255 x 255	78
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	<p>Kiilto Sisänurkkavahvike Core layer modified polyethylene, cover polypropylene Dimensions 120 mm x 120 mm, height 60 mm</p>																				
	<p>Kiilto Ulkokulmavahvike Core layer modified polyethylene, cover polypropylene Dimensions 164 mm x 164 mm, height 57 mm</p>																				