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to Article 29 of the Regulation (EU)  
No 305/2011 of the European  
Parliament and of the Council of 9  
March 2011

MEMBER OF EOTA



## European Technical Assessment ETA-09/0048 of 24/04/2014

### I General Part

**Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S**

**Trade name of the construction product:**

Alfix 1K Watertight covering kit

**Product family to which the above construction product belongs:**

Liquid applied watertight covering kit for wet room floors and walls

**Manufacturer:**

Alfix A/S  
H. C. Ørstedesvej 13  
DK-6000 Kolding  
Telephone +45 75 52 90 11  
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**Manufacturing plant:**

Alfix A/S  
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DK-6000 Kolding

**This European Technical Assessment contains:**

8 pages including 1 annex which form an integral part of the document

**This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:**

Guideline for European Technical Approval ETAG No 022 Watertight covering kits for wet room floors and/or walls, Part 1: Liquid applied coverings with or without wearing surface, Edition April 2007, used as European Assessment Document (EAD).

**This version replaces:**

The previous ETA with the same number and validity from 2009-04-24 to 2014-04-24

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## II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

### 1 Technical description of product and intended use

#### Technical description of the product

##### General

Alfix 1K is a liquid applied one component membrane kit which serves as a watertight covering for wet room floors and walls beneath a wearing surface.

The kit consists of the following components:

##### Primer

Alfix VådrumsPrimer, which is a polymer dispersion primer with a “tell-tale” colour additive for use on moisture sensitive substrates. The primer is intended to have a significant additional function in limiting the water vapour permeability of the kit

##### Membrane

The membrane is a one component system consisting of Alfix 1K liquid membrane on polymer dispersion base.

##### Reinforcement

The reinforcement is Alfix Reinforced Strip, which is a elastic jointing tape used to bridge cracks and joints, and, Alfix Seal Strip, which is a self-adhesive synthetic rubber tape used in connection between the floor and the wall, in corners and around penetrations. Alternatively, Alfix VT-corner tape, Alfix VT-corners and Alfix VT pipeMat (PU) can be used. For gullies the Alfix Drain Mat, which is a self-adhesive collar, is used. The reinforcement is not intended to cover the entire floor and wall covering, but is used over joints and in corners and around pipe penetrations and floor gullies

##### Adhesives

Adhesives covered by this ETA is: Alfix LetFix Universal, Alfix LetFix, Alfix CombiFix, Alfix ProFix

##### Kit build-up

The kit is constructed as follows:

- a layer of minimum 0.10 liters/m<sup>2</sup> (120 g/m<sup>2</sup>) Alfix VådrumsPrimer (depending on substrate)
- reinforcement of in- and outgoing corners in walls, over joints or cracks in the substrate, around pipe penetrations, floor gullies and along the connection between floor and wall with Alfix Reinforced Strip, which is embedded in a layer of Alfix 1K membrane or

with the self-adhesive synthetic rubber reinforcement Alfix Seal Strip or Alfix VT-corner tape, Alfix VT-corners and Alfix VT-pipeMat (PU). Reinforcement around the floor gully can also be established with the Alfix Drain Mat or Alfix Seal Strip

- At least 1500 g/m<sup>2</sup> on floors and at least 1000 g/m<sup>2</sup> on walls. The above mentioned amount of Alfix 1K corresponds to a dry film of 0.8 mm (floors) respectively 0.5 mm (walls).
- a layer of ceramic tiles adhered to the kit with cement based tile adhesive (Alfix LetFix Universal, Alfix LetFix, Alfix CombiFix, Alfix ProFix).

Note that the above mentioned amount of Alfix 1K corresponds to a dry film thickness of 0.8 mm (floors) respectively 0.5 mm (walls) (see section 3.8).

### 2 Specification of the intended use in accordance with the applicable EAD

The intended use of the covering kit is:

1. watertight covering for use beneath a wearing surface, normally in the form of tiles, on substrates of wood based panels, gypsum boards, fibre cement boards, cement bonded boards, watertight boards made from a polystyrene core with a cement based glass fibre reinforced covering and concrete, i.e. moisture sensitive substrates, which are flexible and with jointing and susceptible to cracking

The kit can be used with the following types of floor gullies:

Circular and rectangular gullies made from stainless steel or plastic type PE, with flange for adhesion of the membrane or with clamping ring or with collar

2. Indoor applications, where the liquid applied kit is not exposed to temperatures (i.e. temperature of structure) below 5 °C and above 40 °C, in the following uses:

- Floor and wall surfaces with only occasional direct exposure to water, e.g. at a good distance from shower or bathtub.
- Floors and walls in shower areas or around bathtubs used for a few showers daily, e.g. in ordinary dwellings, multi-family houses and hotels
- Floor and wall surfaces with exposure to water more frequent or of longer duration than normally anticipated in dwellings, e.g. public wet rooms, schools and sport facilities.

The provisions made in this European Technical Assessment are based on an assumed intended working life of the kit of 25 years.

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

Characteristic	Assessment of characteristic
<b>3.2 Safety in case of fire (BWR2)</b>	
Reaction to fire	<b>Euroclass F and Euroclass F<sub>n</sub>*</b> )
<b>3.3 Hygiene, health and the environment (BWR3)</b>	
Dangerous substances	No dangerous materials **)
Vapour permeability	<p>The vapour permeability of the 1 K membrane with VådrumsPrimer when tested at 23°C and RH 93 → 50 %. The test has been performed with the membrane facing a climate of 93 % RH:</p> <p><b><math>Z_v &gt; 1.000.000</math> s/m equal to <math>s_d = 27</math> m for kits with at least <math>120</math> g/m<sup>2</sup> Alfix VådrumsPrimer in two applications and at least <math>1000</math> g/m<sup>2</sup> Alfix 1K in two applications</b></p> <p>The vapour permeability of the 1 K membrane with VådrumsPrimer when tested at 23°C and RH 100 → 75 %. The test has been performed with the membrane facing a climate of 100 % RH:</p> <p><b><math>Z_v = 2.006.000</math> s/m equal to <math>s_d = 53,3</math> m for kits with <math>242</math> g/m<sup>2</sup> Alfix VådrumsPrimer in two applications and <math>1517</math> g/m<sup>2</sup> Alfix 1K in two applications.</b></p>
Moisture resistance	
Water tightness	<b>Watertight</b> according to EN 14891
Crack bridging ability	<p><b>Assessment category 2:</b> Crack width 0,75 mm with 0,8 mm thick membrane (floors)</p> <p><b>Assessment category 1:</b> Crack width 0,4 mm with 0,5 mm thick membrane (walls)</p>
Bond strength	<p>Alfix 1K with Alfix VådrumsPrimer and the following tile adhesives; Alfix LetFix Universal, Alfix LetFix, Alfix CombiFix, Alfix ProFix on a concrete substrate all comply with</p> <p><b>Assessment category 2:</b> Bond strength &gt; 0,5 MPa</p> <p>Alfix 1K with Alfix VådrumsPrimer and the following tile adhesives; Alfix LetFix Universal, Alfix LetFix, Alfix CombiFix, Alfix ProFix on substrates**) of calcium silicate boards, gypsum boards, fibre cement boards, cement based boards and watertight boards made from a polystyrene core with a cement based glass fibre reinforced covering comply with</p> <p><b>Assessment category 1:</b> Bond strength &gt; 0,3 MPa</p>
Scratching resistance	No performance determined

Joint bridging ability	Alfix 1K with Alfix VådrumsPrimer and Alfix Reinforcement comply with <b>Assesment category 2: Watertight</b>
Water tightness around penetrations	Alfix 1K with Alfix VådrumsPrimer and Alfix Reinforced Strip, Alfix Seal Strip, Alfix pipeMat (PU) and Alfix Drain Mat***) comply with <b>Assesment category 2: Watertight</b>

<b>Characteristic</b>	<b>Assessment of characteristic</b>
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<b>3.7 Sustainable use of natural resources (BWR7)</b>	Not relevant
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<b>3.8 Related aspects of durability and serviceability</b>	
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Resistance to temperature	<b>Assessment category 2: Bond strength &gt; 0,5 MPa</b>
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Resistance to water	<b>Assessment category 2: Bond strength &gt; 0,5 MPa</b>
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Resistance to alkalinity	<b>Assessment category 2: Bond strength &gt; 0,5 MPa</b>
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Repairability	Repairable
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Thickness	The required weight (wet) of the Alfix 1K membrane is 1,84 kg/m <sup>2</sup> pr. mm dry thickness of the layer The minimum thickness of the membrane shall be 0.5 mm on walls and 0.8 mm on floors.
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Applicability	Applicable
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\*) In accordance with <http://europa.eu.int/-/comm/enterprise/construction/internal/dangsub/dangmain.htm> In addition to the specific clauses relating to dangerous substances contained in this European Technical Approval, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the EU Construction Products Directive, these requirements need also to be complied with, when and where they apply.

\*\*) The assessment of the fitness for use of the kit on the generic description of the boards is based on test on the following specified substrates in addition to concrete according to EN 1323; Ivarit Hydropanel, Ivarit UniCo, Ivarit UniCo Flex konveks, Internit VR, Aquapanel indoor, Powepanel H<sub>2</sub>O, Lux Element, Jackoboard, Wedi Building board and Glasroc GHIE Hydro Wet room board

\*\*\*) In accordance with the provisions of ETAG 022 part 1 – Annex A, the kit has been tested with three types of floor gullies; two circular gullies, one made from stainless steel with a flange for floors with a membrane and one in PP plastic with a clamping ring type KL/150, and on rectangular gully made from stainless steel with a flange for installation in wood based floors structures

### Aspects related to the performance of the product

The European Technical Assessment is issued for the product on the basis of agreed data/information, deposited with ETA-Danmark, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to ETA-Danmark before the changes are introduced. ETA-Danmark will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

The performance of the watertight membrane kit results from the characteristic values and categories.

The supplementing statements of the manufacturer stated in the MTD for design and application of the watertight system for creating a watertight covering under wearing surface for floors and walls in indoor wet areas shall be considered

The performance of the watertight membrane can be assumed only, if the following aspects are considered:

- only those components which are specified components of the kit can be used,
- the appropriate tools shall be used and adjuvant, precautions shall be taken,

- inspecting the substrate surface for cleanliness and correct treatment,
- inspection in the process of establishing the kit and of the finished watertight membrane and documentation of the results.

The information as to the handling of waste products shall be observed.

It is the manufacturer's responsibility to make sure that all those who utilize the kit will be appropriately informed about the specific conditions according to this ETA and the not confidential parts of the MTD deposited to this ETA

#### **4 Attestation and verification of constancy of performance (AVCP)**

##### **4.1 AVCP system**

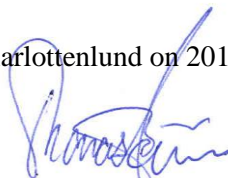
According to the decision 2003/655/EC of the European Commission as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is 2+.

There is no declared fire performance, and hence the Decision 2003/655/EC of the European Commission with regard to reaction to fire is not relevant.

#### **5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD**

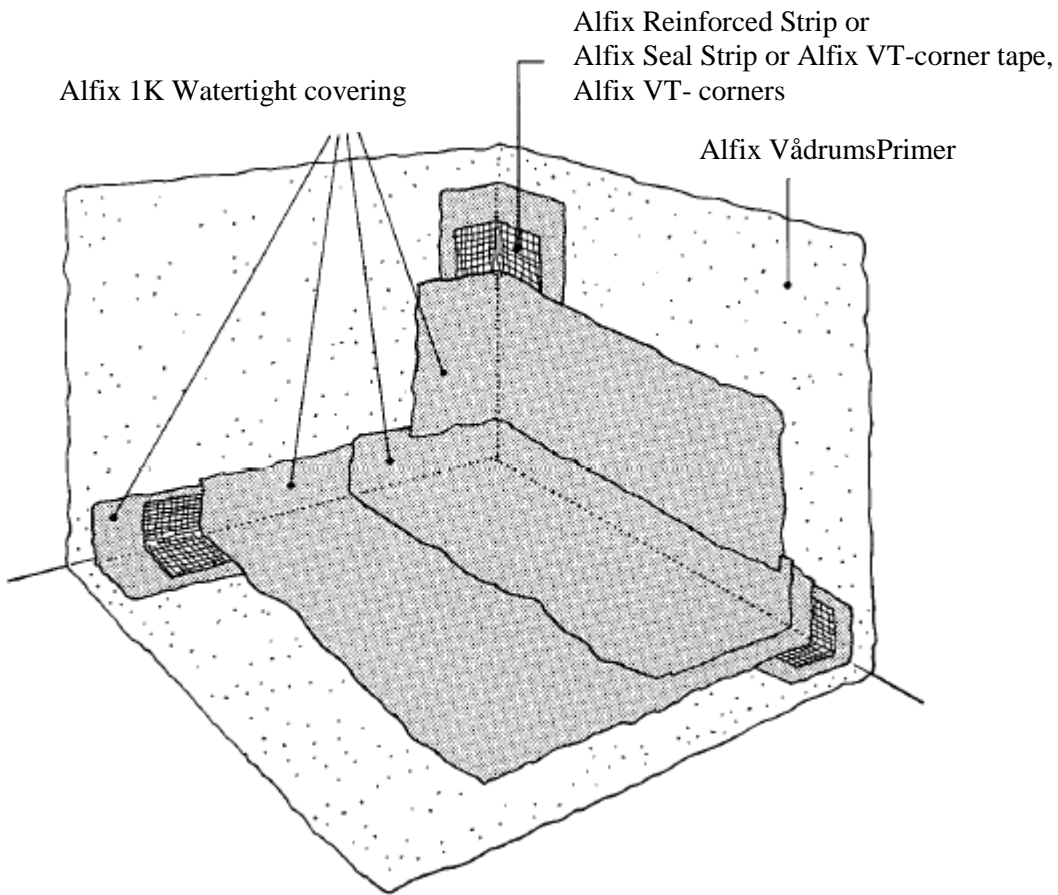
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark

Issued in Charlottenlund on 2014-04-24 by



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Alfix 1K watertight covering kit	Annex 1
Principle build-up of the kit	of European Technical Assessment ETA-09/0048