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to Article 29 of the Regulation (EU)
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MEMBER OF EOTA



European Technical Assessment ETA-16/1004 of 25/01/2017

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:

SCHÖNOX WSF Watertight covering kit

Product family to which the above construction product belongs:

Watertight covering kit for wet room floors and walls based on flexible sheets

Manufacturer:

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Manufacturing plant:

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This European Technical Assessment contains:

9 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 2: Kits based on flexible sheets, Edition November 2010, used as European Assessment Document (EAD).

This version replaces:

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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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

SCHÖNOX WSF is a flexible sheet 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

SCHÖNOX KH, which is a single component synthetic resin dispersion primer or SCHÖNOX KH iFIX, which is a single component solvent free acrylate dispersion primer for various substrates. These primers are not intended to have a significant additional function in limiting the water vapour permeability of the kit.

Adhesive for the membrane

SCHÖNOX WSF flexible sheet membrane can be adhered to the substrate with the following adhesives, approx. 750 g/m² SCHÖNOX iFIX adhesive or approx. 300 g/m² SCHÖNOX WSA - Wetstop adhesive or approx. 500 g/m² SCHÖNOX HA adhesive. The overlaps in the membrane are adhered with SCHÖNOX iFIX and WETSTOP FOIL SEAL sealing adhesive

Membrane

SCHÖNOX WSF is a 3-ply waterproof membrane. The membrane consisting of two outer layers of polypropylene (PP) non-wovens color white on both sides, and the membrane base one inner layer of Modified Low Density Polyethylen the thickness of the PE foil itself is approximately 0,10 mm. The total thickness of the SCHÖNOX WSF polypropylene (PP) membrane is 0,50 mm and the material weight range from 181-219 g/m².

Reinforcement

The reinforcement is WETSTOP KL, WETSTOP BUTYL, WETSTOP SH, SCHÖNOX ST, SCHÖNOX ST BT, which is used in connection between the floor and the wall, in corners and around penetrations. Also readymade fitting pieces are used in inside corners WETSTOP PC, SCHÖNOX ST IC and outside corners WETSTOP PC-E, SCHÖNOX ST EA can be used.

Reinforcement around pipe penetrations in floors and wall and for gullies is established with WETSTOP MP, WETSTOP MG, WETSTOP MG-L, SCHÖNOX ST-D, SCHÖNOX ST-BC and SCHÖNOX ST-BC-L available in various sizes depending on the pipe diameter and the gully and also depending on the working principle and

installation.

Tile adhesives

Adhesives covered by this ETA is:

SCHÖNOX Q2 - SCHÖNOX Q2W - SCHÖNOX Q2 Rapid - SCHÖNOX Q6 - SCHÖNOX Q6W - SCHÖNOX Q8 - SCHÖNOX Q12 - SCHÖNOX TLX, SCHÖNOX PFK PLUS, SCHÖNOX TT S8, SCHÖNOX TT S8 Rapid, SCHÖNOX Q9, SCHÖNOX Q9W, SCHÖNOX Q4 SCHÖNOX Q4 RAPID, SCHÖNOX PFK and SCHÖNOX CF Design.

The kit is constructed as follows:

- Primer configuration:
a layer of 40 - 75 g/m² SCHÖNOX KH (depending on substrate)
or
a layer of 150 g/m² SCHÖNOX KH iFIX (depending on substrate)
- SCHÖNOX WSF flexible sheet membrane is adhered to the substrate in following configurations:
approx. 750 g/m² SCHÖNOX iFIX adhesive.
or
approx. 300 g/m² SCHÖNOX WSA - Wetstop adhesive.
or
approx. 500 g/m² SCHÖNOX HA adhesive.
- reinforcement of in- and out going corners in walls, over joints or cracks in the substrate, around pipe penetrations, floor gullies and along the connection between floor and wall with products mentioned under section II **“Reinforcements”**. They are to be embedded in a layer of SCHÖNOX iFIX, SCHÖNOX HA or WETSTOP FOIL SEAL sealing adhesive.
- a layer of ceramic tiles adhered to the kit with the tile adhesive mentioned under section II **“Tile adhesives”**.

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 PP, 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 |
|---|---|
| 2.2 Safety in case of fire (BWR2) | |
| Reaction to fire | SCHÖNOX WSF applied to massive mineral material of euro class A1 or A2-s1 d0 with a density $\geq 1350 \text{ kg/m}^3$ and a thickness $\geq 8 \text{ mm}$ has a reaction to fire classification in accordance with EN 13501-1 of <u>Euroclass E</u> |
| 2.3 Hygiene, health and the environment (BWR3) | |
| Dangerous substances | SCHÖNOX declare with reference to “Safety information according to Regulation (EC) No. 1907/2006 (REACH), Article 32 SCHÖNOX WSF” dated 2015-09-16, that the products within the scope of the assessment does not contain dangerous substances *) |
| Vapour permeability | The vapour permeability of the SCHÖNOX WSF membrane without primer when tested at climatic conditions 23°C and RH 75/100 % has the <u>sd value of the membrane is 92 m</u> The vapour permeability of the SCHÖNOX WSF membrane without primer when tested at climatic conditions 23°C and RH 93/50 % has the <u>sd value of the membrane is 95 m</u> |
| Water tightness | According to EN 1928 method B for 7 days at 1,5 bar. <u>Watertight = Pass</u> |
| Crack bridging ability | <u>Assessment category 3:</u> Crack width 1,5 mm |
| Bond strength | SCHÖNOX WSF and each of the tile adhesives mentioned in section 1 of this ETA on a concrete substrate all comply with <u>Assessment category 2:</u> Bond strength > 0,3 MPa SCHÖNOX WSF membrane and each of the tile adhesives mentioned in section 1 of this ETA on substrates**) of calcium silicate boards, gypsum boards, fibre cement boards, cement based boards and watertight boards made from a polystyrene core comply with <u>Assessment category 2:</u> Bond strength > 0,3 Mpa |
| Scratching resistance | No performance determined (NPD) |
| Joint bridging ability | According to annex B of ETAG 022 with a 2 mm gap, SCHÖNOX WSF adhered to the substrate with 750 g/m ² SCHÖNOX iFIX. <u>Assesment category 2:</u> Watertight |
| Water tightness around penetrations | Based on an assessment of the manufacturer’s descriptions, drawings and installation instruction and the result of the testing of SCHÖNOX WSF adhered to the substrate with SCHÖNOX iFIX, applying all overlaps and SCHÖNOX reinforcement***) with SCHÖNOX iFIX comply with: <u>Assesment category 2 : Pass</u> |

| Characteristic | Assessment of characteristic |
|---|---|
| Joint strength | No performance determined (NPD) |
| Flexibility | No performance determined (NPD) |
| 2.7 Related aspects of durability and serviceability | |
| Dimensional stability | SCHÖNOX WSF tested in accordance with EN 1107 and sampled according to EN 13416 at climate conditions the temperature 23 ± 2 °C and RH 50 ± 5 % has declared values: Longitudinal direction (MD): $\bar{\alpha}_{AL} = -0,3$ % Transverse direction (CMD): $\bar{\alpha}_{AL} = -0,1$ % |
| Resistance to temperature | The tensile strength and the strain at maximum force of a sample of SCHÖNOX WSF were determined before and after heat exposure. The deviation before and after ageing was considerably lower than 20% and therefore no further investigations are required to assess that the resistance to temperature. <u>Assesment category: Pass</u> |
| Resistance to water | SCHÖNOX WSF adherede to a concrete substrate and tested with the all the listed tile adhesives mentioned in section 1 according to paragraph A.6.3 of EN 14891 all have a bond strength equivalent to the assessment category after water ageing and therefore fulfil the requirements <u>Assessment category: Pass</u> |
| Resistance to alkalinity | The tensile strength and the strain at maximum force of a sample of SCHÖNOX WSF were determined before and after alkaline exposure. The deviation before and after ageing was considerably lower than 20% and therefore no further investigations are required to assess that the resistance to alkalinity. <u>Assessment Category 2: EN 1847 at 50 °C for 16 weeks</u> |
| Repairability | No performance determined (NPD) |
| Thickness | The thickness of the SCHÖNOX WSF is determined to be 0,49 mm. Mass per unit area = 209 g/m ² |
| Applicability | Applicable |
| 2.8 Sustainable use of natural resources (BWR7) | No performance determined (NPD) |

*) 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; The kit consisting of Primers (SCHÖNOX KH - SHÖNOX KH iFIX) and the above mentioned SCHÖNOX WSF applied to various substrate with adhesives (SCHÖNOX iFIX or SHÖNOX WSA or SHÖNOX HA) applied to substrates made from Cement based screed, Cement based floor levelling compound, Cement based wall levelling compound, Calcium sulfate based screed, Calcium based floor levelling, Calcium based wall levelling, Render cement based (Sakret), Gypsum Plaster, Cellular concrete block, Gypsum board, Gypsum fibre boards, Dryboard from polystyrol, Old ceramic coverings.

***) In accordance with the provisions of ETAG 022 part 1 – Annex A, the kit has been tested with three types of floor gullies. One circular gully made from in PP plastic (Drain Purus (PP)) and two rectangular gully one stainless steel line drain (Dallmer) and one Line drain (PP) with floorcuff (Dallmer) and the following reinforcement and sealing accessories WETSTOP KL, SCHÖNOX ST, WETSTOP PC, WETSTOP PC-E, SCHÖNOX ST-IC, SCHÖNOX ST-EA, WETSTOP MP, SCHÖNOX ST-D adhered with SCHÖNOX iFIX or WETSTOP FOIL SEAL and self-gluing sealing accessories WETSTOP BUTYL, WETSTOP SH, SCHÖNOX ST BT, WETSTOP MG, WETSTOP MG-L, SCHÖNOX ST-BC, SCHÖNOX ST-BC-L

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+.

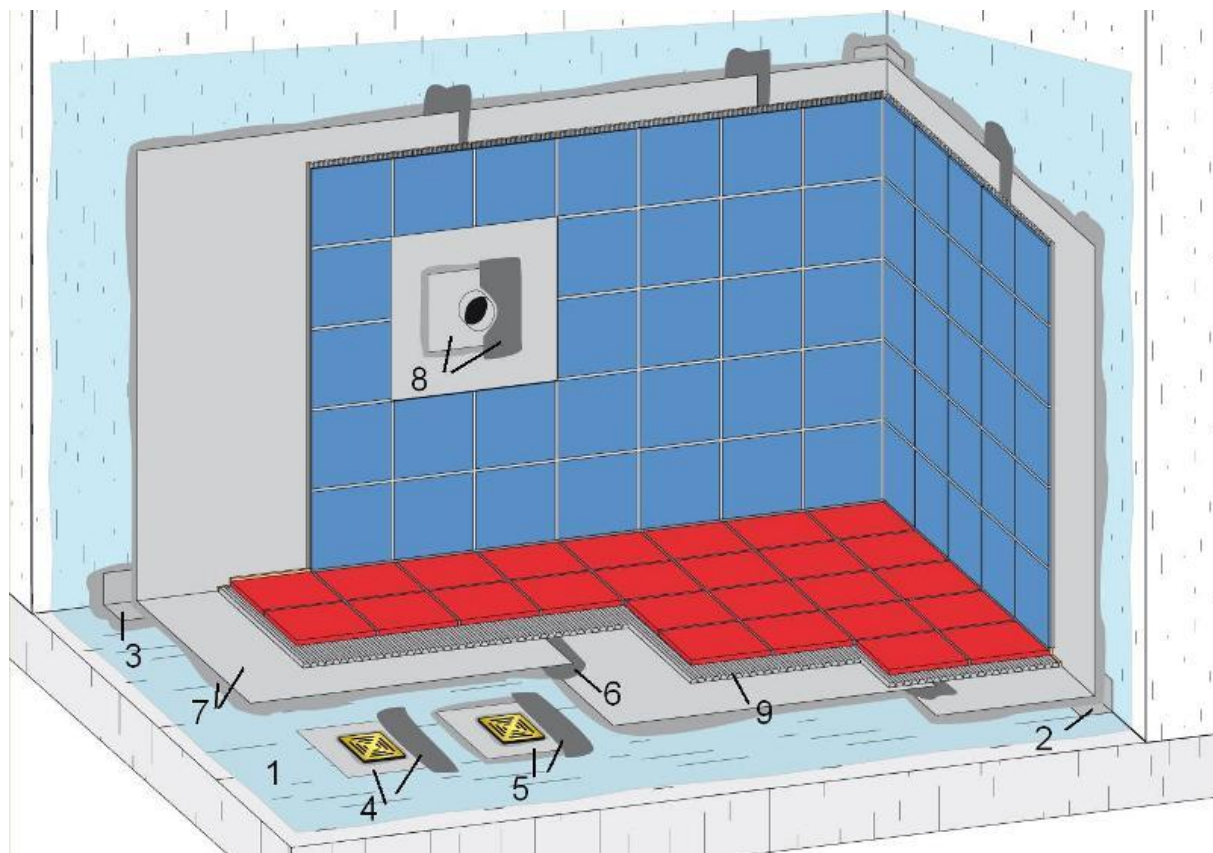
5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD

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

Issued in Copenhagen on 2017-01-25 by



Thomas Bruun
Managing Director, ETA-Danmark



Description:

1. Substrates with SCHÖNOX Primer according to section II
2. WETSTOP BUTYL, WETSTOP SH, SCHÖNOX ST BT directly on substrates, covered from the top with SCHÖNOX iFIX or WETSTOP FOIL SEAL.
3. WETSTOP KL, SCHÖNOX ST with SCHÖNOX iFIX or WETSTOP FOIL SEAL
4. WETSTOP MG, WETSTOP MG-L, SCHÖNOX ST-BC, SCHÖNOX ST- BC-L directly on substrate overlapping with SCHÖNOX iFIX or WETSTOP FOIL SEAL.
5. WETSTOP MG-L, SCHÖNOX ST-BC-L with overlapping with SCHÖNOX iFIX or WETSTOP FOIL SEAL
6. SCHÖNOX iFIX or WETSTOP FOIL SEAL for overlapping from SCHÖNOX WSF
7. SCHÖNOX WSF flexible membrane.
8. WETSTOP MP, SCHÖNOX ST D for pipe penetrations overlapping adhered with SCHÖNOX iFIX or WETSTOP FOIL SEAL.
9. SCHÖNOX tile adhesive for wall and floor tiles according to section II for fixing the tiles to the flexible membrane SCHÖNOX WSF

| | |
|-------------------------------------|--|
| SCHÖNOX WSF watertight covering kit | Annex 1 |
| Principle build-up of the kit | of European Technical Assessment ETA-16/1004 |