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MEMBER OF EOTA



European Technical Assessment ETA-18/0881 of 2018/11/28

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:

PCI Pecilastic W II

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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This European Technical Assessment contains:

9 pages

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, used as European Assessment Document (EAD).

This version replaces:

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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

PCI Pecilastic W II 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

PCI Gisogrund, which is a single component water based primer for various substrates. This primer is not intended to have a significant additional function in limiting the water vapour permeability of the kit.

Membrane

PCI Pecilastic W is a 3-ply waterproof membrane consisting of two outer layers of polypropylene non-wovens and an inner layer of polyethylene. The thickness of the membrane is 0,5 mm and the weight is 291 g/m².

Reinforcement

The reinforcement strips PCI Pecitape 100P, PCI Pecitape Object and PCI Pecitape 120 are used to bridge joints, and in connection between the floor and the wall and in corners. Alternatively, the connection between the floor and the wall and in corners can be reinforced with prefabricated corners PCI Pecitape Corner I, PCI Pecitape Corner E, PCI Pecitape 90°I and PCI Pecitape 90°A. Pipe penetrations are reinforced with PCI Pecitape WS 37x37, PCI Pecitape W2S 36x36, PCI Pecitape 15x15, PCI Pecitape 22x22, PCI Pecitape 10x10, PCI Pecitape 10,5x10,5 (10-24) and PCI Pecitape 10,5x10,5 (18-35).

The reinforcements are glued to the substrate with PCI Pecilastic W Lim. For gullies the PCI Pecilastic W Lim are 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: PCI FT Extra, PCI Nanolight, PCI FT Klebemörtel, PCI Flexmörtel S2, PCI FT Flex, PCI Carrament, PCI Carraflex and PCI Flexmörtel S1 Flott

Kit

The kit is constructed as follows:

- a layer of minimum 0,1 litres/m² PCI Gisogrund (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 reinforcements PCI Pecitape strips, PCI Pecitape Corners and PCI Pecitape collars, all adhered with PCI Pecilastic W Lim.
- PCI Pecilastic W adhered to the substrate with approx. 0,5 kg/m² PCI Pecilastic W Lim.
- a layer of ceramic tiles adhered to the kit with cement based tile adhesive (PCI FT Extra, PCI Nanolight, PCI FT Klebemörtel, PCI Flexmörtel S2, PCI FT Flex, PCI Carrament, PCI Carraflex and PCI Flexmörtel S1 Flott).

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 concrete, fibre cement boards and gypsum boards 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:

- a) floor drain, stainless steel, b) Floor drain, PP with clamping ring as screwed connection, c) PP floor drain with clamping ring as screwed connection, d) plastic floor drain with clamping ring as screwed connection and e) plastic floor drain with spring clamping ring.

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
3.2 Safety in case of fire (BWR2)	
Reaction to fire	Euroclass E/E_n
3.3 Hygiene, health and the environment (BWR3)	
Dangerous substances	The product does not contain/release dangerous substances specified in TR 034, dated March 2012*)
Vapour permeability	The sd value of the membrane at RH 100 → 75 % is 70 m, which is equivalent to $Z_v = 2.600.000$ s/m. The sd value of the membrane at RH 93 → 50 % is 135 m
Moisture resistance	
Water tightness	Watertight according to EN 1928 method B
Crack bridging ability	Assessment category 3: Crack width 1,5 mm
Bond strength	PCI Pecilastic W Lim, PCI Pecilastic W and each of the tile adhesives PCI FT Extra, PCI Nanolight, PCI FT Klebemörtel, PCI Flexmörtel S2, PCI FT Flex, PCI Carrament, PCI Carraflex and PCI Flexmörtel S1 Flott on a concrete substrate all comply with Assessment category 2: Bond strength > 0,3 MPa PCI Pecilastic W Lim, PCI Pecilastic W and tile adhesive PCI Nanolight on fiber cement boards **) comply with Assessment category 2: Bond strength > 0,3 Mpa PCI Pecilastic W Lim, PCI Pecilastic W and tile adhesive PCI Nanolight, on gypsum boards **) comply with Assessment category 2: Bond strength > 0,3 Mpa
Scratching resistance	No performance determined
Joint bridging ability	PCI Pecilastic W Lim, PCI Pecilastic W butt jointed and covered with PCI Pecitape 100P, PCI Pecitape 120, PCI Pecitape Object over a 2mm gap comply with Assesment category 2: Watertight PCI Pecilastic W Lim, PCI Pecilastic W overlapping 5cm over a 2mm gap comply with Assesment category 2: Watertight

Characteristic	Assessment of characteristic
Water tightness around penetrations	<p>PCI Pecilastic W and the following reinforcements, sealing tapes PCI Pecitape 100 P, PCI Pecitape Objekt and PCI Pecitape 120 and corner tapes PCI Pecitape Corner I, PCI Pecitape Corner E, PCI Pecitape Corner 90°I and PCI Pecitape Corner 90°A and sealing gaskets PCI Pecitape WS 37*37, PCI Pecitape W2S 36*36, PCI Pecitape 15*15, PCI Pecitape 22*22, PCI Pecitape 10*10, PCI Pecitape 10,5*10,5 (10-24) and PCI Pecitape 10,5*10,5 (18-35). all adhered with PCI Pecilastic W Lim (see ***)</p> <p>comply with</p> <p>Assesment category 2: Watertight</p>
Joint strength	<p>The declared values are:</p> <p>Overlapping of PCI Pecilastic W: Longitudinal: 200 N/50</p> <p>PCI Pecitape 120: Longitudinal: 100 N/50</p> <p>PCI Pecitape Object: Longitudinal: 80 N/50</p> <p>PCI Pecitape 100P: Longitudinal: 50 N/50</p>
Flexibility	No cracking or other surface deterioration visible
3.7 Related aspects of durability and serviceability	
Dimensional stability	<p>The declared values are:</p> <p>Longitudinal direction (MD): $\bar{X}_{ML} = -0,1$ mm</p> <p>Transverse direction (CMD): $\bar{X}_{ML} = -0,4$ mm</p>
Resistance to temperature	<p>Pass. The tensile strength and the strain at maximum force of a sample of PCI Pecilastic W 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.</p>

Characteristic	Assessment of characteristic
Resistance to water	<p>PCI Pecilastic W Lim and PCI Pecilastic W and each of the tile adhesives PCI FT Extra, PCI Nanolight, PCI FT Klebemörtel, PCI Flexmörtel S2, PCI FT Flex, PCI Carrament, PCI Carraflex and PCI Flexmörtel S1 Flott on a concrete substrate all comply with Assessment category 2: Bond strength > 0,3 MPa</p> <p>PCI Pecilastic W Lim, flexible sheet PCI Pecilastic W and tile adhesive PCI Nanolight, on a fiber cement board all comply with Assessment category 2: Bond strength > 0,3 Mpa</p> <p>PCI Pecilastic W Lim, flexible sheet PCI Pecilastic W and tile adhesive PCI Nanolight, on gypsum bards all comply with Assessment category 2: Bond strength > 0,3 MPa</p>
Resistance to alkalinity	<p>Pass. The tensile strength and the strain at maximum force of a sample of PCI Pecilastic W 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. Assessment category 2: Ageing at 50°C for 16 weeks</p>
Repairability	Repairable
Thickness	The thickness of the PCI Pecilastic W is determined to be 0,5 mm
Applicability	Applicable
3.8 Sustainable use of natural resources (BWR7)	No performance assessed

*) In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, 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 Construction Products Regulation, 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; Fiber cement boards and Gypsum plaster boards.

***) In accordance with the provisions of ETAG 022 part 1 – Annex A, the kit has been tested with three types of floor gullies; three circular gullies, one made from stainless steel with a flange for floors with a membrane and one in PP plastic with a clamping ring, and one in PP plastic with a screw flange

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 2018-11-28 by



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