

(19) **DANMARK**

(10) **DK/EP 2584113 T3**



(12) **Oversættelse af
europæisk patentskrift**

Patent- og
Varemærkestyrelsen

-
- (51) Int.Cl.: ***E 04 F 13/04 (2006.01)*** ***E 04 B 1/66 (2006.01)*** ***E 04 F 13/00 (2006.01)***
E 04 F 13/08 (2006.01) ***E 04 F 15/02 (2006.01)*** ***E 04 F 15/18 (2006.01)***
- (45) Oversættelsen bekendtgjort den: **2019-09-23**
- (80) Dato for Den Europæiske Patentmyndigheds bekendtgørelse om meddelelse af patentet: **2019-06-26**
- (86) Europæisk ansøgning nr.: **12186923.4**
- (86) Europæisk indleveringsdag: **2012-10-02**
- (87) Den europæiske ansøgnings publiceringsdag: **2013-04-24**
- (30) Prioritet: **2011-10-17 DE 102011054523**
- (84) Designerede stater: **AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**
- (73) Patenthaver: **HYDROPHON Kunststofftechnik GmbH, In der Welsmicke 24, 57399 Kirchhundem, Tyskland**
- (72) Opfinder: **Hille, Thomas, Zur Weinspitze 13a, 57399 Kirchhundem, Tyskland**
- (74) Fuldmægtig i Danmark: **RWS Group, Europa House, Chiltern Park, Chiltern Hill, Chalfont St Peter, Bucks SL9 9FG, Storbritannien**
- (54) Benævnelse: **Tætningssæt til vådrum og lignende**
- (56) Fremdragne publikationer:
DE-A1-102007 061 500
DE-B4-102005 052 593
DE-U1- 20 210 177
GB-A- 2 444 121
US-A1- 2003 015 275

Description

The invention relates to a sealing sheet, a sealing set as well as a procedure for sealing between a wall and a wall covering, in particular in a wet cell.

Systems that are available on the market for sealing a wet cell contain sealing sheets, which are glued to the wall with their wall side by means of tile glue. Subsequently, ceramic tiles or some other desired wall covering are glued to the room side of the sealing sheet likewise by means of tile glue.

Furthermore, the application of pressurized water-resistant sealing sheets in the form of strips and overlapping at the edges for the external waterproofing of subterranean parts of buildings is known from DE 10 2005 052593 B4 (see also US2003/0015275 A1). The sealing sheets consist of a polyethylene film, which on the wall side supports a polymer bitumen film as an adhesive layer. Furthermore, the application of an edging strip to the upper edge of the basement wall is described, which supports a nonwoven plaster carrier on the whole of its external surface in order to facilitate the application of a plaster above the sealing sheet on the external wall of the building.

In addition, DE102007061500 A1 describes a sealing sheet with a water-impermeable support layer, on one side of which an adhesive layer is arranged and on the other side an adhesion mediating structure is arranged.

On this basis, the object of the present invention was to make available means for the more easily executable sealing of the surface between a wall and a wall covering.

This object is accomplished by a sealing sheet according to Claim 1, by a sealing set according to Claim 3, by a procedure according to Claim 6, by a wall termination according to Claim 8, as well as by a use according to Claim 9. Advantageous embodiments are contained in the dependent claims.

An inventive sealing set according to Claim 3 contains a sealing sheet and an adhesive strip, which are explained in greater detail below. According to one feature, the invention accordingly relates to a sealing sheet for installation between a wall and a wall covering, for example ceramic tiling. As the expression "sheet" indicates, the sealing sheet is a flat, strip-shaped and flexible product with a given width of typically a few decimetres and a small thickness of typically less than a millimetre. The sealing sheet is rolled up in the unprocessed state, preferably in the longitudinal direction, so that required lengths of the sealing sheet (e.g. corresponding to the ceiling height) can be separated conveniently. The sealing sheet contains the following components:

15 a) A support layer, which typically extends over the entire surface of the sealing sheet. The support layer is water-impermeable, so that it forms a moisture barrier. The support layer can consist of, for example, polyethylene film, polypropylene film or some other film.

20 b) An adhesive layer arranged on one side of the support layer. The adhesive layer preferably extends likewise over the entire surface of the sealing sheet. The side of the support layer, which the adhesive layer supports, is also designated below as the "wall side", since it is intended to be turned to face the wall during processing.

25 c) An adhesion mediating structure arranged on the room side (which by definition lies opposite the wall side) of the support layer. The adhesion mediating structure can be configured in particular to the effect that it facilitates the good adhesion of a tile glue.

35 The sealing sheet has the advantage, thanks to its adhesive layer, that it can be glued simply to a wall. There is no need for time-consuming application with the help of a tile glue.

According to the invention, an edge strip, which is adapted to be bonded to the adhesive layer of another sealing sheet, is provided on the room side of the support layer. This edge strip is free from the adhesion mediating structure. The nature of the edge strip allows sealing sheets to be glued to one another in an overlapping manner, in order to form an overall seamless tight surface. The edge strip typically has a width of from ca. 2% to ca. 25%, and preferably of ca. 10% of the overall width of the sealing sheet.

10

The adhesion mediating structure on the room side of the support layer in particular can be a nonwoven or can contain a nonwoven.

According to a further feature, an adhesive strip for installation between a wall and a wall covering can be provided, which comprises the following components:

15

a) A support layer. This can be configured similarly to the sealing sheet, that is to say water-impermeable, for example.

20

b) An adhesive layer arranged on the wall side of the support layer, wherein the room side of the support layer facing the adhesive layer is adapted for connection to another adhesive layer. This other adhesive layer can, in particular, be the adhesive layer of a sealing sheet of the kind described above, so that a sealing sheet can be glued to the adhesive strip.

25

The adhesive layers of the sealing sheet and/or of the adhesive strip can be covered in particular with a peelable protective foil, which protects them during transport and storage.

30

The aforementioned protective foil can be divided into two, in particular in the longitudinal direction, so that its two parts can be peeled away independently of one another. The division preferably takes place approximately centrally (other width ratios of the protective foil parts are possible, however, typically in the range from 1:9 bis 9:1). This is advantageous, in particular in the case of the adhesive strip, in order to be

35

able initially to glue a longitudinal half of the adhesive strips onto a wall surface in the edge region between two wall surfaces and subsequently to be able to glue the second longitudinal half of the adhesive strip onto the other wall surface.

5

The invention further relates to a sealing set for installation between a wall and a wall covering, which contains a sealing sheet of the kind described above as well as an adhesive strip of the kind described above. The adhesive strip in this case can be used for sealing edges, fittings and the like, wherein it is glued overlapping with the sealing sheet.

The invention further relates to a procedure for sealing between a wall and a wall covering, which includes the following steps:

15

a) The application of an adhesive strip of the kind described above, e.g. to wall edges or the like, wherein this step a) is optional and can also be omitted if appropriate.

b) The application of a sealing sheet of the kind described above to the wall surface, whereby it is glued to the wall by its adhesive layer. In the event that an adhesive strip has been laid beforehand, an edge of the sealing sheet can be glued overlapping this adhesive strip (preferably so that the edge does not cover the entire width of the adhesive strip, but leaves room for gluing another sealing sheet).

25

c) Optionally, at least one further sealing sheet of the kind described above can be glued onto the wall surface, wherein an edge of this further sealing sheet is glued overlapping the edge of the most recently applied sealing sheet. This gluing can take place in particular on an edge strip of the previous sealing sheet, which is free from an adhesion mediating structure.

30

According to a further feature, the invention relates to a watertight wall termination, which contains the following components:

35

- A wall, for example a masonry wall or a wall of timber frame construction.

- A sealing sheet with a water-impermeable support layer, on one wall side of which an adhesive layer is arranged and on the room side of which a nonwoven is arranged. In this particular case, it can be a sealing sheet according to one of the embodiments described above.

10 • A ceramic tiling applied by means of tile glue to a nonwoven of the sealing sheet forming the adhesion mediating structure.

Furthermore, the invention relates to the use of a sealing sheet and/or an adhesive strip according to one of the embodiments described above to form a wall termination, in particular a wall termination of the kind referred to above.

The invention is explained in more detail below by way of example with the help of the Figures, in which:

20

Fig. 1 depicts a schematic cross section through a sealing sheet according to the present invention;

Fig. 2 depicts a schematic cross section through an adhesive strip according to the present invention;

25

Fig. 3-10 depict steps to be performed consecutively in the processing of a sealing set according to the present invention.

30 Figure 3 depicts in a perspective view a sealing sheet 10 as well as an adhesive strip 20 according to the present invention, which together form a sealing set 100. According to the (not to scale) cross section in Figure 1, the sealing sheet 10 consists of the following layers, viewed from bottom ("wall side") to top ("room side"):

35

- A peelable, e.g. siliconized protective foil 13;

- an adhesive layer 12, e.g. made of butyl rubber;
- a support layer 11, which can be configured, e.g. as a PE film;

5

- an adhesion mediating structure arranged on the room side of the support film 11, e.g. a nonwoven 14. It should be noted that, in addition to the nonwoven 14, an edge strip 15 is provided, which remains free of nonwoven.

10

The sealing sheet represented in Figure 1 typically has an overall width of ca. 500 mm, wherein the edge strip 15 exhibits a width of ca. 50 mm. The thickness of the sealing sheet is typically ca. 0.4 mm.

15

According to Figure 2, the adhesive strip 20 has the following structure, viewed from bottom ("wall side") to top ("room side"):

- two peelable protective foils 23a, 23b divided in the longitudinal direction;

- one adhesive layer 22;

- one support layer 21.

With respect to the materials, what is stated in respect of the sealing sheet applies analogously. The adhesive strip 20 typically has a width of ca. 100 mm and a thickness of ca. 0.3 mm.

30

Figures 4-10 depict successive steps in the processing of the sealing set 100. According to Figure 4, an adhesive strip 20 is glued initially on edges of the room. All surfaces in this case must be smooth, dust-free and dry. The slitted protective foil 23a, 23b on the wall side of the adhesive strip permits its application in two steps (1. and 2. in Figure 4, 5). The adhesive strip 20 is initially cut to length from the stock roll according

35

to the ceiling height. A few centimetres of the protective foil 23a are then detached, and the adhesive strip is attached in the upper corner of the room. The protective foil 23a is then peeled away completely little by little, and the one longitudinal half of the adhesive strip is glued correspondingly to the wall W.

According to Figure 5, the same procedure is adopted in conjunction with the application of the second half of the adhesive strip 20, wherein the remaining second longitudinal half 23b of the protective foil is peeled away.

Figure 6 illustrates that, according to the procedure in Figures 4 and 5, all the corners of the room and connections to the floor have been provided with an adhesive strip 20. The adhesive strip in this case must be juxtaposed in a smooth and overlapping manner (Figure 6).

Figure 7 depicts the application of a first sealing sheet 10. Its protective foil 13 is removed. In a corner of the room, starting at the top, the sealing sheet is applied in such a way that its edge strip 15 points in the working direction (white arrow). The protective foil 13 is peeled away little by little, and the sealing sheet is glued correspondingly to the wall or on the right-hand edge onto the previously applied adhesive strip.

According to Figure 8, after gluing the sealing sheet 10, its lower end is cut off so that the sealing sheet 10 overlaps the adhesive strip 20 on the floor by ca. 5 cm.

According to Figure 9, a further sealing sheet 10 can then be glued in place, wherein this is glued with an overlap of ca. 5 cm to the edge strip 15 of the first sealing sheet.

According to Figure 10, the same procedure is adopted with the other walls in the described manner, until all of these are covered with a sealing sheet 10.

In summary, the invention thus makes available a wet cell sealing set, which is of overlapping and self-adhesive execution. This kind of overlapping gluing requires a maximum structure of only ca. 1 mm (0.4 mm sealing sheet + 0.3 mm corner tape). The sealing set consists of two products: a sealing sheet and a corner tape. The sealing set is glued or applied to smooth, dry, clean surfaces. The corner tape is glued initially onto all the wall/wall and wall/floor connection corners. Its typically 100 mm wide, self-adhesive PE film has a slitted covering film on its rear side. This facilitates the installation of the corner tape. A 50 mm wide film is pulled off initially, and this is glued onto a wall side or floor side, the remaining film is then pulled off and the rest of the corner tape is glued in place.

Gluing of the sealing sheet can take place once all the wet surfaces to be sealed in the corner guards have been glued with a corner tape. The sealing sheet typically has a width of 500 mm and is coated on one side with 450 mm nonwoven. The rear side is of self-adhesive execution and is covered with a PE film. A start is made here at the top of the wall, continuing to work downwards as with a wet wallpaper. The siliconized covering film is pulled away to the rear little by little. The transition to the floor is marked, and the sealing tape is parted with a normal scissor cut. The nonwoven-free strip on the visible surface (ca. 50 mm) must always be glued in the opposite direction from the corner, as there will otherwise be no overlapping fixing.

Patentkrav

1. Tætningsbane (10) til anbringelse mellem en væg (W) og en flisebelægning i et vådrum, omfattende et vanduigennemtrængeligt bærerlag (11), på hvis ene vægside der er anbragt et klæberlag (12), og på hvis rumside der er anbragt en vedhæftningsforbedrende struktur (14), hvor en randstribe (15) på bærerlagets (11) rumside er indrettet til en forbindelse med klæberlaget (12) på en anden tætningsbane, idet randriben (15) ikke har en vedhæftningsforbedrende struktur (14).
2. Tætningsbane (10) ifølge krav 1, kendetegnet ved, at den vedhæftningsforbedrende struktur indeholder et vliesstof (14).
3. Tætningssæt (100) til anbringelse mellem en væg (W) og en vægbelægning, indeholdende:
- a) en tætningsbane (10) ifølge i det mindste et af kravene 1 eller 2;
- b) et klæbebånd (20) med et vanduigennemtrængeligt bærerlag (21), på hvis vægside der er anbragt et klæberlag (22), og hvis rumside er indrettet til forbindelsen med tætningsbanens klæberlag (12).
4. Tætningsbane (10) eller tætningssæt (100) ifølge et af de foregående krav, kendetegnet ved, at klæberlaget (12, 22) er dækket med en aftrækkelig beskyttelsesfolie (13, 23a, 23b).
5. Tætningsbane (10) eller tætningssæt (100) ifølge krav 4, kendetegnet ved, at beskyttelsesfolien (23a, 23b) er todelt i længderetningen.
6. Fremgangsmåde til tætning af overgangen mellem en væg (W) og en vægbelægning, omfattende trinene:
- a) anbringelse af en tætningsbane (10) ifølge et af kravene 1 eller 2 på vægfladen;

b) anbringelse af i det mindste en yderligere tætningbane (10) på vægfladen, hvorved en rand af den yderligere tætningbane sammenklæbes overlappende på randen (15) af den foregående tætningbane.

5

7. Fremgangsmåde ifølge krav 6, kendetegnet ved, at et klæbebånd (20) med et vanduigennemtrængeligt bærerlag (21), på hvis vægside der er anbragt et klæberlag (22), og hvis rumside er indrettet til
10 forbindelsen med tætningbanens klæberlag (12), påføres på væggen, fortrinsvis i et kantområde.

8. Vandtæt vægafslutning, indeholdende:

- en væg (W);

15 - en tætningbane (10) ifølge et af kravene 1 eller 2;

- en flisebelægning, som ved hjælp af fliseklæber er anbragt på et vliesstof (14), der danner den vedhæftningsforbedrende struktur.

20 9. Anvendelse af en tætningbane (10) ifølge et af kravene 1 eller 2 til fremstilling af en vægafslutning.

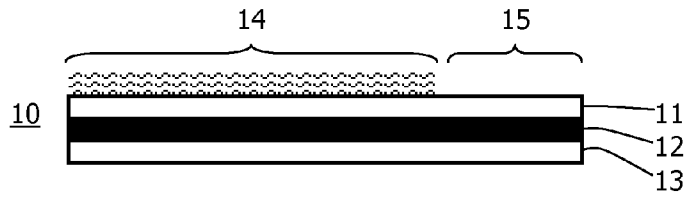


Fig. 1

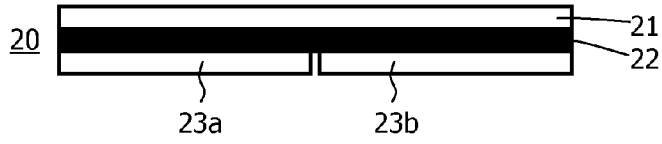


Fig. 2

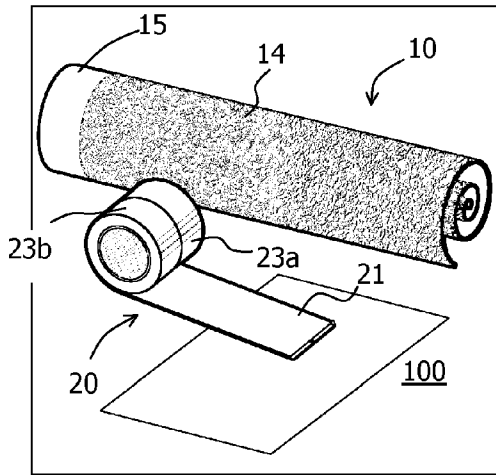


Fig. 3

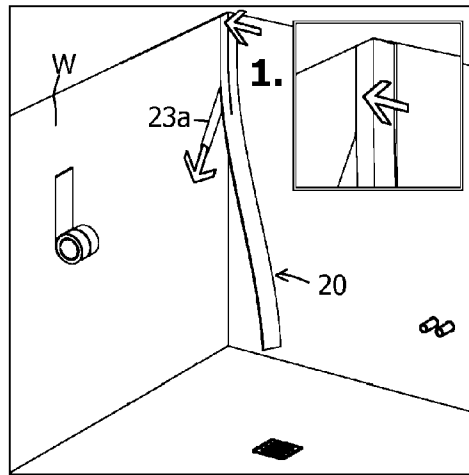


Fig. 4

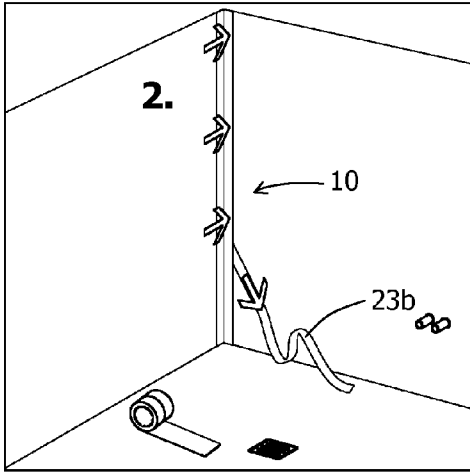


Fig. 5

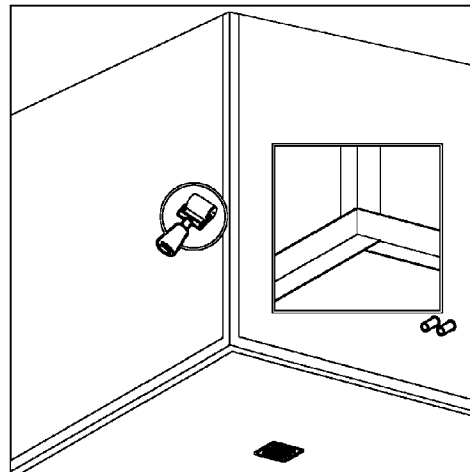


Fig. 6

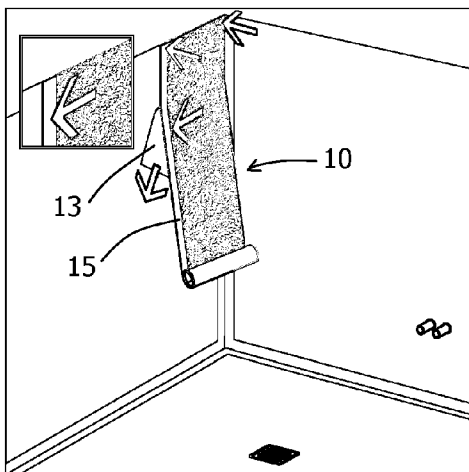


Fig. 7

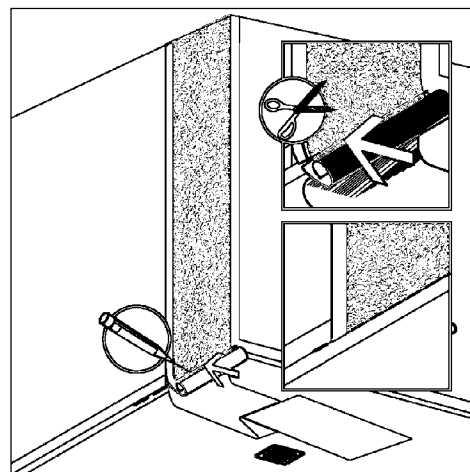


Fig. 8

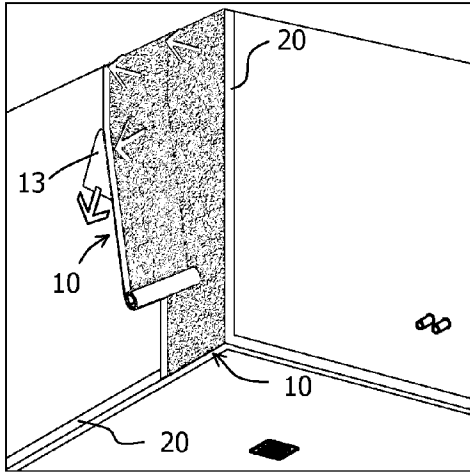


Fig. 9

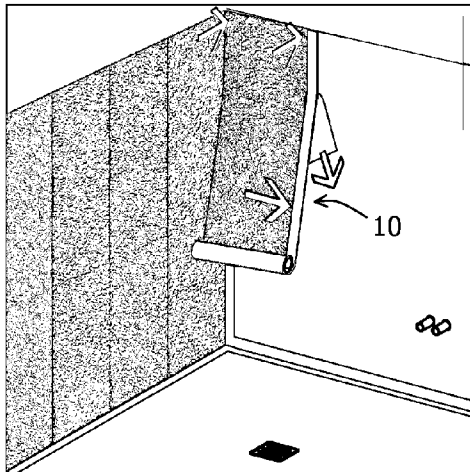


Fig. 10