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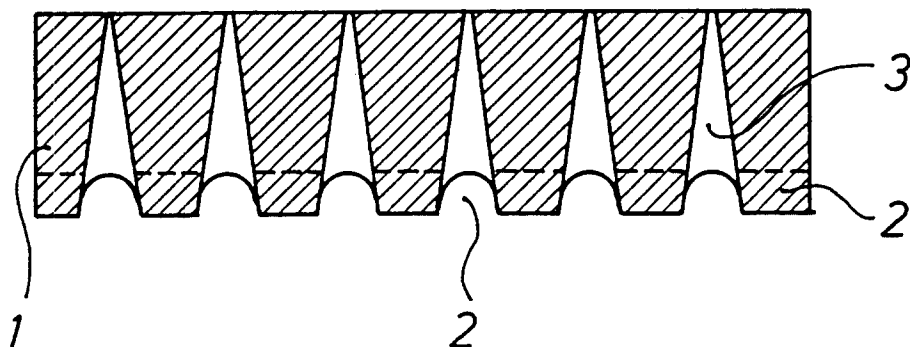
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(54) **REVETEMENT PERMEABLE AUX LIQUIDES**

(54) **LIQUID-PERMEABLE FLOOR COVERING**



(57) Revêtement perméable aux liquides pour des sols et analogues sur lesquels on peut circuler ou marcher, fabriqué en matière plastique élastique cellulaire. Dans la partie du revêtement en contact avec le sol sont formés des canaux d'évacuation de liquides (2, 2') s'étendant parallèlement et à distance les uns des autres, et à partir desquels sont raccordés d'autres canaux (3) s'étendant à travers le revêtement, à distance les uns des autres, lesquels sont découpés ou façonnés dans le revêtement.

(57) Liquid-permeable floor covering for floors that can be walked or driven on, and the like, made of a cellular elastic plastic, with the side of the covering in contact with the floor having liquid-drainage channels (2, 2') running in parallel and spaced apart formed in it, with further channels (3) branching off from these channels and running through the covering at intervals, that are cut or shaped into the covering.

## Abstract

A liquid-permeable covering for floors and the like capable of being walked and driven on, formed of cellular elastic synthetic material, wherein in the side of the covering contacting the floor, mutually spaced liquid drainage channels (2, 2') are formed, extending in parallel to each other, and further, mutually spaced channels (3) branching off from these channels pass through the covering, which are cut into the covering or shaped thereinto.

Liquid-permeable covering

The invention relates to a liquid-permeable covering for a floor and the like capable of being walked and driven on.

It has been known to use surface fastening elements  
5 for covering floors and the like, which are liquid permeable so as to allow for the drainage of surface water and the like. Such elements may, e.g., be made of artificial stone and laid in bond. This requires relatively complex shaping procedures for the elements  
10 and a substantial amount of work when they are laid, with correspondingly high costs. Furthermore, the weight of the elements makes handling and transportation thereof difficult.

The present invention aims at providing a liquid-  
15 permeable covering having a filtering effect, which can be produced at low costs and which can be laid quickly and in a simple manner. At the same time, the covering is to ensure a perfect liquid drainage.

The covering according to the invention is  
20 characterized by a combination of the features that it is formed of cellular elastic synthetic material, the cell size preferably increasing from top to bottom, that in the side of the covering contacting the floor, mutually spaced liquid drainage channels are formed, extending in parallel to each other, preferably also

crossing each other, and that further, mutually spaced channels branching off from these liquid drainage channels pass through the covering, which are cut into the covering or shaped thereinto and which preferably  
5 open downwardly conically or in step-like manner.

This design ensures an optimal filtering and liquid drainage with any desired size and relatively low weight as well as with an elastic deformability of the covering. According to the invention, a high service  
10 life is attained at low wear, and it is ensured that the drainage channels and material cells do not seal, since the drainage apertures widen downwardly when the covering sags under load, any clogging being avoided.

According to a preferred embodiment of the  
15 invention, the covering is designed in the form of a sheet capable of being rolled up, which enables rolling up of the covering and a simple transportation as well as quick laying of the same.

According to a further feature of the invention,  
20 the covering is formed by a cellular elastomer, such as a polyurethane (polyether urethane, e.g. a Sylomer®). Such elastomers may, e.g., have a density of from 150 kg/m<sup>3</sup> to 680 kg/m<sup>3</sup> and ensure a full-surface transmission of force. Besides, they exhibit a particularly favorable behavior under dynamic loads, becoming increasingly stiffer. The elastomers mentioned are resistant to water, oil, fat etc.

Within the scope of the invention the covering may, naturally, also be assembled of individual elements of any desired size, which optionally may be laid in bond.

The channels serving for draining liquid may be  
5 formed by shaping, e.g. when casting the covering, or by mechanical means, e.g. by means of a water jet.

According to the invention, the drainage effect and self-cleaning are additionally enhanced by the elastic behavior of the covering when walked or driven over, on  
10 account of "squeezing processes". In particular, it is ensured by shape changing processes that particles entering the drainage apertures are transported on. Sealing thus is to be excluded.

The liquid drainage channels on the lower side of  
15 the covering help to enhance deformation as well as water drainage. As has been mentioned, these channels may also extend in crossing directions thus providing a network of channels.

Further features of the invention will be explained  
20 in more detail by way of an exemplary embodiment and with reference to the drawing, in which a covering according to the invention having the form of a sheet is illustrated in section.

The covering shown is formed of a highly abrasion-resistant cellular elastomer, e.g. a polyurethane, which is liquid-permeable. The cell size may increase from the top side of the covering towards its bottom

size.

As is illustrated in the drawing, channels 2 extending in parallel to each other are formed in that side of the covering which contacts the floor, which  
5 enhance the deformability of the covering and serve to drain liquid. In the embodiment illustrated, also a crossing group of parallel channels 2' may be provided, thus forming a network of channels. Further, mutually spaced channels 3 extend from the channels 2 through  
10 the covering. The liquid drainage channels 2 and 2', respectively, and the further channels 3 may be formed by shaping, e.g., when casting the covering, or by mechanical means, e.g., by means of a water jet, or by punching. The channels 3 may also open downwardly in  
15 step-like manner.

The covering illustrated may be designed as a sheet or as an individual element which can be rolled up. Within the scope of the invention, various configurations of the exemplary embodiment explained are possible, particularly as regards the materials used.

Claims:

1. A liquid-permeable covering for floors and the like capable of being walked and driven on, characterized in that it is formed of liquid-permeable cellular elastic synthetic material, the cell size preferably increasing from top to bottom, that in the side of the covering contacting the floor, mutually spaced liquid drainage channels (2, 2') are formed, extending in parallel to each other, preferably also crossing each other, and that further, mutually spaced channels (3) branching off from these liquid drainage channels pass through the covering, which are cut into the covering or shaped thereinto, and which open downward conically or in step-like manner.
2. A covering according to claim 1, characterized in that it is designed in the form of a sheet capable of being rolled up.
3. A covering according to any one of claims 1 or 2, characterized in that it is formed of a cellular elastomer, preferably a polyurethane.

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