

## INSTALLATION SAFEGUARD

### 1 Subfloor

All subfloors that are and will remain even, firm, crack-free and dry are suitable for laying DLW SAFEGUARD (see also VOB Part C, DIN 18365 Floor Covering Work, as well as the relevant regulations. Dense, non-absorbent subfloors such as poured asphalt or primed screeds must have an adequate thickness of dispersion adhesive (we recommend 2 mm) applied by trowel when such adhesives are used. Low-tension levelling compounds recommended by the material supplier are suitable for this. Please follow the detailed product recommendations and application instructions of material manufacturers.

The following empirical values apply to the residual moisture of various screeds at normal screed thickness, i.e. not significantly above the minimum requirements of DIN 18 560:

Screed	Permissible moisture in CM %
Calcium sulphate and calcium sulphate pouring screed	≤ 0.5
Cement screed	≤ 2.0

In the case of insulating subfloors such as poured asphalt and chipboard or underfloor heating and the like, we recommend also bonding antistatic floor coverings with conducting adhesive. This eliminates the capacity-reducing effect of the sub-floor.

### 2 Adhesives

DLW plastic floor coverings are bonded with dispersion adhesives. The recommendations of the manufacturer in question take precedence.

We recommend that low-emission and solvent-free adhesives are used that are also free of high-flashpoint solvents.

Please also note that the selection of adhesive may have a negative impact on the indentation properties of resilient floor coverings following installation.

Manufacturer information

Bostik GmbH A.d.Bundesstr.16 D - 33829 Borgholz. Tel.: +49 (0) 5425 / 801222 <a href="http://www.bostik-findley.de">www.bostik-findley.de</a>	Henkel-Thomsit Bautechnik GmbH Erkrather Str. 230 D - 40233 Düsseldorf Tel.: +49 (0) 211 / 7379256 <a href="http://www.thomsit.de">www.thomsit.de</a>
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Schönox GmbH Postfach 1140 D - 48713 Rosendahl Tel.: +49 (0) 2547 / 910234 <a href="http://www.schoenox.com">www.schoenox.com</a>	UZIN UTZ AG Dieselstr. 3 D - 89079 Ulm Tel.: +49 (0) 731 / 4097258 <a href="http://www.uzin-utz.com">www.uzin-utz.com</a>
WULFF GmbH Wersener Str. 30 D - 49504 Lotte Tel.: +49 (0) 5404 / 881-0 <a href="http://www.wulff-gmbh.de">www.wulff-gmbh.de</a>	Wakol GmbH Bottenbacher 30 D - 66954 Pirmasens Tel.: +49 (0) 6331 / 8001186 <a href="http://www.wakol.com">www.wakol.com</a>

The adhesive manufacturers mentioned are given by way of example of many others. The adhesives recommended by the adhesive manufacturers should be obtained directly from the manufacturers or from the Armstrong DLW helpline on +49 (0) 71 42 / 71 – 255.

### 3 Sizing up and determining quantities required

To determine the quantities required, the run lengths and widths must be measured. Before sizing up, therefore, the installation direction must be established. Abutted seams are only permissible for run lengths of over 5 m, with the minimum length of a run being 1 m. Runs running towards door openings, niches or similar, must run across and cover these areas. Side door openings, niches and similar may be laid with strips.

### 4 Storage, acclimatisation, installation conditions

Proper storage of the floor covering is the best prerequisite for its characteristics being maintained for installation purposes. Before the floor covering is laid it should be stored upright in a dry and not too warm area, most importantly not in a boiler room. Rolls must be stood upright for intermediate storage purposes. If elastic floor coverings are stored at too low a temperature, then it will in all likelihood prove impossible to lay them correctly. Installation in accordance with the rules of the profession assumes a minimum ambient temperature of +18°C, a subfloor temperature of at least +15°C, and if underfloor heating is present, between +18°C and +22°C. Relative humidity should be no more than 65 % (ideally 40 % to 60 %). These climate conditions should be maintained for 3 days before preparatory work starts and for at

least 7 days after completion. Even at suitable temperatures, the floor coverings still need to be conditioned before being laid. It is therefore advisable to cut the floor covering to size the day before laying it.

DLW SAFEGUARD are best laid out on top of each other and allowed to adjust to room temperature overnight.

Care should be taken to ensure that rolls in the same room all have the same manufacturer's batch number, and that they are laid in sequential order of roll number. This applies both to runs and tiles.

## 5 Laying

Even if edges will be bonded later, it is advisable to cut both edges of the run because only a cleanly-cut edge can guarantee a tidy seam. The first run edge is easily cut with the strip cutter. The second edge can be cut using one of two methods:

**a)** For small rooms (before applying adhesive):

The underlying run is scored with the knife along the upper, already cut, run edge and the surplus bent strips are then cut in the opposite direction using the hooked blade.

**b)** For large rooms (after applying adhesive):

The upper run edge is scored with the scorer or the Linocut along the run edge of the lower, already cut run edge lying in the adhesive bed, and the bent surplus strips are cut off with the hooked blade.

### 5.1 Seam incision

Seams should be cut to leave a minimal gap between the runs such that the material edges do not push against one another. The incision should be either vertical or at a slight angle.

### 5.2 Abutted ends

Abutted ends can be cut to fit before applying adhesive. For longer runs, it makes more sense to cut the abutted end after bonding the surfaces. This also applies to abutted seams.

## 6 Bonding

Bonding must always be carried out over the entire surface. Always follow the instructions of the adhesive manufacturer in the process. In order for the back of the floor covering to be wetted, it is essential to select the correct notch spacing, change trowel blades in good time and rub thoroughly. Continuously check that the back is wetted by pulling up tiles as you work.

The runs are folded back towards the middle of the room. Bonding begins with the middle run. The adhesive for the second run half must be fitted exactly to the adhesive border of the first run half. Run halves that are cut to closely fit adjacent room fittings such as door thresholds and frames must

be bonded first. The runs are pushed into the adhesive bed, taking into account the drying or open times of the adhesive (see manufacturer information). No air may be trapped when doing so. Hollow raised areas can be found by knocking and remedied by stroking the trapped air outwards. The abutted ends are pressed hard against each other. If necessary, seams and abutted ends must be weighted down until they are kept flat by the adhesive.

## 7 Sealing the seams

Sealing the seams is recommended in rooms that are to be protected against ingress of moisture. Seams should always be sealed when laying is carried out on plywood and screed with underfloor heating. The sections cannot be sealed until the adhesive has set. The adhesive manufacturer's instructions should be followed carefully. Depending on the type of adhesive used and the climatic conditions in the room, this may take several days. The covering seam is milled out to a depth of 2/3 of the covering thickness using a seam miller and plane. The channel must then be cleaned carefully (vacuumed or blown out). The seam width should be around 3.5 mm.

In DLW SAFEGUARD, DLW SAFEGUARD Design and SAFEGUARD SPA silicon carbide is an important constituent of the covering, so that the milling head is liable to increased wear. A diamond milling head is recommended. Since the covering surfaces are not smooth, increased care must be taken when milling out.

The DLW plastic welding cord can be applied with the hand welding unit with 5 mm diameter quick-weld nozzle attached. To avoid glossy areas on the covering surfaces, the quick-weld nozzle must have a very small air outlet. The working temperature is around 450 to 500 °C, and working speed approx. 4 – 5 m per minute. The overlapping part of the welding rod is removed in two stages. Immediately after being applied, the still-warm welding rod can be cut off with the sickle knife with shoe attached, then after the welding cord has cooled off, the welding seam can be cut flush to the covering surface with the quarter-moon knife.

### Cold welding

DLW SAFEGUARD can also be welded with cold-welding material if required, but in this case the seam does not have to be cut to do so. Care must be taken that the cold welding agent does not force its way into the subfloor area of the tight-cut seam. Details of cold welding techniques can be obtained from, for example:

Werner Müller GmbH  
PVC-Kaltschweißtechnik  
Rudolf-Diesel-Str. 7  
D- 67227 Frankenthal

Tel. +49 (0) 62 33 – 3 79 30  
Fax +49 (0) 62 33 – 3 79 320  
[www.mueller-pvc-naht.de](http://www.mueller-pvc-naht.de)

## 8 Laying in wetrooms

See our comprehensive laying recommendations for wetrooms.

## 9 Laying on underfloor heating

DLW floor coverings can in principle be bonded to subfloors with underfloor heating; the heat transfer resistance is so low that it has almost no effect on heating operation (Specialist information: Interface coordination for heated underfloor constructions. Publisher: Central Association of Sanitation Heating, Air conditioning).

### 9.1 Dry design

Dry designs can be made up of calcium sulphate or plaster fibre boards. The Armstrong covering runs can be laid after the seams have been plastered over.

### 9.2 Wet design (A1 – A3)

With wet designs, heating pipes or cables are embedded in a floating cement or anhydrite screed. Before the floor covering is installed, the heating system installer should ensure that the moisture which is driven out by the effect of heat escapes before the floor covering is laid. The heating system installer should hand over a report relating to the heating up and cooling down measures carried out for this purpose. Moisture testing must only be carried out at the measurement points identified by the screeder. If there are no measurement points, then the floor layer must raise his concerns in writing to his customer

## 10 Cleaning and maintenance

The contractor should hand over to the customer written maintenance instructions for the floor covering in accordance with VOB DIN 18365, Section C, Paragraph 3.1.4. The following brochures are available free of charge:

- Cleaning and maintenance of DLW SAFEGUARD

These can be requested by telephoning +49 (0) 71 42 / 71 – 3 40.

## 11 Special notes

### 11.1 Office chairs with castors

Office chairs with castors must be equipped for use on resilient floor coverings with Type W castors to EN 12529, i.e. with soft castors of the specified dimensions (50 mm diameter, 20 mm running surface, 100 mm balling radius of running surface). This should be taken into account when procuring new chairs with castors.

### 11.2 Burns

Smouldering cigarette butts can cause charring on synthetic floor coverings. These floor coverings should therefore not be laid in public houses likely to be subject to this kind of problem.

### 11.3 Discolouration

In the event of prolonged contact, rubber can leave indelible discoloration on all resilient floor coverings. Examples of possible causes are: car tyres, covering materials, castors or feet on washing machines, refrigerators, prams. This discoloration will not appear immediately, but as a consequence of the migration of substances and subsequent exposure to light.

To avoid this kind of discoloration, use castors made of polyurethane. If this is impossible, we recommend using foot/castor cups.

Bitumen-based asphalts, mineral oils, greases, coloured shoe polishes deposited on the floor covering by shoes can result in discoloration on light-coloured synthetic floor coverings in areas of heavy traffic. This will happen, for example, in areas which are accessed from asphalted streets, in kitchens or in offices of petrol stations and car repair workshops.

### 11.4 Adhesive tapes

If adhesive tapes are used on the floor covering, please check compatibility with the manufacturers in question.

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Your contact for dealing with any technical questions about installation:

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Fax +49 (0) 71 42 / 71 – 1 46.  
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[www.armstrong.eu](http://www.armstrong.eu)

***This edition supersedes all previous installation recommendations.***