

# Sealing Linoleum Floors

## 1 GENERAL

Linoleum has for many years been used as a type of resilient floor covering. It consists of a calendared hardened mixture of linseed oil with bulking agents and pigments on a base material, mostly jute. The surface of linoleum is porous and, to a certain extent is absorptive, which can lead to the floor becoming sodden if subjected to the penetration of dampness over a longer period. In order that the floor can be effectively cleaned and is resistant to water, the surface must be sealed by subsequent treatment. Nowadays this can be done with a factory-applied UV-hardened finish, or conventionally after the floor has been laid as initial care with polymer films or permanent sealers. Today it is common in factory-applied pre-treatment to also apply temporary coatings, which are removed and replaced during their use, or after the lino is laid, by strip-cleaning.

Dr. Schutz as a partner of flooring professionals, offers not only high-performing cleaners and strip-cleaners, but also polymer films and permanent sealers to be applied by such professionals. The subject of this technical information is sealing with 2-component lacquers, whose properties mean that they cannot be removed by strip-cleaning; they are permanent. Deficiencies when carrying out the preparation of the subsurface can lead to problems with adhesion of the lacquer, which can also become visible as poor functional values, such as heightened scratch sensitivity or inadequate resistance to chemicals. Therefore, we point out explicitly that work must be carried out properly by professionals, as typically defects can only be rectified by the time and trouble of sanding down. Permanent sealers have become especially popular in recent years. With sealers the cycle of initial care and strip-cleaning is broken, saving resources and costs. The lifetime of a sealer is sustainably longer than that of a polymer film, under the same conditions. Creating a matt finish is possible at every grade with the water-based sealers from Dr. Schutz. Antislip effects and surface texturing to achieve R-classification are possible. Resistance against chemicals can be increased long-term, which makes sealers an especially interesting alternative in health-care areas with their disinfectants. Of course, after many years it is also possible to renovate a linoleum floor by sealing it with a water-based coating material. Here you will find out what you have to pay attention to.

## 2 Surface preparation - Deep cleaning

Principally with linoleum it is possible that the subsurface becomes discoloured if it is treated too aggressively chemically or mechanically. Therefore, the procedure should if possible be oriented towards the specific application.

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In the case of new linoleum, the quality of the covering is typically well known to the contractor. The pre-treatment before sealing differs depending on the factory-applied finish.

- 1) Unprotected linoleum (example: sport-lino) must be completely cleaned of dirt and residues resulting from laying it. It is the responsibility of the contractor to ensure this is achieved. **Dr. Schutz Clean&Strip**, 1:5 diluted in water, apply generously with approx. 150 ml/m<sup>2</sup> and carefully go over the surface with a green **Dr. Schutz Superpad** (alternatively use a blue **Dr. Schutz Grit Brush**, or a comparable hard, green pad without a sanding effect). Edges have to be worked on by hand. Do not allow the cleaning solution to dry, vacuum off immediately. Neutralize the surface with plentiful clear water, going over it with a green pad, then vacuum off. After it has dried completely, typically 1d with good ventilation, the surface is ready to be sealed.
- 2) Temporarily protected lino (for example: LPX) must have its factory-applied finish completely removed by strip-cleaning. It is the responsibility of the contractor to ensure that this is done properly. **Dr. Schutz Clean&Strip**, 1:1 diluted in water, apply generously with approx. 150 ml/m<sup>2</sup>, allow to soak in

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for about 10 minutes, then carefully go over the surface with a green **Dr. Schutz Superpad** (alternatively use a blue **Dr. Schutz Grit Brush**, or a comparable hard, green pad, or a PU Renovation pad). Edges have to be worked on by hand. Do not allow the cleaning solution to dry, if necessary, add some water. After cleaning, vacuum off immediately. Neutralize the surface with plentiful clear water, going over it with a green pad, then vacuum off.

After it has dried completely, typically 1d with good ventilation, the surface is ready for protective treatment. The result of preparation is to be assessed critically. The floor must be evenly matted over the entire area. Whether the film layer has been completely removed can be ascertained by rubbing with **Dr. Schutz Elatex**.

- 3) UV-hardened permanent factory-applied finishes (for example: Lino PUR, TopShield II) must not only be cleaned, but also carefully sanded, so that adhesion of the subsequent coating is assured. It is the responsibility of the contractor to ensure that this is done properly. **Dr. Schutz Clean and Strip**, 1:5 diluted in water, apply generously with approx. 150 ml/m<sup>2</sup>, allow to soak for about 10 minutes, then carefully go over the surface with a green **Dr. Schutz Superpad** (alternatively use a blue **Dr. Schutz Grit Brush**, or a comparable hard, green pad, or a PU Renovation pad). Edges have to be worked on by hand. Do not allow the cleaning solution to dry, if necessary, add some water. After cleaning, vacuum off immediately. With plentiful clear water sand the surface to be sealed with **Dr. Schutz Abranet 150**, then vacuum off. After it has dried completely, typically 1d with good ventilation, the surface is ready for protective treatment.

The result of preparation is to be assessed critically. The floor must be evenly matted over the entire area. It is possible that by sanding unevenly laid lino yellow discoloration can occur, which mostly disappears after a few days of light shining on it (dark yellowing).

### Renovation of old linoleum floors, or an unknown surface

Dirt and the remnants of care products must be carefully removed. It is the responsibility of the contractor to ensure this is done properly. When the dry floor is subsequently homogeneously matt and absorbent, the treatment of the surface can begin. However, if there are problem areas, like shiny places, scratches and surface deterioration, or non-adherent previous sealers, these must be sanded down cleanly before the planned permanent sealer is applied. Discoloration due to sanding is possible and should be accepted. We recommend informing customers in advance about this and, in case of doubt plan to apply a colour sealer if desired.

In the case of thicker residues of care products, firstly break up the surface by dry abrasion with a HiPro-Pad. Apply **Dr. Schutz Clean&Strip**, diluted in a ratio of 1:1 with water, generously with approx. 150 ml/m<sup>2</sup>, allow to soak for 10 minutes and then go over the surface carefully with a green Dr. Schutz Superpad (alternatively Dr. Schutz GritBrush blue, a comparably hard green pad, or a PU Renovation pad, for very thick layers use HiPro-Pad). Edges have to be worked on by hand. Do not allow the cleaning solution to dry, if necessary, add some water. After cleaning vacuum off immediately. Neutralize with plenty of clear water, going over the surface with a green pad, vacuum off.

After it has dried completely, typically 1d with good ventilation, the surface is to be assessed critically. Whether care films have been completely removed can be ascertained by rubbing with Dr. Schutz Elatex. The floor must be evenly matted over the entire area, absorbent and load bearing. If, despite the previous measures taken, not all care film layers, dirt and poorly adhesive former sealers have been completely removed, the floor must be sanded with plentiful clear water and Abranet 120, in tough cases with Abranet 80 and subsequently 120. We especially recommend using a satellite disc as well as increased sanding pressure. The sufficient sharpness of the sanding medium must always be assessed critically, depending on the square meters. Clogging of the sanding medium can

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be avoided by applying a larger mopped solution, or it can be rinsed out occasionally. Vacuum off the solution and remove any residue of sanding dust and cleaning products by mopping with clear water. If needed, repeat mopping with clear water. The floor must be dry before subsequently sealing it.

The result of the preparation is once again to be assessed critically.

Please note:

- First of all, protect neighboring surfaces by taping them off with Dr. Schutz Safe Tape.
- The way sanding is carried out is also oriented to the required matt grade of the subsequent sealing. The less matted the surface, the finer the final sanding.

### 3 SEALING

Untreated or sanded linoleum has a porous, absorbent surface. At first this must be closed by using an appropriate pore-filler, so that the subsequent sealing is in a good consistent state. For this purpose, we recommend **Dr. Schutz Lino Primer**. At a temperature of at least 15 °C, apply evenly to the correctly prepared subsurface with approx. 30 ml/m<sup>2</sup> with the Dr. Schutz Aquatop Roller. After a short while the water evaporates and then the sealing can be carried out.

Alternatively, it is also possible to apply two coats of sealer without Lino Primer, providing optimal protection due to the increased thickness of the combined coating.

Professionally prepared permanent sealers, whether factory-applied or previously by hand, can be sealed without using a primer. However, it is worth noting that possible sanded areas may look raw after sealing, which necessitates a second application.

For the purpose of sealing apply one coat with 100 ml/m<sup>2</sup> of a transparent Dr. Schutz sealer evenly with the Aquatop sealer—roller. On coarsely sanded floors we recommend a further application of sealer, if necessary, sanding the floor between coats with a 120 sanding disc, or even filling between coats with the lacquer, particularly in the case of glossy qualities.

The preferred sealing quality is **Dr. Schutz PU Sealer**. You have the choice of gloss grades from glossy to ultramat. If special resistance to chemicals is required, we recommend the alternative of **Dr. Schutz PU Anticolor** with special reference to the grade satin-gloss for the highest protection against staining influences, such as hair dyes and tyres.

For a colourful design the most suitable sealer is the **Dr. Schutz PU Color**, whereby the whole range of possibilities from the Dr. Schutz Design System is available. PU Color is also recommended if, due to the abrasive pre-treatment of the floor, coloured, cloudy variations are visible. It is common practice for PU Color to be finished with at least one coat of transparent sealer.

With **Dr. Schutz R10 Antislip Add** or **R11 Antislip Add** the precise level of slip-resistance can be attained.

### 4 CLEANING & CARE / MAINTENANCE

In principle floors should not only be cleaned, but also taken care of. By cleaning something is removed from the surface (e.g. dirt, sand, friction marks). Caring for the floor means adding something which provides the floor with the best possible protection against the effects of water, dirt and abrasion, as well as preserving its attractiveness. Care has the primary technical purpose to keep the surface sealed, because it is impossible to avoid scratches on floors. That is why any guarantee for the floor can only be given if the care instructions of the contractor are followed.

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For sealed linoleum floors Dr. Schutz offers general Cleaning and Care instructions for PU sealed surfaces (the file can be found [here](#)). Please also note in these general instructions the advice to install clean-running zones in entrance areas, as well as furniture gliders, to mitigate the effect of chair castors and other factors.

### 5 GENERAL ADVICE

The Product Information about the above-mentioned products must be heeded.

The Technical Information 002 "Preparation of resilient floors" gives further advice on strip cleaning and sanding.

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