

Preparation of surfaces prior to the application of Dr. Schutz surface products

before applying Dr. Schutz surface products

1 General

Surface coatings, including permanent sealants and maintenance coatings, can only produce good results on the substrate if it has been properly prepared. The substrate must be stable and clean, dry, and free of oil, wax, and dust before coating. The possible presence of silicones must also be critically examined, especially in the case of painted substrates (e.g. factory coatings). Cleaning and sanding will bring the surface into the appropriate condition to be coated.

For the coating process, a distinction must be made between wetting and adhesion:

- Good wetting means a wet film that covers the entire surface. This is necessary so that the remaining dry film also covers the entire surface of the substrate. For good surface wetting, it is necessary to thoroughly remove water-repellent substances (e.g. fats, waxes, silicones, etc.) without leaving any residue by wet cleaning. We generally recommend intensive cleaning for new coatings or basic cleaning for existing floors before applying a coating.
- The adhesion of coatings to the substrate is the anchoring of the layer to the surface. This can be chemical, due to a reaction with the surface, or mechanical, due to interlocking with surface roughness. For this purpose, the surface must also be accessible for coating by means of careful cleaning beforehand. Roughening by sanding for mechanical interlocking is recommended by, especially before sealing with permanent coatings. Wet sanding is for basic or intensive cleaning as part advantageous of rinsing. Roughened surfaces are also typically easier to wet. Wet sanding prevents the formation of dust, so this technique can be used in clean rooms even or for partial floor renovations during use.

Different trades understand different processes by the term "coating." Building cleaners refer to their maintenance coating with acrylate polishes, which typically results in dry layer thicknesses in the μm range. When varnishing floors permanent are used, which is why the term "sealing" is more appropriate in this case. coatings in the 50-200 μm range. This results in different requirements for substrate pretreatment. This TI does cast resin coating with self-leveling PU and EP compounds with layer thicknesses in the mm range not cover, but it does cover the surface treatment of such coatings.

The result of a coating depends heavily on the skill of the craftsman! This clearly highlights the craftsman's responsibility for the result. It should also be emphasized that different surfaces require different levels of preparation. In this respect, surface treatment must be carried out with expertise and experience. Unless otherwise specified, the floor must be subjected to a professional assessment before thorough cleaning. The probability of the subfloor being damaged by the use of water and cleaning agents as well as mechanical processing must also be assessed. Examples include well as floating installation or installation on fixing aids substructures made of fiberboard or prefabricated screeds. Reservations must be made if necessary.

Below you will find information on how these requirements can be reliably met on the construction site for the coating of floors. Please note that, especially in the case of permanent coatings, errors in the pre-treatment can only be corrected with great effort, if at all.

2 Wet cleaning / intensive cleaning - strip cleaning

Cleaning is usually with the aid of carried out cleaning pads and a single-disc machine. The service life of a pad can be very short in individual cases, in which case it must be changed frequently. If the pad is no longer effective

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because it has been worn down by the substrate or because care products or contaminants have clogged it, it must be replaced with a new pad. Grit brushes offer pads an improvement over. They clean more effectively structured floors and do not become clogged. Another advantage of grit brushes is their long service life with minimal wear and tear and their resistance to cleaning chemicals. Dr. Schutz offers tested, high-quality pads and grit brushes that are ideally suited for the intended use of the coatings. Note: The grit (grain) of a grit brush is often mistakenly understood as an abrasive. In fact, these brushes do not grind. The grit serves to intensify the cleaning performance.

The choice of pad or brush depends on the surface and the subsequent coating. As a general rule, use the hardest possible and the softest necessary.

- If the surface is only treated with a wipe-on cleaner (e.g. Dr. Schutz Floor Cleaner R1000), use less hard, non-abrasive pads or brushes (red). These are also used if the covering is soft and prone to scratching.
- A layer-forming care film is used (e.g. Dr. Schutz Secura, Ultra High Shine, Medica, floor mat, floor shine), we recommend green as first the pad choice, or black or the renovation pad for scratch-resistant factory finishes.
- With permanent PU Sealers (Dr. Schutz PU Sealer, PU Color, PU Anticolor), sanding marks are due to the high solids content of these well covered coating products. Due to the permanent nature of the sealant, adhesion is so important that you approach the surface as hard as possible should (grit brushes, prep pad, high-performance pad).

Dr. Schutz Clean and Strip (medium alkalinity, all floor coverings) should be used for the gentle removal of care product residues or for intensive cleaning. **Dr. Schutz Turbo Strip** (medium alkalinity, PVC, gentle removal of care product residues or intensive cleaning linoleum/rubber after work sample) or **Dr. Schutz Super Basic Cleaner** (high alkalinity, only PVC and PU cast floors) effectively dissolve even thicker dispersion care layers in this wet cleaning process and facilitate removal with a brush or pad.

The concentration of the cleaning agent in the solution depends on the type and amount of the substances. Recommendation: start with 5 parts water to 1 part cleaner, increasing the concentration if necessary until pure. Apply 150-250 ml/m² of the cleaning solution. A contact time of 10 minutes is recommended, or longer in difficult cases. Please note that the surfaces with be removed must always be kept moist cleaning solution. Avoid drying out. After mobilizing the contaminants or care films, remove the solution, for example with a water vacuum cleaner. Assess the surface to determine whether the process needs to be repeated.

Protect adjacent areas by carefully masking them off. When using these cleaners, keep a distance from adjacent components to surface damage prevent. The edge areas must be treated by hand with appropriate care from splashing. When working with strong cleaners, protect your skin, especially with gloves and suitable footwear.

3 Rinsing/ Neutralizing and roughening/sanding

After cleaning, rinse with clear water and remove any cleaner residue. It is common practice using a single-disc machine to rinse ("neutralize"). At the same time, the surface can wet be sanded and roughened. Please always ensure that pads or wet abrasives are rinsed thoroughly with water during the process. They can only do their job if they are not separated from the surface to be rinsed or roughened by a build-up of grease. The rinsing water is collected again with the wet vacuum cleaner and finally again with wiped the water-wetted mop.

Roughening the surface before applying p permanent coatings (e.g. PU Sealer, PU Anticolor, PU Color) is crucial for adhesion. A surface that cannot be sanded should not be sealed. We recommend the **Dr. Schutz Prep Pad**, a diamond-coated sanding pad. This diamond pad has been tested by Dr. Schutz and classified as particularly

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suitable.

For applying a protective film (e.g. Secura, Ultra High Shine, Medica) we recommend the renovation pad, as sanding marks may not be sufficiently covered by the thin protective films.

For low-residue wipe care products should only the red pad be used for neutralization.

As a condition for coating the surface of the covering must be dry and stable, i.e. clean and free of dust, grease, oil, wax and care product residues, as removable factory finishes as well as any decomposition products. In the case of subsequent permanent sealing, the floor must be sanded mat over its entire surface. The result must be assessed by an expert. The dry floor can then with the desired Dr. Schutz permanent sealers (e.g. PU Sealer or PU Anticolor) or with a Dr. Schutz care film (e.g., Secura) be treated.

4 Machine recommendation

We recommend a slow-running single-disc machine (150 rpm, e.g. **Dr. Schutz SRP1**), using **Dr. Schutz grit brushes** or suitable pads and Dr. Schutz abrasives. The effect of the machine can be enhanced by adding weights. A wet vacuum cleaner (e.g. **Dr. Schutz wet vacuum cleaner PS27**) is recommended for collecting cleaning fluids. Good ventilation will help the floor to dry. The drying process can be accelerated by using blowers (e.g., **Dr. Schutz dry blower TG1**).

5 Basic sanding

Alternatively, the surface can be prepared by professionally sanding the surface of the floor covering. This basic sanding is usually carried out dry. Examples include sanding wood floors or diamond grinding concrete or stone floors. With the necessary expertise, this type of basic sanding can also be carried out on linoleum or cast resin floors. PVC or rubber are not usually sanded dry professionally.

6 Notes

- Please refer to Appendix TI 002a, the overview matrix for the use of cleaning agents and abrasives for the safe preparation of surfaces prior to sealing.
- Whether chemical basic cleaning of the floor is necessary can be determined by spot treatment with **Dr. Schutz Elatex**. If a mark appears after wiping off after approx. one minute of exposure, then removable coatings are present and these must be reliably removed, especially before permanent sealing. This test should be repeated after basic cleaning to determine whether everything has been removed.
- When using alkaline basic cleaners, the result of the neutralization can be evaluated with universal indicator paper and is good if the pH of the solution is less than 8. Note: the indicator paper can also be placed on damp joints to check the neutralization locally.
- Roughening requires sanding, not polishing! High-speed machines are more likely to produce a polishing effect. High-speed single-disc machines are therefore less suitable. Sanding is done with sharp abrasives; blunt or clogged abrasives polish. A polished surface is exactly the opposite of the desired effect, as it is more closed than before instead of being opened up as desired by sanding. The service life of abrasives must therefore be critically evaluated during use.

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- Substrates filled with mineral ingredients (e.g. ceramic additives, sand, or sand powder in epoxies, can lead abrasives and polishing rapid degradation of normal. The diamond-coated Dr. Schutz Prep Pad reliably activates these surfaces as well. If a stronger grind is desired, diamond abrasives are generally preferable.
- Deficient surfaces are classified as unsound and must not be sealed. The deficiencies must be carefully sanded out (e.g. superficial light-induced decomposition). In extreme cases, the covering is classified as non-renovable (e.g. softened syneratic linoleum).
- Linoleum must always be tested for color fastness in an inconspicuous area beforehand to rule out discoloration caused by the use of abrasives, brushes, and basic cleaning agents. Sanding may expose dark yellowed layers, but also this yellowing due to exposure to light will fade after some time. If permanent sealing is planned, this must not result in the sanding being omitted.
- If the floor is visually altered to an unacceptable degree by basic cleaning or sanding, covering it with **Dr. Schutz PU Color**, with decorative elements if desired, is an interesting option for renovation.
- Please note that joints and room corners in particular require longer drying times. When using chemically cross-linking surface products, the surface **MUST** be completely dry.
- For textured surfaces, the possibility of surface preparation must be assessed depending on the covering. Of course, the general instructions listed above also apply within the "texture valleys," which are typically difficult to reach with a single-disc machine. In the case of light structures, we recommend using a grit brush with a high-low structure (e.g. **Dr. Schutz grit brush** green or red) when rubbing with the strip cleaner and the abrasive or pad as described above in the neutralization step. The more pronounced the structure, the more craftsmanship and expertise are required.
- Be aware of the possibility of sanding through, especially with very thin layers. If you sand through, visual deviations are possible and must be accepted, or the surface must be redesigned with PU Color. However, the alternative must not be to dispense with surface sanding.
- Before thoroughly cleaning click flooring or loose vinyl flooring: please refer to the detailed installation recommendations on our website or contact our application technology department, as in these cases a flooring-dependent procedure must be used and not all floorings can be approved for this.
- If the safety of the surface treatment cannot be determined with certainty, a test area must be created in any case. In this context, we would like to point out that some flooring surfaces difficult to treat have proven (e.g. LVT made of polypropylene/polyolefin). You can find flooring and surfaces tested by us with installation recommendations on our website or contact our application consulting team.
- You can find installation recommendations for individual floor coverings and property situations on our website at www.dr-schutz.com.

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Cross-references

The product information and safety data sheets for the above-mentioned products must be observed.

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