Sealing Conductive Floors

1 GENERAL

Conductive floors are functional floors. Their function, in addition to their advantageous appearance and easy-cleaning characteristics, is especially to conduct away electrostatic charges due to friction at a low voltage level. If the voltage of charge is too high, then this can be dissipated with a sudden discharge and flow of electricity (electrostatic discharge ESD), which can have critical consequences, for example for electronic components, or in Ex-proof areas. Due to the floor being walked on, ageing, dirt carried in and inappropriate cleaning and care, its conductivity can decline. Therefore, the conductivity of such floors must be regularly tested and, if necessary, action must be taken. Instead of replacing the floor, with the associated time and financial costs incurred, in many cases the floor's conductivity can be restored with the ESD System from Dr. Schutz.

The Dr. Schutz ESD System consists of low odor, waterbased 2-component lacquers, which are applied after strip-cleaning and light wet-sanding to the floor, with a roller by a skilled professional. A strongly conductive primer, **ESD Basecoat** (transparent) or **ESD Colorbase** (with colored pigments), restores the general conductivity again. The floor is then finished with the transparent **ESD Topcoat,** with a greater emphasis on protecting the surface. Alternatively, when the focus is on greater resistance against chemicals, the finish can also be carried out using **ESD Medicoat**. If the floor still has very good conductivity, then by simply applying **ESD Topcoat** or **ESD Medicoat** the surface can be protected. Of course, new floors can also be treated with the system, if for example a matt surface or good cleanability is required.

A further advantage of such a surface treatment is that the entire process is free of dust and largely noiseless. So bigger rooms can be partially worked on in sections, one after another, while the floor is in use, whereby closure times are avoided.

The process is generally independent of the type of floor, whether it is a conductive EP cast resin floor, or a conductive PVC covering. A precondition is always that the floor has been installed in an orderly way.

You will find out here what to consider during the process.
We draw your attention to the fact that we only supply this product system to certified partners who have been trained by us.

2 Surface preparation - Deep cleaning

Generally, the floor to be lacquered must have been professionally prepared. For this purpose, we recommend an abrasive wet cleaning, whereby adhesion reducing substances are removed from the surface and active conductive points of the floor are exposed. Problem areas, such as scratches and surface damage due to weather and light, especially likely in front of low-set windows and where light incidence is high, as well as non-adhesive previously sealed surfaces, must be sanded clean first.

Apply **Dr. Schutz Clean&Strip** generously (250 ml/m²) in a dilution of 1:5 with water onto the floor with a mop, before carefully sanding in several steps, going over it with a monodisc machine and **Dr. Schutz Abranet** 80 grain, followed by 100 grain and, if necessary, by 120 grain. The finer wet sanding phases can also be carried out using only water. We particularly recommend using a satellite disc and ensuring that the sanding pressure is sufficient. The necessary abrasiveness of the sanding medium depends on the hardness of the floor and its square meters,

Sealing Conductive Floors

which must always be scrutinized critically. In order to avoid the sanding medium clogging up, a higher amount of mopped solution should be applied, or must be occasionally rinsed away. Dispose of the solution with a wet-vac-uumer and remove any remaining sanded dust and cleaning agent by mopping with clear water. If necessary, mop clean again. The floor has to dry before the subsequent sealing.
The result of preparation must be assessed critically. The entire area of the floor must be clean and matted.

Please note:

- Conductive EP-floors can be formulated with hard fillers, e.g. quartz powder. Such surfaces can quickly wear down the sanding medium. In extreme cases diamond abrasives are to be preferred.
- Generally sanding should be “as coarse as possible, as fine as necessary“. Sanding grooves must not be visible after sealing, which is why it may be necessary to follow coarse sanding with a finer phase.
- New floors whose surface merely requires protection, can also be treated directly with a sanding medium of 120 grain.

3 SEALING

The cleaned and sanded floor is lacquered evenly with a coat of 100 ml/m² of the transparent **Dr. Schutz ESD Basecoat** or two coats of 80-100 ml/m² **Dr. Schutz ESD Colorbase** with the Aquatop roller. Directly after drying, when it can be walked on carefully, an additional rolled application of 50 ml/m² **Dr. Schutz ESD Topcoat** or **Dr. Schutz ESD Medicoat** provides the floor with its finish. After approx. 12 hours the floor can be used carefully. Full usability follows after approx. 7 days.

Please note:

- Very good conductive floors can also be directly sealed with a coating of 50 ml/m² **ESD Topcoat** or **ESD Medicoat**.
- With **Dr. Schutz R10 Antislip Add** or **R11 Antislip Add** specific slip resistance can be acquired on top if desired.
- When using **ESD Colorbase** design possibilities of the Dr. Schutz Design Systems are available; chip technique, wrap technique, template technique.
- We recommend testing the conductivity of the floor before and after working on it, and documenting the results. After only approx. 24 hours following the final sealer application the conductivity remains largely constant and undergoes no major changes with the increased hardening of the sealing coat.

4 CLEANING & CARE / MAINTENANCE

In order to preserve their conductivity, conductive floors must only be treated with special cleaning agents without insulating sediments (**Dr. Schutz ESD Floor Cleaner**). Using care products with common acrylic polishes leads to the formation of insulation and must not occur.

For sealed conductive floors Dr. Schutz offers general cleaning and care instructions (find the file here). Please also pay attention to the general notes relating to clean-walking zones in the areas near entrances, furniture gliders, wear due to chair castors and further related topics.

Sealing Conductive Floors

5 GENERAL ADVICE

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

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