

TECHNICAL SPECIAL INFORMATION 02

The silicone disease - a common problem in the sealing technology

One of the most common causes of complaints in the past of parquet and wood flooring is silicone. This often colorless and therefore invisible fabric leads to matt spots in the sealing surface or to fish eyes (paint failure).

Both effects are visually clearly visible and are usually complained by the client. The refurbishment of a silicone-contaminated floor is generally only possible by a thoroughly polished section and a new sealing. Hence, an intensive clarification of the operator and client is required.

Where does the silicone come from?

Today silicone is used in many modern materials, such as sealing and joint compounds, silicone cords, in some polyurethane assembly foams, on surfaces of some plastic products (as mold release agents), wallpaper remover, in some moltopren rollers etc.. Such fabrics are used by pavers, roofers, plumbers, glaziers, carpenters, interior decorators and last but not least by do-it-yourself or hobby craftsmen. Silicone-based products are used to seal, grout, insulate, mount doors and windows, shower cubicles, bathtubs, sinks, etc. Yes, even some ignorant parquet recliner use it to glue baseboards to walls and floors, or to correct wood and processing defects and "thus shoot a classic own goal".

In most, but not all cases, manufacturers refer to the silicone content of their product in the label text for eligible articles. Often, the application manual also contain formulations and phrases that indicate incompatibility with paints. Unfortunately, these hints are often not read or consistently followed.

Why is silicone so dangerous?

The dangerousness, even the "cattiness - badness" of the substance, is based on the following factors:

- **Silicon** is often invisible and therefore not immediately recognizable by the sealer.
- **Silicone works even in the smallest amounts** (a few milligrams damage many m²). For example, a craftsman crosses the floor with silicone-contaminated shoes.
- **Silicone is badly removable**. Heavy strains from silicone on the uncoated wood cannot be removed by grinding. Particles have penetrated into the wood and are released again when grinding and sealing. Silicone is very fine, it spreads and adheres strongly.
- **Silicone is durable** and hardly degrades over the years. Even after completion of the sealing work with silicone-containing products, filled joints and depressions will be again reactivated by the renovation after many years and spread through the sanding process. Often are the joints filled with dirt and are so much hardened, that the silicone containing fabrics are not recognizable.

In all cases, and the practice provides different individual cases, in case the silicone was placed on the wood or sealing surface before or during the sealing process, the silicone spreads more or less all over the entire floor. Caution and mistrust are always required when workers of other crafts are in action before or at the same time.

Damage

Depending on the extent and spread of the silicone load, smaller punctures (needle-sized funnels) up to matt spots (Ø 3 cm), which result from the set back of the sealing layer. **The silicone prevents wetting of the surface with a seal and rejects the seal.** This effect usually does not occur directly during the processing, but during the drying phase. As a rule, damage can only be discovered after drying when entering the sealing layer. In many cases, the silicone source can be investigated by questioning the building owner and / or the exact defect-recognition (the frequency of mat spots in certain areas on the floor).

Damage repair advice

Generally, the seal must be completely removed by thorough sanding down to the wood and rebuilt. It is also advisable to remove the sanding dust after each sanding process and to use fresh, which means absolutely new sanding paper. Obvious, discovered silicone spots must be removed or covered in advance. However, the second option does not provide 100% security.

However, in some cases of very low silicone contamination and with almost invisible impact, the simplified renovation procedure has been already proven as follows: The floor is carefully matt grinded with 100-120 grain sandpaper. Wipe or vacuum off the sanding dust. This is followed by acid filling (so-called zero filling). With a double spring spatula and the sealing material the surface is thinly removed, but not with a basic seal. After a complete drying, the surface can be recoated with the same sealing material using a brush or roller. If this method is ineffective, the surface must be sanded down to the raw wood.

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Recommendation for the prevention or reduction of technical and damage-related risk

In order to avoid the relatively common silicone risk, a major advanced strategy provides with success. Following general steps should be followed:

1. Focus your attention and the attention of your employees for possible silicone sources as listed above.
2. Let it become your checking routine to search the area for possible silicone sources before starting work. New windows and doors and elastic joints are partly recognizable in advance.
3. If possible, coordinate the timing of your work with the other professionals. If possible, make sure that your construction work is only entered by you from the beginning, right up to the last sealing layer. If, as it is usually the case, coordination with other professionals and securing the construction site is not possible, inform the architect who is in charge of the construction and the building owner immediately of the existing risks and reject the takeover of this risk in written form.
4. Communicate the existing risk to the other professionals wherever it is possible and contribute to an improved awareness of the issue.
5. Let your professionals read this special technical information once a year. This way the knowledge remains intact and your employees are always open-eyed.
6. If possible, also protect yourself against your end customer in such a way that you inform him orally or in written form during the quotation period, but at the latest in written form with the order confirmation, and thus point out this risk clearly. Additionally, in this statement, you should clearly assign the risk to the area of responsibility of your customer, unless it was caused or identifiable by you – which means, this is not your fault at all.

The CTA (Chemisch-Technische Arbeitsgemeinschaft Parkettversiegelung) has developed an end-user letter containing appropriate formulations. We would like to offer you this standard letter for your consideration. We would be happy to provide you any time with this letter. Of course you can suit the letter to meet your needs.

7. Use only silicone-free materials, such as our proven product AQUASEAL® PAFUDIMA FLEXFILL COLOR (parquet joint sealing compound), in order not to build up an "automatic silicone trap" for yourself or for one of your colleagues, who will make the follow-up sealing in a few years, which will happen with a high probability.

This special technical information is intended to advise you to the best of our knowledge and belief and in accordance with the state of the art, thus helping to avoid unpleasant complaints and to achieve all our objectives of high-quality sealed parquet.

In case of doubt or if additional information is required, we offer our customers a comprehensive telephone consulting service. Our expert team is at your disposal for further information.