

REPAIR OF PARQUET CAVITIES (PK 11)

Cavities under the parquet are annoying, as they not only give the impression of faulty parquet bonding, but are also noticeable acoustically. However, they are not just a sign of ageing, but can also occur in recently laid parquet floors for various reasons. Cavities, and the noticeable acoustic properties that accompany them, should be removed as quickly as possible to avoid visible damage to the wooden floor due to repeated exposure to stresses. This is done by injecting STAUF Repamed without the need to remove parquet elements or loose strips. This allows the wood to form a firm bond with the substrate again.

STAUF Repamed is a 1-component "liquid adhesive" based on polyurethane. The adhesive sets by reacting with moisture (humidity of the air and residual moisture from the substrate and parquet) and becomes polyurethane (cured polyurea in technical jargon). Minimal amounts of carbon dioxide are formed as a by-product, resulting in controlled foaming of the liquid adhesive.

STAUF Repamed is applied by localising the cavities by tapping or brushing off the parquet floor and by drilling a hole in the centre of the cavity to open it up. The duller the cavity sounds, the easier it is to inject the liquid adhesive later. The more rustic the parquet grade or appearance of the wood species, the easier it will be to repair it later with hard wax or a wooden plug. "Disturbing" underlying adhesive ridges can act as a kind of "barrier" during injection, prevent STAUF Repamed from flowing optimally or require more pressure during injection. The circumference of the cavity should be marked with an easily removable marking line (such as adhesive tape, masking tape). Depending on the size and shape of the cavity, one or more holes must be drilled. To prevent the parquet surface from cracking when drilling, cover the drilling spots with strong adhesive tape.

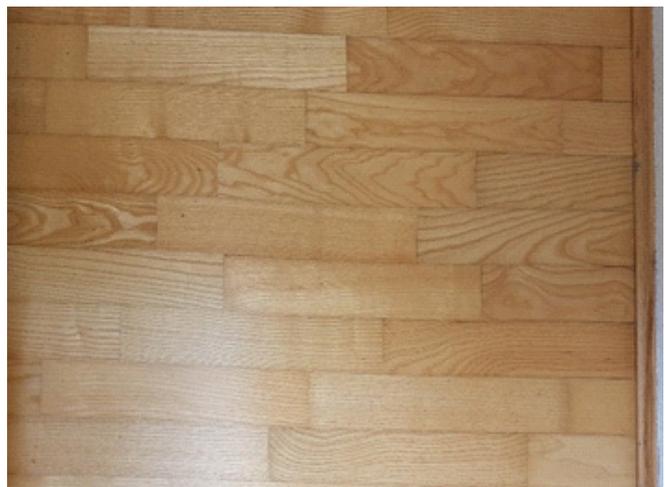


This can also prevent adhesive from escaping from the drill hole on the parquet surface. A (wood) drill diameter of approximately 2.5 to 4 mm is sufficient for drilling and injecting the liquid adhesive used here.

In order to improve the flow properties of the liquid adhesive, the adhesive can be heated, for example, in a hot water bath or on a radiator. To inject STAUF Repamed, the syringe is placed vertically on the drill hole and the liquid adhesive is continuously injected into the parquet at uniform pressure. Repeat the process if several holes have been drilled. Wipe away any material escaping from the drill holes straight away. In all cases, wear gloves and provide sufficient cloths and STAUF Intensive Cleaner. If smaller drilling diameters are required, e.g. for back injecting the edge area, for skirting boards or also for bonding top layers on multi-layer parquet, the enclosed needle can be used. In this case, the use of a hot water bath before application is strongly recommended due to the high viscosity of STAUF Repamed.

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If the cavities are larger than several handbreadths, the cavity should be sufficiently weighted after being injected. This makes it possible to reduce the foaming behaviour of STAUF Repamed in a controlled way.



After just one day, the adhesive tapes can be removed and the drill hole sealed with liquid plastic, hot wax, wood plugs or other suitable materials.

In principle, it is possible to close the drill holes shortly after injecting STAUF Repamed, but this is not recommended due to the possibility of soiling the tools and, in particular, the parquet floor. In addition, setting the liquid adhesive is impaired, although this can be compensated for by spraying very small amounts of water.

Caution should be exercised, though, as the use of liquid adhesive should not be a "carte blanche" to fix in place separations of parquet floors of any size. In the case of large-area separations and not handbreadth-sized cavities, the use of liquid adhesive is possible, but not expedient. Here it is rather advisable to remove the loose parquet strips and carry out a root cause analysis for the separations.

The information provided above corresponds to the current status of development. The information is purely indicative and non-binding, since we have no control over the laying process and because the actual laying conditions on site vary. Thus no claims can be made based on this information. The same is true for the commercial and technical advisory services that are provided without obligation and free of charge. We therefore recommend carrying out sufficient testing of your own in order to determine whether the result is suitable for the intended purpose.

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The problem of cavities is an issue that is gaining in importance due to the various types of parquet construction and the ever-increasing size of parquet formats (large-format solid floorboards are becoming increasingly popular). Basically, a distinction must be made here between "hollow-sounding areas" and "hollow areas moving under load".

The following statement can be found in the commentary on DIN 18356, edition of December 1992 and June 1996, Baumann, Fendt, Barth, page 112, section 3.2.3, Parquet strips, parquet panels and parquet elements in parquet adhesives: "Due to the evenness tolerances permitted according to DIN 18202, 100% wetting/bonding is not possible. The lower limit and sufficient adhesion of the element is 40% wetting." According to the commentary on DIN 18356, small-format, hollow-sounding areas in the installed surface are therefore almost unavoidable and must be tolerated, provided that they do not represent any optical or mechanical impairment for the user. It goes on to say: "This section also applies analogously to pre-finished parquet elements in any form [...] Hollow-sounding areas are not a defect if the elements laid do not move under load. Therefore, at least according to the commentary on DIN 18356, cavities in pre-finished parquet elements must be tolerated. For other types of parquet, there is also information on the percentage wetting of the underside of the strip in the trade press, specialist books or other literature and sources.

In the current commentary on DIN 18356 parquet work and wood block work from 2011, authors Barth, Schmidt, Strehle, there is no information on the wetting percentage of the element. This commentary says: "Every substrate, even the best prepared one, shows irregularities in the surface, which inevitably also occur in the adhesive bed. Since the elements to be bonded cannot adapt to these irregularities, this inevitably leads to partially non-wetted element undersides. These areas sound hollow when tapped. If the element is otherwise firmly fixed to the substrate, hollow-sounding areas do not constitute a defect. The most important thing is that the parquet does not move visibly under normal load". Basically, both comments do not contradict each other.

However, the comments on DIN 18356, "Parquet and wood block work" should not be a carte blanche for experts to ignore cavities during installation. The percentages given are only indicative and can be used to reach an agreement in the event of a dispute. A

level surface that is "really" even and does not "only" meet the minimum requirements for evenness tolerance according to DIN 18202 is the best way to reduce cavities to a minimum or even avoid them completely.

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