

TECHNICAL SPECIAL INFORMATION 18

Smelling parquet floors, aggravated problem!

The current initial situation

Sustainable solvent odour through sealed parquet has long been a sensitive issue. And this has not only been the case since the days of high health awareness and organised consumer protection. Since the following jurisdiction this topic might experience however for the processing craftsman a clear intensification. The following article in a regional daily newspaper points the problem out. The consumer will take it interested to the knowledge and remember it if necessary.



Source: Rheinpfalz from 13.06.2003

With this ruling by a Higher Regional Court, the pressure on solvent-based seals and the obligation to use water seals or high-solids parquet oils will continue to increase. In principle, this is nothing new, as the industry has long since voluntarily and comprehensively switched to environmentally friendly alternative products. Thus, today more than 80% of the surfaces are treated in the handcrafted processing locally with water seals and parquet oils.

Since 1993, the use of low solvent-containing seals has also been prescribed by Gisbau in TRGS 617, although exceptions are permitted for technical reasons. Since January 2007, the VOC Directive (DecopaintRichtline) has also stipulated maximum limits for organic solvents (so-called VOC's) in coatings for buildings. Since then, only these alternatives have been used in accordance with the state of the art and legal requirements. Those who do not adhere to them are liable to prosecution.

Therefore, we assume in the following that the use of solvent-containing products is only a matter of cases which can basically be excluded or which, for technical reasons, cannot be sealed optimally or without risk with water seals.

Which solvent-containing products are particularly affected?

These are mainly the OIL-KH and urethane alkyd seals as well as the polyurethane seals, as these are both applied in larger quantities and dry more slowly and thus in principle seep through larger joints into the substrate, where they release solvents into the substrate and harden more slowly. Under unfavourable conditions, this leads to months of delayed release of the absorbed solvent into the room air due to evaporation. This can then easily lead to complaints as in the present case.

What is a "strong solvent smell for months"?

At this question the spirits might divide and one may be curious on the further jurisdiction here. In case of doubt, however, it will initially be the case that this will lie in the personal assessment of the user. What "stinks" to one person is still acceptable to the other. An objective method for an unequivocal definition of a threshold value is not yet known.

In other words, only a consistent avoidance strategy can really help here.

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This means: waterproofing wherever possible and reducing the risks when using solvent-based products.

How can we largely avoid the odour problem here?

The present case was obviously caused by solvents. Even though the leading and specialised manufacturers of parquet flooring sealants today use the mildest solvent variants, a residual odour load cannot be ruled out. Particularly in the case of old floors or parquet to be renovated, considerable joint formation can occur. This is the "open door" or "barn door" through which the seal reaches the subfloor in large quantities. The first concern must therefore be the effective sealing of the joints. Whether this is done in detail by filling with wood cement binder with AQUASEAL® PAFUKI, or by targeted spraying of larger individual joints with AQUASEAL® PAFUDIMA FLEXFILL COLOR or in the case of a massive joint pattern by filling with our AQUASEAL® PAK-STOP System, the same is basically true. The seal cannot "seep" into a completely closed surface and this risk is therefore eliminated.

The wide edge joint or expansion joint must also be given appropriate attention. In this case, a permanently elastic filling must be used or the skirting board must first be fitted in the edge area, sealed (AQUASEAL® PAFUDIMA FLEXFILL COLOR) and then sealed.

Generally speaking, more attention must be paid to a more thorough filling and correct mixing of the wood filler solution. Because even the sum of smaller "baggers" for a new floor with normal joints should not be underestimated. In this case, the same thing happens as described above on a smaller scale, the seal seeps away and evaporates longer. This also results in the known surface defects along the joint, which can be filled with our SOLVSEAL LT EXPORT THIXPRIMER, for example. We know from practical experience that too fast work or a too dry mixture of the wood cement binder is often the cause. Here the joint is not filled and closed well enough and the too lean mixture (too much wood flour too little binder) does not stick properly in the joint and is torn out during the final sanding and leaves many small joint holes.

With careful attention to this problem, a big step has been taken towards precaution and the months of strong evaporation of the subfloor can be avoided.

Short-term odour nuisance must be accepted

With its somewhat spongy definition of "month-long" odour pollution, the judgement does not initially indicate an exact time threshold. However, one can certainly assume that short-term odour impairment is not to be understood as a lack of work in this sense. And this would not be technically feasible either. Because some days or weeks it can come depending upon different wood and soil types already to solvent and own smell, like that the consumer is used also since ages. However, this effect is decreasing nature, so that a waiting can be made plausible and be made understandable to the user.

The odour of seals

Unfortunately, this is an issue that cannot be completely excluded for very sensitive users and could become a problem in the context of the new case law. This has less to do with solvents.

For example, oxidatively drying sealing systems are based on binders such as soybean oil, linseed oil, wood oil, etc., which ultimately come from nature. These substances have their own odour and can give off this odour over a longer period of time, which may disturb one or the other.

The danger of an odour nuisance by oxidatively drying systems is also influenced by the processor. Especially if the individual layers are not completely dried out and the required amount of oxygen was not sufficiently available before the next layer was applied, the risk is increased. For this reason, the manufacturer's instructions on drying and waiting times should always be strictly observed. Do not over seal until the previous layer has dried properly.

Discuss alternatives with customers and, if necessary, have them exempted.

Whatever the technical circumstances and interests of the customer, it is best for the contractor to arrange an open and clarifying discussion beforehand. This can explain to the customer the odour theme and the technical risks involved in using a solvent-based seal. Depending on the risk situation, you may also have to be exempted from the odour risk. Conversely, the customer expressly requests the use of a water sealing system and must then be made aware of the technical risk.

Always priority on water seal

From all this it becomes clear again that one is generally on the safe side with water seal and these systems are used wherever possible.

However, not a few end users clearly prefer the cheering look of oil-KH and urethane alkyd products. Then, with a corresponding reduction in risk, one is probably prepared to accept a certain odour nuisance. Or you can combine appropriate solvent-based seals / primers with water-based top seals to achieve a good technical and odour compromise.

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As far as the necessity of using solvent-based polyurethane seals such as our SOLVSEAL UNO SIEGEL is concerned, our AQUASEAL® 2KPU almost completely achieves the technical properties today, i.e. you can switch to water immediately and without unacceptable product disadvantages.

Attention: Parquet oil is not always low in solvents!

Caution is advisable with some parquet oil, if this should be chosen for reasons of solvent poverty. Because there is oil with ZERO % solvent portion and which with 70 % solvent portion. With the latter, the problems described above even become more acute. Here only the survey of the manufacturer helps. With our products CLASSIC BASEOIL and CLASSIC 100PROOIL the processor and end customer has 100 % solids and practically ZERO % emissions.

Conclusion

With a consistent water-based product policy or alternative oil systems with 100% solids and careful preparation of the substrate when using solvent-based sealing products, the odour problem should be under control for the time being.

In case of doubt, one should aim for an exemption of relevant risks and start with an open and clarifying discussion. Then the further course of the practice and iurisdiction must show, where exactly the journey goes. As your specialist partner, we are there to advise you.