

Toby Technical Bulletin 3

Delamination

Delamination on a timber floor can occur between coats or between the coating system and the substrate. It can be noticeable directly after drying of the coating or many months later. Possible cause for delamination is:

- Contamination
- Inadequate surface preparation
- Incompatibility
- Excessive timber movement

Contamination

Contamination creates a barrier film between adjacent surfaces preventing intimate contact, reduced adhesion and ultimately, delamination.

Contamination can be on the timber or cork floor surface or on the sanding or application equipment.

Potential sources of a contamination include:

- Aerosol sprays
- Spillages, especially cooking oils and food in kitchen areas
- The use of incorrect cleaning and maintenance products

Natural oils and waxes from the timber can be extracted by the solvent of the sealer and can sit on top of the sealer surface after drying. Application of a solvent-based floor finish can re-dissolve those extracted materials so that they sit on the surface of that floor finish layer. Very often, there are no or only minor signs of rejection. The second finish coat with its surface characteristics will possibly then show reduced adhesion.

Inadequate surface preparation

Polyurethane floor finishes, especially solvent-based products, dry to an highly inert film and they will not adhere to other coats, unless they are surface activated. Good sanding followed by thorough vacuuming is essential in order to achieve a mechanical activation for proper bonding. The sanded surface should appear uniformly dull after sanding. The surface is not sufficiently activated if the screen or sandpaper caused only a few scratches on the floor.

Incompatibility

The use of mixed systems can create a lot of problems. Do not use Toby timber finishes and sealers with other manufacturers products because they may not be compatible and delamination may occur. Do not use anti-silicone drops with any Toby product. Use only Toby Flo-Add in accordance with the recommendation on the data sheet and label if rejection problems are expected on a floor.

Excessive timber movement

Excessive timber movement, due to improper installation and/or significant moisture change of the timber since installation can also create or contribute to delamination. The loss of adhesion normally starts on the edges of some boards, and in severe cases the coating can be peeled off in sheets.

How to avoid delamination

Following is a list of things that, if considered, can help to eliminate or drastically reduce the likelihood of delamination problems on timber floors:

- Wash polyurethane floors with thinners prior to the sanding process, particularly in kitchens and around tables where silicone sprays may have been used
- Keep application equipment clean
- Do not use mixed systems, use only recommended products
- When using 2-pack Toby products, ensure they are properly mixed together
- Do not overdose additives and mix thoroughly according to instructions
- Re-sand existing old floors, changing sandpaper and screens for each coat
- Ensure timber is properly installed and moisture content is correct to eliminate severe timber movement

Rectification

Unfortunately in most cases a total re-sand to bare timber and repeating the coating process, covering all bases, is required and the only guarantee to fix a delamination problem on a floor.

For further technical advice call our Technical Hotline on 1800 073 530.

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