

Technical bulletin 1

Delamination

Delamination of coatings can occur between the coating system and the substrate. Possible causes for delamination are

1. Contamination
2. Inadequate surface preparation
3. Incompatibility
4. Excessive timber movement

Contamination

Contamination can be on timber, cork floor surfaces or it can be introduced onto the substrate surfaces by sanding or application equipment. Potential sources of contamination include

- Aerosol Sprays
- Spillages, especially cooking oils and food in the 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 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 finished coat with its surface characteristics will possibly then reduce adhesion.

Inadequate surface preparation

Polyurethane floor finishes, especially solvent-based products, dry to a highly inert film and they will not adhere to other coats, unless they are surface activated. Good sanding followed by 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 system can create a lot of problems. Evaluation of all systems used prior to application needs to be carried out. Eracoat additives are recommended for use in Eracoat products. Other additives need to be evaluated prior to use.

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 peel off in sheets.

How to avoid delamination

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

- Wash polyurethane floors with thinners prior to sanding process, particularly in kitchens and around tables where silicone spray may have been used
- Keep application equipment clean
- Do not use mixed systems, use only recommended products
- 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 information please call (02) 9623-5200

