

Introduction

During the life of a floor, spills, drips and sprays will invariably come into contact with a coated timber floor. In many situations it is simply a matter of quickly wiping up the offending material. At other times one may not be aware of the spill or drip and as such it remains for a period of time on the floor. The result of this may be a permanent marking of the floor. All of the above can be classified as surface contaminants of varying aggressiveness to the coating, ranging from negligible to significant. This information sheet outlines where one needs to be exercised care.

Common spills, drips and sprays

Common spills include:

- Cleaning materials
- Wine
- Caustic based cleaners
- Cordial and soft drinks
- Wall and ceiling paint
- Alcohol based cleaners
- Nail polish remover
- Pet 'accidents'
- Isopropyl alcohol screen cleaners

Common drips include:

- Wall and ceiling paint
- Opened cans and dispensers
- Garbage bag contents
- Animal flea treatments
- Drinks & beverages (including tea bag drips)
- Fragrant oils when heated

Common sprays include:

- Insect sprays
- Insect repellents
- Household cleaners
- Wall and ceiling paint
- Ironing sprays
- Pet products

Household examples

These photos show how aggressive some household products can be. The close-up of a drip from a suspected leaking air freshener can, has caused the coating to 'fry' and when cleaned up expose bare timber beneath, as shown in the second photo. Note also in this instance, how the drip crosses one board edge to another suggesting that the problem is not related to the timber. The conditional also occurred well after the floor was coated and therefore also not associated with the coating process.



Similarly, something as common as when an insect is sprayed on a floor and the can lid placed on top of it, so that it does not escape, can also result in damage. The powerful propellant solvents in the insect spray are contained under the lid. This concentrated solvent environment results in the 'frying' or solvent attack of the oil modified coating surface.

Taking immediate action

If the floor is subject to a spill, drip or spray, action should be taken as soon as possible and the procedure outlined below is suggested.

1. Dab the contaminant with an absorbent tissue or paper towel. Do not wipe it up in the first instance as this action may cause greater penetration of the contaminant into the actual coated surface.
2. Soak up any remaining surface contaminant with an absorbent paper towel.
3. If the surface is marked, wipe the affected area with a wet paper towel with a dilute mild dishwashing detergent. Then wipe dry and examine.

If the surface is damaged or marked refer to the section on "Taking Remedial Action" later in this sheet.

Noticing the surface contaminant after some time

The longer a surface contaminant is in contact with the floor, the more likelihood surface damage will result. Consider an example where a concrete cleaner adjacent to a normally very chemical resistant laminate floor, splashed onto the laminate floor causing permanent etching type damage to the laminate surface. The four photos show a simulation of the consequences of not attending to this quickly:

Photo 1 shows the splash residue simulation after a 1 hour dry time

Photo 2 shows residue wiped off after 24 hours leaving no discernible marking of the surface

Photo 3 shows residue from evaporation remaining after 3 days

Photo 4 shows surface marking after the residue is wiped up and washed off after 5 days.

Photo 1

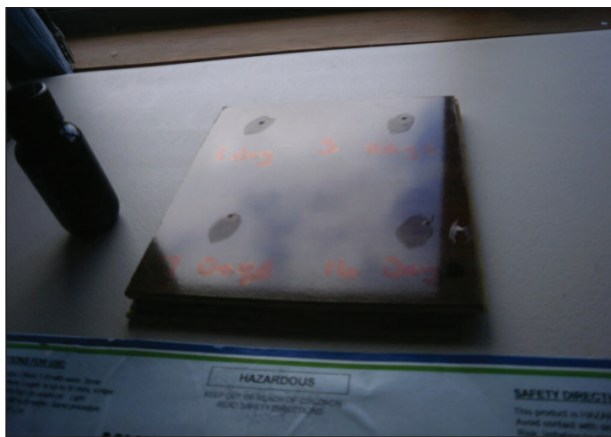


Photo 1



Photo 2

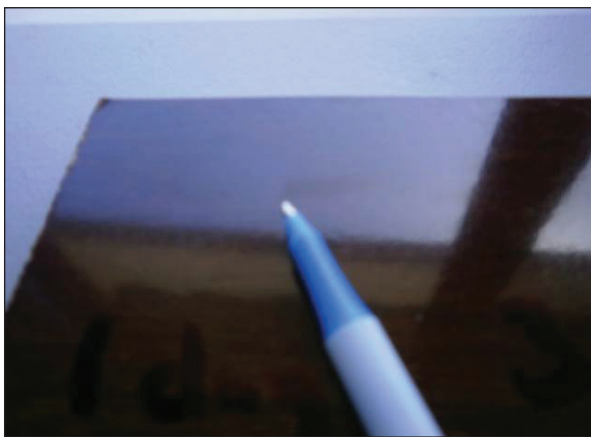


Photo 2



This example shows that if the surface splash contaminant had been detected and removed within 24 hours then no permanent marking damage as shown in photo 4 would have occurred. The lesson here is that immediate action can avoid more permanent damage to the surface that might result from delayed action.

Taking remedial action

As indicated above, if a solvent drips onto the floor, immediate dab removal might avoid permanent surface damage. In the fly spray example, there is however no easy surface treatment to correct this condition. Masking off the damage area and carefully conducting a 'spot repair' might improve the situation, however, a repair will always look like a repair.

Drips from initial coatings application result in permanent markings and no surface treatment can correct this. These as shown in the photo, if not prevalent in the floor may need to be accepted.

Also consider the situation where paint drips from wall paint landing on the coated floor and the painter then attempts to wipe the paint off after it has dried. If methylated spirits was used it would smear the paint splatter and etched it into the floor coating surface leaving permanent marking. If the condition is widespread, then re-sanding the floor may be necessary. But note that a drop sheet would have avoided the issue.

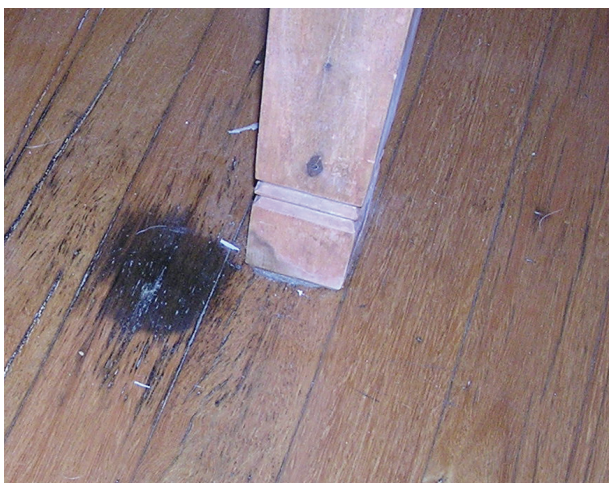


Pet urine stains

Another aspect to be considered is for those owners who have pets indoors. If your pets have 'accidents' inside it is important to realise that some coatings are more resistant than others to pet urine. In particular solvent-based polyurethanes are more resilient than water-based polyurethanes. Water-based polyurethanes have greater permeability to moisture transfer through the coating and therefore need greater care.

Although pet urine does not directly discolour the timber, discolouration occurs due to exposure to ammonia produced by microbial activity decomposing urea in the urine and releasing ammonia which in turn reacts with the tannins in timber to produce a black coloured compound. Natural tannins in timber react strongly with aqueous ammonia. With an intact polyurethane coating, it is thought that permeation of microbial generated ammonia through the coating film to the timber surface below occurs. Also, if surface urine is left on the floor unattended for long periods, it can degrade the coating and result in blackening of the floor as shown in the first photo.

However, it has also been found that with careful sanding and then application of an oxalic acid solution, stains can be removed.



During the life of a floor the coating type can also change. If a floor has been previously coated with solvent based polyurethane and the floor is refurbished by sanding back to bare timber, and a water-based polyurethane applied, it is prudent to make owners aware of the differences. The second photo shows a floor where the owners only noticed staining after a change from solvent-based to water-based polyurethane. Again, the key is, take action as soon as possible to prevent or minimise any damage. Also be aware that damp nappies left sitting on a floor can have a similar effect.

Some coatings are more resistant to surface chemical damage than others

Surface coatings range from very poor chemical resistance to exceptionally good chemical resistance. One of the toughest chemical environments is a women's hairdressing salon where bleaches and dye can severely affect a poor chemical resistant coating.

Cleaners and timber floors

Following on from this it is also necessary to consider the cleaners we use on our floors. Different products and coatings have different chemical resistance. Laminates are the most chemical resistant surface with two pack polyurethanes the most resistant of the coatings. Penetrating oils are the least chemical resistant. It should be noted that the use of incorrect cleaning products can also damage floors and it is for this reason that product or coating manufacturers' advice should be obtained and followed. Cleaners when diluted generally provide good results, but as a note of caution, when used concentrated they can attack the coating and leave a permanent dull mark. Some stubborn stains may not be removable, as they may have actually penetrated into the coating. No surface treatment can remove a penetrated stain. An example is a felt tip pen or texta mark on a floor with certain types of coatings.

Cleaners and laminate floors

It is important to note that off-the-shelf cleaning products can also adversely affect the surface of laminate (melamine surface film) flooring. Products that contain citric acid, bleach, D-limonene (Orange oil) and solvents are examples of chemicals that can affect the board surface. Different laminates can also have different chemical resistance with some used in the likes of laboratory bench tops designed to resist almost all common chemicals.

Avoiding damage to the boards

- Anti-static dry mops should be the main method of keeping the floor clean. Liquid cleaners should only be used when necessary as they can work their way between and under the flooring and can cause damage, peeling and bubbling to the laminate surface. Also do not use steam mops.
- Never use acidic cleaners or general household products. This includes household detergents, bleach, ammonia, petroleum distillates, methylated spirits or kerosene as they can irreversibly damage the finish. Also avoid household polishes, steel wool, wax or any abrasive cleaners. Neutral pH cleaners are often available from flooring suppliers and need to be laminate-safe.
- Similar to other floor surfaces spills should be cleaned up as soon as observed. Don't allow any liquid to sit on the floor for long period of time because they can stain the flooring and damage the protective wear layer. Soak up the excess liquid with an absorbent cloth or paper towel and don't allow the area to remain wet. Note also that even water left on board joints can cause swelling of board joints.
- Remember that using twice the recommended concentration won't render the floor twice as clean. Rather, the excess can leave a streaky, cloudy residue that actually makes the floor look less clean.