



Q&A on Coatings.

Floor Cleaners Producing Patchy Surfaces

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This Q & A section continues as a new addition to the magazine and intended to answer those questions that ATFA members may have on coatings.

Please send in any questions you would like addressed to ATFA.

Clients are commenting on 'patchy' dull areas on newly installed floors that have been cleaned with a preparation. Why would this be so?

Rule 1: Do not apply any chemical cleaners to a recently installed floor.

Two reasons for this. Each can contribute to either a temporary or a more permanent sheen variation on a floor.

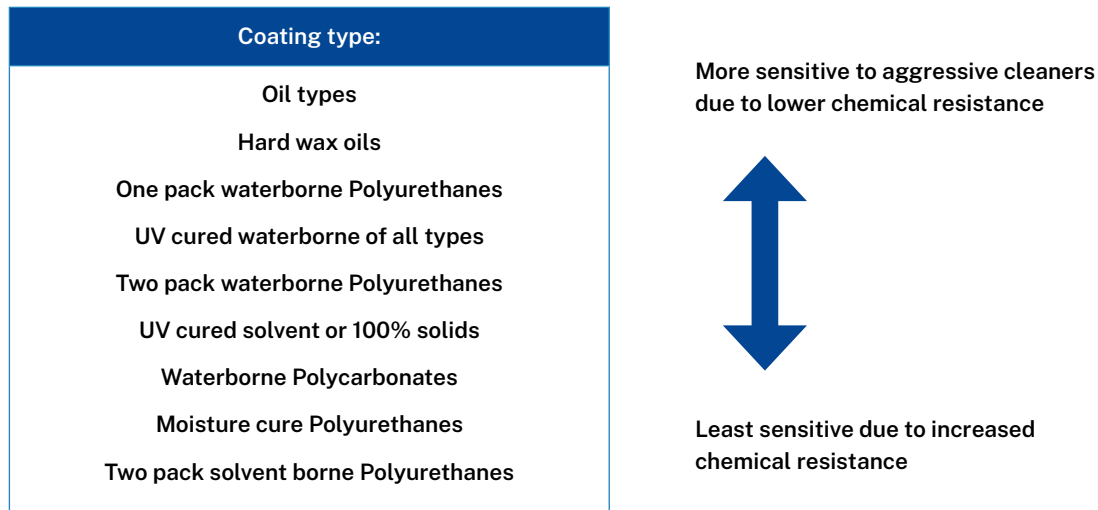
First when applied to a floor, even when considered dry, all floors, with the exception of UV coated, can outgas for some days or longer. Outgassing is the escape of volatiles contained within the coating. Even if fully cured, volatiles can still be contained and will eventually escape through the surface. These contained volatiles in a newly laid floor can include unreacted species, oil fractions, solvents (all types of coatings except UV cured contain solvents!). Presence of these unreacted, mobile species can 'draw' surface-applied coatings into, or onto, the surface.

Secondly, the chemical resistance of a new coating will increase until a nominal full state of cure is obtained. Depending on the coating technology, this may take one to four weeks. As an example, even when just water is used to clean a newer coated surface, should the coating contain an isocyanate hardener, any trace of residual unreacted isocyanate can create a milky haze in the form of a Polyurea – this may be permanent. Prefinished UV coated new floor surfaces are the only type that can be safely washed at installation using a recommended cleaning product (or just lukewarm water would suffice). Your coating manufacturer can provide a guide as to when full cure might result. Note that their product warranty might be linked to their own floor cleaner option.

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Rule 2: All floor cleaners contain chemicals. Depending on the coating technology used, some may be detrimental to the coating surface.

The lower the chemical resistance of the coating, the more likely to react negatively to certain cleaning preparations, with variation in sheen levels from different applications.



Note: This is general information only. Results may vary within and between technology groups.

This article should be read in conjunction with the article **Floor Coating Preparations for Timber Floors** in Timber Floors magazine issue 46, page 10.

The following extract from this reference article is relevant.

Floor cleaners can enhance a floor or be detrimental to a floor.

This article is a result of a study of 44 commercially available cleaners (there are many more) on the Australian market.

The premises owner expectations of a cleaner are:

- It is 'fit for purpose' as a cleaner as per the imagery or claims on the product labelling.
- It will enhance the appearance aesthetic of the floor without leaving a streaky finish.
- It will clean the surface removing deposits of grease, oils, food and beverage spillages, etc.
- It will not damage the surface of the polished timber floor.

The flooring contractor's expectations for the customer whose floor they have coated or installed:

- A 'fit for purpose' cleaner will be used for cleaning the floor.
- They will follow the written advice of the contractor in how to maintain the floor for maximum appearance benefit and longevity. This will include the recommended cleaner description.
- The recommended cleaner will be readily available.
- The cleaner will not harm or deteriorate the coated surface.
- A satisfied customer may bring referrals for other business or be used for the eventual refurbishment.

The myth

"As long as the cleaner is pH neutral it is OK for cleaning the floor!"

Reality is that this may well not be the case!

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Findings of the TAMSA study of the 44 cleaning materials

Characteristic	Number of products having this characteristic	Potential consequences in use
Mild detergents	44	OK if used to dilution. Used neat can damage some coatings.
Contain solvents - Alcohols - Ethoxylated alcohols - Alkyl ethers	25	Too concentrated can attack the coating especially waterborne, hard wax oils and oils.
pH neutral	12	OK if no other potentially harmful ingredients.
Oils	10	Film forming, some can attack the surface e.g. eucalyptus.
D-limonene, orange and other citrus oils	9	D-limonene is also a paint stripper and graffiti remover in concentrated form. Danger is in thinking 'more is better' by homeowner.
Waxes and silicones	3	Film forming. Can compromise later refurbishment of the floor.

Contractor advice

1. The job is not complete until one has provided the premises owner with a detailed floor maintenance regime and more so discussed it to ensure understanding. This should include the recommended cleaner and where to obtain supplies. Many contractors will leave a complimentary bottle of the cleaner with the premises owner to ensure the maintenance regime commences correctly.
2. Some coatings manufacturers will link the coating warranty to use of their own, or one recommended, cleaner. The contractor needs to be aware if this is a warranty condition and advise accordingly.
3. Be aware that some cleaner preparations can contain potentially harmful ingredients per the table above. **Check the SDS for the cleaning product – contact the undersigned for assistance.** The least vulnerable to chemical attack from the cleaners are solvent borne Polyurethanes and the most vulnerable being waterborne, UV coatings, oils and hardwax oils.
4. The survey found the best cleaning materials are those provided by the coatings manufacturer. These tend to be mild detergents with no potentially aggressive solvents or other additives.
5. Note that some cleaners can leave films on the surface that can lead to delamination potential on a later recoating. Any recoating should assume the cleaning regime may have left a problematic film on the surface that might compromise recoatability. The stripping and rinsing prior to any surface abrasion should be considered best industry practice in refurbishment for this reason.

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For further information on this technical article regarding specific cleaning products or on coatings related issues in general the ATFA Coatings Hotline on 0414 793 237 can be consulted. Alternatively email your question to tamsaconsult@hotmail.com . This is a free service to ATFA members.