TECHNICAL BULLETIN

TILING OVER PREVIOUSLY PAINTED SURFACES

INTRODUCTION & SCOPE

A common situation encountered when doing renovations is the temptation to apply ceramic tiles over previously painted surfaces. Whilst some DUNLOP adhesives will generally adhere to painted surfaces, the installer needs to consider that this is not an ideal substrate for tiles to be applied to and it is best to remove it.

With regards to paints, certain exceptions apply to particular primers and these are noted.

Remember, the tile bond is only as good as the adhesion of the paint to the substrate, not the necessarily tile adhesive to the paint.

THE ISSUES

Paints are designed as decorative finishes and are intended as the final surface. When applied on walls they are only intended to carry their own weight, and are not designed to carry the loads imposed by tiles, adhesives and grout which may cause the paint to de-bond and then the tiles go with it.

Some types of paints are incompatible with the typically alkaline nature of tile adhesives and will therefore chemically or physically degrade when tiled over, again resulting in de-bonding. water based paint (e.g. Acrylics/PVA) can soften when damp resulting in peeling, and PVA paint can be water soluble and breaks down when in contact with the wet tile adhesive.

Paints with very glossy and hard finishes such as polyurethanes or resin rich epoxies provide very non-porous and inert surfaces. The tile adhesives do not develop a chemical or physical bond to these paints and so can de-bond.

Texture coated surfaces are generally too rough to get a flat surface and may result in irregular tiled sur-

Recommendations for various paint types

Paint type	Suggested preparation
Solvent based alkyds ('oil based paints')	Mechanically roughen full surface with coarse sand paper (40 grit) where sound to a visibly rough profile. If unsound remove 100% of paint to substrate. Priming with DUNLOP MULTIPURPOSE PRIMER will improve bond. Note slower drying of primer.
Water based acrylics and PVA	Mechanically remove 100% of paint to expose the substrate.
Calsomine and similar washes	Mechanically remove 100% of paint to expose the substrate.
Polyurethane	Mechanically remove 100% of paint to expose the substrate.
Epoxy Enamels and Finish Coats*	Mechanically roughen full surface with coarse sand paper (40 grit) where sound to a visibly rough profile. If unsound remove 100% of paint to substrate. Priming with DUNLOP MULTIPURPOSE PRIMER will improve bond. Note slower drying of primer.
Paving paints and timber finishes	Mechanically remove 100% of paint to expose the substrate.
Texture coats	Mechanically remove 100% of paint to expose the substrate.
Bituminous coatings	Mechanically remove 100% of paint to expose the substrate.
Generally unsound painted surfaces	Mechanically remove 100% of paint to expose the substrate.

faces. Surfaces that are not sound for example; peeling, flaky, dusty, oily or dirty are poor surfaces for tiling on.

*The application of two part epoxy primers (which are filler rich rather than resin rich as is the case with epoxy enamels), is a requisite practice over metal surfaces before adhesive fixing tiles. The same applies to the application of tile adhesives over water based epoxy sealers such as ARDEX WPM300 HYDREPOXY (± sand seeding). Both these coatings are acceptable surfaces.

There are also two other points to consider –

- Premixed adhesives applied over painted surfaces can displayed extended drying times.
- Where coating is not fully removed (alkyd paints), this procedure is only recommended on internal surfaces, and is not recommended on external surfaces.

CAUTION – Older oil based paints applied before the mid 70's may contain Lead or Cadmium, for example the 'red lead primer' contains lead oxide, and other paints can have heavy metal based drying agents. It is not recommended that these paints be sanded and expert advice on how to remove these coatings should be sort from a paint manufacturer or a specialist consultant in this area.

CONCLUSIONS

Some types of paints can be tiled over, however for the reasons mentioned already, DUNLOP recommends that the best approach is remove paints from the substrate and apply the tile adhesive to the cleaned surface.

Clean and properly prepared substrates always provide the optimal surface for the application of tile adhesives.

The most reliable results will be obtained with DUNLOP TILE ALL adhesive.

NOTES

Always refer to the product data sheets for specific usage details.

The information contained herein is to the best of our knowledge true and accurate.

No warranty is implied or given as to its completeness or accuracy in describing the performance or suitability of the product application.

Users are asked to check that the literature in their possession is the latest issue.

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GLOSSARY

Acrylic paints-These contain an Acrylic polymer suspended as an emulsion in a water carrier. Acrylates are either thermoplastic or thermosetting resins. Acrylics can be attacked by highly alkaline materials.

Alkyd paints-This is the traditional style of paints that contain a polymer based on an ester of Phthalic Acid and a glycol modified with fatty acids. Often older paints of this type contained Linseed oil. The resin of these paints are dissolved in solvents such as Turpentine or White Spirit. More recently water borne alkyds have appeared.

Calsomine-A cheap paint made from lime wash, Calcium Hydroxide and Chalk combination.

Epoxy-These are a reaction polymer based epoxy resin with an amine or amide catalyst. Some are water borne and other solvent borne. Epoxies form hard and tight surfaces that are highly durable but can be unreactive and difficult to bond to. They are not UV stable and chalk.

Heavy metals-The use of compounds based on metals of high formula weight such as Lead, Cadmium, Cobalt, Chromium and Mercury was common before the 1970s in paints as pigments or special additives.

Oil based paints-A generic name for paints based on oils derived from plants or petroleum. Alkyds and Tung or Linseed based materials and other solvent borne paints are considered 'oil based'.

Polyurethane-These are a reaction or thermosetting polymer formed from Isocyanates and Polyols and are solvent borne. They can either be two part systems or moisture curing on exposure to moist air. Urethanes form hard and tight surfaces that are highly durable but also unreactive and difficult to bond to.

PVA-Poly vinyl acetate or Poly vinyl alcohol. To different polymers based on the vinyl base, that are water soluble. Basic and low cost paints are based on PVA. They are not stable to alkalinity such as from cement.