YELLOWING OF WALLS FOLLOWING APPLICATIONS OF SOLVENT BASED COATINGS

The objective of this technical bulletin is to alert appliers/home owner/builders/project manager, to the potential for reaction between polyurethane/solvent based floor finishes, and newly applied acrylic paints (to walls/joints). The occurrence of this is very rare and has proved impossible to reproduce in a controlled circumstance, therefore avoiding thorough investigation. However, as a guide and in line with industry information, we suggest that there is a phenomenon involving the slight yellowing of plaster joints/paint work/render following the application of polyurethane/ solvent based floor finishes in cold weather and/or poorly ventilated areas.

Understanding the Cause

Theory suggests that solvents curing out of solvent based Polyurethane coatings can react with the amine element in “undried” or “uncured” paints. Often these paints have remained “uncured” beyond their specified drying times due to a reaction borne out of contact with plaster jointing cement, raw plaster, render, and other similar products used for walls and stopping purposes. It is suggested that the effective priming/undercoating of such areas will eradicate this already rare phenomenon, and the provision of ventilation 4-6 hours after coating will avoid any solvent concentration.

All water based paints either vinyl or acrylic are made using amines. Inferior quality amines are used in budget paint products and tend to have longer curing requirements especially in unventilated areas, cold temperatures, *and of course over inadequately sealed/primed plaster and jointing compounds.*

The solvents in the floor coating evaporate as coating dries and mix with these “uncured” amines which may result in pale yellowish staining. Incidences reported to date have been evidenced by the walls being “more yellow” at the plaster board “joints” or a gradual intensifying stain beginning at the floor and gradually fading in “yellowness” as it approached the ceiling (or visa versa).

It is thought that most calcite based plasterboard leveling/jointing compounds used by plasterers, retard curing of paints due to both chemical reaction and being of quite a porous nature, thus absorbing larger volumes of paint upon coating.

On freshly painted walls sometimes the solvents can react with this “uncured” paint and the ensuing reaction results in the plasterboard or the joins turning yellow.

In the few documented cases this has always been evidenced by the joins being “more yellow” than the walls.

When It Is Likely To Happen

- Most likely to happen where walls have not been undercoated/sealed with a recognised sealer/undercoat.
- On freshly painted walls
- On painted walls that are yet to cure
- In winter months

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- Areas with poor ventilation
- When solvent based coatings or strong solvents are used in the vicinity

This can happen to any brand of water based paint and in nearly all cases occurs when no undercoat has been applied on new walls.

How To Fix The Problem?

Apply another coat of paint to the walls after the floor coating is finished and the solvent odour is gone.

TO MINIMISE THE POTENTIAL FOR OCCURRENCE

MAKE SURE THE PAINT ON THE WALLS HAS COMPLETELY CURED. ENSURE ADEQUATE VENTILATION DURING USE OF ALL ACRYLIC COATINGS, AND AFTER INITIAL DRYING OF FLOOR COATINGS.
CONFIRM THIS WITH THE HOMEOWNER, PROJECT MANAGER OR BUILDER BEFORE APPLYING SOLVENT BASED FLOOR COATINGS

PLEASE CONTACT POLYCURE'S TECHNICAL SERVICE DEPARTMENT OR YOUR LOCAL POLYCURE ACCOUNT EXECUTIVE FOR FURTHER FREE ADVICE.

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