

# Solver Paints

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## PRODUCT INFORMATION

SS-125

### SURFACTANT LEACHING

This phenomenon is known by several names: streak staining, surfactant leaching, surfactant staining exudation and weeping. It can occur with any exterior water based paint when conditions are such that water soluble components in the paint are extracted and subsequently deposited in concentrated streaks on the surface. Surfactant leaching is visually more apparent with dark colours, although it can also be found occasionally on white and light colours if the leached material has a tan colour as sometimes occurs. The likelihood and severity of this deposition of water soluble components depends on the paint formulation and the condition under which the paint is applied and allowed to dry.

All water based paints are made using some water soluble raw materials, such as dispersants, surfactants, wetting agents, thickeners and glycols. All of these materials are eventually removed from the applied paint film on exposure.

These materials are normally leached out by rain and dew, usually over the first several weeks of exposure. Weather conditions can be such that a large proportion of water soluble ingredients are brought to the surface as the paint dries, or very shortly thereafter, and appear typically as shiny streaks or blotches. Also dew or light rain soon after the application of the paint can extract water soluble material which then results in the surfactant leaching.

The resultant surfactant leach will generally weather off after 1 month or so. Removing it prior to this time can be difficult, especially if it has been baked on due to sun exposure. Care must be taken in trying to remove the leaching by washing with generous amounts of clean water and a soft cloth as the paint remains soft and not fully cured for some weeks.

For this reason, it is recommended that no remedial action be taken to either repaint or to use high pressure water cleaning. In general, surfactant leaching does not adversely affect the film integrity or exterior durability of the paint.

This surfactant leaching is not totally restricted to exterior situations as the same problem can occur when water based paints are exposed to high humidity or condensation such as found in bathrooms. This can be particularly found when bathrooms are painted using dark colours, colours tinted from dark bases or colours that are heavily tinted with machine colourant and then exposed to high moisture conditions when the bathroom (shower) is used prior to the full film cure of the paint. To remove any leaching in interior situations, the paint must be left until fully cured, i.e. after 1 month recommended, and then washed with generous amounts of water and a soft cloth.

SOLVER water based paints have been formulated to minimise the amount of water soluble ingredients that they contain which will assist to minimise the amount of surfactant leaching or water spotting. They have been formulated using the minimum level of surfactants required for good colour acceptance, the minimum level of co-solvents for good paint stability and application properties. Unfortunately, the addition of colourant may reduce any benefits gained by minimising the amount of water soluble raw materials because Universal Colourants used in all tint machines and bottle colourants as sold to Painters contain glycols and surfactants. The Chemist has allowed for this tint addition as part of the formulating process.

The addition of colourant amounts in excess of those recommended on Page 1 of Book 1 of the SOLVER Tint Manual will increase the likelihood of surfactant leaching that may occur on both external and internal surfaces. The recommendations therefore should never be exceeded.

### CHANGES SINCE LAST ISSUE:



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