

Tips for dealing with Hand Oils

Every year we see more and more coating adhesion problems on handrails due to the oil build up from human contact and the application of water-based architectural coatings.

In this article we will look at the different substrates used for handrails and how best to treat these for a long lasting finish.



Handrail requiring repainting

Bare Surfaces

Galvanized steel is commonly used for Handrails, this zinc plated steel is resistant to corrosion as long as the zinc layer remains intact.

- When these handrails in or around a school or heavily trafficked areas, and the bare rails will become very shiny, like they have been coated with a clear coating. In actual fact the clear slippery surface of the metal is a build-up of hand oils that are produced naturally by the body.
- If the rails are to be painted the removal of this oil layer is only possible by extensive washing with a strong degreaser or solvent. Hand sanding will not remove all the oil and may actually make the situation worse by driving the oil into deeper into any scratches or surface defects.

Painted Surfaces

- Painted surfaces will also build up a layer of hand oils which will have to be dealt with before repainting. In any re-paint situation, sanding the original finish is always required, but, again sanding alone will not do an adequate job of removing the oils.

Many inter-coat delamination situations arise because of incomplete preparation of painted surfaces.

- There have been many methods tried for the removal of the accumulated oils. Hot water power washing is deemed to be the fastest and most effective method. Following up with the use of a bonding primer will help to ensure a good adhesion when using water based Acrylic / Vinyl Latex Coatings.
- There are many benefits of using water based Acrylic / Vinyl Latex Coatings, and they work extremely well in most situations. However if they are exposed to excessive hand oils the coating may soften, lose gloss and adhesion. Even after extensive cleaning and sanding, you may be required to apply a “bonding primer” over existing Alkyd or water based coatings.
- In conclusion: be very aware of the surface conditions you encounter, especially the history of the substrate. If hand oil is found, surface preparation and special bonding primers may be required when painting bare or painted surfaces.