General

Ideally paint should break down by gradual erosion of the surface leaving a perfectly adhering, etched surface that is ideal for repainting after a simple wash down to remove surface chalking. Unfortunately this ideal does not always occur necessitating greater surface preparation.

Surface preparation

Breakdown due to loss of adhesion

This is the most serious problem to overcome and may include flaking, peeling and blistering. Where any of these breakdowns have occurred, unless specific localised reasons for the failure can be identified, it is wise to assume that the weakness may be prevalent over the whole surface. The assessment that has to be made is whether the existing system has sufficient adhesion to hold on when subjected to the extra stress and weight of two or three more coats of paint. Stresses are, of course, increased if the new system is darker in colour than the existing system.

D87.1 Test for adhesion

Clean an area of suspect coating and apply a strip of adhesive tape ensuring firm contact by rubbing with a fingernail. Rapidly pull off the tape at 90° to the surface. Examine the tape for any detached paint. If there is no paint on the tape the substrate is suitable for paint and preparation can proceed to D87.3. Where paint flakes come away thorough sanding and/or stripping will be required. Feather all edges of poorly adhering areas and immediately treat with the first coat of the system to prevent ‘edge curl’ with subsequent weathering.

D87.2 Strip off existing paint

Thoroughly scrape to remove as much paint as practicable to make the stripping stage easier. Apply Resene Strip-Off (see Data Sheet D81) or other suitable paint stripper as per directions to remove all paint. Thoroughly rinse clean with clean water. Allow to dry. Alternatively use a hot air gun.

D87.3 Remove all moss and mould

Thoroughly clean down to remove all loosely adhered material. Treat areas of moss or mould infestation with Resene Moss & Mould Killer (see Data Sheet D80) correctly diluted with clean water. Leave for up to 48 hours to achieve full kill. For heavy infestations further applications may be needed. Wash thoroughly with clean water to remove residues.

D87.4 Remove efflorescence

Remove any efflorescence with a dry brush or cloth.

D87.5 Remove surface oils

Treat any heavy oil deposits by first removing any surface oil with a dry rag. Treat remaining oil by scrubbing thoroughly with Resene Paint Prep and Housewash (see Data Sheet D812) or a solution of sugar soap. Repeat to remove as much oil as practicable. Adhesion and performance of the final coating may be affected by residual oil.

D87.6 Remove rust stains (via oxalic acid)

With great care for personal safety, treat areas of rust staining with a 10% solution of oxalic acid. Rinse off with copious quantities of clean water after it has reacted. When thoroughly dry, spot prime remaining rust stains with Resene Sureseal (see Data Sheet D42).

D87.7 Remove rust (via wire brushing)

Thoroughly wire brush to remove all areas of red and white rust. Where major underfilm corrosion is taking place remove the existing paint by scraping, Resene Strip-Off (see Data Sheet D81) or other suitable means. Power wire brushing may be used to remove rust but care must be taken not to damage sound zinc coated areas. It is strongly recommended that badly rusted sections of galvanised steel are replaced. The performance of the subsequent paint systems will be largely dependent on the thoroughness of this surface preparation stage.

D87.8 Abrasive blasting

There are a series of abrasive blasting techniques for higher performing systems. Abrasive blast surfaces to the suitable standard. See your Resene Representative.
D87.9   Waterblast 1500 psi (timber substrates only)
Carefully waterblast at 1500 psi to remove all dirt, chalk, moss and mould residue, any loose and flaking paint and other contaminants. Allow to thoroughly dry.

D87.10 Waterblast 3000 psi
Carefully waterblast at 3000 psi to remove all dirt, chalk, moss and mould residue, any loose and flaking paint and other contaminants. Allow the surface to dry out for at least 24 hours.

**Glossy surfaces**
Enamel paints that have aged in the absence of U.V. light develop an extremely hard, impermeable surface that is difficult to adhere to. In exterior situations this occurs in sheltered situations, such as the underside of weatherboards, and under eaves and soffits. In interior situations this condition is almost always prevalent and the surface may be even more difficult to adhere to due to the surface contaminants, such as soap contamination in bathrooms or grease contamination in kitchens. In all cases glossy surfaces must be de-glossed by a thorough sanding. However, in special circumstances some old two component finishes may be so intractable as to require light abrasive blasting (see D87.8).

D87.11 Sand surfaces
Thoroughly sand the surface to remove contaminants and provide a mechanical key for subsequent coats. Wipe surface with a damp rag to remove dust.

Sanding dust from old lead or chromate based paints or old building materials containing asbestos may be injurious to health if inhaled or ingested. Seek expert advice and read the Resene Putting your safety first brochure if the presence of these materials is suspected. Sanding dust from some hardwoods is considered carcinogenic and all timber sanding dusts must be considered potentially harmful. Always wear an effective dust mask.

D87.12 Scrape and sand flaking paint
Thoroughly scrape and sand to remove all loose and flaking paint and to provide a key for subsequent coats. Ensure all areas of flaked paint are thoroughly sanded to a feathered edge. Sand any sharp edges to give a rounded edge. Remove all sanding dust.

D87.13 Apply Resene TimberLock
Apply one coat of Resene TimberLock (see Data Sheet D48) to bare areas. Allow 24 hours to dry. Remove excess Resene TimberLock (see Data Sheet D48) by wiping with a turps dampened rag.

D87.14 Spot prime
For previously painted surfaces, spot prime bare areas with the same primer shown for new work and then proceed as for new work.

D87.15 Fill and sand timber surfaces
Fill all cracks and nailholes etc with a suitable filler according to the manufacturer’s directions. Thoroughly sand to a smooth, clean surface. Sand any sharp edges to a rounded profile. Wipe surface with a damp rag to remove dust.

D87.16 Fill paperfaced plasterboard gaps
Fill all cracks or holes with a suitable filler applied according to the manufacturer’s instructions. Allow to dry for two hours before sanding smooth and sealing repaired areas with Resene Sureseal (see Data Sheet D42).

D87.17 Treat stains
If staining is evident after the application of Resene Quick Dry waterborne primer undercoat (see Data Sheet D45), apply a coat of Resene Enamel Undercoat (see Data Sheet D44).

D87.18 Seal surfaces
Allow to dry out thoroughly then seal with a full coat of Resene Sureseal (see Data Sheet D42).

**Pretreatment of timber**
Resene TimberLock (see Data Sheet D48) improves the dimensional stability of the substrate, as well as improving its fungal, water and U.V. light resistance. Its use improves the durability of subsequently applied topcoats. It is especially recommended on Cedar that is to be painted as well as on old weathered timber. Resene TimberLock (see Data Sheet D48) is not required when Resene Woodsman (waterborne see Data Sheet D57a, solventborne see Data Sheet D57) is to be used.

NB.
(1) Always coat any end grain prior to erection.
(2) Never coat timber when its moisture content is higher than 17%.
(3) Always carry out filling procedures after priming.

If in doubt about any aspect of your specification please contact Resene.