

Resene



Popular Paint Systems

Exterior timber

This document is an edited version of the Resene Best System Selling training notes provided to Resene staff and is provided to enable you to gain a greater understanding of the substrates and paint systems you may encounter in your decorating project. It is impossible to cover all decorating scenarios in a single document, so if you are in doubt about any aspect of your project please contact Resene for assistance.



Resene

the paint the professionals use

PREPARATION PRODUCTS



Resene Moss & Mould Killer

- All exterior timber surfaces – especially in shaded and/or damp areas will, over time, support mould growth. Before prep-work and painting it is vital to kill and remove the mould and mould spores.
- Use a good garden sprayer and saturate the areas to be painted, paying particular attention to heavily infested areas. Then wash and scrub off with Resene Paint Prep and Housewash.



Resene Paint Prep and Housewash

- Developed specifically to prepare painted surfaces for painting.
- Is a powerful cleaner but will not stain or mark window glass.
- Weatherboards and windows are washed in the same way a car is washed.
- Flaking paint should be scrubbed using a hard short bristled brush.
- Far more effective at 'de-chalking' and cleaning than waterblasting.



Resene TimberLock

- Resene TimberLock was developed to 'condition and preserve' timber before priming and painting.
- It should be used where the timber is badly deteriorated due to age or high U.V. exposure – such as North facing windowsills or when timber has been stripped back.
- Resene TimberLock is about the only option for people who want to paint 'greyed' and weathered rough sawn timber.
- It is also useful for treating surrounding areas after rotted timber has been removed.

PRIMERS



Resene Quick Dry Primer Undercoat

- Resene Quick Dry is our best timber primer.
- It has tremendous adhesion plus good flexibility so it copes well with any timber movement.
- It contains anti-corrosive pigments to slow down corrosion of galvanised nails and fixings.
- It is fast drying, waterborne and very easy to apply and use.
- Is recommended over most timbers including Matai and Totara but will **not** prevent salt and Cedar and other water soluble staining.

- May be used as a Resene Cool Colour primer.
- Has excellent sanding properties.
- May be used in combination with Resene Acrylic Undercoat (general purpose) for strong colours. Resene Acrylic Undercoat was not developed for direct application to timber.



Resene Wood Primer (solventborne)

- A traditional solventborne primer - available in white and aluminium.
- Resene Aluminium Wood Primer was developed to seal difficult stains and very resinous timber - particularly if resin bleeding is present or likely. It is also used as a first coat over fire damaged timber.
- Ideal for old and weathered timber (often used in combination with Resene TimberLock).
- Being solventborne it will hold back most water soluble stains, including salt staining.
- Should be used in preference to Resene Quick Dry Primer over rust stained timber and where rusted nailhead corrosion is an issue.
- Our recommended primer for Cedar and Redwood, (both old and new).

TOPCOATS

The topcoats have been divided by their suitability for use on weatherboards and exterior timber and exterior joinery.

The paint needed on weatherboards and exterior timber does not need the same blocking ability as the paint used on windows and doors.

Blocking describes the situation where two painted surfaces touch as is the case with windows and doors. If the paint does not have excellent blocking ability the two paint surfaces will stick to each other and in most cases the window will not be able to be opened and will require 'freeing'.

Pergolas and especially fences can be painted using the self priming Resene Lumbersider (instead of a full system) if they are distinct from the main body of the house and especially if the type of timber is different (rough sawn compared to dressed).

However if the pergola or fence is designed as part of the house and uses the same colour(s) then the paint system as used on the house should be followed.



Weatherboards



Resene Hi-Glo - Waterborne Gloss

- Resene Hi-Glo has the highest gloss of any of our waterborne paints and has a higher gloss level than other decorative products on the market.
- It has good flow and will dry to an almost mirror like finish but does require more care when applying, especially in colder conditions.
- It is very tough, and easy to keep clean and maintain.
- Has good mould resistance.
- Retains good flexibility so copes well with timber movement.
- Can be used on non-opening window frames, sills etc.
- Available in Resene Cool Colour and MoulDefender options.



Resene Sonyx 101 – Waterborne Semi-Gloss

- Uses the same resin system as Resene Hi-Glo and is as durable, as tough and as easily cleaned and maintained.
- Has a smooth semi gloss finish (approx half the gloss level of Resene Hi-Glo) so doesn't highlight imperfections as much as Resene Hi-Glo.
- Slightly easier to apply than Resene Hi-Glo.
- Available in Resene Cool Colour and MoulDefender options.



Resene Lumbersider – Waterborne Satin

- Resene Lumbersider is a tough satin finish (roughly ½ the gloss level of Resene Sonyx 101).
- It uses a different resin system and is less easily cleaned than Resene Sonyx 101 (and Resene Hi-Glo).
- Ideal on rough sawn or weatherboards that have a lot of imperfections.
- Is self priming on most timber surfaces (except Cedar and weathered timber) so is ideal for fencing, pergolas etc.
- Available in Resene Cool Colour and MoulDefender options.
- Wide colour range and is the paint we use in our testpots.



Window joinery and doors



Resene Enamacryl and Resene Lustacryl - Waterborne Enamels

- A true waterborne enamel that outperforms traditional enamels on exterior exposure.
- Waterborne enamels were ground breaking when introduced in the mid 90s. and have steadily grown in popularity since their release.
- Has significantly better U.V. resistance compared to traditional enamels.
- Easy to apply, low odour and water washable.
- Available in Resene Cool Colour and MoulDefender options.
- Less flexible than standard acrylics like Resene Hi-Glo so less suitable for weatherboards, except where a harder more resistant finish is needed. For example where there are a lot of airborne contaminants, such as coal dust present.

Resene Super Gloss Enamel



- A traditional enamel made using alkyd (solventborne) resins.
- Has a higher gloss level than Resene Enamacryl and has a longer open time (basically how long it takes before you can no longer work the paint with a brush before leaving obvious brush marks) so will give a better smoother finish.
- However it won't last as long because it is less U.V. resistant than Resene Enamacryl and Resene Lustacryl and will chalk much more quickly. It is because of this that we do not actively recommend it for exposed exterior timber, except where a very high gloss finish is desired (such as for a prominent or feature front door).
- Resene Lusta-Glo semi-gloss enamel has poor U.V. resistance and is **not** suitable for exterior joinery.

The choice of primer will be dictated by the type of timber, its condition and if already painted the condition of the paintwork. The topcoat options should be presented to the customer and the selection will come down what gloss level they prefer and if imperfections in the timber need to be disguised.

In addition some timbers, such as rough sawn pine, simply suit a lower gloss finish and the recommendation flowcharts that follow try to take this into account.

BRUSHWARE

Our Resene ColorShops stock a variety of brushes and at varying price points.

One of the objectives of Best System Selling is to identify the best or most appropriate application tools to use alongside our paint.

When it comes to exterior painting you will note that the flow charts almost exclusively recommend Legend brushes for painting weatherboards and windows. There are two reasons for this:

1. They are the best brush we have found for waterborne paints, both acrylics like Resene Hi-Glo and waterborne enamels like Resene Enamacryl.
2. When you are painting the exterior of their home they will be painting a large area, so time and energy saving tools should be used especially if they will improve the finish of the paint (the ideal is a smooth, even finish without obvious brush marks).



For weatherboards there are two considerations, the size of the board itself and who is doing the painting. The bigger the brush the more paint it will hold and the quicker the job. However it is also much harder to control, heavier and more tiring to use. As a general rule customers painting weatherboards and exterior timber should select either a 63mm, 75mm or 88mm Legend brush.



So a smaller easier-to-use brush is ideal for smaller width weatherboards (common on 1950s and 60s weatherboard homes) and may be preferred by female painters.

The 75mm Legend brush in the photo above is ideal for the weatherboard profile.

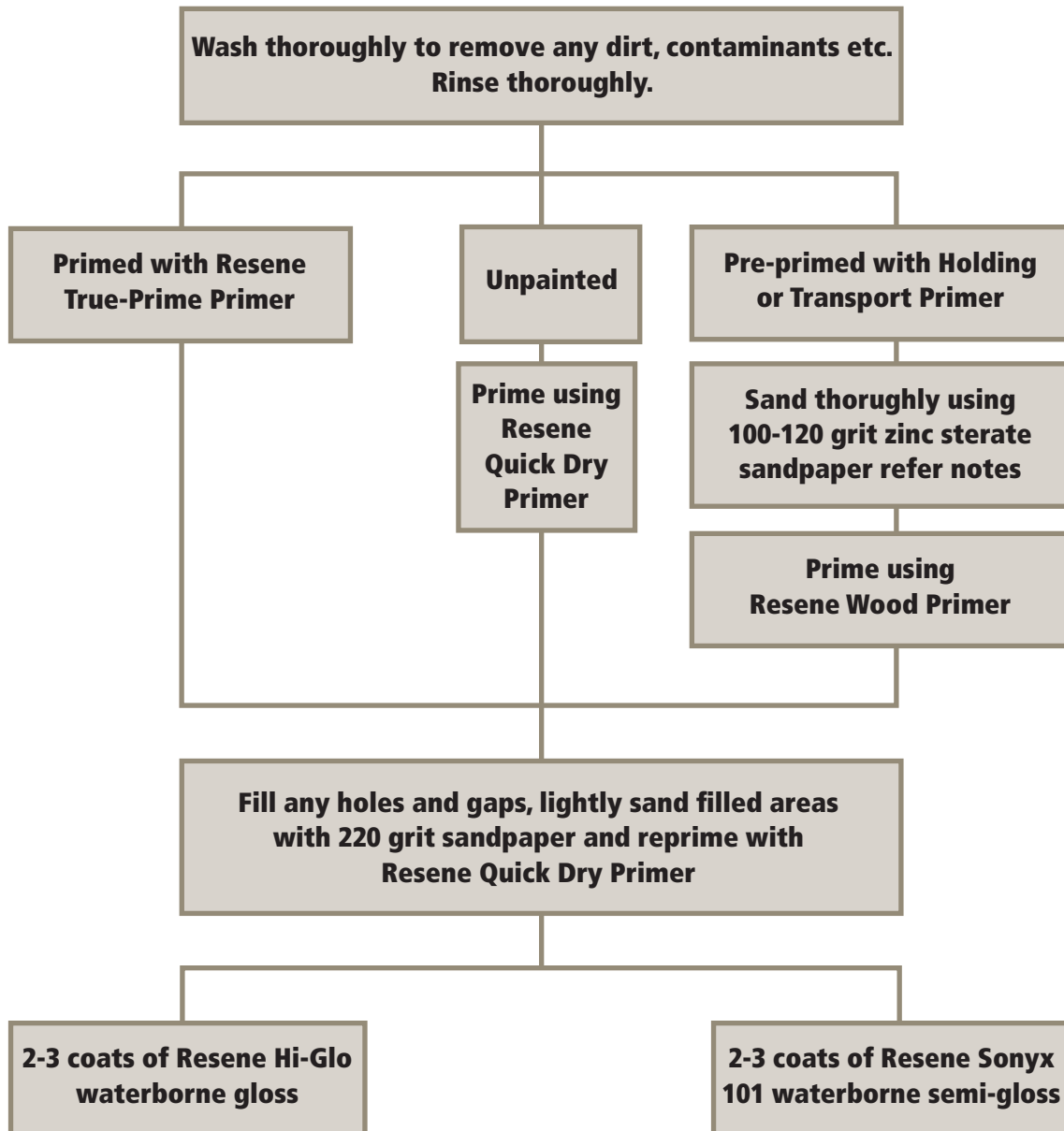
When it comes to applying waterborne enamels to windows and joinery the Legend cutting in brushes either the 35mm or 50mm are ideal.

If an solventborne primer or Resene Super Gloss Enamel is going to be used then it is a good idea to purchase a second brush. This will save a lot of time cleaning out between oil and waterborne products. If spot priming, a lower quality 'professional' brush will be fine. However if you have a feature front door and you want the best possible finish then a 50mm or 63mm Premier Oval brush is recommended (see photo on left).





New timber and weatherboards



Also consider using



1. New timber and weatherboards

Notes:

- With the notable exception of Resene True-Prime the manufacturers of the primers used to pre-prime timber in NZ and Australia require that the timber is sanded and primed with an oil based primer – such as Resene Wood Primer. These pre-primers are thin, holding primers and only designed to provide temporary protection during the building process. **They should not be considered part of the coating system.**
- Unfortunately most are so poorly bound together that unless the primer is sanded off completely an oil based primer (as opposed to waterborne primer like Resene Quick Dry) will be needed to help stabilise the pre-primer and ensure a good base for future topcoats. Most paint failures on new exterior timber are due to the poor quality of these primers.
- As noted the exception is Resene True-Prime which was developed specifically to overcome the issue identified above. It is blue in colour but unfortunately this has been copied, so the only true indicator is if the required identification sticker has been left on site.
- There will always be dirt and other contaminants on timber surfaces and these must be removed before painting can commence. A thorough wash ideally with Resene Paint Prep and Housewash is recommended.
- It is always best to prime any holes or cracks **before** filling – large filled areas may need re-priming especially if Resene Sonyx 101 or Resene Hi-Glo is used.
- Bargeboards inevitably have more issues than weatherboards and often deteriorate quicker due to higher U.V. exposure and differing timber qualities. To help overcome this recommend a third topcoat. Three coats are also much better over sharp edges.
- We recommend either Resene Hi-Glo or Resene Sonyx 101. Apart from the gloss level there is no difference in long term performance between the two – although as a rule lower gloss paints are easier to apply so Resene Sonyx 101 has a slight application advantage. As a trend sales of Resene Sonyx 101 for use on weatherboards and exterior timber have increased substantially over the past five years.



Key accessories

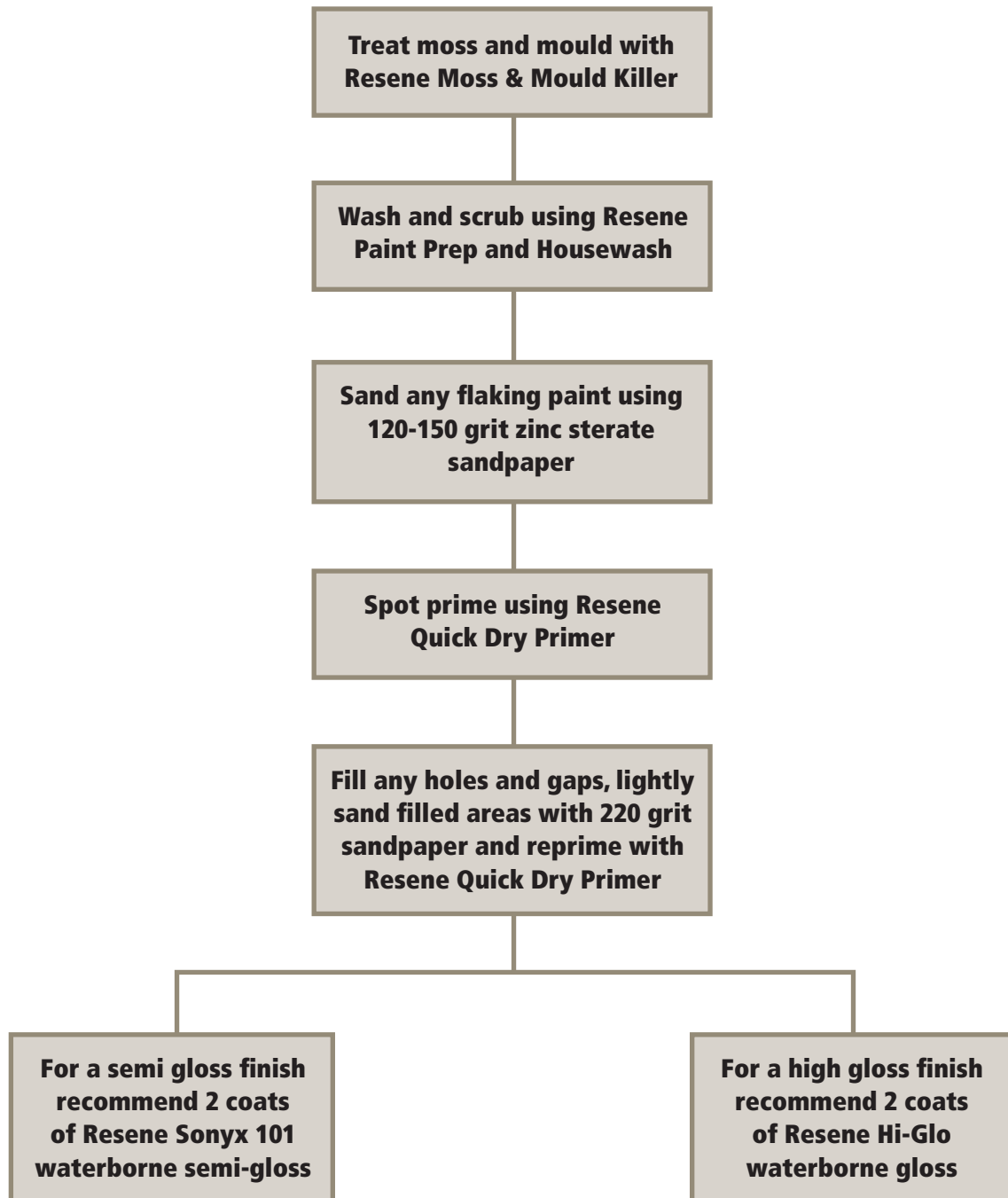
- Resene Paint Prep and Housewash
- A good quality brush is recommended
 - 75-83mm Legend brush for men
 - 63-75mm Legend brush for women
- Contract filler for any cracks or nail holes
- 120 grit zinc sterate sandpapers for preparing transport primers and 180 grit for sanding fillers etc.
- Paint pot to decant into if using 10 litre pails

Add ons

- Drop sheets
- Resene Resene Hot Weather Additive for hot dry conditions
- Sunscreen
- Sanding blocks
- Painter's gloves (good for sanding and painting)
- Turps for Resene Wood Primer
- Resene MoulDefender



Painting timber and weatherboards in good condition



Also consider using



2. Painting timber and weatherboards in good condition

Notes:

- Resene Hi-Glo, Resene Sonyx 101 and Resene Lumbersider are formulated using costly adhesion promoters so they will adhere exceptionally well to aged paints, including old enamels without the need for extensive sanding of otherwise sound paints.

As an indication of their adhesion properties Resene Hi-Glo and Resene Sonyx 101 can be applied directly to weathered COLORSTEEL® (or COLORBOND®).

- However any loosely bound contaminants or mould on the paint surface must be removed before painting or the paint will not bond to the old surface.

As exterior paint ages it will succumb to constant U.V. attack and will slowly deteriorate, with the top layer breaking down and 'chalking'. The 'chalk' is mostly loosely bound pigments of TiO₂ (Titanium Dioxide) for white paint.

- 'Chalk' and other contaminants need to be removed (de-chalking) and the most effective way is to use Resene Paint Prep and Housewash and wash and scrub the same way you would a car – scrubbing flaking areas and washing paintwork in sound condition. It is also very effective at loosening and removing salt.
- Any flaking paint should be scrubbed to remove the worst affected areas (a short bristled brush or Scotchbrite pad is ideal) and sanded using 120 to 150 grit zinc stearate sandpaper ensuring the edges are feathered before spot priming using Resene Quick Dry Primer.
- After sanding, prime the same day as night time dew will creep under the freshly sanded paintwork and the edges will curl and lift – plan the prep work so that this is achieved.



Key accessories

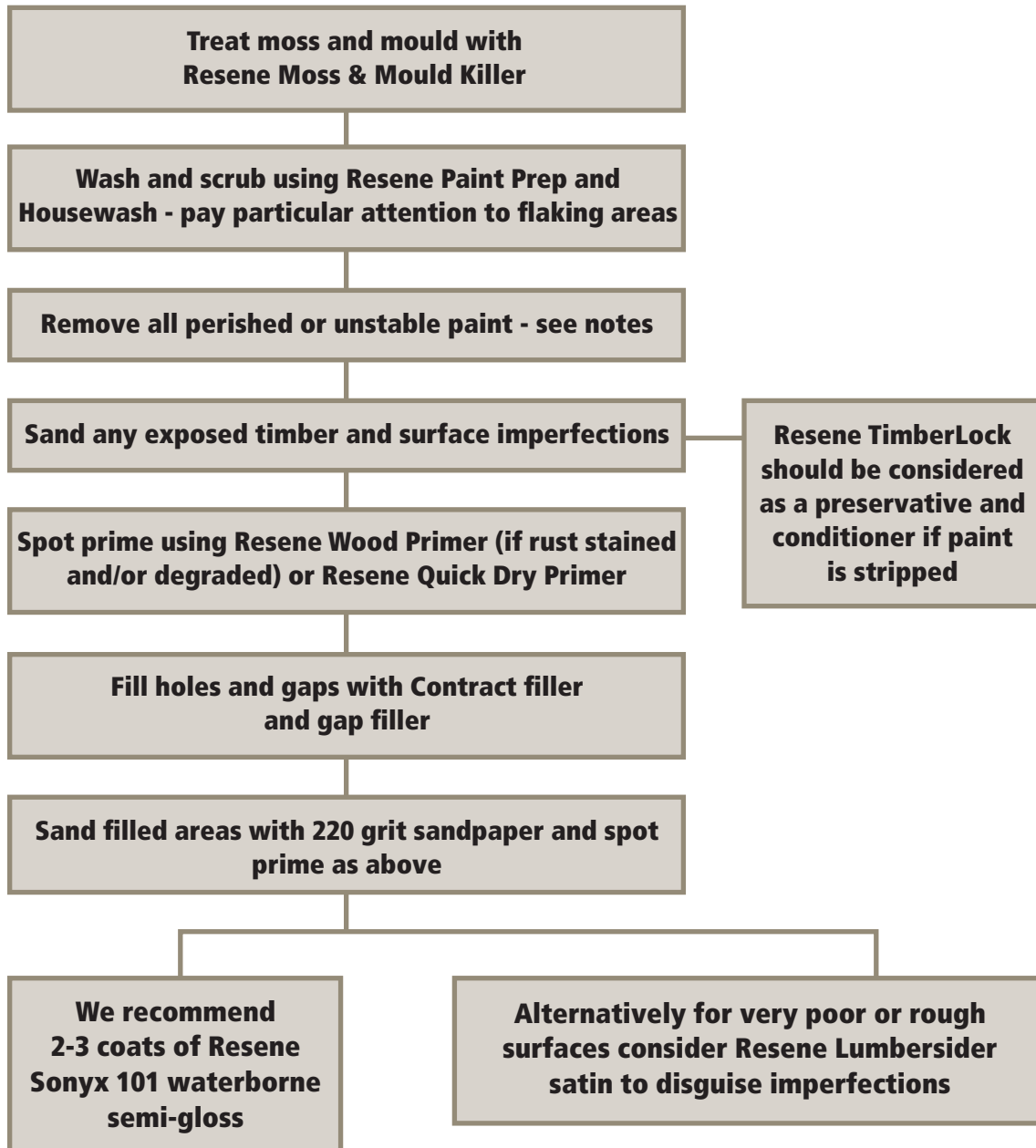
- Resene Moss & Mould Killer
- Resene Paint Prep and Housewash
- A good quality brush is recommended
 - 75-83mm Legend brush for men
 - 63-75mm Legend brush for women
- Contract filler for any cracks or nail holes
- 100 to 120 grit zinc stearate sandpapers for preparing and 180grit for sanding fillers etc.
- Paint pot to decant into if using 10 litre pails

Add ons

- Drop sheets
- Resene Resene Hot Weather Additive for hot dry conditions
- Painter dusting brush
- Sanding blocks
- Painter's gloves (good for sanding and painting)
- Resene MoulDefender



Painting timber and weatherboards in poor condition



Also consider using



3. Painting timber and weatherboards in poor condition

Notes:

- The paintwork will be characterised by lots of bare timber, crocodiled and flaking paint; there will likely be rusty nailheads, dirt, salt and other contaminants as well as moss and mould especially on the South side.
- While waterblasting will remove paint it is likely to 'gouge' the timber and isn't as effective as Resene Paint Prep and Housewash at de-chalking and removing contaminants
- Badly damaged and unstable paint needs to be removed. Burning off with a hot air gun is very slow which is why most professional painters use a mechanical stripper or linbide scraper, which is remarkably quick at removing poorly adhered paintwork although there is the risk of gouging the timber. It is also tedious and unpleasant work although innovative products such as the 'Sea to Sky' stripping range are proving popular as they are simple and safe to use.
- Resene TimberLock is ideal for bare timber as a surface pre-treatment and performs a similar function to Sureseal's on old powdery surfaces. Use when you believe paint will need to be stripped – especially on the North and North East elevations of a home.
- Treat nailhead corrosion.
- The paint may well contain lead, which we are happy to test for. If the test is positive then you will need to take precautions including ensuring nearby soil isn't contaminated and that lead in sanding dust isn't ingested.
- After sanding, prime the same day, as night time dew will creep under the freshly sanded paintwork and the edges will curl and lift – plan the prep work so that this is achieved.
- The prepared surface will have repaired cracks, old paintwork and new freshly primed timber it will be less than perfect when compared to new weatherboards.



That is why we recommend Resene Sonyx 101 over Resene Hi-Glo, as its lower gloss will not highlight imperfections in old timber and paintwork or Resene Lumbersider if it is particularly rough.

Key accessories

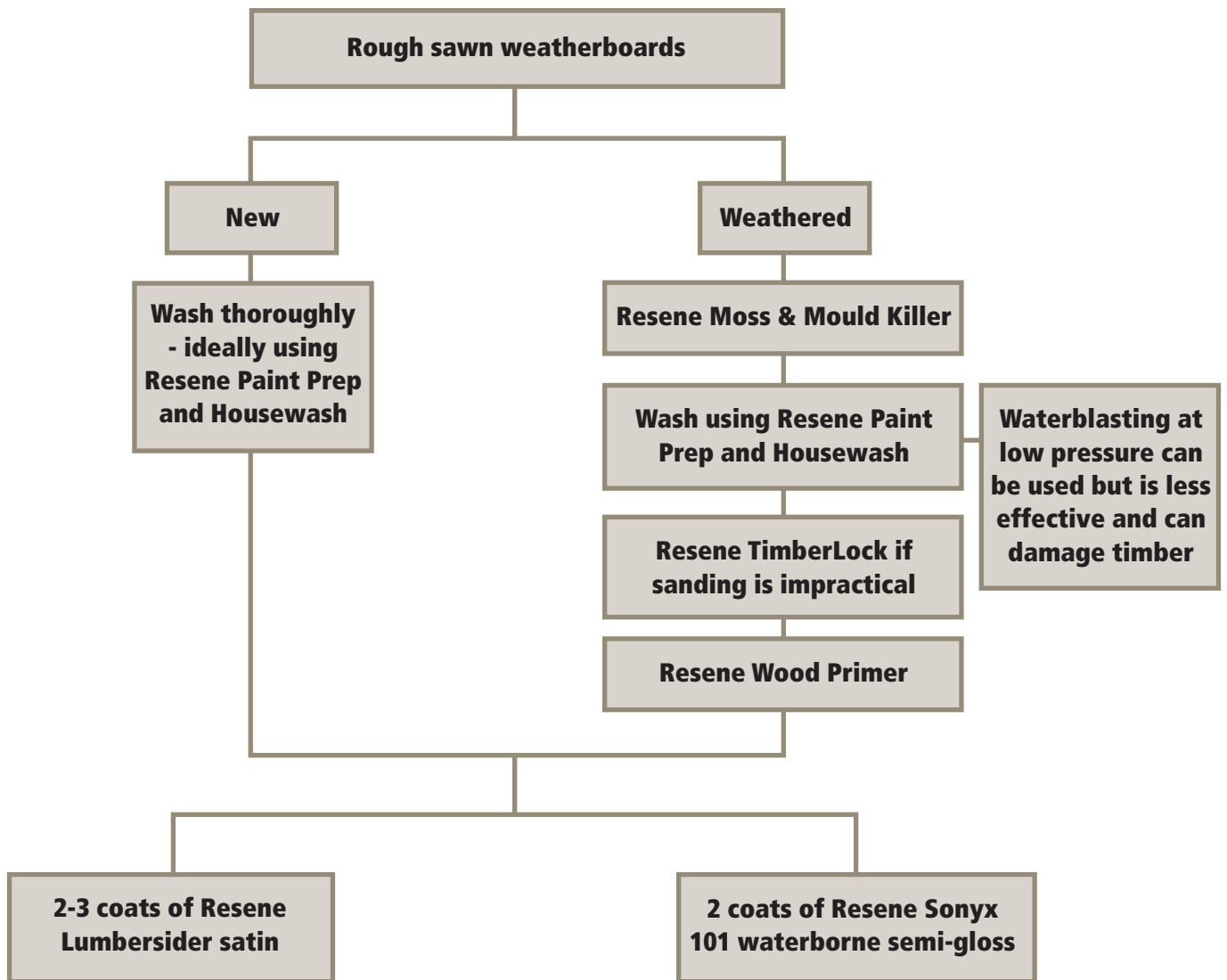
- Resene Moss & Mould Killer
- Resene Paint Prep and Housewash
- A good quality brush is recommended
 - 75-83mm Legend brush for men
 - 63-75mm Legend brush for women
- Contract filler for any cracks or nailheads
- 100 to 120 grit zinc stearate sandpapers for preparing and 180grit for sanding fillers etc.
- Paint pot to decant into if using 10 litre pails

Add ons

- Drop sheets
- Resene Hot Weather Additive for hot dry conditions
- Painter dusting brush
- Sanding blocks
- Painter's gloves (good for sanding and painting)
- Linbide scraper
- Resene TimberLock
- Resene MoulDefender



Rough sawn and band sawn timber



Also consider using



4. Rough sawn and band sawn timber

Notes:

- It is rare to find rough sawn timber used on new homes, however it was used extensively on older homes including many historic styles. Today you are most likely to see it used for fencing, sheds and pergolas.
- Unpainted rough sawn timber will use 30-40% more paint than flat sawn (or smooth) board.
- Given most rough sawn is used for fencing it is probably unrealistic to expect three coats (either three of Resene Lumbersider or Resene Quick Dry primer plus two of Resene Lumbersider) to be applied. Mostly two coats of Resene Lumbersider will suffice.
- Depending on the profile rolling with a Long Reach or 180mm No. 2 (or No. 3) roller can be very effective.
- Nails are usually left flush with the surface (as opposed to being punched and filled) and are simply painted over.
- Old, grey and weathered rough sawn timber is not easily sanded so Resene TimberLock should be used in lieu of sanding before applying two coats of Resene Lumbersider.
- As an alternative to Resene TimberLock and Resene Lumbersider for greyed rough sawn (or Resene Lumbersider for new timber) use Resene Woodsman after killing mould and washing clean.
- Due to the rough profile we use Resene Lumbersider, which has the added benefit of being self priming, although Resene Sonyx 101 is also an option if a more cleanable surface is required – especially over old painted band sawn timber.
- If repainting refer to flowcharts 2 and 3 for preparation advice.



Key accessories

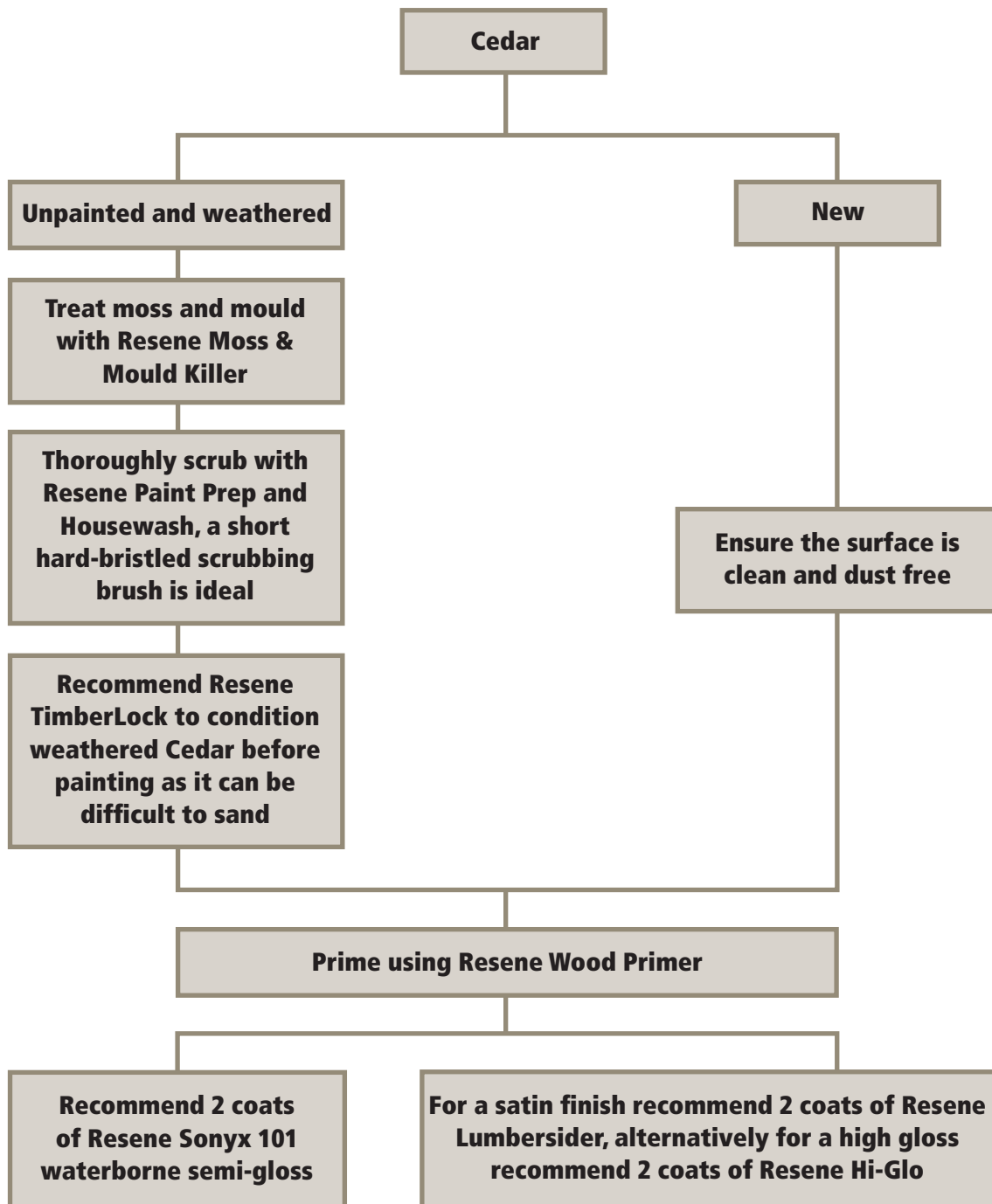
- Resene Moss & Mould Killer
- Resene Paint Prep and Housewash
- A good quality brush is recommended
 - 75-83mm Legend brush for men
 - 63-75mm Legend brush for women
- Paint pot to decant into if using 10 litre pails

Add ons

- Drop sheets
- Resene Hot Weather Additive for hot dry conditions
- Sunscreen
- Painter's gloves (good for sanding and painting)
- 180mm no. 2 roller, tray and handle
- Resene MoulDefender



Cedar weatherboards and timber



Also consider using



5. Cedar weatherboards and timber

Notes:

- Cedar is a highly resinous timber which is also why it is so durable and able to be left to weather uncoated. However the resin will bleed through waterborne primers and paints including Resene Quick Dry (see photo). Resene Wood Primer is our only recommendation.
- Resene Waterborne Woodsman is not affected by the resin bleed and can be applied directly onto Cedar. Conditioning with Resene TimberLock, while a good idea before priming will **not** prevent the stain from leaching through Resene Quick Dry Primer.
- However, surface forming wood stains should be avoided however as the top layer of Cedar degrades quickly under U.V. attack resulting in the stain flaking off. Refer to Resene Help line if asked for a paint system to redo flaking stains on Cedar.
- Redwood is part of the same family as Cedar and while it is much less common for new or recently constructed homes it presents the same issues when painted.
- Cedar is a comparatively soft timber (more so than pine) and is easily damaged by waterblasting. Our only recommendation is to scrub or wash with Resene Paint Prep and Housewash.
- Aged grey Cedar can be painted but should first be conditioned with Resene TimberLock before priming and painting. Typically Cedar weatherboards are not smooth sawn and are difficult to sand and prepare. Resene TimberLock should be viewed as an alternative to sanding where the surface or texture of the timber makes it impractical.
- Flathead nails (including copper nails) are often used and left exposed rather than punched and filled and are simply primed and painted at the same time as the weatherboards.
- Cedar is easily painted and is an excellent substrate for paint (more so than pine for example) once painted repainting is straightforward the only real consideration is that any bare areas need to be spot primed with Resene Wood Primer rather than Resene Quick Dry.
- Resene Sonyx 101 or Resene Lumbersider suit Cedar more so than the high gloss Resene Hi-Glo due to the surface texture of the timber particularly quarter sawn boards. If repainting refer to flowcharts 2 and 3 and prime or spot prime with Resene Wood Primer.



Key accessories

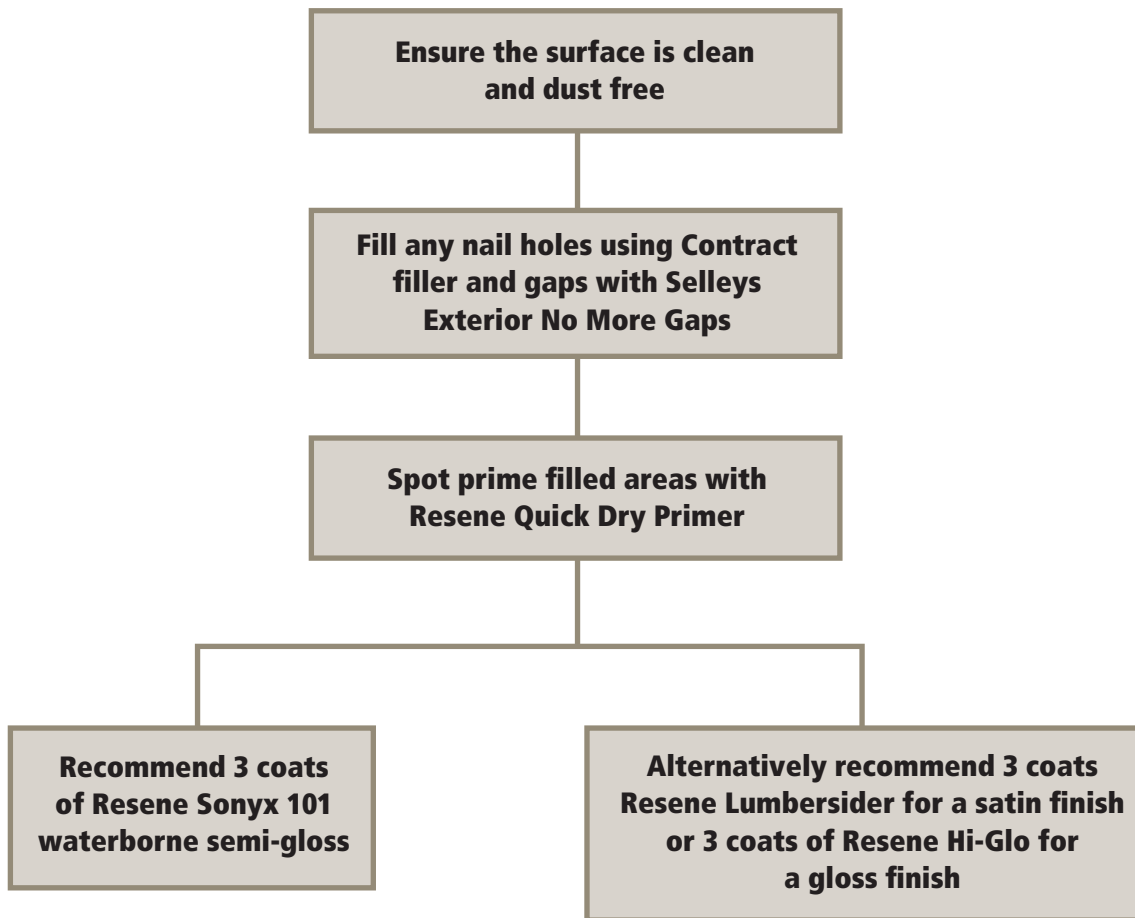
- Resene Moss & Mould Killer
- Resene Paint Prep and Housewash
- A good quality brush is recommended
 - 75-83mm Legend brush for men
 - 63-75mm Legend brush for women
- Contract filler for any cracks or nailheads
- Paint pot to decant into if using 10 litre pails

Add ons

- Drop sheets
- Resene Hot Weather Additive for hot dry conditions
- Painter dusting brush
- Turps for Resene Wood Primer/Resene TimberLock
- Painter's gloves (good for sanding and painting)
- Resene MoulDefender



Linea weatherboards



Also consider using



6. Linea weatherboards

Notes:

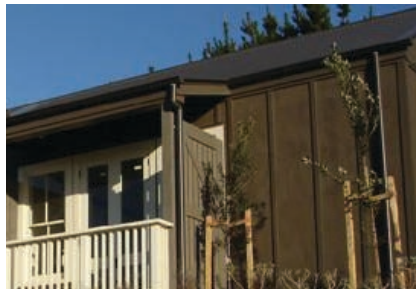
- Resene Sonyx 101 is our recommended topcoat for Linea. As there are often imperfections in the boards that Resene Hi-Glo will highlight. Resene Lumbersider is an option especially if the boards are in poor condition with lots of filled nailheads, joins etc or if a more rustic look is preferred.
- Linea weatherboards utilise innovative ceramic technology to produce a very durable, movement and moisture resistant substrate – and is an ideal substrate for painting as it overcomes many of the movement related issues inherent in timber.
- Its lack of movement and inertness mean that strong colours can be used without the risk of warping and shrinkage – problems common to timber weatherboards. As a result it is proving popular with designers and architects wishing to use stronger colours on their designs.
- While they arrive at a building site primed they will need spot priming for any nail holes, cut edges and any sanded areas.
- For maximum durability we recommend three topcoats are applied - this increases the coverage and therefore durability over sharper edged profiles.
- To extend colour durability still further a coat of Resene Multishield+ (flat, satin or gloss) can be applied (usually over Resene Lumbersider).
- Repainting older fibre cement weatherboards such as Hardiplank and Weathersider is usually straightforward. Our recommended topcoat is Resene Lumbersider. For preparation information and what to do if they contain asbestos refer to your Resene ColorShop.

Key accessories

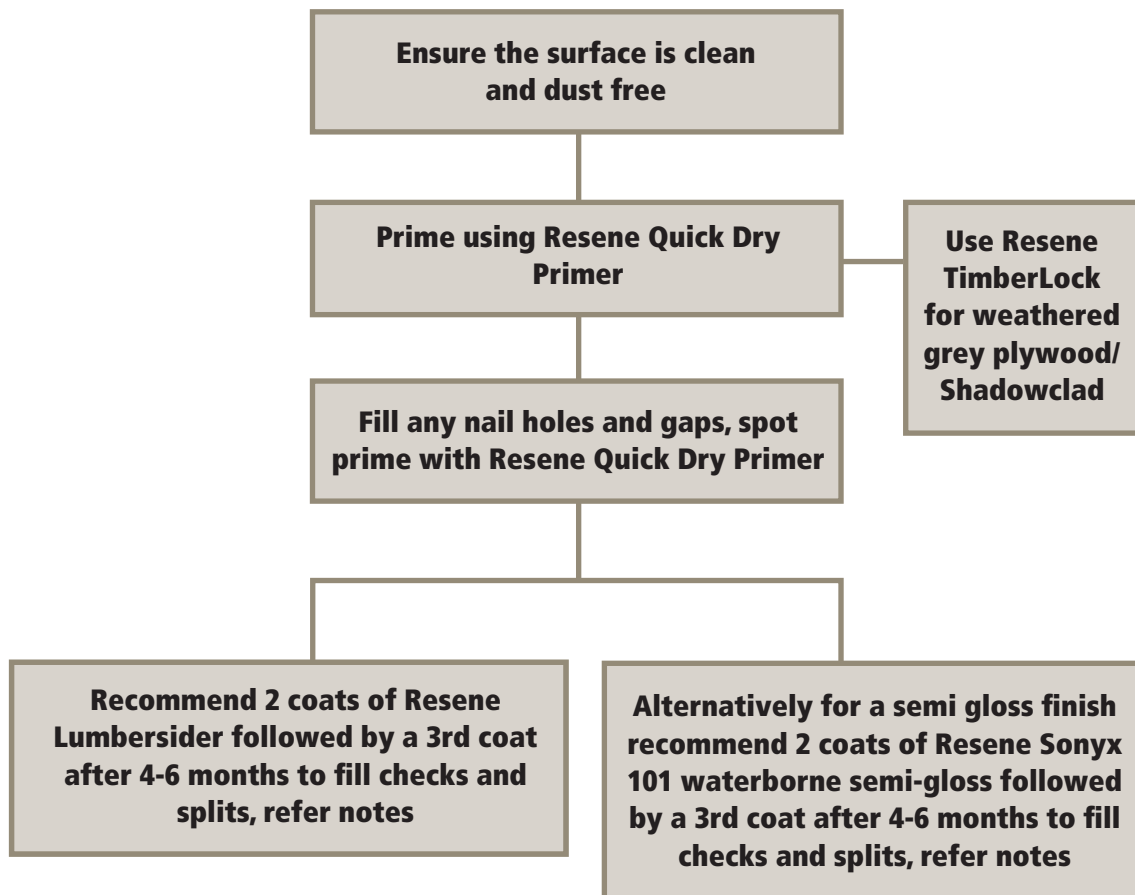
- Resene Paint Prep and Housewash
- A good quality brush is recommended
 - 75-83mm Legend brush for men
 - 63-75mm Legend brush for women
- Contract filler for any cracks or nailheads
- Exterior No More Gaps
- 220 or 180 grit zinc stearate sandpaper for sanding fillers etc.
- Paint pot to decant into if using 10 litre pails

Add ons

- Drop sheets
- Resene Hot Weather Additive for hot dry conditions
- Painter dusting brush
- Sanding blocks
- Painter's gloves (good for sanding and painting)
- Resene MoulDefender



Shadowclad and plywood



'Use paint colours with a light reflectance value of 40%-100% to meet the 50 year durability requirement of the NZBC to prevent potential problems such as face checking. The use of 'Resene Cool Colour Technology' can increase the range of dark colours (LRV <40%) which can be used on the substrate and may be acceptable to the local Territorial Authority as an 'Alternative Solution'.'

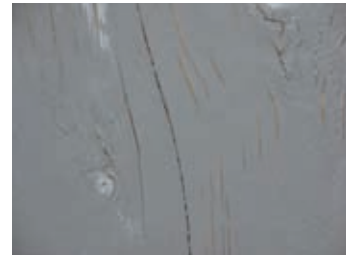
Also consider using



7. Shadowclad and plywood

Notes:

- Shadowclad is a form of plywood and behaves in a similar manner. It is manufactured by Carter Holt in Australasia. Most commonly it is designed to look like rough sawn vertical timber – it is promoted as being suitable as a bracing board as well as cladding. Typically flathead galvanised nails are used to fix the sheets and are simply painted over.
- Bracing refers to how a structure is stabilised against movement in strong winds and earthquakes.
- To comply with the NZ Building code Shadowclad must be painted or stained and not left to weather. Marine ply can however.
- It readily accepts paints and stains although due to an anomaly in the NZ building code when it is stained (with Resene Woodsman for example). It doesn't meet the bracing standards and additional bracing (and cost) is needed.
- Previously painted plywood and Shadowclad should be prepared and painted the same as timber weatherboards (refer to flowcharts 2 and 3).
- The most common form of plywood used exterior is Marine ply. Construction plywood is also frequently used but typically as a base for a cladding such as vertical Cedar boards and polystyrene - usually to improve bracing.
- Plywood and Shadowclad are manufactured from alternating thin layers of layered timber that are then glued together. The top layer is likely to split or check when first exposed to moisture and heat (a rainy day followed by a sunny day!). This will happen regardless of whether it is painted or stained first and is not a board fault.
- We recommend that either it is deliberately wet and allowed to check (allow approx. 24 hours) and then primed and painted - applying a third coat to the checked area or painting it straight away and allowing for a third coat to be applied at a later date once it has checked.
- The very best but hardly used paint system for ply is Resene X-200. For its crack filling and high build properties.
- A roller is an ideal way to paint plywood and the face of Shadowclad.
- The statement on the preceding page is from the Resene Specification system for Shadowclad and is included as a note to point out the requirement for light reflectance values over 40% unless Resene Cool Colours are used and the local council accepts the change.



Key accessories

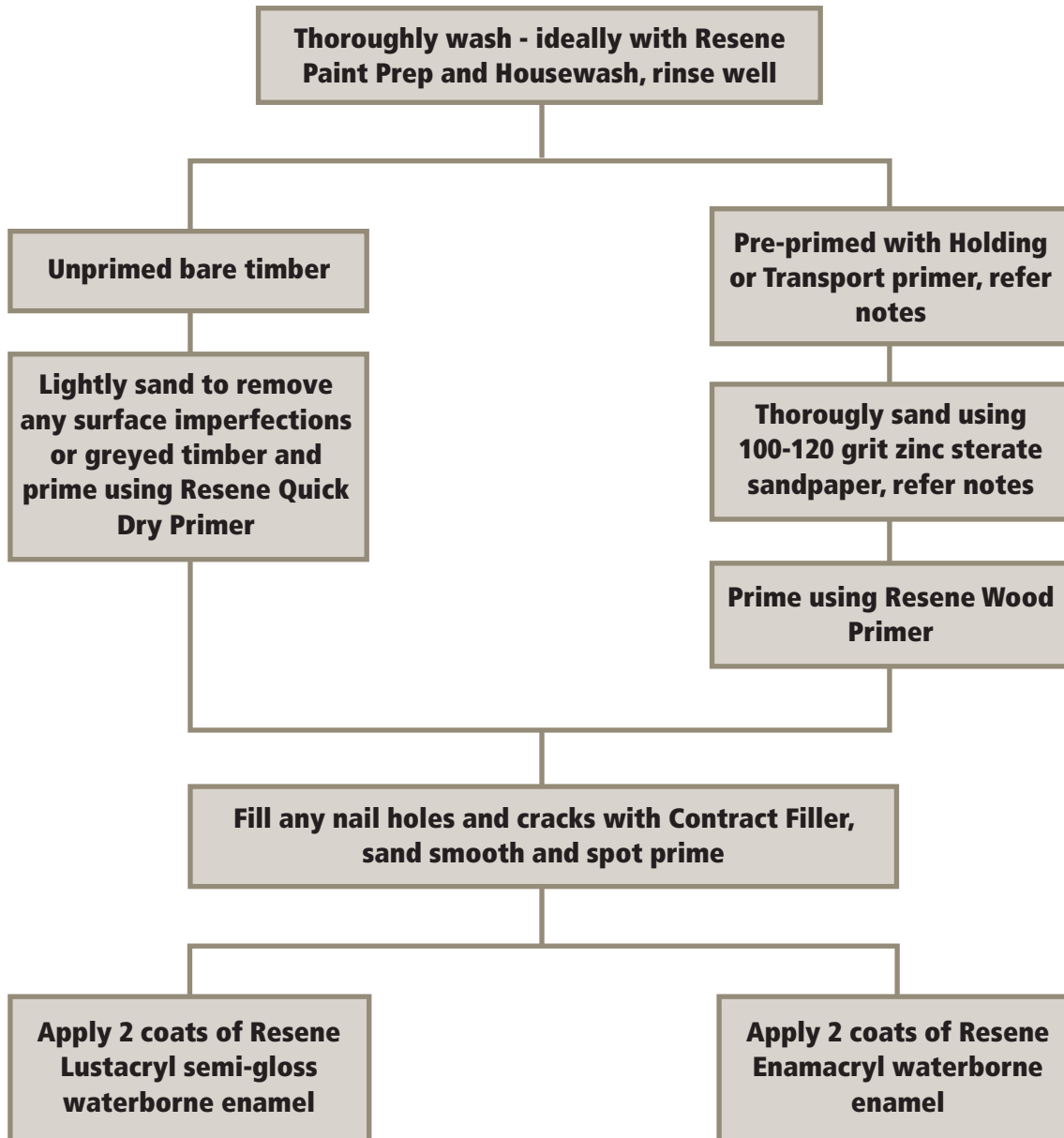
- Resene Moss & Mould Killer
- Resene Paint Prep and Housewash
- A good quality brush is recommended
 - 75-83mm Legend brush for men
 - 63-75mm Legend brush for women
- Contract filler for any cracks or nailheads
- 120 grit zinc sterate sandpapers for preparing and 180grit for sanding fillers
- Paint pot to decant into if using 10 litre pails

Add ons

- Drop sheets
- Resene Hot Weather Additive for hot dry conditions
- Painter dusting brush
- Painter's gloves (good for sanding and painting)
- Resene MoulDefender



New wooden windows, doors and joinery



Also consider using



8. New wooden windows, doors and joinery

Notes:

- Most new windows come pre-primed and are coated in the same pre-primers as weatherboards. Unfortunately the same quality issues also arise – refer to the section on new weatherboards.
- If windows are puttied (as opposed to using a timber bead) wait until it is firm to touch before proceeding to the painting stage – usually after 10 days, unless a synthetic fast drying putty has been used.
- It is important to paint the top, bottom and inside edges of the window to ensure a good moisture seal and help reduce swelling. **We strongly recommend the full three coat system is applied to these areas.**
- Traditional full gloss solventborne enamels used to be our only recommendation for exterior joinery however because of the significant increase in U.V. resistance that the waterborne enamels have and their ease of application they are now preferred.
- A full gloss solventborne enamel can still be used – refer later flowchart, however the waterborne equivalent would be expected to perform better.
- While the basis of some debate we recommend that windows are completed before the weatherboards and that the edges or scribes are (see photo) painted the same colour as the window frames rather than the weatherboard colour if different.



Key accessories

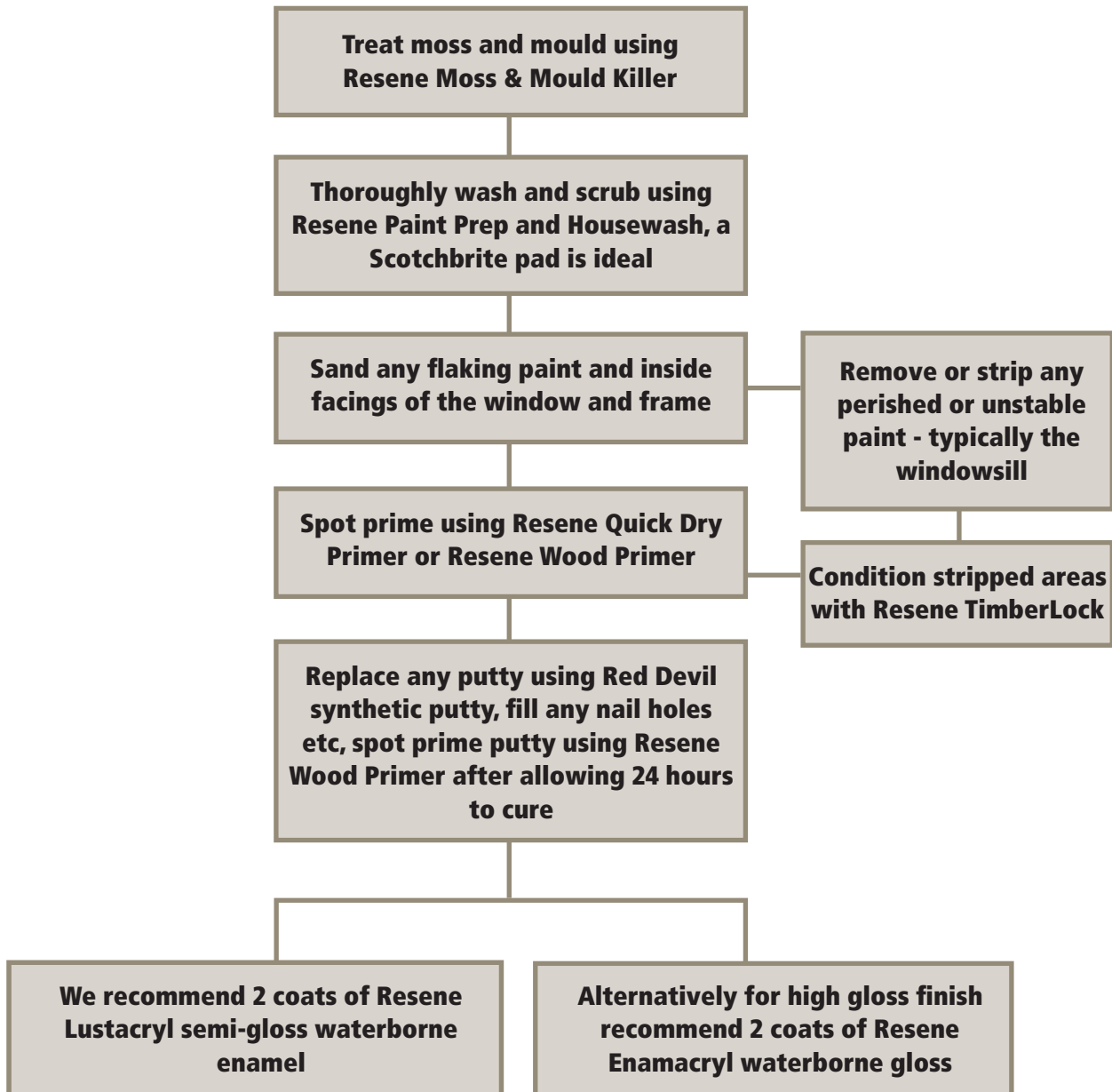
- Resene Paint Prep and Housewash
- A good quality brush is recommended - 35 or 50 mm Legend Cutting in brush
- Contract filler for nail holes
- Exterior No More Gaps to seal edges
- 120 grit zinc stearate sandpaper for preparing, transport primers and 180 grit for sanding fillers etc.
- Paint pot to decant into
- Scrapper to remove excess dry paint from window
- Resene Galvo-Prime (500ml is usually enough) for galvanised flashings

Add ons

- Drop sheets
- Resene Hot Weather Additive for hot dry conditions
- Masking tape
- Turps if Resene Wood Primer is needed
- Painter's gloves (good for sanding and painting)
- Resene MoulDefender



Repainting wooden windows, doors and joinery



Also consider using



9. Repainting wooden windows, doors and joinery

Notes:

- The best way to wash and prepare windows is to use Resene Paint Prep and Housewash and **3M** scourer or Scotchbrite pad which is effective at reaching edges and recesses of windows.
- Although not always done, the top, internal and bottom faces of the window should be painted.
- Hack out and replace putty that has dried out and come loose – we recommend Red Devil or Bostik Synthetic putty as they can be primed within 24 hours with Resene Wood Primer and then painted with Resene Lustacryl or Resene Enamacryl (traditional putty needs to cure for two weeks).
- The inside faces will need sanding to 'de-gloss' them. Old enamel paint not exposed to U.V. light (the inside faces of windows and frames in particular) gets harder and more brittle over time and will need thorough sanding before painting. The exposed faces will need washing to 'de-chalk' if the paintwork is sound.
- Substrates that are exposed at a 45 degree angle to the sun are subject to twice the level of U.V. attack that a vertical or horizontal surface will. In the same way that our nose will get sun burnt more quickly than our cheeks. This is why the top edge of a window sill will deteriorate more quickly than other painted surfaces.
- We recommend Resene Lustacryl as its lower gloss conceals imperfections more effectively than the higher gloss Resene Enamacryl.

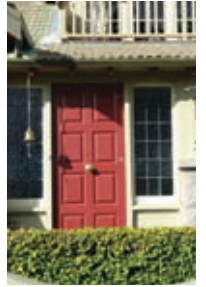


Key accessories

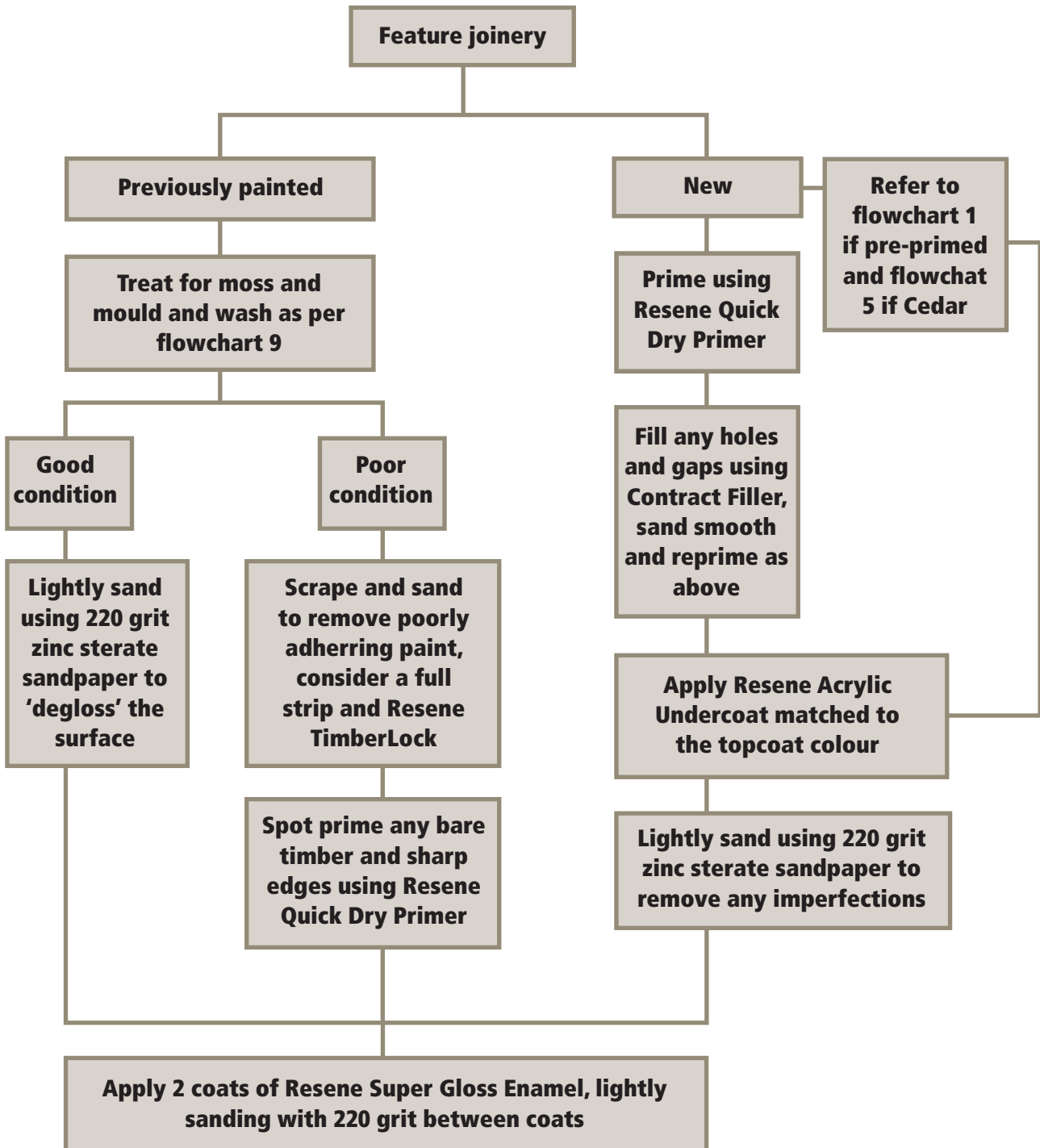
- Resene Moss & Mould Killer
- Resene Paint Prep and Housewash
- Scotchbrite pad
- A good quality brush is recommended - 35 or 50 mm Legend Cutting in brush
- Contract filler for any cracks or nailheads
- 100 to 120 grit zinc stearate sandpapers for preparing and 180 to 220 grit for sanding fillers etc.
- Paint pot to decant into
- Red Devil Putty and Putty Knife if needed
- Scraper and spare blades to remove excess dry paint from window

Add ons

- Drop sheets
- Resene Hot Weather Additive for hot dry conditions
- Resene Galvo-One for spot priming Galvanised Iron flashings
- Turps for Resene TimberLock, Resene Galvo-One or Resene Wood Primer if needed
- Painter's gloves (good for sanding and painting)
- Resene MoulDefender



High gloss feature doors and joinery



10. High gloss feature doors and joinery

Notes:

- Resene Super Gloss Enamel dries to a higher gloss and has slightly better flow than Resene Enamacryl and as a result has a smoother higher gloss finish. Many people prefer this look for feature elements of their home such as a feature front door.
- However Resene Super Gloss (and all solventborne paints) weathers and degrades more quickly than Resene Enamacryl, and will need to be redone sooner as a result – although as many front doors are relatively sheltered and set back from direct sunlight this can be less of an issue.
- For the 'very best gloss finish' apply two coats of Resene Super Gloss over either Resene Quick Dry Primer or Resene Acrylic Undercoat in a colour matched to the Super Gloss colour and lightly sand with 220 grit sandpaper to achieve a smooth surface before applying the final coat.
- Resene Quick Dry Primer and Resene Acrylic Undercoat have excellent sanding properties making them ideal as a base for high gloss finishes
- Resene Acrylic Undercoat can be tinted to most colours in the Resene Total Colour System and is an ideal base for strong colours. However it is not suitable as a primer for bare timber as it doesn't have the anti fungal and timber preserving properties that Resene Quick Dry Primer has.

Key accessories

- Resene Moss & Mould Killer
- Resene Paint Prep and Housewash
- A good quality brush is recommended
 - 50 or 63mm Eclipse is ideal
- Contract filler for any cracks or nailheads
 - 120 grit zinc stearate sandpapers for preparing, transport primers
 - 180grit for sanding fillers etc
 - 220 grit for finishing after second to last coat of Super Gloss
- Turps for Resene Super Gloss and cleaning
- Paint pot to decant into for ease of brushing

Add ons

- Drop sheets
- Painter's gloves (good for sanding and painting)
- Masking tape for handles, hinges etc

How much paint?

There are three factors which determine how much paint will be needed.

- The area in square metres that needs painting.
- What level of preparation is going to be needed? Will four litres of Resene Quick Dry Primer be enough to spot prime the windows and weatherboards of a home in good condition or is 10 litres a better option? Obviously the worse the condition the more preparatory products – sandpaper, primers etc will be needed.
- The colour scheme and how many colour changes there are. Complicated schemes with three or four colours typically use more paint.

Below are some conservative estimates based on typical homes and the condition of paintwork.

If you are taking paint to a more isolated location, such as a bach or farm, you may pay to take more paint to ensure you don't run short.

The paints needed for topcoats are similar for each case but the primer estimates change according to the surface conditions and preparation necessary.

Small homes, mostly 2 bedrooms around 150m ² on plan			
Prime all surfaces new homes	16	Litres	QD Primer*
Spot prime repaints good condition	4	Litres	QD Primer
Priming repaints poor condition	12	Litres	QD Primer
Top coats for weatherboards	30	Litres	Sonyx 101
Top coats for joinery and trim	12	Litres	Lustacryl

Average 3 bedroom home around 175m ² on plan			
Prime all surfaces new homes	20	Litres	QD Primer*
Spot prime repaints good condition	8	Litres	QD Primer
Priming repaints poor condition	16	Litres	QD Primer
Top coats for weatherboards	40	Litres	Sonyx 101
Top coats for joinery and trim	12	Litres	Lustacryl

Larger homes, around 200m ² on plan			
Prime all surfaces new homes	24	Litres	QD Primer*
Spot prime repaints good condition	10	Litres	QD Primer
Priming repaints poor condition	20	Litres	QD Primer
Top coats for weatherboards	60	Litres	Sonyx 101
Top coats for joinery and trim	16	Litres	Lustacryl

* Materials typical i.e. Resene Sonyx 101 – Resene Hi-Glo etc quantities given for wooden joinery of windows

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Aluminium joinery

We haven't covered painting aluminium joinery in the system recommendations and while it is more time consuming and difficult to prepare and paint it is relatively straightforward to do using the two pack Resene Uracryl.



Aluminium windows are generally painted when they become oxidised, dull and unsightly or when their colour simply doesn't work with the proposed colour scheme.

Detailed below is a typical specification for painting aluminium windows:

1. Carefully wash the aluminium with DevPrep – a specialist degreaser and deoxidising wash manufactured by Altex and available on request from Resene or direct from Altex.
2. Apply a coat of Resene Vinyl Etch Primer.
3. Apply two coats of Resene Uracryl 402 (semi-gloss) or 403 (high gloss)

Notes:

- We normally recommend a dark colour – the mitre joints will become very obvious when painted in a light colour as will the black rubber strip between the aluminium and the glass.
- Resene Uracryl is a two pack product (1 to 4 mix ratio) with a three hour pot life (it become unusable after this). However as the smallest available size is a 1 litre composite pack part mixing of the base and hardener may be needed.

Architects memo no. 54: October 1998

The problem of life on paint films

Paint films have to put up with an awful lot of abuse during their life times. Not only do they have to resist energy attack in the form of infra-red, visible and ultra violet radiation but also chemical attack from a host of industrial and household chemicals. Add to this, physical attack from wear and tear and one would think that that is sufficient abuse for the poor old film. But no - worse is to come.

Paints are also under attack from a ubiquitous life form - the moulds. Otherwise known as mildew, mould generally describes a mixture of fungi and algae, the spores of which are constantly in the air that surrounds us. On painted surfaces mould looks like dirt and frequently the two cannot be visually distinguished. The most common species are black but others can be brown or green. By wetting the surface and rubbing, mould will show up as slime.

The theorist may be interested in knowing that moulds seldom live alone on paint films but in a symbiotic relationship with enzyme producing bacteria. Further, that the substrate need not be the primary source of nutrient - airborne dirt provides a perfectly satisfactory diet.

The practical person, however, should be aware that mould is a major cause of paint disfigurement. It destroys the paint's fresh, clean appearance and if left unchecked shortens the life of the paint

film. Unless removed within a few months of its appearance, mould penetrates the body of the existing film and once firmly established, will grow through subsequent paint coatings, impairing adhesion and ruining the appearance of the paint work.

The practical person must also be aware that mould will only grow in damp areas or where the relative humidity is greater than 70%.

Most high quality paints contain a fungicide but its killing ability is finite and the mould will eventually take over. The only way to fix a mould problem permanently is to remove the source of moisture and/or provide adequate ventilation.

Fungicidal washes do, however, have a place in the scheme of things. They can be used as a cosmetic treatment to clean up mould-infested surfaces where provision of adequate ventilation is not feasible. But far more importantly they must be used to sterilise old surfaces before repainting.

It is particularly important to include such a treatment in the specification where the surface to be coated is not smooth. Surface roughness, which allows dirt to accumulate, will invariably harbour mould. Weathered, unpainted concrete is typical of such a surface.

Fungicidal washes based on sodium hypochlorite (such as Resene Moss & Mould Killer) are extremely effective at killing mould with the added benefit of bleaching the moulds clean. It is however important to realise that they have no residual effect; any ongoing effect must be provided by the paint itself or further maintenance.

As stated earlier, most high quality paints contain fungicide at a level designed to cope with average exposure. It is accepted that there are some occasions and micro climates where additional defence may be needed. As an experiment Resene is introducing into its Resene ColorShops an acrylic paint compatible concentrated blend of fungicides and algicides under the brand 'MoulDefender'. This product is designed to be added, at point-of-sale, when a particular need for extra protection is identified.

Architects memo no. 83: May 2006

Prima facie

At first sight, the concept of having a single paint that acts as its own primer and topcoats is appealing. It makes specifying easier and certainly makes the logistics of the painting contractor simpler.

The more traditional 'systems' approach is predicated upon the belief that the idiosyncrasies of the substrate need to be addressed with whatever technology may be appropriate and that the burden of also meeting the requirements of a topcoat (colour, cleanability, durability etc) will detract from meeting the specific substrate needs.

There is one school of thought (your scribe's actually - but there may be like-minded technologists out there) that claims that the primer is pre-eminent and that the topcoat's role is merely to

protect this primer. Some designers would disagree but it is indisputable that there will never be a cataclysmic failure of a paint system as long as the primer remains in sound condition.

Not all substrates are equally demanding. A fully cured, autoclaved fibre-cement sheet is a relatively undemanding surface and decorative topcoats are perfectly satisfactory when applied direct to the surface. Poured concrete, however, can present a variety of problems such as high alkalinity, undercured friable areas and highly glazed areas, which may demand more specialist pre-treatment.

To push the point further, no-one in their right mind would expect to protect mild steel in a marine environment simply with decorative topcoats.

Typically primers are a different colour to the topcoat and this gives a strong incentive to apply an adequate amount of topcoat in order to obliterate the primer colour. The increasing popularity of self-priming systems has been used as an excuse to simply drop the primer completely and move from a three to a two coat system.

It is axiomatic that if any coat is contributing to the hiding power of a system it must be interacting with light - visible and, invariably, the damaging ultra violet. The concept of the protected primer, discussed in the third paragraph, is clearly not happening. But, I hear you say, 'is this not a cunning plan to get us to use more paint and thus boost your profits?!'

Not so! Numerous exposures, particularly over timber, clearly show that one achieves more than double the durability with a three coat system than with only two coats. Over the medium term, three coats actually decreases paint usage.

One learns never to say never and also to expect the unexpected when it comes to human ingenuity. However, surveying the current state of the art technology, we believe that better long term value is delivered by a well designed systems approach.

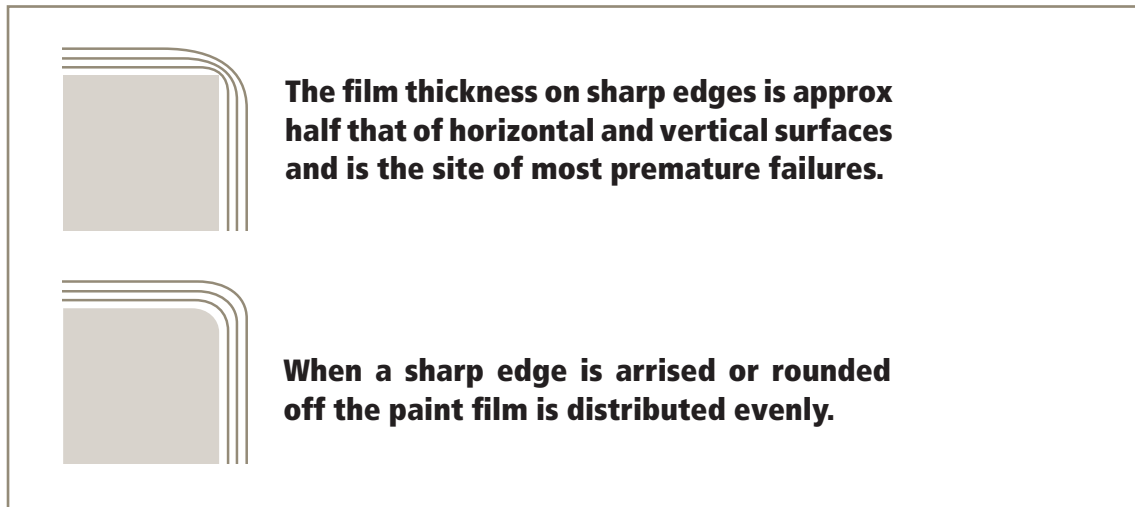
Arising edges

Paint naturally pulls away from sharp edges (all liquids will). This phenomenon means that the paint film is thinner on the edges of windowsills, frames and some weatherboard profiles than on the vertical or horizontal face.

Ultimately this is where paint will fail first (see photo).

To help overcome this we recommend that sharp edges are sanded so the edge becomes rounded – this is called arising. It changes the surface tension of the paint being applied ensuring a more even application and film thickness.



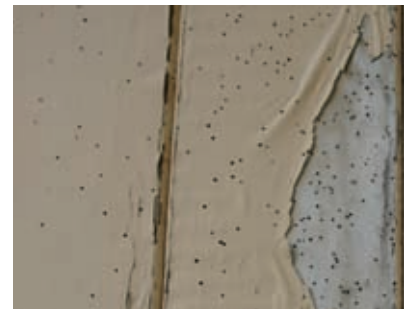


Borer damage

Many older New Zealand homes show signs of Borer damage.

This is because the native timbers used were not treated to guard against both Borer and fungal attack.

Exotic timbers, such as radiata pine, are also very susceptible to both mould and insect attack and must be treated against both.



Often Borer holes, where the adult Borer beetle emerges from the larval stage by literally 'boring' or eating their way out of the host timber, appear. (Rusticated weatherboards are particularly susceptible).

There are specialist treatments available to kill Borer (including saturating the affected area with a strong solvent like Kerosene or employing a specialist) however the visible holes will need to be filled before repainting.

Resene Thixalon is a very thick high build paint normally used on concrete is ideal for this (more than one coat may be needed however) although it will tend to have more obvious brush and roller marks so the lower gloss finish. Resene Lumbersider is the recommended topcoat.

Chalking

Chalking occurs when the top layer of the paint film erodes under damaging U.V. light.

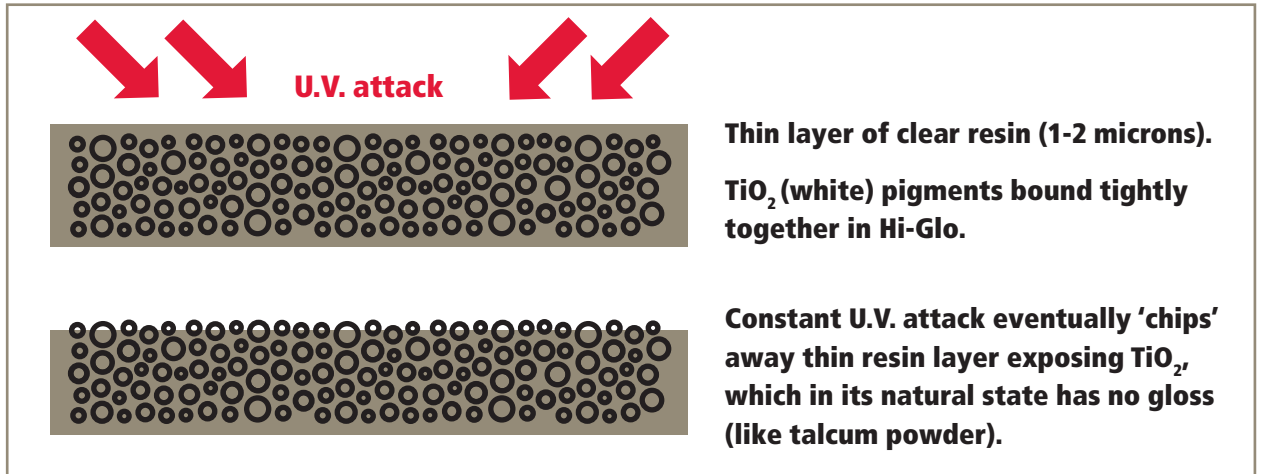
The top layer of fresh paint consists of a thin resinous film and as it erodes the pigments become exposed (wiping your hand across an aged paint surface will collect the oxidised paint residue or chalk).



Resene ✓ Popular Paint Systems

Exterior timber

Paints with a higher gloss level usually have more surface resin film than lower gloss paints and mostly are slower to erode and therefore chalk than lower gloss paints. This is often the main reason interior paints and coatings fail rapidly if they are used outside.



'Chalking' is poorly bound to the rest of the paint film and must be removed.

Simply hosing will not achieve this (just as hosing your car will not shift dirt).

Waterblasting is inconsistent and inefficient. The most effective method is to wash using Resene Paint Prep and Housewash as it was developed to shift chalk and paint residues.



Resene Paint Prep and Housewash has successfully 'de-chalked' the left hand side of this heavily oxidised panel.

Colour

Painting the exterior of your weatherboard home is an opportunity to improve the value of what for most of us is our biggest investment.

It is also an opportunity to change or modernise the colour scheme and to place your own mark on your home.

For many people the prospect of a new colour scheme or even moving away from a tried and true scheme can be very daunting. However it isn't difficult to achieve a good colour scheme and importantly if colour is used well it will not only add value to the home but equally can be very satisfying.

Research by real estate firms show that houses with stylish colour schemes sell more quickly and for higher amounts than structurally identical 'white' houses – anyone who has watched one of the DIY or 'Sell my Home' shows on TV can attest to this.

Put another way it's often said that spending \$1.00 on painting will add \$10.00 to the value of the house.

Cool Colours

Resene Cool Colours are available in a number of different products including Lustacryl, Enamacryl, Hi-Glo, Sonyx 101 and Lumbersider. Essentially they are the same colour but made using a Resene Cool Colour base and/or Resene Cool Colour black tinter.

Any colour that is formulated using black (B) tinter can be reformulated using the Resene Cool Colour black tinter – obviously it is sensible to focus on deeper shades – greys in particular rather than light or pale shades.

The solar light spectrum includes about 46% infra-red heat radiation (along with visible and ultraviolet light). The Resene Cool Colour technology reflects infra-red heat rather than absorbing it as standard colours with black in would.

Resene Cool Colours absorb less infra-red heat while the colour is essentially unchanged or the same as the standard colour (with the exception of jet or pure blacks due to the slight brown undertone of the cool black tinter).

It is ideal for any building including weatherboard homes where dark colours (those containing black) are selected or being considered.

See the Resene Cool Colour brochure for more information.

Fading

A paint colour will fade (or bleach out) over time under constant U.V. attack. How quickly this occurs is dependant on the quality and make-up of the colour. In the paint industry this means how good your tinters or colorants are.

At Resene we use high strength automotive grade pigments in our tinters. This is one reason why we enjoy such a strong reputation for colour and quality. Our colours do not fade as quickly as our competitors so they last longer.

However, different tinters have different levels of U.V. resistance. For example F tinter is made using red oxide, a naturally occurring pigment that has been used since cavemen adorned their caves with ancient drawings. It is very U.V. resistant. Our M or Magenta tinter while being significantly stronger and more U.V. resistant than others is an inorganic (or man made) tinter and simply can't be made any stronger with existing colour technology. So it will fade quicker than F for example.



However much of what is considered 'fading' is actually the erosion of the top layer of what started out as gloss or semi-gloss paint and is in fact chalking (see above) or the difference between the pigments that make up the colour in their wet state compared to their dry state.

Many old roofs 'miraculously' regain their colour when it rains!

However even using the toughest paint systems, pigments will over time fade or bleach out. Often the more U.V. resistant colour will remain while the weaker pigment will fade or bleach out.

If colours are susceptible to fading then they would benefit by being over coated with Resene Sun Defier. While those that have good durability would benefit from a coat of Resene Multishield+ or Resene F-10 glaze to slow down chalking effectively protecting the top layer of the paint (see 'Chalking' and also Architectural Memo No 47 – 'More On Durability' and Memo No. 71 'Weatherbeaten').



Filling and stopping timber

Putty is a mix of linseed oil and ground calcium carbonate (whiting) and is a traditional compound used for filling nail holes and cracks in timberwork and particularly for bedding glass into the frame rebates of timber sashes.

Putty is slow drying and care is needed to prime and/or seal timberwork before stopping with putty because the raw timber will rapidly absorb the linseed oil from the putty causing it to shrink and become loose and crumbly.

It is important to allow sufficient time for the putty to set, particularly when used as a glazing compound. The exposed putty should be primed with Resene Wood Primer and the paint film taken slightly onto the glass face to ensure a weather seal.

However we recommend Red Devil glazing compound when replacing missing or failing putty as it can be overcoated after 24 hours with Resene Wood Primer and has most of the benefits of traditional putty. It has similar handling characteristics and is easily knifed into position on glazing bars.

For most filling jobs where the surface is to be painted, putty has been largely superseded by cellulose based fillers such as Resene Easyfill, Permafil and PAL Contact Filler which are all ready mixed, easy to use, fast drying and simply require a light sand prior to over coating.

For large holes and timber defects two pack fillers such as Resene Gelled Epoxy Filler and Turbo Builders Bog (which is a polyester like fibre glass) should be recommended. These fillers dry by chemical reaction, do not shrink and can be used for large holes where ordinary fillers would tend to slump. Both, however, are very hard when cured and care is necessary to stop as neatly as possible because sanding away any excess afterwards can become tedious!

Putty is better than cellulose based fillers for filling nail holes after rusty nails have been punched back when preparing for repainting because the linseed oil is a natural anti-corrosive compound.

Also putty continues to be particularly useful when stopping and filling timbers that are to be finished in clear finishes and pigmented stains because putty can be easily coloured to match the grain colours.

This is undertaken by using small additions of Resene MPS Stainers usually Yellow Ochre, Sienna, and Amber to putty, a messy job best done on a sheet of newspaper and mixed by hand exactly as one would a scone mix. Some dry Plaster of Paris is used as a 'dusting' and to adjust the consistency of the mixed putty. Basically three shades are made up and then mixed proportionally to obtain the suitable timber shades.

Such stoppings are usually well matched and imperceptible on the finished work and the messing around to establish a suitable working medium is extremely worthwhile.

The ready mixed 'plastic wood' type fillers are often just 'off' in their colour matches and not easily adjusted.

Flashings

Windows need to be flashed to prevent water ingress, usually with galvanised iron flashings that run under the weatherboard and down to the top of the window itself.

The galvanised iron or Zinalume needs to be treated in the same way you would a galvanised iron roof. Washed down and primed using either Resene Galvo-Prime if new or Resene Galvo One if weathered. If heavily rusted it should be replaced.



Maintenance

Well prepared and painted weatherboards and windows will last many years, but they will last much longer if they are maintained between repainting. For most weatherboard homes with wooden windows this simply means a regular six monthly wash down either by a professional cleaning contractor or by the homeowner themselves.

Resene Paint Prep and Housewash is ideal for this especially in combination with a good quality telescopic cleaning brush. Dirt and grime will usually shed from Resene topcoats when it rains keeping the home looking clean, however sheltered areas such as under eaves and the top of some weatherboards will need cleaning.

Also as the paint surface ages it will start to chalk and will stain more easily. The surface will be rougher as a result and dirt and dust will not rinse off as easily, so a wash – in the same way you would a car is essential to keep the house looking good.

Resene ✓ Popular Paint Systems

Exterior timber

South facing and areas shaded by leafy trees will grow mould in time and will need treating with either Resene Moss & Mould Killer before washing or Resene Deep Clean (if the homeowner plans to simply apply and leave it).

The paint system and the interval between repainting will also be extended as a result of ongoing maintenance.

Some areas of a typical home will tend to deteriorate at a quicker rate than others. Windowsills are usually the first to go (typically fading, cracking and some flaking may occur).

This is due to the angle most windowsills present to the sun (around 45°).

A surface exposed to the sun at a 45° angle will attract twice the damaging U.V. light that a vertical or horizontal surface will – this is why your nose will usually get sunburnt before your cheeks.

Sills are often painted in strong colours and this can also cause problems as additional heat is drawn into the surface which can destabilise the timber and old coatings resulting in flaking.

This really isn't as bad as it sounds as homeowners can simply repaint their windowsills more frequently (say every four or five years). Also the availability of Resene Cool Colours in Enamacryl and Hi-Glo will help.



Matai and Totara

These two New Zealand hardwoods were extensively used on early homes – particularly window joinery (see photo to the right). Their high resin content retards the drying of traditional oil based primers like Resene Wood Primer (several days if at all!) This made painting very difficult until the introduction of Resene Quick Dry Primer which was initially sold as a primer for Totara and Matai.



Pre-primed timber

Factory applied primers and pre-primed timber have a chequered history in both New Zealand and Australia.

Mostly the primers used are poor quality and really should be considered as a pre-primer only. Basically a transport or holding primer developed to prevent timber from degrading when stored in the timber yard or joinery shop as well as in transit and through the construction process.

The primers deteriorate quickly in U.V. light and will need thorough sanding (to remove the poorly bound top layer). They are significantly softer than Resene Wood Primer for example and are readily scratched with a fingernail!

They must be re-primed using a high quality oil based primer such as Resene Wood Primer before top coating.

Resene ✓ Popular Paint Systems

Exterior timber

They came in many colours, however reddish pink, green or increasingly beige are most common which is why when Resene entered this market with (the well named) Resene True-Prime we chose a pale blue colour to differentiate our primer. True-Prime is a high quality oil based primer that doesn't need re-priming it is the only factory applied primer recommended by the group that represents all Australasian paint manufacturers, who after extensive testing, approved only Resene True-Prime for use under their coatings!

Timber including weatherboards and joinery arrives on site with an identification sticker such as the one above. These are usually stuck onto the window glass to make painters aware that Resene True-Prime has been used.



Pre-primers that are not prepared correctly including thorough sanding and re-priming with an oil based primer are the cause of the majority of paint complaints received by our technical team. Invariably we receive a paint flake with the poor quality primer stuck to the back of the topcoat. The photo on the right is an example of pre-primer failure.



Primers

We have two primers which we recommend for exterior timber including weatherboards and joinery – Resene Wood Primer and Resene Quick Dry Primer.

Resene Wood Primer is a traditional alkyd primer often referred to as a long oil alkyd and is excellent for old timber especially if it is weathered and grey with age (timber will turn grey with exposure to U.V. light. The top layer is damaged and poorly bound to the layers beneath and must be removed or conditioned with Resene TimberLock before painting).

Being oil based it copes better with aged timber than waterborne products like Resene Quick Dry Primer.

Importantly it will hold back staining from salt (which accumulate in cracks in the timber, under eaves etc) and the resin of timbers such as Cedar and Redwood. It is also our best recommendation over rusted nails or nailhead corrosion.

We also need Resene Wood Primer as a first coat on window putty.

Also available is Resene Aluminum Wood Primer which was originally developed as a primer for knotty pine with a lot of resin bleeding. It is not recommended often however it is our best recommendation for timber that has resin bleeds or is in particularly bad condition (if the timber is in a 'dire' state it can be used after conditioning with Resene TimberLock and will fill small cracks etc better than standard Resene Wood Primer).



However, it is the waterborne Resene Quick Dry Primer that is our best primer. It has flexibility so copes well with timber movement, is tough and durable and has added fungicide (to prevent

and slow mould growth). It even has anticorrosive properties to reduce nailhead corrosion (for badly rust stained or corroded areas Resene Wood Primer should still be preferred) and as the name suggests it's quick drying.

So for most exterior timber with some notable exceptions our recommended primer is Resene Quick Dry Primer. The short table below is a brief summary of what primer is the most appropriate – it also advises when Resene TimberLock (preservative and timber conditioner) should be recommended, although as a rule all timber will benefit from an application of Resene TimberLock before priming and top coating.

	Resene TimberLock	Primer
New timber	No	Resene Quick Dry
Weathered Cedar and Redwood	Yes	Resene Wood Primer
New Cedar / Redwood	No	Wood Primer
Matai / Totara	Yes if needed	Resene Quick Dry
Old rough sawn (unpainted)	Yes	Resene Quick Dry or Resene Lumbersider
Spot priming (repaints)	Not usually	Resene Quick Dry
Sappy or resinous timbers	No	Resene Wood Primer
LOSP timber	No	Resene Wood Primer if LOSP smell prevalent or Resene Quick Dry if evaporated
Rust stained	Not usually	Resene Wood Primer
Timber with resin bleeding	No	Resene Aluminium Wood Primer

Lead – and what to do with it!

Many older homes and most of those built before 1960 will have lead based primers on the exterior weatherboards and joinery.

Lead is a heavy metal and if ingested can attack the central nervous system and in sufficient quantities will kill. It is particularly dangerous to children and pets.

Typically it is ingested (gets into the blood stream) by breathing in contaminated sanding dust. It can also get into water especially pet bowls or where rain water is collected for drinking. It can even get into our systems through our vegetable gardens if scrapings and dust are allowed to settle. It is dangerous and care needs to be taken.

It can be and is dealt with sensibly all the time in New Zealand and Australia and advice on how to deal with lead and dispose of it correctly is available at the local councils and in brochures such as relevant OSH leaflets and the 'Resene Putting your safety first' brochure available in all Resene ColorShops. In addition painting contractors who have invested in specialist lead removal equipment are listed in the Yellow Pages and from our Resene ColorShop network.



LOSP timber treatment

Light Organic Solvent Preservative is a timber treatment which uses pressure to diffuse preservatives through the cell structure of timber.

The organic solvent is mostly kerosene and this solvent is exuded or released from the timber for sometime after treatment. Traces of solvent can occasionally be caught under paint films resulting in small blisters and adhesion failure.

We recommend that painting be delayed if there is a smell of solvent coming off the timber, it will usually diffuse quickly once it is allowed to air.

LRV – Light Reflectance Values

LRV measures the amount of light a colour will reflect. It is measured as a % with '0' equating to absolute black absorbing all of the sun's light and '100' equating to pure white and reflecting all of the sun's energy.

Essentially the closer to '0' the hotter a paint surface will become when the sun shines.

It is a useful although somewhat simplistic guide for determining how much heat stress a painted substrate will face. This isn't a problem for inert materials like concrete – they will simply get hot and while the heat they take in will warm what is behind it, the concrete itself will not be affected.

However materials that have high moisture contents like timber will shrink as they dry resulting in excessive movement and possibly cause the cladding to fail.

LRV values are also useful when determining whether a particular colour will cause problems for the old paint system and are used by manufacturers of cladding systems to ensure their systems do not suffer from heat related failure (and the need to return and rectify the problem!) See also Architects Memo No.13 – 'Not Another Paint Failure'.

Plaster systems and Rockcote both impose a LRV limits on their respective systems – but this will vary depending on the system selected.

Architects and designers as well as our own salespeople and colour consultants need to be aware of these requirements when they specify paints and coatings as well as cladding systems for their buildings.

Council building inspectors are also acutely aware of these requirements and police them diligently – a code of compliance for a new home (or renovation) will not be issued unless the specified cladding system has been used and installed correctly and in a colour that conforms to the LRV limits for the system.

This all seems reasonable however it doesn't recognise Resene Cool Colour technology (which relies on reflecting much of the sun's infra-red heat). Some but not all Councils are happy to accept Resene Cool Colours as an 'Alternative Solution'.

Painting in cold conditions

Quite simply if it's too cold the paint will not dry and if it is caught by dew the paint surface will mark and any heavy rain will simply wash the paint off! We recommend a minimum temperature of 10 degrees, not only when you start to paint but for as long as it takes to dry. Additionally the ambient air temperature may be warmer than the substrate being painted (less critical for timber but important for concrete and plaster).

Some products are less sensitive to cold than others (Resene Lumbersider is better than Resene Hi-Glo for example) if a customer needs to paint in cold conditions then Resene Wintergrade paints – Resene Hi-Glo, Resene Sonyx 101, Resene Lumbersider and Resene Quick Dry Primer should be recommended. See also Architectural Memos No. 62 – 'Cool Coalescings' and Memo No. 52 'Waterworld 2'.



Painting in hot conditions

Waterborne paints like Resene Lumbersider, Resene Sonyx 101 and Resene Hi-Glo become difficult to apply in hot, dry conditions as they dry too quickly resulting in a patchy finish with obvious brushmarks and in the worst cases a paint film that will not have completely cured leading to premature failure.

To help, add Resene Resene Hot Weather Additive which will slow the drying of the paint.

However it is not a silver bullet!

Ideally plan the project to avoid the heat of the day and particularly direct sunshine. Additionally wind will quickly dry paint – just consider how quickly clothes dry on a hot, windy day compared to a hot, still day!

Relatively high humidity while presenting other problems is usually not too much of an issue as long as it is also warm as the moisture in the atmosphere will slow down the drying of water borne paints – especially Resene Lustacryl and Resene Enamacryl.

Primer – Less or Direct to Substrate Paints (DTS)

We see two main problems with DTS paints.

1. They encourage a coat to be missed – as usually only two coats are applied instead of three leading to premature coating failures.
2. Primers – less paints do not have the same fungal, mould and corrosion resistance as Resene Quick Dry Primer and do not have the same durability. The compromises taken invariably result in reduced performance and an earlier repaint.

These compromises reduce the paints durability and its ability to prime timber well. Essentially paint manufacturers simply cannot 'jam' all the bits they need to into a single paint that will do everything a primer and topcoat needs to do especially on timber and galvanised steel etc – so sacrifices are made. A DTS



paint will not last as long as a high, quality paint system (matched primer and topcoats). The photo shows a failure of a DTS paint system to a galvanised roller door.

Resene Lumbersider is an excellent DTS paint and works very well – however it is not as durable or cleanable as Resene Sonyx 101 and doesn't have the same level of fungal and corrosion resistance as Resene Quick Dry Primer. See also Architectural Memo No. 83 - 'Prima Facie'.

Primers for Galvanised Steel, Zincalume and rusted areas

Most weatherboard homes will have metal fittings such as window and door flashings (see above), cast iron downpipes, galvanised iron guttering and pipes, metal gates and fretwork.

When painting, small quantities of specialised primers will be needed to either prime new and weathered metal or treat corrosion.



The following are a list of the likely substrates and the recommended primers for each.

Substrate	Primer
1. New galvanised iron or Zincalume	Resene Galvo-Prime or Resene Galvo One Primer
2. Aged galvanised iron	Resene Galvo One Primer
3. Cast iron (downpipes) in good condition	Resene Galvo One Primer
4. Rusted cast iron	Resene Rust-Arrest followed by Resene Galvo One
5. Badly rusted iron	Resene Rust-Arrest followed by Resene Galvo One
6. Lightly rusted iron	Two coats of Resene Galvo One Primer
7. Aluminium and Copper	Resene Vinyl Etch Primer

Prepare the surface well, removing as much corrosion (usually red and white rust) as practical. Follow the recoat recommendations on the paint cans and/or product data sheets carefully.

PVC (Plastic) downpipes and guttering

They are sold under a variety of brand names including Marley.

Our premium acrylic paints all adhere well to PVC, simply wash thoroughly to remove dirt and surface contamination before applying directly to the PVC.

This is also the case with PVC weatherboards which are widely used in the USA and have a small following in Australia and New Zealand where they are mostly sold under the brand name 'Palisade'.

However dark colours will attract more heat and can cause a small amount of shrinkage exposing small white unpainted areas as the guttering shrinks slightly at corners and joins. It is easily fixed by touching these areas up and no damage to the actual PVC will result.



Resene MoulDefender

All our exterior paints have additives designed to inhibit moss and mould growth. This is sufficient for most homes and properties. However we can increase the levels by adding Resene MoulDefender at Point of Sale.

It was developed as an add-on sale particularly for areas that are more prone to mould growth.

South facing walls and shaded areas for example.



Rotten timber

Rotten weatherboards and timber either need to be replaced or the rot removed before painting. While replacing is usually a builder's job most DIY customers and painting contractors are able to remove and treat small areas of rotten timber. Chisels, rasps and even mechanical grinders are suitable for this purpose.



Below we have identified the stop by step repair process for pockets of rotted timber.

1. Remove all rotted timber leaving only sound timber.
2. Saturate the area with Resene TimberLock.
3. Prime with Wood Primer.
4. Depending on the size of the hole, either cut a piece of treated timber to fit and fill the surrounding area with Turbo Bog or Resene Gelled Epoxy. Alternatively use Turbo Bog or Gelled Epoxy for the bulk of the filling and finish with the more easily sanded Contract Filler.
5. Prime with Resene Quick Dry Primer
6. Complete the topcoat system.



Flat Galvanised Iron cut to size can also be used but note that it is more noticeable. The above two photos are examples of how rotten timber has been dealt with.

Rusty nailheads

Inevitably nails will rust and as they do they expand and push out any putty or filler also leaving rust stains on the surrounding paintwork. Short of painting weatherboards and windows in a rust colour the rusty nail will need to be treated or removed and replaced.

Unfortunately punched nails are difficult to get at and coat with a rust treatment or paint – such as Resene Rust-Arrest so unless the nails are removed it really becomes an issue of containing the rust staining.



Detailed below are the typical steps a DIY customer will need to follow:

1. Remove as much of the putty or filler above the nail as practical – typically nails on weatherboards and windows are punched into the timber about 5-7 mm and the resultant hole filled with putty.
2. If the nail is close to the surface punch it further into the timber or punch it all the way through and re-nail the weatherboard.
3. If practical apply a small amount of amount of Resene Rust-Arrest directly onto the nail. Many painters and DIY customers apply rust treatments (including Resene Rust-a-node and Resene Rust-Arrest) to the painted area surrounding the rusty nail and to any rust staining – frankly not only does this do little to stop future rust coming through as rust treatments only work when applied directly to rust but they also have poor adhesion to other paints like those used on weatherboards!

If the nailhead cannot be reached with a small artist's brush don't bother and move to the step 4.

4. Sand any rust stained paintwork to remove the worst affected areas.
5. Prime using Resene Wood Primer (or Resene Aluminium Wood Primer) paying particular attention to the nailhead hole. (Resene Wood Primer has reasonable corrosion resistance and will stop the rust stain bleeding through acrylic topcoats).
6. Fill the hole using linseed oil putty – again this has good corrosion resistance (as opposed to synthetic putty and fillers like PAL Contract filler)
7. Re-prime the area with Resene Wood Primer
8. Apply topcoat system



Ultimately once a nail starts to rust it will return at some stage and at best can only be contained for a few years. Replacement of rusty nails is the only long term solution.

Salt staining

Most of New Zealand and much of coastal Australia is classified as being a marine or severe marine environment – and while this classification relates to steel protection it also means the paint on our homes and buildings will be covered in windblown salt.

Resene ✓ Popular Paint Systems

Exterior timber

Salt will bleed through waterborne paints causing unsightly and difficult to remove stains – the stains typically show as unsightly flat patches or a discoloured bleaching of darker colours.

It **must** be removed before painting – washing with Resene Paint Prep and Housewash followed by thorough rinsing with fresh water is the best way to achieve this. By comparison waterblasting is ineffective.

Coastal homes (and even those further inland if the wind is or has been in an on shore direction) will need to be rinsed with fresh water between coats to remove any salt deposited between coats, especially if several days have elapsed.

If salt staining appears after painting a coat of enamel undercoat will need to be applied, to seal it in before repainting.

Selecting colour

What charts are useful to someone painting the exterior of a weatherboard home?

Most people end up selecting colours for the body or main part of the house (weatherboards, plastered blockwork etc) from white or pastel bases usually in combination with darker accent and/or contrast colours.

So the Resene Whites and Neutrals Colour chart and to a lesser degree The Range Whites and Neutrals fandeck along with the neutral palettes from the Resene Total Colour System range are almost mandatory. Contrast and accent colours can be selected from the Resene The Range fandeck, and the Resene Total Colour System Palettes.

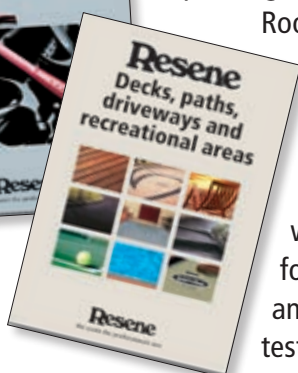
We also include details on what colours are popular – our Top 20 and for many people this is a great place to start. Without exception they are off-whites and neutral shades (and are all on the Resene Whites and Neutrals chart). We also have recommended accent colours available.

For older homes dating back to the turn of last century and up to the 1950s the Heritage chart not only identifies the colours used in each era but suggests ideas on how to combine them.

Depending on what is being painted, the customer may also need a Resene Roof paint systems chart and possibly the Decks, paths, driveways and recreational areas (for steps and porch areas).

The Colour Library and Drawdowns

This aspect of our in-store colour offer is proving increasingly popular with our customers – the bigger samples as well as the 'inspiration' folders and magazines help confirm and finetune their colour choices and are effectively an intermediate step between colour charts and testpots.



Testpots

Still the best way to actually confirm that the colour and colours selected will suit your home and its aspect or environment. Testpots shouldn't be seen as simply a colour check but are a great way to help decide what direction you want to take with colour.

For example, if you are unsure or perhaps nervous about using bolder or deeper colours you could take a couple of testpots to trial (either directly onto the home or onto boards or cardboard).



EzyPaint (Render Service)

EzyPaint is an excellent way to decide on what colour direction you should or could head in. Either using pre-pathed homes from the program on their own computer or the in-store computer. Alternatively scanning a photo of your own home, pathing it and then colouring it yourself.

For a small fee (\$25.00) the Render Team at Head Office will scan a photo or use a digital shot and 'path' your house for you and even recommend colours. This is an extension of the service we offer architects and designers.



Colour consultancy

In all of our ColorShops there are people who are very good at helping customers with their colour selections.

Trends in colour

Traditional weatherboard homes present the perfect opportunity to use colour and colour combinations to significantly improve their look and appearance.

Over the past century weatherboard homes have been painted in many different colour schemes as different eras come and go.

A good colour scheme isn't necessarily complicated or even really colourful (in both senses of the word!) Rather it should be sympathetic to the house, its aspect and its surroundings.

It shouldn't quickly date and look out of place. Also and without being too over the top a good colour scheme should reflect the people who live in it and hopefully bring a little joy to them (and their neighbours!)





So what are the trends in exterior colour?

1. Strong colours

Homes built before WWII were often painted with reasonably deep shades with any architectural elements highlighted with strong colours like Resene Burnt Crimson (from the Resene Heritage colour chart).



Somewhere, probably in the 50s or 60s fashion changed and many houses were painted in stark white – both weatherboards and windows – with perhaps the only concession to individuality being the leading edge of the windowsills and perhaps the front door.

While window frames/sills coordinated with feature bargeboards are more commonly highlighted with strong colour than weatherboards, increasingly this is changing.

Weatherboards are being painted in deeper shades usually complex neutrals like Resene Tea and Resene Mondo and then being offset against lighter coloured windows (rarely is white used even on windows where colours like Resene Sea Fog or Resene White Pointer are selected instead) and bright shades – reds, blues etc are used as feature colours on doors, sills, etc to compliment the scheme – although usually more moody shades rather than clean primary colours. (Resene Hot Chile rather than Resene Bright Red).

But there is a downside – especially for older homes and that is the potential failures brought about by the additional heat on aged timbers and paint systems (see Architect's Memo No. 29).

While Resene Cool Colour technology will help it won't overcome this completely – especially if very deep colours are used on old homes that still have the original primer.

2. Using historic colours

The trend here is to paint homes in colours that reflect the era in which it was built – even to the point of using historic references to determine the original colour scheme.

Most colours used over the past 100-150 years are still found (or at least very close versions) on today's colour charts although obviously made using modern pigments and tinted into modern paints. (Early paint colours were often made using dangerous oxides of heavy metals like lead and chromium and mercury).



3. Using complex 'whites'

The colour white is rarely used by Resene customers and has largely been replaced by colours tinted from the white base that combine three or four tints to create a 'complex' off white shade (as opposed to more single dimensional shades – Resene Pearl Lusta for example which is basically a yellow based cream).

Complex whites appear different as the light changes and compliment deeper neutrals and strong colours used on exterior colour schemes just as they work well when combined with interior feature walls.

For example Resene Spanish White (or Resene Half Spanish White as this is now more popular!) is made from a white base and has four tinters in it. It is a colour that appears to change depending on the surrounding colours – both other paint shades and surrounding areas such as adjoining trees and other plantings.



It uses a small amount of 'G' tinter or red orange which is why it is a good offset to reds such as Resene Hot Chile. Interestingly our competitors when attempting to make Resene Spanish White usually miss these subtleties.

Complex whites will soften strong colours where a stark white will appear to accentuate them, so if strong colours are used then it is invariably in combination with complex whites (true for both interior and exterior) and the popular colours indicator on the Resene Total Colour System stand strongly supports this.

Selling Resene Cool Colours

Changing from a standard colour to a Resene Cool Colour makes a lot sense but there is a danger that it will be seen as a complete cure or a fix for all heat related problems.

It will help but won't prevent heat related issues completely.



The following advice is worth remembering:

- 1. '...the use of Resene Cool Colour technology will not completely prevent cracking, cupping and warping of timber but will significantly reduce these and other heat related stresses...'**
- 2. '...for colours with a lot of black in them – dark grey and even black based greens like Karaka, we are able to take the standard black tinter out and replace it with a Resene Cool Colour black tinter. How much black is in the colour will dictate the extent to which heat absorption will be reduced...'**

Soffits

Soffits are usually painted in the same paint (Resene Sonyx 101 or Resene Hi-Glo) and colour as the weatherboards when the house colour is a white or off white. When this is the case it is straightforward to carry the paint up from the weatherboards to the soffit. Essentially treating the soffit as an extension of the weatherboards and using the same preparation primers etc – this also saves on buying a separate product.



Resene ✓ Popular Paint Systems

Exterior timber

Alternatively if a darker colour is used on the weatherboards then a contrasting white or off white (often matched to the window colour) is ideal.

Soffits – especially larger areas and /or those constructed using Villaboard or cement sheets suit lower gloss finishes that will disguise surface imperfections.

Most weatherboard homes have relatively small soffits so this is not typically an issue and it is easiest to use the same paint as on the weatherboards.

However many modern designs incorporate large sweeping canopies – mostly made using Villaboard and a dead flat washable finish is best to disguise the Villaboard jointing. (Think of Villaboard as an exterior wallboard like GIB® board with similar flush finished joints).

This is why we recommend Resene Spacecote Flat or alternatively Resene Lumbersider. Also commercial applicators often use Decorator I/E Flat (Interior/Exterior Flat).



Stripping old paint

Over time successive coats of paint applied over many years and many repaints become so thick that failures occur due to the loss of intercoat adhesion (mostly caused by poor preparation) or cracking because the paint film becomes so thick it loses elasticity, and the original primers, often decades old simply lose adhesion to the timber substrate.

Typically paintwork will cope with the increased film build of many additional layers. At least until the colour is changed to a deeper shade (even relatively small changes can have an effect!) which adds heat and stress to old paintwork often causing blistering and peeling – usually going right back to the original paint layers.

Removal of old paintwork is almost always difficult and time consuming and although it's pretty easy to say something like 'old and perished paint shall be removed' it is where the hard work starts. See also Architects Memo No.13 – 'Not Another Paint Failure'.

Removal by heat

Most paints soften when heated and Hot Air guns (like an industrial hair dryer) soften and plasticize old paint films to the point they can be removed with a flat scraper.

This supersedes removal by blowtorches with the associated high fire risk. Hot Air guns don't have a naked flame but care is still necessary to guard against timber and paint scrapings sparking and catching alight. Keep the hose handy when using Hot Air guns. An alternative that uses infra-red lamps (i-Strip) is also available and works similarly.

Note: i-Strip should not be used near window putty as it softens and will need to be replaced – sills and frames are usually far enough away however.

Mechanical stripping

Machine sanding and scraping is often used and there are a variety of sanding machines using abrasive belts and disks available. Some synthetic high speed abrasive discs are very effective. It is important to use first class respiratory protective masks, goggles and ear protection to prevent breathing in dust etc.

Chemical stripping

Aggressive (and often toxic) chemicals have long been used for paint removal, but were dangerous and difficult to use. This includes Methylene Chloride based products which are still widely promoted (Coopers and 'Dad's Easy Spray' for example) and is a known carcinogenic.

However there are much less toxic, but equally effective, liquid stripping compounds, such as **Sea 2 Sky** now available (stocked in Resene ColorShops). The two photos below show an area saturated with **Sea 2 Sky** Paint Stripper and after its removal.



These solutions work very well provided they are applied liberally and thickly and kept wet so the chemical agent can work through old paint films. It shouldn't be applied in either direct sunlight (as it evaporates too quickly) or on very cold days (as the chemical reaction slows) – see in store for details.

When handling and using all chemicals it is essential to use quality protective equipment including heavy rubber gloves and safety glasses.

Waterblasting

Waterblasting will remove flaking paint, moss and mould but will not remove paint without causing major damage to the timber and as a result should not be recommended for preparatory work. Waterblasting is suitable for hard surfaces like concrete and iron where the pressure will remove paint etc but not damage the substrate.

Stripping old paint films by whatever method is slow and tiresome. Good housekeeping is essential to manage paint scrapings, dust and removed materials. Shade cloth and weed matting laid on the ground adjacent to walls is particularly effective at containing debris.

Some customers may not be confident to undertake major preparatory work and they should engage a professional painter.

Topcoat systems – for weatherboards

There are many products that can successfully be used on weatherboards. However the three that we will concentrate on are Resene Hi-Glo, Resene Sonyx 101 and Resene Lumbersider.

They are waterborne, very durable and U.V. resistant so they last well outside, they are flexible so they will cope with timber movement and are very easy to apply and achieve a great finish.

Resene Hi-Glo and Resene Sonyx 101 share a common resin system and are on a par in terms of durability and washability however as Resene Lumbersider has a lower gloss level and uses a different, slightly softer resin system isn't as easily cleaned (we couldn't use the same resin as Resene Sonyx 101 as it isn't designed to be applied direct to timber . Resene Lumbersider remains our most popular product however and is easily the best exterior low sheen available!).

Essentially the choice of topcoat comes down to a choice of gloss level – high gloss, semi-gloss or satin.

The higher the gloss the more imperfections on the surface are highlighted and stronger colours in particular will look more vibrant and 'alive' the higher the gloss level (check the gloss level indicator on the front of the Resene The Range fandeck).

So how can we use this knowledge?

Well, the first thing we must do is to tell our customer this and to show them actual samples or panels of Resene Hi-Glo, Resene Sonyx 101, and Resene Lumbersider.

For many customers it will come down to simple preference for a particular gloss level. However there are some house styles and timbers that suit certain finishes.

As a rule, the older the home – the more likely it is that there are surface imperfections – flaking paint, replaced boards etc that will be highlighted by the higher gloss of Resene Hi-Glo. So we recommend Resene Sonyx 101 and sometimes Resene Lumbersider for old Villas and homes.



It is the ideal system as it offers the best durability while its semi gloss finish doesn't highlight imperfections. (Resene Lumbersider is an option but isn't quite as durable as Resene Sonyx 101).

New Homes – particularly those using the new fibre cement Linea boards suit a high gloss finish especially if strong colours have been selected – Don't forget the cool colour options!

The flow charts have been designed to help guide you and your customer to the Best System for their requirements.

Two coats versus three

The top layer of all waterborne paints will weather and erode at the same rate whether two, three or even four coats are applied.

However the thicker layer achieved when three coats of topcoat (over a primer) are applied increases the coverage over sharp edges and weaker areas of the timber and will also be more flexible. So three coats of topcoat will resist cracking and flaking more so than two coats and will last longer as a result.

We recommend three coats on areas like bargeboards that are more difficult to access and tend to breakdown sooner than the weatherboards of a home and where dark colours are used on window frames, sills etc.

Why don't Resene Lustacryl and Resene Enamacryl stick to themselves?

This question relates to window and door joinery and the inside faces that touch when windows or doors are fully closed.

If these touching faces were painted in Resene Hi-Glo you can guarantee they would stick together and be almost impossible to open without the services of a builder and occasionally a glazier!

We know of some windows that have not been opened since the sixties!

The reason that surfaces painted with standard waterborne paints tend to stick together is that they are thermoplastic. Thermoplastic means they soften with heat – so the warmer they become the softer they become. (The molecules become more mobile and if there is another similar thermoplastic surface touching it then they will migrate and join together – sort of melting or fusing together)

This isn't all bad as thermoplastic paints – like Resene Hi-Glo and Resene Sonyx 101 are also flexible and cope well with timber movement, so on weatherboards and galvanised iron for example it is a real benefit – compare their performance to a traditional oil based enamel which gets more brittle with age – any movement and it will crack and flake off.

So how was Resene able to make an waterborne enamel that works?

It took a lot of work by our technical team for a start, including working with Rohm and Haas the resin company who supply us with most of the resins we use in our paint.

Two pack epoxies and urethanes like Resene Aquapoxy and Resene Uracryl crosslink to form tough, solvent-resistant films – a chemical reaction is set off when a hardener or catalyst is added to the base.



The Resene Enamacryl resin (and Resene Lustacryl) also crosslink's but is able to do it with a special self-crosslinking mechanism which doesn't need an added hardener. This mechanism is relatively slow to 'kick in' so Resene had to develop some added technologies to get a 'snap' hardening which allowed windows to be successfully closed even before the full crosslinking reaction has taken place. (We use the same resin in Resene SpaceCote; Resene SpaceCote Low Sheen and this also explains why marks are more easily removed after three weeks when it is fully cured). It isn't thermoplastic in the way Resene Hi-Glo is, so it isn't as good on weatherboards but it is very very good for windows that open and close.

Resene was the first company to successfully introduce a truly workable waterborne enamel and while there have been others, they had a limited colour range (only colours off a white base, where ours is complete) and had such poor opacity (covering power) that customers simply refused to use them.

It was to take another three years before other companies in the US and Europe worked out how to make a decent paint from the resin.

Why fence paints have a bad reputation!

Quite simply because many of them deserve it! Many paint companies manufacture fence paints (and fence stains) from mixtures of mistinted and/or off-spec product.

The quality can vary greatly as a result, so when paint chemists formulate a fence paint from scratch they do so using very tight price constraints – in other words they couldn't formulate a fence paint that would cost a lot more than those made from mistints etc – and therefore perpetuating the low quality perception of fence paints.

There is some sense to this however as most fences are unseen – with vegetation, trees, shrubs etc hiding them, so the decorative element of a paint finish was less of an issue.

Our recommended paint for wooden fences is Resene Lumbersider (and Resene Woodsman our recommended stain). However for those who have a wooden fence that is mostly obscured then the Crown fence paints and timber finishes are a very good option – they are good quality but only available in a limited colour range.

Why were primers pink?

This is a historical quirk more than anything. Early timber primers were invariable made using Red Lead pastes. Mostly they performed well and in the days before galvanised and stainless steel nails they were effective at holding back nailhead corrosion.

But they contained lead so when alternative formulas became available that didn't use lead manufacturers including Resene added some red pigment to the otherwise white primer.

However the use of a pink primer did ensure that two topcoats were applied!

Something that doesn't always happen nowadays!

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