

Substrate Characteristics

Freshly prepared cedar has unique grain patterns, colour and colour variations. This changes with time at a rate determined by exposure condition. Under mild indoor conditions, changes are slow and colour change slight. Under outdoor exterior exposures the changes may be rapid and drastic. Cedar erodes appreciably faster than other timbers mainly due to its low density, lignin content and extractive content, which can cause staining. When exposed to normal exterior conditions, solubilising of the lignin takes place due to the effects of light and water. Bacteria and enzymes also cause degradation resulting in decomposition and favourable conditions for the growth of fungus and rot.

Surface Preparation

New Work - see [Surface Preparation D82](#) for detailed preparation guidelines.
Repaints - see [Surface Preparation D87](#) for detailed preparation guidelines.

8e 1/3 Exterior Waterborne

Cedar must be coated before it is exposed to weather or as soon as it is erected. All unsealed cracks and end grains must be sealed to prevent moisture penetration. Sharp edges on timber are difficult to coat as paint tends to flow away from edges leaving weak spots - ensure all sharp edges and rough profiles are rounded before painting to promote good film build. Any cedar exposed for longer than one week must be sanded/planed back to a sound surface. Waterborne coatings are most suitable for exterior applications being more durable and flexible than solventborne coatings. For better hiding, Resene Acrylic Undercoat (see [Data Sheet D404](#)) tinted to the correct colour may replace one of the topcoats. Due to cedar's higher surface degradation and erosion rates, pretreatment with Resene TimberLock (except under Resene Waterborne Woodsman) to improve durability is strongly recommended. If Resene TimberLock (see [Data Sheet D48](#)) is omitted, Resene Wood Primer (see [Data Sheet D40](#)) must be the first coat. The exception to this is Resene Waterborne Woodsman (see [Data Sheet D57a](#)), a penetrating oil stain that does not form a surface film and will require maintenance after two summers. The profile of cedar weatherboards is crucial to the success of the paint system (please see over).

Exterior Cedar

For interior painting of Cedar see 2i and 2e/i

For Interior Timber Joinery see 3i (Painted Finish) and 3i (Clear Finish)

Generic Specification				Resene Spec No.	Resene One-Line Specification				
Substrate ment	Environ- Type	Paint Level	Gloss		Surface Prep	1st Coat	2nd Coat	3rd Coat	4th Coat
Cedar	Exterior	Waterborne	Gloss	8e 1.1	D82 & TimberLock D48	NC: Quick Dry D45	Quick Dry D45	Acrylic Undercoat D404	Hi-Glo D31
						WC: Wood Primer D40	Hi-Glo Acrylic Undercoat D404	Hi-Glo D31	Hi-Glo D31 (optional)
Cedar	Exterior	Waterborne	Semi-Gloss	8e 1.2	D82 & TimberLock D48	NC: Quick Dry D45	Quick Dry D45	Acrylic Undercoat D404	Sonyx 101 D30
						WC: Wood Primer D40	Sonyx 101 Acrylic Undercoat D404	Sonyx 101 D30	Sonyx 101 D30 (optional)
Cedar	Exterior	Waterborne	Satin	8e 1.3	D82 & TimberLock D48	NC: Quick Dry D45	Quick Dry D45	Acrylic Undercoat D404	Lumbersider D34
						WC: Wood Primer D40	Lumbersider D34 Acrylic Undercoat D404	Lumbersider D34	Lumbersider D34 (optional)
						SP: Lumbersider D34	Lumbersider D34	Lumbersider D34	-
Cedar	Exterior	Waterborne	Flat	8e 3.5	D82	SF: Waterborne Woodsman D57a	Waterborne Woodsman D57a	Waterborne Woodsman D57a (after 3 months)	-

Key: NC = New Cedar SF = Stained Finish SP = Self Priming WC = Weathered Cedar

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

Continued over 

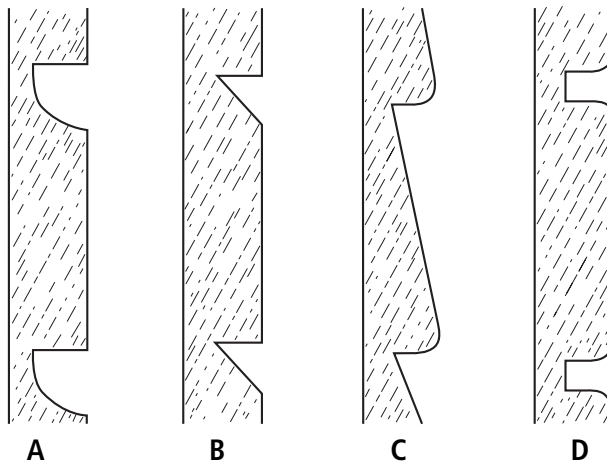
8e 2/4 Exterior Solventborne

Cedar must be coated before it is exposed to weather or as soon as it is erected. All unsealed cracks and end grains must be sealed to prevent moisture penetration. Sharp edges on timber are very difficult to coat as paint tends to flow away from edges leaving weak spots - ensure all sharp edges and rough profiles are rounded before painting to promote good film build. Any cedar exposed for longer than one week must be sanded/planed back to a sound surface. Due to cedar's higher surface degradation and erosion rates, pretreatment with Resene TimberLock (except under Resene Woodsman) to improve durability is strongly recommended. Resene Woodsman (see [Data Sheet D57](#)) is a penetrating solventborne stain that does not form a surface film and will require maintenance after two summers. Resene Kwila Timber Stain (see [Data Sheet D501](#)) is designed for application over new and weathered Kwila, Cedar and other exterior timber decks and furniture. Like Resene Woodsman, Resene Kwila Timber Stain penetrates into the timber and does not form a surface film. Semi-gloss and flat solventborne paints do not have the necessary weather resistance for exterior exposure. For better hiding, Resene Acrylic Undercoat (see [Data Sheet D404](#)) tinted to the correct colour may replace one of the topcoats. The profile of cedar weatherboards is crucial to the success of the paint system (please see below).

Generic Specification				Resene Spec No.	Resene One-Line Specification				
Substrate	Environment	Paint Level	Gloss		Surface Prep	1st Coat	2nd Coat	3rd Coat	4th Coat
Cedar	Exterior	Solventborne	Gloss	8e 2.1	D82 & TimberLock D48	NC: Quick Dry D45	Quick Dry D45	Acrylic Undercoat D404 Super Gloss D32	Super Gloss D32
						WC: Wood Primer D40			Acrylic Undercoat D404
Cedar	Exterior	Solventborne	Flat	8e 4.5	D82	SF: Woodsman D57	Woodsman D57 (after 3 months)	Woodsman D57	-
						KS: Kwila Timber Stain D501			Kwila Timber Stain D501

Key: KS: Kwila Coloured Stain SF: Stained Finish NC = New Cedar WC = Weathered Cedar

By far the biggest contributor to paint failures for Cedar is the profile of the timber used, for example:



Type **C** is by far the most desirable profile for painting, and on most weatherboard houses the bottom angle is bevelled.

Type **A** is extremely difficult to coat with any paint system. The profile has two sharp edges and the scalloped face becomes almost horizontal at the bottom of the scallop. This means that, on northern facing walls, parts of this scalloped face will always be at right angles to the sun and therefore subject to maximum ultra violet light. The sharp edges however, are the major concern with this weatherboard. This is because, as with all liquids, the effects of surface tension will pull the liquid away from the sharp edge. In paint systems this results in a paint coating on these edges of only 50% of the film build achieved elsewhere.

Type **B** weatherboard does not have such a sharp profile as type **A** but it is still difficult to adequately coat the edges and the top profile is angled to pick up considerably more ultra violet light than the vertical surface of the board.

Type **D** weatherboard may run vertically, diagonally or horizontally. It does not have the sharp profile problems of type **A** and **B** boards, but if not properly sealed before fixing in place there is easy access for water to get behind the board because of the square channel pattern between each board. Any timber movement will expose unprimed timber areas that may soak up water.

Where boards are fixed other than horizontal, Resene recommends that the full coating system be applied to all sides.

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