

Redwood

TECHNICAL DATA SHEET

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Quality paint systems provide seven to ten years of service...

Painting Redwood Siding: Guidelines to Extending Maintenance Cycles

Properly specified and applied paint systems perform better on redwood than on practically any other wood substrate. The USDA Forest Products Laboratory ranks redwood in the highest category among softwoods with regard to characteristics for painting and finishing.

For a long-term, low-maintenance service life, high quality paint systems should be applied over the correct grades of kiln dried redwood on structures built with proper construction methods. While the initial cost for painting is higher than for application of natural finishes, the rewards are much longer maintenance cycles and higher levels of protection provided to the substrate. Most natural finishes require reapplication in from one to three years. High quality paint systems typically provide seven to ten years of service.

Paint grades of redwood include Clear All Heart, Clear, Heart Clear, B Grade and Heart B. Sidings, trim and fascia can be solid boards or more economical finger-jointed or end- and edge-glued lumber, and should be specified Certified Kiln Dried. Specify vertical grain for maximum performance. If flat grain lumber is used, install boards with the bark side exposed, as the grain of any species tends to separate or “shell” on the pith side, rupturing the paint film. Specify saw-textured surfaces on flat-grain products to reduce grain raising and improve overall paint performance.

Several keys to a high quality, long-lasting paint job are:

- proper siding specification and construction practices,
- proper surface preparation and priming,
- the selection and proper application of high quality paint products
- and, maybe most importantly, not taking any shortcuts.

Weathering reduces paint holding qualities...

Pre-primed redwood offers considerable advantages over job-site priming...

Priming

Use one coat of an oil- or alkyd resin-based primer for redwood. Backprime. Prime all ends, edges and sides. As an alternative to oil- or alkyd resin-based primers, use two prime coats of a water-borne “stain-blocking” primer specifically formulated for extractive rich woods. Work primers into the wood with a brush or roller, and allow to dry (according to manufacturer’s recommendation) prior to finish coat application.

Do not allow wood to weather in an unprimed state. Weathering at this time reduces the paint-holding quality of the wood surface. If some weathering does occur, clean the wood surface and lightly sand to prepare it for priming and painting.

Protruding fibers on saw-textured surfaces act as channels for moisture, resulting in extractive staining. Brushing a minimum of two coats of primer into saw-textured surfaces assures a continuous, moisture-resistant film. Spray applications do not apply a continuous film on saw-textured surfaces, so they should be followed by thorough back-brushing or back-rolling.

Paint manufacturers recommend application rates for the primer, in terms of square feet of surface covered per gallon. These instructions should be carefully followed. Some painters thin the primer too liberally on the job to extend its coverage per gallon. Avoid this as it reduces the capability of the primer to do its job properly.

If the siding has been prefinished with a paintable water repellent preservative solution, prime it as you would bare wood before applying the top coats.

Some redwood suppliers offer pre-primed sidings, trim and fascia. Pre-primed redwood has considerable advantages over job-site priming. High quality factory-applied prime coats can

Painting Checklist

Siding

- Grade
- Moisture Content
- Grain
- Texture

Preparation

- Clean, Dry Surface
- Proper Temperature and Weather Conditions

Priming

- Oil- or Alkyd-Based
- Coverage Rate
- Brush Apply or Factory Prime

Top Coat

- Acrylic Latex
- Coverage Rate
- Number of Coats

seldom be duplicated in the field. Factory application of primers control two of the most important variables which determine paint performance: the characteristics of the wood substrate and the quality and application of the primer. The wood for factory priming is carefully selected, handled and stored prior to priming to ensure a clean, dry surface on which to apply the primer. By controlling application rates carefully, the factory can apply an even primer coat of known thickness. The benefits of factory pre-priming make it the preferred choice whenever possible.

When pre-primed material is cut during field application, the cut ends should be field primed prior to installation. This frequently overlooked step is very important since moisture moves much more rapidly through the end-grain than through the face of wood.

Factory pre-primed surfaces should be painted within 30 days of installation, or dirt, moisture and chalking may prevent bonding and shorten the life of the paint film. If the primed surface is allowed to weather for an extended period of time, clean and reprime the surface prior to topcoat application.

Paint primed surfaces within 30 days for maximum bonding and long life...

Topcoats

Use two topcoats of a top-quality acrylic latex paint for redwood siding. Acrylic latex paints remain flexible with age, thus stretching and shrinking with the wood and allowing some passage of water vapor. These characteristics prevent the cracking and blistering that sometimes occur with oil- or alkyd resin-based topcoats. Two acrylic latex topcoats over an oil- or alkyd resin-based primer will outlast both oil- and alkyd resin-based topcoats. Acrylic latex topcoats also perform well over water-borne "stain-blocking" primers and factory-applied primers.

Apply topcoats in warm, dry weather, not below 50 degrees F., to wood that is clean and free of dust, dirt, grease and surface moisture from light rain or dew. The old painter's adage, "follow the sun" should be heeded. This means paint any area after the sun has passed overhead so that the sun's rays do not strike the surface during or immediately after the painting. "Following the sun" gives a slower drying rate and a better paint film.

Use brush application for superior results, especially for first coat...

Finish coats or topcoats can be applied to broad surfaces by roller or spray, but brush application is the superior application method, especially for the first coat. Research has indicated that the optimum thickness for the total dry paint coat (primer and two topcoats) is 3.5 to 5.0 mils (1.0 mil equals 0.001"). To avoid future separation between paint coats, the first topcoat should be applied within two weeks of the primer and the second coat within two weeks of the first coat.

**Maintain painted surfaces
with washing and repainting
as necessary...**

Maintenance and Refinishing

Periodic washing helps maintain painted surfaces. Repaint only when the paint film erodes enough to show faded areas or wood-grain patterns. One coat is usually enough; paint film that becomes too thick from repainting cracks across the grain and peels away. Where paint has eroded completely, siding should be repainted as soon as possible. After removing loose flaking old paint, sand and spot prime any bare wood prior to topcoating. If the paint shows evidence of moisture problems, don't repaint until the source of the moisture is located and eliminated.

In areas of high humidity, mildew makes paint look dirty and splotchy. To remove it, scrub with a solution of one cup of household bleach in a gallon of warm water. Commercial mildew removal products are also available. Wear rubber gloves and rinse all surfaces with clear water after treatment.

Note: Household bleach should never be mixed with detergent containing ammonia. Fumes can be fatal!

Paint additives minimize mildew growth. Check paint container labels for mildewcide, or add it separately. These products, and advice about their use, are available from paint suppliers.

Additional information on painting techniques is available from paint manufacturers and dealers and from the following publications:

Finishing Exterior Wood Products. 1991. American Forest & Paper Association, 1111 19th St., N.W., Eighth Floor, Washington, D. C. 20036

Finishes for Exterior Wood. Selection, Application and Maintenance. A comprehensive guide to the painting/staining and maintenance of homes, decks, log structures, and more. 1996. USDA Forest Products Laboratory, Madison, WI.



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