



# WESTERN RED CEDAR

## GUIDE TO FINISHING



WESTERN RED CEDAR EXPORT ASSOCIATION





# CARE & MAINTENANCE

PROPER, REGULAR MAINTENANCE EXTENDS LIFE OF THE COATING.

## CARE AND MAINTENANCE TIPS

Extend the life of the coating and appearance of Western Red Cedar by following a regular maintenance and care program. Cedar enjoys a well-deserved reputation as a wood that takes and holds a range of finishes for extended periods. Nevertheless, the normal life of a finish will be shortened by degradation and discolouration. The causes of discolouration, though not in themselves a failure of the finish, often require remedial treatment.

Dirt is the most benign cause of discolouration and not usually a problem. A periodic cleaning with a mild detergent solution will usually restore the surface finish.

Mildew applies both to the fungus and to its staining effects on both the finish and the wood. Mildew is a common cause of discolouration of paint, solid-colour stains and natural finishes. Restaining does not solve a mildew problem. When it is time to refinish, clean off the mildew with a commercial mildew-remover then refinish with a coating that contains an effective mildewcide.

Extractives bleed that discolour the finish is usually caused by moisture. To stop stains caused by extractives bleed, moisture problems must be eliminated. Mild staining is often washed away by rain over a period of weeks. In sheltered areas of the building where the stain persists, it may become darker with age and more difficult to remove. If washing with a mild detergent solution does not work, a commercial cleaner may help.

Iron stains may appear in two forms: the reddish brown discolouration caused by rust, and blue-black discolouration caused by the reaction of iron from nails and other metal objects with extractives from the Cedar. To prevent these stains, use only hot-dipped galvanized, aluminum or stainless steel nails when fastening Cedar. Water stains often occur in combination with extractive bleed and mildew growth. These stains can be difficult to remove. Scrubbing the wood with an oxalic acid solution is sometimes effective.

**Caution: Handle oxalic acid solution with care as it can be harmful.**

Chalking is a property of the paint, not the Cedar. It occurs when a paint film weathers or deteriorates, releasing pigment particles that act like a fine powder on the paint surface. Chalking is a common cause of fading of tinted or coloured paints.

## CLEANERS AND RESTORERS FOR WESTERN RED CEDAR

Uncoated, weathered Cedar can often be restored to its original colour by applying commercial products called cleaners, brighteners or restorers. Although intended primarily for restoring horizontal wood surfaces such as decks, they generally work almost as well on vertical surfaces. Some products are formulated with thickening agents to help the liquid cling better to vertical surfaces.

Commercially available cleaners and restorers generally fall into three categories: paint strippers, bleaches, and oxalic acid-based formulas. After application of these products the surface should be thoroughly washed and allowed to dry completely before finishing. These products contain hazardous ingredients and should be used with caution. The manufacturer's instructions should be followed for optimum effectiveness and safety.





AMONG ALL THE SOFTWOOD SPECIES, WESTERN RED CEDAR IS CONSIDERED TO HAVE THE VERY BEST FINISH RETENTION FEATURES.

#### OVERVIEW

The unique properties of Western Red Cedar enable end uses distinct from other softwood species. Western Red Cedar is renowned for its naturally occurring resistance to moisture, decay and insect damage. Its unique blend of natural characteristics make it ideal for exterior uses including cladding, fences, decks, garden features, doors and windows. Indoors, Cedar's dimensional stability and its appearance make it perfectly suited to a variety of uses including window blinds, shutters, paneling, moldings and sauna paneling.

To protect its natural luster or add a touch of colour to a project, proper steps should be taken to finish and subsequently maintain the beauty and performance of Western Red Cedar.

#### WESTERN RED CEDAR HAS UNIQUE FINISHING RETENTION FEATURES

The most important characteristics of Western Red Cedar that contribute to its exceptional ability to accept and retain many different types of finishes are its outstanding dimensional stability, fine texture, a pattern of growth that results in narrow bands of summerwood, and freedom from pitch and resin.

Dimensional stability is related to the wood's density. The less dense the wood, the less it tends to shrink and swell in response to changes in moisture content. Cedar is a low density wood exhibiting excellent dimensional stability.

Texture refers to the general coarseness of the wood surface, primarily caused by the sawing, planing or sanding process.

Pattern of growth, or springwood and summerwood, is the annual increments or bands of tree growth. Cedar has a lower percentage of summerwood than most other species.

Pitch or resin can be found in most softwoods but is absent in Cedar. However, water-soluble extractives which give Cedar heartwood its natural decay resistance are present.

#### GOOD CONSTRUCTION PRACTICES ESSENTIAL TO GOOD PERFORMANCE

The moisture content of wood at the time of construction and during the structure's lifetime is the most important factor impacting upon the performance of the finish. Good construction practices are critical to the prevention of excessive moisture build-up in wood. Before you start a project ensure you have reviewed installation and fastener recommendations for Western Red Cedar available at [www.wrcea.org](http://www.wrcea.org) or by contacting the Western Red Cedar Export Association directly.



## GUIDE TO FINISHING WESTERN RED CEDAR



# CEDAR ALLOWS FOR A BEAUTIFUL FINISH



PROPER SURFACE PREPARATION WILL ENHANCE THE PERFORMANCE AND LIFE EXPECTANCY OF THE FINISH.

## NEW TIMBER

New timber for applications such as cladding and trim, should be protected from the weather before, during and after construction. It is recommended to apply at least one coat prior to deliver to the job site. Factory finishing in a controlled environment provides the optimum finishing conditions.

If factory finished Western Red Cedar is not available, ensure the wood has not weathered for more than two weeks and is clean and dry. If it has been contaminated by dirt, oil and other foreign substances they must be removed. For smooth-planed, flat-grained Cedar, some surface preparation may be desirable. On flat-grained wood, the surface should be scuff-sanded with 50–60 grit sandpaper. This procedure will greatly increase the coatings performance but will not detract from a smooth finish.

## WEATHERED TIMBER REQUIRES SPECIAL ATTENTION

Even though Western Red Cedar weathers over time to an attractive silver-gray patina that has a certain architectural appeal, it is strongly recommended that some form of protective finish be applied to prevent surface degradation. Weathered surfaces provide a poor substrate for finishes. Even a few weeks of exposure will decrease Cedar's ability to hold a finish. Once the finish-wood interface fails, the coating will debond, blister, crack, flake or peel. The longer the period of weathering, the more rapidly the finish may fail.

Weathered new wood that has been exposed to the elements for longer than 2 weeks may have a degraded surface that is unsuitable for painting. Restoring and preparing the surface before applying the finish is recommended.

## REFINISHING PAINTED OR STAINED SURFACES

Paint finishes must be removed if the old surface is severely peeled, blistered, or if cross-grain checking has occurred because of excessive paint build-up. The removal of a film-forming finish is also necessary if a penetrating stain or water-repellent finish is to be applied to a previously painted or solid-colour stained surface. Note that changing from a film-forming to a penetrating finish sometimes does not give satisfactory results because residual paint inhibits absorption. Finishes can be removed by sanding, electrically heated paint removers and chemicals. Although quick and easy, sandblasting and pressurized water spray are not recommended.

Weathered water-repellent preservative finishes should be cleaned with a non-ferrous bristle brush to remove loose fibers and dirt. If the surface is soiled, it may be scrubbed with a mild detergent solution. If mildew is present, it should be controlled. The surface should be thoroughly rinsed and allowed to dry completely before refinishing. Important: Do not use ferrous wire brushes or wool for surface preparation.

**Caution:** Never mix bleach with detergent containing ammonia as the fumes can be harmful.



## WEATHERED TIMBER MUST BE PREPARED BEFORE TREATMENT WITH A DECORATIVE FINISH.

### FINISHES FOR EXTERIOR APPLICATIONS

The choice of an exterior wood finish for Cedar depends upon the desired appearance and the degree of protection required. Conversely, the amount of protection provided to the wood depends on the type of finish selected. Finished wood is a combination of two widely different materials and the properties of both must be considered to achieve the most durable wood-finish system. With all types of finishes, the manufacturer's recommendations should be followed.

Cedar's excellent finishing characteristics cannot compensate for products that are unsuitable, of inferior quality, or improperly applied. Finishes perform best when the coating is applied to all surfaces (face, back, edges and ends).

### OPAQUE COATINGS

Paint provides the most surface protection against weathering and wetting by water while providing colour and concealing some of the wood's characteristics. Although paint can reduce wood's absorption of water, paint itself is not a preservative. Alkyd oil-based primers usually offer the best shield against discolouration by water-soluble extractives. Latex paint, particularly 100% acrylic formulations, remains more flexible and accommodates dimensional changes by stretching and shrinking with the wood.

Solid-colour stains are opaque finishes with fewer solids than paint. Available in a wide spectrum of hues, solid colour stains obscure the wood's true colour but allow some of the natural characteristics and texture of Cedar to remain. Solid-colour stains perform best on textured surfaces. They are non-penetrating and form a film. A stain-blocking primer should be applied first, followed by a 100% acrylic latex top coat.

### SEMI-TRANSPARENT STAINS

Semi-transparent stains may be latex or oil-based. The semi-transparent nature of the stain, due to its low solids content, does not block all ultraviolet radiation and some will reach the wood's surface. Latex stains do not penetrate the surface and are less durable than opaque coatings.

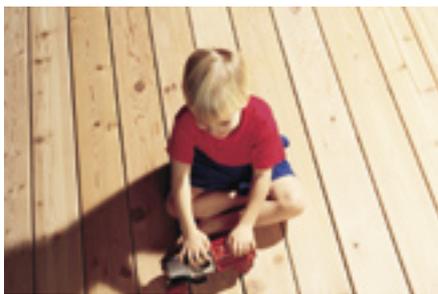
### NATURAL FINISHES

Water-repellents and water-repellent preservatives may be applied to Cedar used above ground. These formulations reduce water absorption in the short term. The addition of a fungicide that inhibits the growth of mildew and decay fungi will further increase wood's durability. A low-wax-content water-repellent preservative applied to newly-milled Cedar as a single-coat pre-treatment before painting may help reduce discolouration caused by bleeding of water-soluble extractives.

Caution: Transparent, non-flexible, film-forming finishes such as lacquer, shellac, urethane, and varnish are not recommended for exterior use on Cedar. Ultraviolet radiation can penetrate the transparent film and degrade the wood. The finish will eventually become brittle, develop severe cracks and then fail.

Achieving a "weathered" look can be accomplished by applying a commercially prepared bleaching stain which is essentially a water-repellent finish containing pigments and other additives. This finish is most effective on textured Cedar. To maintain a uniformly gray wood surface, bleaching stain may have to be re-applied periodically.

## CEDAR ACCEPTS MANY TYPES OF FINISHES



## ALL DECKS REQUIRE FINISHES SPECIALLY FORMULATED TO WITHSTAND THE ABRASIVE EFFECTS OF FOOT TRAFFIC.

### FINISHES FOR WESTERN RED CEDAR DECKS

Although Cedar is a naturally durable wood ideal for decks, its performance is enhanced when protected by an appropriate finish. Decks have full exposure to sun and rain, which greatly accelerates the weathering process. Finishes applied to Cedar decks, post and railings should contain a water-repellent, fungicide, mildewcide, and protection against ultraviolet light.

The simplest finish to maintain on a Cedar deck is a water-repellent preservative, which may have to be applied annually. Water-repellent preservatives of some types are formulated with non-drying oils. These oils penetrate the wood to protect it against degradation. The deck surface may remain oily until the finish absorbs, which may take several days.

The next easiest is a semi-transparent oil-based stain. Both types of finishes are extremely effective in stopping the absorption of water and are recommended. Semi-transparent stains provide colour and some ultraviolet protection and greatly increase the durability of the finish. Apply finishes the full length of only two or three boards at a time to avoid lap marks. Do not apply more stain than the Cedar will absorb because the excess stain will appear as a shiny area on the surface. For extra protection against mildew, an annual or even semi-annual application of a water-repellent preservative formulated with a mildewcide may be effective.

Opaque stains, paints, and other film forming finishes are not recommended for decks.

Select products which have been specifically formulated to withstand the abrasive effects of foot traffic on patio decks. Always follow the manufacturer's application instructions.

### FINISHES FOR CEDAR PANELING, POSTS, BEAMS AND JOINERY

Western Red Cedar used in the interior requires less protection than exterior siding, trim and decks. Consequently a much wider range of finishes, including many not recommended for outdoor applications, may be used. Conversely, not all finishes acceptable for exterior use can be used inside. The finishes' suitability for interior use should be verified with the manufacturer. In most interiors, Cedar needs nothing more than protection against abrasion and stains from water and other liquids that may be splashed on the surface and absorbed by the new wood. Finishes also provide an easily cleanable surface as well as modifying Cedar's colour to complement a decorative theme.

A pastel latex paint applied to smooth, clear paneling creates a dramatically different design treatment for a Cedar accent wall. The rich beauty of Cedar's varied tones can be protected and enhanced by a coating of clear sealer. The rich beauty of Cedar's natural colours can be enhanced or modified by applying any of a number of commercial finishes. If Cedar is left in its natural state, some darkening of the wood can be expected as it ages and the colour variation will become less pronounced. Application of transparent finishes will also darken Cedar to some degree but they form a protective surface that is easier to maintain.

# NATURALLY DURABLE WOOD IDEAL FOR DECKS



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