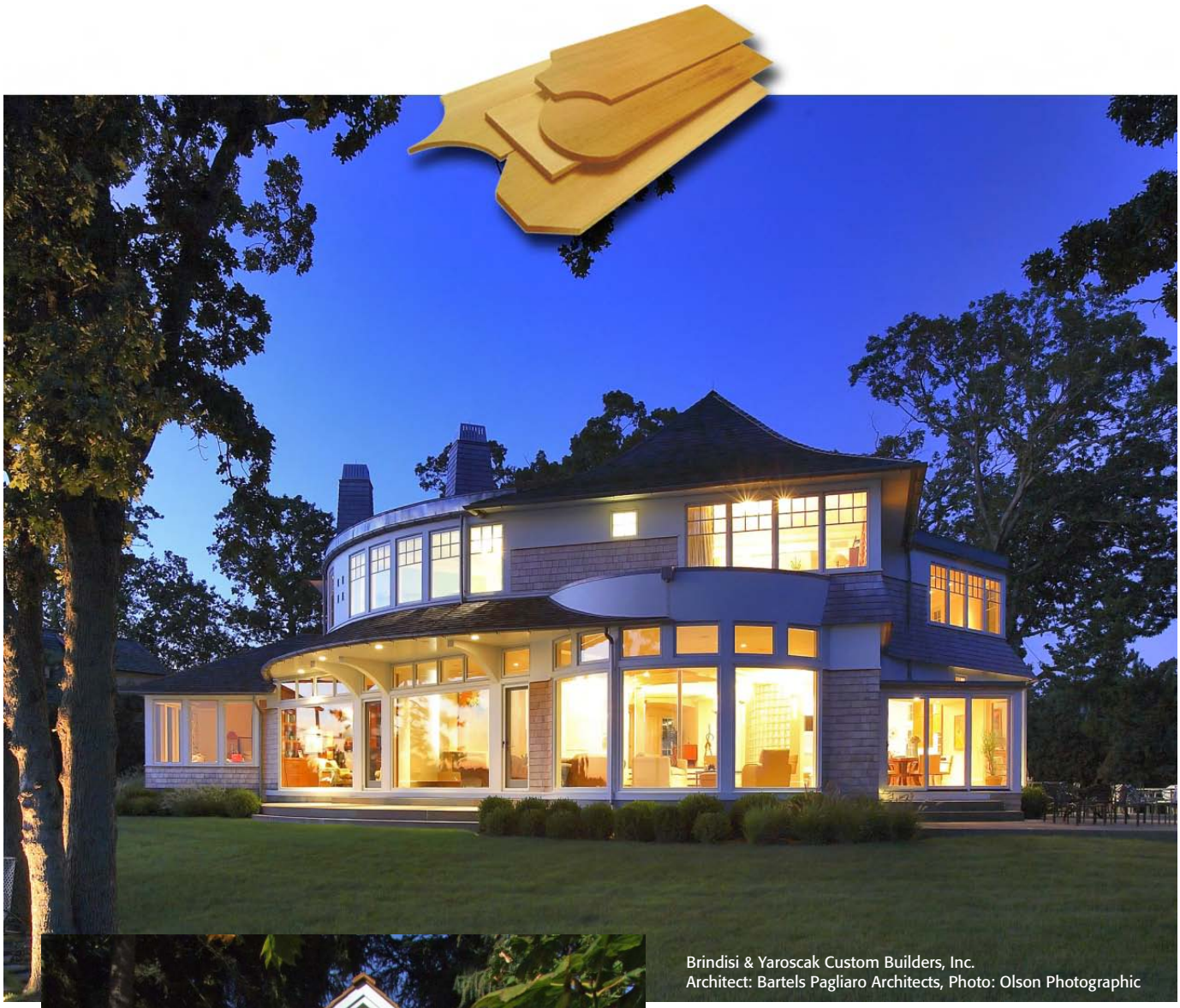
Endless Possibilities...

Cedar Shake & Shingle Bureau®

WESTERN RED CEDAR SIDEWALL FINISHES/COATINGS OPTIONS



Brindisi & Yaroscak Custom Builders, Inc.
Architect: Bartels Pagliaro Architects, Photo: Olson Photographic

Design & photo Wolf Wenzel Graphics

Welcome to a world of beauty… enhanced even more with modern finishes and coatings. Like a breath of fresh spring air, cedar shake and shingle sidewall products give your home natural good looks and durability. There are virtually limitless design and color options for your consideration – and we invite you to experience the delight of choice in the following pages.

Cedar Shake & Shingle Bureau ("CSSB") Member products – have a look!

Cover credit: Smiros & Smiros Architects, LLP

Finishes/Coatings Definitions for Western Red Cedar Sidewall

Important note: The information provided herein is of a general nature only; check with your finishes/coatings manufacturer and sidewall product manufacturer (both of these are now referred to as "manufacturers") for details on your specific project. This brochure focuses on factory finishing of kiln-dried sidewall products, recommended to save on labor costs and enhance consistency (refer to page 4 for in-field application data). Numerous manufacturers offer pre-stained, pre-primed or primed and finished sidewall products. Visit www.cedarbureau.org for contact information.

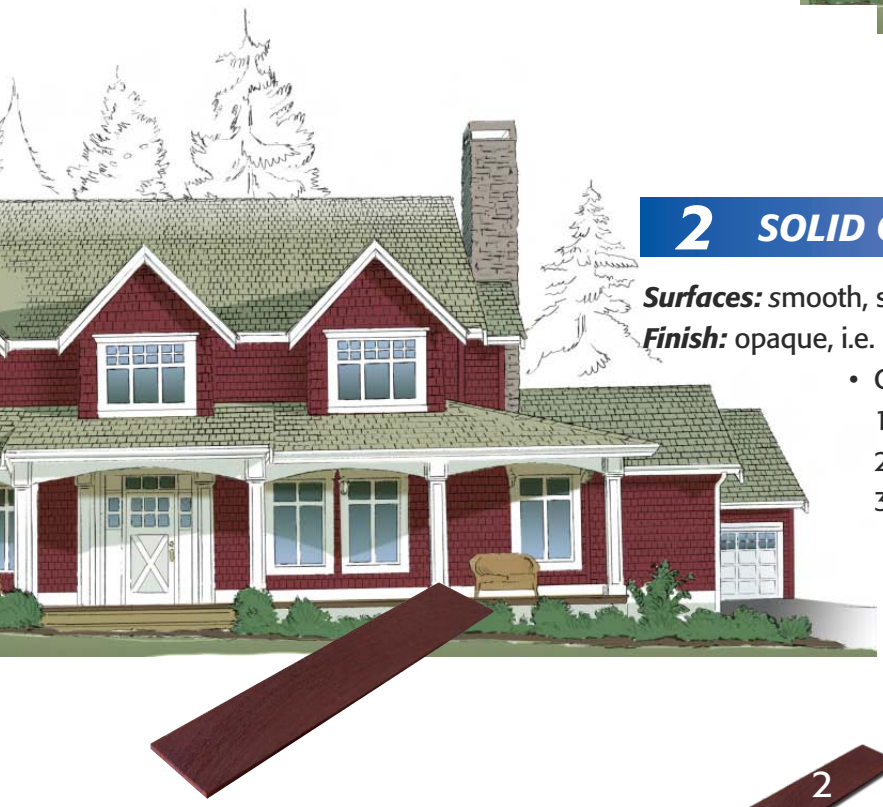
There are five different finishes/coatings available; all have a primary function to help protect the wood surface of western red cedar. Manufacturers applying a film forming opaque finish/coating to a western red cedar sidewall product utilize a variety of methods, including the option of alkyd oil or latex stain blocking primers, to complete the system. This variety in methods is due to controlled application and drying cycles possible via factory finishing. Ask the manufacturers how stain blocking is achieved with their specific finish/coating system. More specific scientific information is available on the Forest Products Laboratory website, www.fpl.fs.fed.us. Insure you confirm with the manufacturers that you are referencing the correct section, as certain technologies are not utilized by all manufacturers. Finishes/coatings system limited warranties of 10-30 years are available, however, coverage and term vary depending upon product type, finish/coating type, multi-coat status and manufacturers.

1 PAINT

Surfaces: smooth, saw textured and split surfaces

Finish: opaque, i.e. grain or natural color obscured (film forming)

- Best for long term service life
- Good chemistry products:
  1. Are durable/flexible
  2. Have good color retention
  3. Contain mold and mildew inhibitors



2 SOLID COLOR/BODY STAINS

Surfaces: smooth, saw textured and split surfaces

Finish: opaque, i.e. natural color of wood obscured (film forming)

- Good chemistry products:
  1. Are durable/flexible
  2. Have good color retention
  3. Contain mold and mildew inhibitors

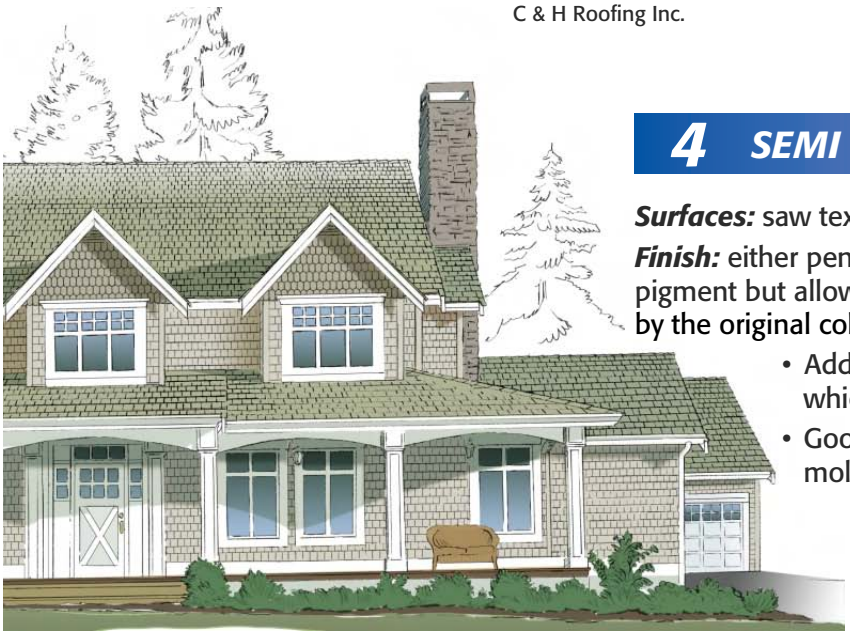
3 TRANSPARENT/NATURAL FINISHES

Surfaces: saw textured and split surfaces

Finish: clear, lightly pigmented (penetrating) - allows natural grain to show through

- Penetrating oil based stains
- Shortest service life
- Good chemistry brands contain:
  1. Mold and mildew inhibitors
  2. UV filters

C & H Roofing Inc.



4 SEMI TRANSPARENT

Surfaces: saw textured and split surfaces

Finish: either penetrating oil based or latex based. Both have additional pigment but allow the wood grain to show. Color of the finish is affected by the original color of the cedar shake or shingle.

- Added pigment provides additional UV protection which improves service life over transparent stains
- Good chemistry brands contain mold and mildew inhibitors

5 BLEACHING OIL

Surfaces: saw textured and split surfaces

Finish: penetrating weathering stain used to provide a weathered, aged look

- Chemistry of this type of finish accelerates the weathering process, over time providing a gray appearance
- Good chemistry brands contain:
  1. Oil based water repellants
  2. Mold and mildew inhibitors

Sidewall Project Tips

All areas of the world present unique finishes/coatings challenges and following instructions suited to your local climatic conditions is advised. Here are some general tips for your next sidewall project:

- Do follow the manufacturers' instructions
- Do research product options BEFORE starting the job
- Do purchase enough product from the SAME COLOR LOT to ensure consistency
- Do ask the manufacturers how their systems minimize extractive bleeding potential
- Do design the building with an adequate overhang and proper drainage
- Do ensure proper flashing above windows and doors
- Do caulk areas that cannot be flashed, such as water pipes and electrical sources, as they may be susceptible to moisture penetration. Use polysulphite, polyurethane or latex silicone (pure silicone is not compatible with western red cedar).
- Do use oil based semi transparent products in cooler northern climates
- Do use latex based semi transparent products in hot, humid southern climates
- Do keep the internal humidity of the building as low as possible

In-Field Application Overview

Solid finish in-field application is different from factory finishing; contact the manufacturers for details on in-field application AND ensure you use the stain blocking primer the manufacturers recommend. Some things to keep in mind:

- According to the USDA Forest Products Laboratory, when applying 'penetrating' oil based products, it is advantageous to apply liberal amounts of the solution to all surfaces of the wood after the wood has achieved equilibrium and prior to installation of the products
- Don't let cedar weather before applying the finish/coating
- Do insure your cedar product is at equilibrium point prior to applying a finish/coating
- Do insure all surfaces of the product receive the finish/coating

Remember

- Don't use film forming products on roofs
- Don't rely upon stain blocking primer to act as a wood protector. Rather, it is simply the material that adheres the paint or solid stain to the wood surface.

Avoid these mistakes

The top three causes of finish/coating failure generally are:

- Improper preparation of the siding
- Incorrect finish/coating application
- Improper siding application

By following manufacturers' directions and the tips outlined in this brochure, one can avoid mistakes like these below:

Not back primed.
Primed over weathered wood .

Not back primed.
Weathered wood and mold

Painted over weathered wood.
Improper installation.

These three photos demonstrate (film forming) finish/coating failure.

Extractive bleeding - Facts

Extractives are contained in the wood of all tree species. Dry wood is composed of both organic and .01-1.0% inorganic materials. The organic components are referred to as extractives which include tannins, essential oils, and resins, (western red cedar is non-resinous). These extractives contribute to properties in the wood such as color, odor, insect resistance, and can be released with the use of solvents such as water, alcohol, benzene and ether, often found in paints or stains. Extractives deposited or diffused onto the surface by water will leave a reddish-brown streak or stain after the solvent (water) evaporates. This extraction can be compared to a tea bag placed in hot water. As moisture generally is the primary cause, this streaking can be avoided by keeping the product dry during shipping and storage, and on the job site.

Before application, drying the cedar shake or shingle to its equilibrium point is essential. It should be shipped with a protective waterproof cover. On the job site, keep the wood dry and (if possible) out of the elements, off the ground and under cover. If storing over new concrete such as a freshly poured concrete slab or over damp ground, place a moisture barrier beneath the product. Allow air to circulate freely around the product. The time needed for a wood product to acclimatize will vary with the moisture content of the product and the local climate condition. Check with the manufacturer regarding kiln-dried product and acclimatization time frame, if necessary.

Extraction concept

Correcting water soluble extractive staining can often be achieved by cleaning with warm water and a soft brush if caught soon after it appears. Mild staining is often washed away after a few weeks by rain.

(Source: USDA Forest Products Laboratory 'The Finish Line-Paint, Stain, Varnish or Preservative? It's your choice')

It's natural

Keep in mind that extractive bleeding is a natural phenomenon caused by incorrect installation, or incorrect moisture levels - it does not imply that the cedar is defective nor does it mean that the manufacturers are at fault. Ask the manufacturers how stain blocking is achieved with their specific finish/coating system.

Brindisi & Yaroscak Custom Builders, Inc., Architect: George Dumitru

Architect: Shope Reno Wharton, Photo: Robert Benson

Seminars available

The CSSB offers seminars to many different groups: distributors, installers, code officials, insurance adjusters and inspectors.

In addition, the CSSB is a registered Continuing Education Systems (CES) provider of the American Institute of Architects and offers the following seminars for credit:

CSSB 1 - Red Cedar Shakes & Shingles: Identification, Application & Benefits, 2 (CES) Learning Units - Health, Safety, Welfare (HSW)

CSSB 2 - Finishes/Coatings: Recommendations for Western Red Cedar Shakes & Shingles, 1 (CES) Learning Unit - Health, Safety, Welfare (HSW)

Project Planning Notes...

Architect: Gary Tabasinske, AIA Photo: Chris Eden

Photo: B.C.F. Shake Mill Ltd.

Photo: Wolf Wenzel Graphics

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The Cedar Shake & Shingle Bureau would like to thank everyone who contributed images and product for this brochure.

Cedar Shake & Shingle Bureau

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