CANADIAN FORESTRY SERVICE

fact sheet

A NATURAL FINISH FOR WOOD SIDING

how to make it yourself

The finishing of wood siding to preserve its natural beauty has become very popular in modern house construction. Finishes may be clear, or may be pigmented to accentuate wood colour. Originally, natural finishes were applied to the darker-toned woods such as redwood and western red cedar, but in recent years they have also become widely used on lighter-coloured woods such as pine, hemlock and spruce.

When finished in this manner, the siding is often used in combination with other exterior building materials such as stone and brick. These combinations, when properly designed, produce very pleasing effects. Summer cottages are often coated with a natural finish to create a rustic appearance.

types of finish

There are many natural finishes on the market today, and the selection of a suitable one for a particular application will depend primarily upon the final appearance desired. If a high-gloss finish is preferred, then it will be necessary to use a film-forming coating such as one of the varnishes (spar, epoxy, urethane, etc.). On the other hand, if a low-lustre appearance is desired a semi-transparent oil-based stain should be used.

Future maintenance is important when selecting a type of finish. Although some film-forming finishes are very durable with respect to properties such as toughness and resistance to erosion, they may fail through weathering by cracking and scaling. Complete removal of the finish will then be necessary before re-coating. The oil-based finishes, since they do not form films of appreciable thickness, do not fail in this way and the wood may be refinished with less expense and effort.

a simple natural finish

The Eastern Forest Products Laboratory of the Canadian Forestry Service recommends a simple natural finish that imparts a fairly durable surface to exterior siding, even under relatively severe climatic conditions. It is an oil finish that yields a low lustre. The ingredients are readily obtained at paint or hardware stores or building materials dealers, and are economical and easily mixed by the homeowner. Some paint stores will prepare this finish upon request.

Boiled linseed oil, which contains a drier, is superior to raw linseed oil in that it dries in a reasonable time and is less susceptible to attack by moulds. One gallon should cover 400 to 500 square feet of smooth-surfaced siding, and perhaps half of that area on a heavily-textured surface.

natural finish formula

Boiled linseed oil	1 gallon
Mineral spirits (paint thinner)	1 pint
Pentachlorophenol Preservative Concentrate 10:1	1 pint
Pigment ground-in-oil	(approx.) 1/2 pint
Paraffin wax	2 to 3 ounces

The boiled linseed oil should be placed in an open metal container of suitable size and the pentachlorophenol concentrate added carefully with stirring. *Avoid splashing the concentrate onto skin or clothing.* The paraffin wax should be melted in the top of a double boiler and slowly poured into the mineral spirits with thorough stirring. The solution of paraffin wax in mineral spirits can then be poured into the linseed oil mixture with thorough stirring. Pigment can then be added to give the desired colour.

anti-mould protection

In damp locations, mould may form on natural or painted finishes, causing a dark or black appearance. To overcome this, the toxic preservative pentachlorophenol is included in the above formula to the extent of about five per cent by weight. Pentachlorophenol is often marketed through paint stores as a concentrated solution labelled "Penta Preservative Concentrate 10:1". This means that one part of the concentrate when mixed with 10 parts of oil or other solvent will give a solution containing about five per cent by weight of pentachlorophenol.

improved durability and colour selection

The life of natural finishes is extended considerably by the addition of pigments such as the raw or burnt umber and raw or burnt sienna pigments used to achieve the familiar brown "cedar" colour. The exact amount of pigment to use can be found by trial, using scraps of wood siding to arrive at the desired colour. The greater the amount of pigment, the greater

will be the durability of the finish, but the quantity should not be so large as to obscure the grain figure of the wood, or a painted appearance will result.

The cedar and redwood colours have enjoyed traditional use and produce a finish with good durability. The kinds and amounts of pigments to use are as follows (based on a four-gallon batch of finish):

Brown cedar colour ...	1 pint burnt sienna, 1 pint raw umber.
light redwood	2 pints burnt sienna.
dark redwood	1/3 pint burnt sienna, 1/3 pint raw umber, and 2/3 pint Indian red oxide.

A further range of colours that can be obtained through the use of pigment combinations is offered by the U.S. Forest Products Laboratory[1] as follows (based on a four-gallon batch of finish):

Green gold	1 pint chromium oxide, 1 pint raw sienna.
Tan	1 quart raw sienna, 3 fluid ounces burnt umber.
Chocolate brown	1 quart burnt umber.
Forest green	1 quart medium chrome green.
Fruitwood brown	1 pint raw sienna, 1 pint raw umber, 1/2 pint burnt sienna.
Smoky gray	1 quart white oil-based house paint, 6 fluid ounces raw umber, 3 fluid ounces lampblack.

application

The natural finish may be freely applied by brush, roller or spray. After 20 or 30 minutes any excess material should be removed by wiping with rags to prevent the formation of a soft, gummy film or glossy patches. The extent of wiping will also be governed by the amount of pigment in the finish. If the figure of the wood has been obscured by the finish, then more should be wiped off. In the case of new work, two applications of the natural finish are necessary — the second coat should be applied about 24 hours after the first.

Addition of a second pint of mineral spirits to the formula will improve absorption, lessening the need to wipe off excess finish. (Caution — Oil-saturated rags constitute a dangerous fire hazard. They should be carefully disposed of immediately after use).

when to refinish

To determine when an oil finish should be renewed, splash droplets of water onto the siding; if absorption takes place immediately, the sealing qualities of the oil have deteriorated and a fresh coat should be applied. It should be noted that an oil finish should not be applied over a varnish or wood sealer finish.

If a change to paint finish is contemplated at any time, the natural finish should be allowed to weather for at least a full year before painting.

A final note — to prevent possible streaking, or discoloration of wood siding with a natural finish, only galvanized or aluminum nails should be used in construction.

[1] USDA Forest Service Research Note FPL-046, 1972.

Cette publication est disponible en français sous le titre *Un fini naturel pour revêtements extérieurs en bois*

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