

The WeatherSeal User Guide

WeatherSeal can best be described as a cross between a paint and a stain. WeatherSeal applies like a super thick, creamy smooth paint, yet it soaks into the wood like a water-thin stain. It's much easier and more enjoyable to use because the sloppy mess associated with staining is virtually eliminated. Furthermore WeatherSeal packs a powerful performance punch. Its highly durable oil-based resins, water proofers and special performance boosters really hold up to the elements.* Plus, its clean air formulation is sensitive to environmental concerns and meets air quality standards for all regions of the country.

****Performance will vary according to application method, wood species, surface conditions and other variables.***

The Continental Products Company has been manufacturing high performance industrial coatings since 1916. With the development of WeatherSeal, we are excited to bring our expertise in modern paint technology to the log homeowner. Log Homes pose a unique challenge for any type of exterior wood coating because the mass and surface of a log can vary greatly from log home to log home. Each individual log can possess varying moisture contents, different amounts of resin, a predominance of bark, cambium, sapwood or heartwood layers, and varying densities of growth rings. In addition, log products are hand-peeled, drawknifed, finely milled, or somewhere in between and come in a variety of wood species.

Unfortunately, it is impossible to design a coating that will wear in a similar manner over such a variety of surface conditions. Because of all these variables, including different locations and climates, the success and satisfaction of ones surface maintenance efforts will be greatly enhanced by minimizing the conditions that can lead to early coating failure. A coating's performance is dependent on four basic factors:

- 1. The Quality Of The Coating.**
- 2. The Surface Coated.**
- 3. The Location.**
- 4. The Design Of The Building.**

The Quality Of The Coating The quality and physical characteristics of a coating are determined by its formulation, method of manufacture and quality control procedures. These are the only elements over which the paint manufacturer has direct control. Directly related to the quality and performance of a coating is how it's used. For example, a quality wood coating designed for interior application, when applied to an exterior wood surface, will not perform properly. A coating designed for price consideration only will be formulated differently and of a lesser quality than coatings designed and used in markets that are oriented toward higher quality and better performance.

The Surface Coated A very crucial aspect of a coating's success is directly related to surface conditions. Often, the reason for early coating failures is caused by poor surface conditions and a high moisture content within the logs. Closely related to surface conditions is method and time of application, i.e., how and when a coating is applied.

The Design And Location Of The Building Building design, and/or its particular location play an important role in the longevity of an outdoor wood finish's performance. The most common design elements that contribute to accelerated wear of a wood finish include: undersized overhangs, lack of gutters, inadequate roof pitch, insufficient distance between sill logs and ground, poor deck design and absence of porches, especially on weather sides. Contributing location factors include: highly exposed Southern and Western facings, low lying areas of poor drainage, waterfront sites, high altitudes and local climate. Some of these design and location features, once implemented, are difficult to change. Under such circumstances, in order to maintain an attractive appearance, more frequent maintenance treatments will be necessary.

For best results the log or wood surface should be free of bark and cambium layers, mill glaze and burnished surfaces before application of WeatherSeal. Any of these surface conditions will impede penetration and inhibit adhesion of WeatherSeal to the wood fibers. Application of WeatherSeal over such surfaces may result in excessive film formation and/or poor adhesion to the surface coated, which in turn can lead to premature flaking and peeling of the finish.

Basic Requirements

Mix thoroughly. To achieve the proper super-thick consistency, simply mix

with a paddle mixer and power drill. WeatherSeal does not require dilution under normal circumstances. WeatherSeal can be diluted with up to 1 pint of mineral spirits per gallon if excessive brush drag or spray difficulty is experienced.

Apply with a high quality bristle brush (preferably a synthetic **Chinex** bristle). Brush with the grain in smooth, even strokes.

May be spray applied if immediately back-brushed.

Don't leave too thick of a coat on the wood surface.

Level and brush immediately into the wood any excess stain left on the surface after each application.

To minimize lap marks, coat each log or wood component to completion (don't stop in the middle) and maintain a wet edge.

To avoid confusion regarding stain color, do not make a final color choice from our brochure. Instead, order a "wet" sample.

To insure color uniformity, always intermix a new can of WeatherSeal with a partially full used can.

Do not apply in direct midday sun or on heated wood surfaces.

The temperature should remain between 50 degrees F (10 degrees C) and 95 degrees F (35 degrees C) for at least 48 hours.

Do not apply in wet weather or if rain is predicted within 24-48 hours of application (length of dry between coats is dependent on temperature and humidity.)

Do not apply multiple coats over wood with a moisture content that exceeds 18%.

Do not apply on damp logs.

The Formula For Success!

Surface Prep and Application Schedule

Step 1 Log Handling at the Construction Site

It is essential to keep logs adequately sheltered during the construction phase. Maintain sensible log handling and storage methods during the entire building phase. These procedures include keeping all logs and wood members from ground contact, and preventing wetting of the wood surfaces through tarping or other protective measures.

Step 2 Log Cleaning

After the log shell and roof are assembled, a pressure cleaning of the wood surface is recommended. Pressure cleaning involves the use of a power wash spray unit that sprays water under pressure. Pressure washing the log

surface is an excellent method of surface preparation before application of WeatherSeal. High pressure does the job. The pressure wash method helps open the wood pores, rids the surface of mold, mildew and dirt stains, and improves the absorption and bond of WeatherSeal over problem surfaces, i.e., cambium, mill glaze, burnished surface.

Pressure Wash Method...Bleach Solution Formula

Mix a solution of:

1 cup Trisodium Phosphate

(or equivalent no phosphate substitute)

1 qt. fresh bleach

3 qts. clean water

Soak the log surface to be cleaned with fresh water. Then apply the bleach solution onto the wetted surface with a low pressure spray (a hand pump garden sprayer works fine). Allow the bleach mixture to activate its cleaning power for 20-30 minutes. Pressure wash clean at 500-750 psi with fresh water. Always spray at angles when cleaning near log seams to avoid damaging the seal. Let the cleaned surface thoroughly dry before coating with WeatherSeal.

NOTE: for clean-up of hard to remove rust stain, blue stain, chemical (coffee) stains; replace the bleach solution with a mixture of ½ lb. oxalic acid crystals to 1 gallon fresh water. Scrub with a medium hard bristle brush and rinse thoroughly with clean water.

Step 3

WeatherSeal Coat \Waterproofing and Weatherproofing Protection

Before application of WeatherSeal, randomly check the log surfaces for dryness. When the log surfaces are dry to touch, proceed to apply a single coat of WeatherSeal. For best performance, apply by brush only using a high quality synthetic brush. Application by spray method will result in a greater likelihood of uneven wear, flaking, peeling and overall reduced performance of WeatherSeal. Ideally, the moisture content of the logs should be around 18% before applying WeatherSeal. Because the log moisture content is generally higher on new log homes, only apply one coat of stain. Applying more than one coat of WeatherSeal on newer, fresh cut logs, will reduce WeatherSeal's ability to effectively handle the hydraulic pressure created from the rate and volume of water vapor passing from the logs through the coating. One coat of WeatherSeal is less dense and more porous and breathable and thus able to

better withstand the amount of water vapor passing through it. If green logs are oversealed, moisture-related coating problems are more likely to occur i.e., molds, mildew, and peeling. This preliminary first coat we term "the seasoning coat" and should provide a good year of protection.

Step 4 Maintenance Coats

Before applying subsequent maintenance coats, make certain to clean and hose down areas to be re-coated in order to remove surface particulates, i.e., mold, mildew, dust, pollen, loose worn out stain, etc. Loose or flaking stain should be removed and heavily soiled areas scrubbed clean using the bleach solution formula and medium bristle brush. Whenever cleaning the wood surface, always rinse thoroughly with fresh water and allow thoroughly to dry before staining. Approximately one year after the first application, apply a second coat of WeatherSeal. Do not coat to excess and apply by brush or if sprayed, make certain to backbrush. The following year, inspect the log surfaces for wear. Any areas that show signs of exposed wood, deterioration of stain, or evidence of mold and mildew should be cleaned and touched up with the same color. Also, as the wood dries, medium to large cracks in the logs can occur which may adversely affect the WeatherSeal coating surrounding the cracks. Lightly sand around the crack edges and fill the openings with a quality log home caulk. Once the caulk has dried, apply WeatherSeal over the caulked area and feather into the surrounding stain. Touching up patches of wear before they start affecting adjacent areas will prolong the overall life of the finish.

The reason for the succession of single coats the first few years is due to the different amounts of moisture that are initially present in most new logs. This moisture will slowly work its way out of the logs and evaporate into the outside environment. But the drying or "seasoning" process takes time, up to 18 months or more, before a moisture balance is achieved between the internal moisture of the logs and the relative humidity of the outdoors. During this seasoning process, the WeatherSeal coating will weather more quickly because of two conditions acting simultaneously on the coating. One condition, that of the moisture being released from the logs, creates stress on the coating from the inside out, while the other condition, the harsh elements of weather, wears at the coating from the outside in. As the moisture content of the logs is stabilized and is less of a factor, WeatherSeal's service life should improve considerably.

The exception to this initial one coat rule is if the logs are determined to be

adequately dry (around 18% moisture content) and the surface accepts good absorption of the stain. Under these circumstances two coats may be immediately applied to the log surface with follow-up renewal coats as needed. (See Step Five).

Step 5 Renewal Coats

The frequency of renewal coats will depend upon where the home is located, its design, the species of wood, the shape of the logs, and other factors. Plan on having to re-coat portions of the home at 3 to 5 year intervals.

Step 6 Common Sense

Do not rely on a specific time frame for your maintenance requirements. Use common sense as you visually assess the log exterior to determine the need for follow-up maintenance. If the logs are checking and cracking, exposing uncoated wood or when the finish looks drab and thirsty (i.e. worn, dried and flaking in areas) then it's time to WeatherSeal the logs. Remember, always clean the areas that need attention with the bleach solution before touching up and re-coating.

Summary

Surface Maintenance For New Log Homes Construction Phase

Once the log shell and roof are completed, clean surfaces with bleach solution as required. Allow to thoroughly dry.

Seasoning Coat

(First coat, beginning of year one). Apply one single brush coat of WeatherSeal.

Protective Coat

(Second coat - beginning of year two). Approximately one year later, reapply another single brush coat of WeatherSeal over entire house.

Maintenance Coat

(Beginning of year three). Assess the surface condition of the logs. Clean and spot coat any areas that require maintenance.

Renewal Coats

Thereafter a maintenance schedule can be established approximately every 3 to 5 years.

Additional Considerations

Borate Treated Wood

Logs preserved with Sodium Borate should be coated with WeatherSeal shortly after construction because of the tendency of borates to leach out of wood exposed to moisture. That's because Sodium Borate is water-soluble and will migrate to areas that are wet. WeatherSeal is designed to weather and waterproof the wood surface thus creating a water barrier to minimize such leaching. As an added benefit, WeatherSeal's unique formula contains Sodium Borate, which will help replace some of the borates that may have leached out of the log surface during the unprotected construction phase. Prior to treating with WeatherSeal, and areas of mold, mildew, grime, or borate residue should be cleaned. The pressure wash method previously outlined is generally an accepted method of cleaning borate treated wood. However, before cleaning, contact the borate treater of your logs and/or wood components for their recommendations on proper cleaning procedures. Once the logs are clean and dry, brush a single coat of WeatherSeal. Thereafter, follow the same application schedule discussed earlier regarding logs with a higher moisture content.

Skip-Peeled Logs

The charm and attraction of a rustic, hand-peeled log home is due to the presence of bark and cambium layers that remain on the outer surface of the log. As stated earlier in the text, the log surface should be free of cambium, inner bark and outer bark layers to achieve maximum performance and longevity of WeatherSeal. Because this requirement is not realistic for a hand-peeled log, we recommend an added step in the surface preparation process to improve WeatherSeal's ability to perform over such surfaces. That step is simply to scuff the hand-peeled surfaces prior to pressure washing. This can be accomplished with a non-ferrous wire brush or coarse sandpaper. The idea is to partially break the hard, smooth cambium and bark membranes to create a better surface for WeatherSeal to bond to. It's still important however, to pressure wash (500-750 psi) after scuffing the surface because, in addition to its cleaning benefits, a pressure wash will further improve the porosity of the cambium and bark layers and remove any loose layers of bark. Once this initial surface preparation is completed, apply one coat of WeatherSeal only. The following year apply another coat and thereafter proceed with the maintenance schedule as previously mentioned. Should any

flaking or premature wear occur between renewal coats, scrape and scrub clean the affected areas and touch-up with the same color.

Drawknifed Logs

Drawknifed logs, like skip-peeled logs, use a special handheld drawknife to peel and sculpt the log surface. But unlike hand-peeled logs, all of the bark and most of the cambium is removed from the log surface. Because of the drawknife effect, this type of log is faceted, like a diamond. Consequently, more wood surface is exposed to the environment and because the drawknifed surfaces have ridges and are at slight angles, their uneven exposure to sunlight and general weather factors will tend to promote variations in wear and overall performance of WeatherSeal. Additionally, the cutting action of the drawknife may leave a slick, compacted, burnished surface that can also create penetration and adhesion difficulties for an exterior wood stain. Therefore, our recommendations for surface preparation on this type of log are to lightly sand with coarse sandpaper the log surface and pressure wash clean (500-750 psi). Then proceed with the same WeatherSeal application requirements as indicated with the hand-peeled log.

Outdoor Hand-crafted Rails

Hand-peeled and spindle type rails are a popular style railing for bordering porches and decks of a log home. However, this type of railing usually contains a greater portion of bark, cambium and burnished surfaces. As mentioned earlier, burnished and cambium surfaces will create coating problems. To insure more successful coating results, rough up the wood surfaces with coarse grit sandpaper or a non-ferrous wire brush. Next, scrub the bleach formula onto the railing with a medium to hard bristle brush. Rinse thoroughly with fresh water. Allow to dry completely. Apply one brush coat of WeatherSeal. Thoroughly saturate the end grain but do not overcoat the other surfaces. Yearly spot maintenance is usually required.