

Application Temperatures

Most of our labels list the recommended temperature range for the application of the product. There are; however, situations when you may need to know a bit more detail about the application temperatures in order to schedule or complete a job. In some cases, there are steps that can be taken to help cope with extreme hot or cold temperatures. Just remember that we are concerned with surface temperatures, not air temperatures. It is the temperature of the logs that must be considered, not the temperature on the thermometer hanging on the porch.

Finish Removers

Recommended Range for Best Results

StripIt®	55° F – 90° F
S-100™	50° F – 90° F

Finish removers become less effective as the temperature decreases. It is not that these products can not be used in cold temperatures; however, it may take several more hours of contact time to soften an existing finish to remove it. One positive note about both S-100™ and StripIt® is that prolonged contact with the surface will not damage the wood fibers.

At high temperatures the challenge is preventing either product from drying. Preventing this can be accomplished by keeping the surface damp. When using S-100™ mist the surface with water or if using StripIt® add additional StripIt® to the coated surface (**Note: Do Not mist StripIt® with water**). Additionally, pressing a sheet of plastic (6 mil) against S-100™ or StripIt® will slow down the evaporation rate. If S-100™ or StripIt® dries on the surface, they are no longer active. To remove the dried residue of S-100™ or StripIt® from the wood surface, apply an additional application of the respective material to re-wet the surface followed by pressure washing. As long as they are kept moist (Water for S-100™ and additional material for StripIt®) in hot weather, these products do not take very long to do their job.

Cleaners & Brighteners

	<u>Recommended Range for Best Results</u>
Log Wash™	40° F – 90° F (not stated on label)
Cedar Wash™	40° F – 90° F (not stated on label)
Wood ReNew™	50° F – 90° F (not stated on label)
Oxcon™	50° F – 90° F (not stated on label)

Similar to finish removers, cleaners and brighteners work better at warm temperatures. Of the three products listed above, Log Wash™ is the least affected by cold temperatures. A wash down with Log Wash even at temperatures close to freezing will still do some good. On the other hand, at very cold temperatures, applications of Wood ReNew™ and Oxcon™ may not be very effective. The reason is because they rely on chemical reactions to accomplish their tasks. Reaction rates significantly decrease as the surface temperature approaches 32° F.

If any of these products are allowed to dry, they stop working so in hot weather they too need to be kept wet with an occasional light mist of water. It is especially important to keep Oxcon™ wet. If Oxcon™ dries on a wall, crystals will form on the top layer of wood. Once formed they are difficult to rinse off. Even a minor amount of oxalic acid residue can reduce adhesion of a finish.

Exterior Finishes

	<u>Recommended Range</u>
All Lifeline™ stains	40° F – 90° F
Lifeline™ Advance	40° F – 90° F
Log End Seal™	40° F – 90° F (not stated on label)
Deck Defense™	40° F – 90° F
Log & Timber Defense	40° F – 90° F

What happens in early spring and late fall if the temperature falls below freezing a few hours after the finish is applied? As far as we know freezing conditions after film formation has no effect on the look or performance of the finish. The surface temperature limitations pertain to the temperature of the walls while staining, not to temperatures that the walls may be exposed to after film formation.

If a film does not form, applying a second coat can result in failure. Applying a second too soon, will result in the film balling up into little beads during back-brushing. The one thing you never want to do is attempt to stain logs that are frozen. A coherent film will not form and the finish will flake off the wood. At high temperatures drying time is also an issue but in this case, the film may dry so quickly that it will not be able to be back-brushed.

An Advance finish applied at cold temperatures and high humidity presents a somewhat different challenge. The longer it stays uncured, the more susceptible it is to blushing. At high temperatures the fast-drying time may prevent adequate back-brushing.

Although the application surface temperature range on the labels of our finishes is between 40°F and 90°F, the most favorable temperature range for easiest application is between 50°F and 80°F.

The finish most sensitive to cold weather application is Log End Seal™. Log End Seal™ is water sensitive before it completely cures and since cold weather retards the curing time, there is a good chance that the Log End Seal™ may blush white and stay that way for several months, especially on thicker applications. When the temperature increases, the film will eventually become clear and stay that way. It is recommended to coat Log End Seal™ with Lifeline™ Advance Gloss or Satin to protect it from blushing and dirt pick-up.

Sealants

	<u>Recommended Range</u>
Perma-Chink®	40° F – 90° F
Energy Seal™	40° F – 90° F
Woodsman™	40° F – 90° F (label states 40° F – 120° F)
Check Mate 2®	40° F – 90° F (not stated on label)

When applying any of our sealants in cold weather there are two main factors to consider, the temperature of the logs and the temperature of the product. Provided the logs are dry and not

frozen, any of our sealants can be applied without comprising appearance or performance. The problem associated with very cold sealants is viscosity, their viscosity increases as the temperature decreases. This is especially apparent when trying to squeeze product out of an 11 or 30 oz. tube or when attempting to load a bulk loading gun from a pail of sealant. Cold product is also more difficult to tool. It is always best to store our sealants in a controlled environment (50-70°F). That will make them easier to apply and tool. Once applied the only effect that freezing temperatures have on our sealants is lengthening the time it takes for them to cure. In the summer months it may take Energy Seal™ or Perma-Chink® a few weeks to cure, whereas in the winter it may take a couple of months to completely cure.

No matter the time of year, it is advisable to never apply a sealant in direct sunlight. Even if the day is cool, direct sunlight can cause the surface to skin over before the remaining free water has a chance to evaporate resulting in blisters forming on the surface of the sealant. In very hot weather blistering can occur if the sun rapidly heats the wall after chinking has been applied, especially if the underlying wood is green or damp. Draping the chinked wall with a tarp until the chinking cures will help prevent the formation of blisters. Another challenge using our sealants in very hot weather is that the surface may dry so quickly that tooling time may be reduced to only a few minutes. If masking tape was used to protect the surrounding outer surfaces, it is imperative to remove the tape before the surface starts to dry. If the tape is left on too long, it will pull off the skinned-over layer of sealant. Although we do not specifically state an upper limit on the Perma-Chink and Energy Seal labels, we discourage either products' use above 90°F.

Note: The upper limit of the Woodsman™ application temperature range is 120°F on label. That is fine if the Woodsman is to be used between courses of logs, but if it is going to be used as an external sealant like Energy Seal, 90°F should be considered the upper temperature limit.

The Tool Every Contractor / Applicator Should Have

These days there is no reason for any professional to profess ignorance about the surface temperature of a wall prior to the application of any of our products. Infrared thermometers used to be quite expensive but a quick search on [Amazon.com](https://www.amazon.com) resulted in a number of them that cost between \$25 and \$50. At that price they are affordable to anyone including a homeowner who wants to eliminate the guesswork of determining if a wall is too hot or too cold before applying a finish or sealant.

Some Inexpensive Infrared Thermometers

