



**PERMA-CHINK®  
SYSTEMS, INC.**

YOUR WOOD CARE RESOURCE

## **WORLD CLASS PERFORMANCE!** **LOG HOME SEALANTS** APPLICATION GUIDE

### **Premium Performance Products**

Log Home Sealants  
Stains and Finishes  
Restoration Products  
Wood Preservatives  
Tools and More

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Since 1981, *Perma-Chink Systems'* log home sealants have proven themselves on thousands of chinked and chinkless style homes to become the most widely applied log home sealants in the world. They are simply the best by every measure: longevity, appearance, performance, and ease of application.

Perma-Chink®  
Energy Seal® and Woodsman™  
Check Mate™ 2

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## BACKING MATERIAL | WHY YOU NEED IT



Backing materials are an integral part of a sealant system and should be used wherever possible. The overall performance of any sealant system is dependent on the use of correct application thickness and proper backing. For small joinery, the most commonly used backing is round backer rod. It comes in a range of sizes and is relatively inexpensive. It is flexible and can be pushed into a crevice without needing to be nailed or stapled.

In situations where joinery is too narrow to insert some type of backing material, a narrow strip of water resistant masking tape works well. Avoid masking tape that wrinkles when wet, because the wrinkles may show through the sealant after it has cured. A good option is to use pinstripe tape available at most automotive supply stores. The tape should be water resistant, so *Energy Seal* does not adhere to it, making it a suitable backing material. Pinstripe tape is available in widths down to 1/8 inch.

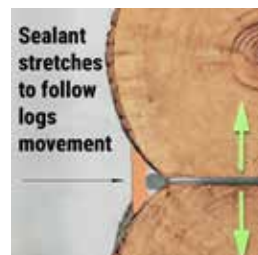
### APPROVED BACKING MATERIALS

Grip Strip™  
Backer Rod™  
Log Gap Cap™  
Polyisocyanurate board (Polyiso or R Max)  
Extruded Polystyrene (non-foil faced EPS)  
Water-resistant masking tape or pinstripe tape

### DO NOT USE:

Blue Board  
Pink Board  
Other colored boards that outgas to cause blisters  
Polyurethane foam (Pur Fill, Great Stuff, Styrofoam)

### The role backing materials play in sealing a seam



### TOOLS

- Application bags, caulking gun, or bulk loading caulking gun.
- Rags and a bucket of water for general cleanup.
- Follow plate for bulk loading gun.
- Spray/mist bottle (use water with a few drops of dish soap as a release agent).
- Trowels and spatulas (close to the width of the finished seam is best).
- Masking tape if desired.

### WEATHER CONDITIONS

Freshly applied sealants should be protected from direct rainfall for a minimum of 24 hours. Either watch the weather or drape a newly sealed wall with plastic film. Be sure to allow some air space between the wall and the plastic to facilitate drying. Avoid applying sealants in direct sunlight or when the temperature is less than 40°F. In cold weather, it is important that the logs be free of frost and dew in order to ensure that the sealant adheres tightly to the wood. Like stain, the best surface temperature range for easiest application and best results is between 40°F and 90°F.

## SEALING | WINDOWS AND DOOR FRAMES



Use Log Gap Cap™ where round logs meet window and door jamb trim



Insert Log Gap Cap™ into void between logs and frame. Leave 3/8 inch gap between surface of foam and edge of frame



Apply masking tape to prevent sealant from smearing onto the adjacent logs



Fill the 3/8 inch gap between the surface of the foam and the edge of the frame with sealant. Remove tape, once complete

## PERMA-CHINK® | WHEN TO APPLY IT?

- Apply *Perma-Chink* log home sealant after staining for the best finished appearance and the least total labor to avoid getting stain on the new chinking.
- **Best:** After application of *Lifeline* stain, but before *Lifeline Advance* clear topcoat (*Lifeline Advance* should be applied over *Perma-Chink* log home sealant, making it easier to clean.)
- **Second Best:** After application of *Lifeline* stain and *Lifeline Advance* clear topcoat.
- **Worst:** Over a fresh application of oil-based stain. Oil-based stains must be allowed to dry for 2 months. Then clean the upper and lower chinking joint edges with at least 70% Isopropyl alcohol to remove the surface oil residue.
- **Weather:** Protect freshly applied *Perma-Chink* from rain for at least 24 hours to allow a water-resistant skin to form.

### ROUND LOG | CONSTRUCTION

When using *Perma-Chink* log home sealant on full-round log construction, the finished width of the chinking seam should be approximately 1/6 inch of the log diameter (i.e. if your logs are 15 inches in diameter, the chinking seam should be about 2-1/2 inches wide.) This is very important on log home siding applications. Use proper width backing material to provide for your desired seam width when considering that the applied wet material will be approximately 5/16 inch to 3/8 inch thick.

### SQUARE LOG | CONSTRUCTION

Backing material and chinking seam width are determined by the engineered geometries of square log wall construction. It is always best to install backing materials, so the finished chinking application does not result in a horizontal lip or ledge at the bottom edge of the seam where rainwater can accumulate. A little planning at this point can prevent a lot of maintenance in the future.



## BULK LOADING APPLICATION GUNS STEP-BY-STEP



Remove the lid and the plastic liner from the pail; set aside



Place the follow plate on top of the chinking pail



Remove the cap and cone tip from the gun barrel and push the end of the barrel onto the hole



Ensure the tight seal, fully extend rod and fill barrel. Press the lever down while fully extending the rod up, filling the barrel. Disengage the gun from the follow plate



Attach the end cap and cone tip to the end of the barrel



Insert the handle rod into the open nut to remove the follow plate



Replace plastic liner over the surface of the sealant



Replace the lid. Make sure that it is tight on the pail

## APPLICATION OF PERMA-CHINK® LOG HOME SEALANT GENERAL TIPS

- When using a ladder, it is best to start at the top of the wall to avoid leaning the ladder into freshly applied chinking.
- For square logs, inexperienced applicators may want to mask the top and bottom edges of the chinking application to keep wet chinking off the face of the logs.
- Inspect the backing material installation for all discontinuities. Gaps between sections of backer, dimples from staples, and wrinkles or bulges in the backer won't show in finished wet chinking, but they can show up after the chinking has fully cured because of shrinkage during the curing process.
- Observe the proper application thickness (5/16 inch to 3/8 inch wet thickness). When chinking is too thin, it is susceptible to tearing in those areas. If it is too thick, then it loses much of its stretching capacity and wastes material.
- You can check the wet application thickness with a toothpick marked at 5/16 and 3/8 of an inch or similar small tool.
- If you are new to chinking application, start in a place where the chinking is least likely to be seen. Your technique will improve quickly, so the appearance will improve and work will progress more quickly. Inside a closet or the backside of the house are good places to start the first time.



Square Logs



Proper Application Thickness



## GENERAL TIPS...continued

- When the chinking is uncured, it is very susceptible to dimples caused by people or pets touching the soft surface. Hiding the wet chinking with tarps, cardboard panels or other means can prevent this from happening.
- Wear old clothes because chinking is very hard to remove from fabrics.

### PREPARATION

- Before starting, inspect the installation of backing materials. Where pieces of backer butt up to one another, make sure that there are no gaps or ledges between pieces. If you find gaps, fill them with backing material or cover the span with tape.



Check for gaps or ledges

- Make sure that the wood surfaces along the seam are clean and free of oils or waxes to insure proper adhesion of the cured chinking.



Seam is completely clean

### APPLICATION TECHNIQUES

- Apply only as much chinking as you are able to tool smooth in about 15 minutes (less in warm, dry weather that causes the chinking to skin over rapidly).
- Start by holding the applicator tip against the back surface of the joint and apply a bead of chinking. If multiple beads will be required to span the entire gap, apply them close together to avoid trapped air during tooling. Apply enough chinking to maintain a consistent wet thickness of approximately 5/16 to 3/8 inch.
- The first step in tooling is to wet the trowel only (not the chinking), then spread it out evenly from 5/16 to 3/8 inch thickness, making sure the wet chinking is in good contact with the wood surfaces at both edges of the seam. Good contact is critical to ensure proper adhesion after curing.



Spread out evenly



Lightly mist the trowel & tool

**NOTE** > Be careful to maintain proper thickness in all corners.

- After smoothing to the proper thickness, lightly mist the trowel and tool for completing the final smoothness desired.
- Avoid applying enough water to cause it to run onto the wood surface. Wipe any runs immediately.

**TIP:** If you used masking tape to create a clean line, remove it immediately after smoothing the chinking and smooth out the edges with your tool, ensuring good contact with the wood.

- If your preference is for the finished chinking to have a different texture than smooth, you should experiment before application.

## GENERAL TIPS...continued

### DRYING | CURING

- *Perma-Chink* log home sealant develops a skin in a short period of time. Full curing requires it to dry all the way through and may take a number of weeks. Cool temperatures or high humidity extend drying time.
- Protect freshly applied sealants from rain for at least 24 hours to allow a protective skin to form.
- Blisters during curing are common to sealant applications in hot environments. Blisters can be caused by the use of improper backing materials or by trapping air inside the wet chinking during application. Prevent most blisters by making sure to trowel all of the air out of seams in "multi-bead" applications.
- Avoid application in direct sunlight on south and west walls. If newly applied chinking is exposed to sunlight and begins to blister, the effect can be minimized by shading the walls with white tarps for the first 1-2 days. In the first few days, blisters can be closed by puncturing the surface skin of the chinking and carefully pressing the blister surface back against the wet chinking inside.

### CLEAN-UP

If you get any sealant on the surface of the wood, be sure to wipe it off with a wet rag immediately. Dried chinking is difficult to remove. Clean your tools and equipment with clean water occasionally during application.

To be applied 5/16 to 3/8 inch thickness\*

| PERMA-CHINK® COVERAGE RATES |                      |
|-----------------------------|----------------------|
| Width of Gap                | Linear Feet Per Pail |
| ½"                          | Use Energy Seal      |
| ¾"                          | Use Energy Seal      |
| 1"                          | 259'                 |
| 1½"                         | 172'                 |
| 2"                          | 129'                 |
| 2½"                         | 103'                 |
| 3"                          | 86'                  |
| 3½"                         | 74'                  |
| 4"                          | 65'                  |
| 4½"                         | 57'                  |
| 5"                          | 52'                  |
|                             |                      |

\* Wet thickness impacts coverage rate

One pail of *Perma-Chink* is equivalent to approximately fifty-three 11-oz. tubes or nineteen 30-oz. tubes

## ENERGY SEAL® AND WOODSMAN™



*Energy Seal* is a textured sealant that helps to match the appearance of the surrounding wood. The texture also allows it to accept a stain so that sealed joints and gaps become virtually invisible. *Energy Seal* may also be used in narrow chink joints with a width of one inch or less.

*Energy Seal* can be used to seal gaps between logs, around windows, doors, vents and anywhere else where air or water can enter your home.



*Woodsman* multi-purpose sealant may be used for multiple applications in and around all types of homes. When used on the outside of a home this smooth surfaced sealant provides a flexible barrier against water and weather that will not dry out and crack like most general purpose caulks.

*Woodsman* adheres to most common building surfaces such as wood, metal, concrete, brick, masonry, porcelain, ceramic tile, marble and glass. Ideal for sealing construction joints like window and door frames, woodwork, eaves, soffits, vents and expansion joints, *Woodsman* can also be used as an internal sealant between courses of logs.

## ROUND LOGS

The width of the backing material you require depends on the profile of your logs but be sure to take into account that you will be applying between a 5/16 to 3/8 inch thick layer of sealant over it. Often, the sealant width is determined by the profile of milled logs and must be tailored accordingly.



## SQUARE LOGS

*Energy Seal* or *Woodsmen* is used on square log construction to seal corners, butt joints, windows, door frames, and other areas where a visible chink joint is not desired. Tape should be applied prior to sealant on a cosmetic chink gap. For cosmetic chink joints (less than 3/8 inches deep) we recommend sealing the seam with *Energy Seal* and then applying *Chink-Paint* over the entire joint for the best completed appearance.



## WHEN SHOULD ENERGY SEAL® OR WOODSMAN™ BE APPLIED?

- **Best:** It is generally best to apply *Energy Seal* after walls have been cleaned and before stain is applied. Our sealants adhere aggressively to bare wood surfaces or to wood finished with *Lifeline*.
- For the least visible sealant lines, choose a sealant color that is a shade lighter than the stain you plan to use because it's easier to cover a lighter color sealant with a darker color stain than it is to hide a dark colored sealant with a light colored stain.
- **Or:** if you want visible sealant lines, you may apply *Energy Seal* after you stain. If you do this, it is best to apply *Lifeline Advance* topcoat after the *Energy Seal*, making it easier to clean. This results in a more even appearance, helps seams to blend in with the rest of the wall and makes sealants easier to clean.
- **Weather:** Protect freshly applied sealants from rain until a water resistant skin has formed on new sealant applications (usually about 24 hours). Avoid applying in direct sunlight to help prevent heat-induced blisters. Wood surface temperatures should be between 40°F and 90°F. Tarps can be used to protect sealant applications from weather.

**Warning** ➤ Application to surfaces with freshly applied oil-based stain should be avoided. Oil-based stains must be allowed to dry for 2 months. Then clean the upper and lower chinking joint edges with at least 70% Isopropyl alcohol to remove the surface oil residue.

## PREPARATION

- Before starting, inspect the installation of all backing materials. Where individual pieces of backing material join together, make sure there are no gaps, ledges or discontinuities that will show through after the sealant has cured. Apply tape where necessary to smooth, trim or bridge gaps.
- To ensure proper adhesion, make sure that wood surfaces where the sealant adheres are clean and free of oils, waxes, or other contaminants. Clean area by using at least 70% Isopropyl alcohol or sand the joint edges with 80 grit.



## APPLICATION

- Cut the applicator tip to the desired diameter of the sealant bead you want to apply.
- Begin by holding the applicator tip firmly against the seam and apply a bead of sealant. Apply a 5/16 to 3/8 inch wet thickness of sealant approximately 1/2 inch across the entire seam. Apply as much sealant as you can tool smooth in about 15 minutes to avoid a dried skin before final finishing.
- After the joint is filled, trowel out to approximately 3/8 inch thickness across the entire joint, making sure there is good contact between the sealant and the wood. Be careful to maintain proper thickness especially in corners.

**TIP:** Occasionally check the thickness of the sealant using a marked toothpick to see if you are maintaining the proper thickness.

- Once the sealant is roughly in place, lightly spray the trowel or spatula with water to smooth the sealant.

**TIP:** If you used masking tape to create a clean line, remove it immediately after smoothing the *Energy Seal* and smooth out the edges with your tool, ensuring good contact with the wood.



## CLEAN-UP

If you get any sealant on the surface of the wood, be sure to wipe it off with a wet rag immediately. Dried sealant is very difficult to remove. Clean your tools and equipment with clean water occasionally during application.



## DRYING | CURING

Drying time and curing time are two entirely different terms. In warm or hot weather, *Energy Seal* and *Woodsman* may begin to skin over in as little as ten minutes while a complete cure may take a couple of weeks. Cooler temperatures and high humidity slows the drying time and curing process.

### ENERGY SEAL® COVERAGE RATES

To be applied 5/16 to 3/8 inch wet thickness\*

| Width of Gap | Feet per 11-oz. tube | Feet per 30-oz. tube | Feet per Pail |
|--------------|----------------------|----------------------|---------------|
| 1/2"         | 9'                   | 26'                  | 485'          |
| 3/4"         | 7'                   | 20'                  | 375'          |
| 1"           | 5'                   | 13'                  | 243'          |

\* Wet thickness impacts coverage rate

### WOODSMAN™ COVERAGE RATES

To be applied 5/16 to 3/8 inch wet thickness\*

| Diameter of Bead | Feet per 11-oz. tube | Feet per 30-oz. tube |
|------------------|----------------------|----------------------|
| 1/2"             | 8'                   | 23'                  |
| 3/4"             | 6'                   | 17'                  |
| 1"               | 5'                   | 14'                  |

\* Contact Perma-Chink Systems, Inc. for coverage rates when using *Woodsmen* between logs during stacking

## CHECK MATE™ 2 | CHECK SEALANT

*Check Mate 2* is an outstanding water resistant sealant that prevents water and air infiltration through pronounced cracks (called checks) in logs, timbers and wood siding.

It is especially important to seal upward facing checks in any location where they may accumulate water. If these checks are left unsealed, they become sites where rot may begin to take hold. If you have old checks where rot is a risk, be sure to apply borates before sealing with *Check Mate 2*.



### Application

- Like other flexible sealants *Check Mate 2* should be used in conjunction with Backer Rod whenever sealing a gap that is more than 1/4 inch wide.
- Make sure the Backer Rod is pressed into the check around 3/8 to 1/2 inch deep to allow room for the *Check Mate 2*. Place masking tape on the outside of the check.
- Apply *Check Mate 2* maintaining 3/8 inch thickness.
- Since *Check Mate 2* comes in various colors you should choose a color that is close to the color of the logs. However, if you are planning to stain over the *Check Mate 2*, choose a color that's a shade lighter than the stain.
- Remove masking tape while *Check Mate 2* is still wet.



11-oz. *Check Mate 2* tube will seal 16 feet of 1/2 inch wide checks.

## SEALANTS FROM **PERMA-CHINK® SYSTEMS** ARE THE INDUSTRY LEADERS!

**Energy Efficient...** Save on your heating and air-conditioning bills.

**Aesthetic Appeal...** Look authentic and provide a feeling of structural integrity.

**Flexibility...** Provide adequate resiliency to absorb the expected amount of log movement while helping keep your log home weather tight.

**Bonding Ability...** Bonds to logs with sufficient strength to ensure a long-term seal.

**Breakdown...** Resistant to exposure of natural elements such as rain and ultraviolet rays.

**Maximum Strength...** Strong enough to permanently bond to wood creating a weather tight seal.

**Application Ease...** Easy to apply for both the novice chinker sealing their own home or for commercial contractors on larger jobs.



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