

## Perma-Chink Log Chinking

Since 1981, Perma-Chink Log Home Chinking has proven itself on thousands of **chinked and chinkless** style homes to become the most widely applied chinking in the world. It's simply the best chinking by every measure: longevity, appearance, performance and ease of application. Even though it looks and feels like traditional mortar, it is not. Perma-Chink Log Chinking is a **pure acrylic** that **adheres** to **logs** and **stretches** to **maintain a tight seal** by **following log movement** on homes which require chinking as part of the home design or offer the option of a chink gap.

- **Eliminates air and water infiltration**
- **Remains flexible to allow for log movement**
- For **exterior** and **interior**
- **Suitable for all climates**
- **Superior elongation, adhesion and durability**
- **Remains stable throughout the freeze-thaw process**
- **Resistant to chemicals, salt spray, water vapor, and mildew**
- **Skins over in less than two hours and cures in 2 -8 weeks**, depending on **temperature** and **humidity**
- **Easy to apply** with a **grout bag**, **caulking gun** or a **chink pump**
- **Requires only one** application
- **Cleans up quickly** and **easily** with soap and water
- **Safe** to use
- **VOC compliant** and **meets all current state and federal air quality requirements**

### Coverage

Gap Width	Coverage of 1-5 gallon Bucket
<b>For Gaps Smaller than 1" in Width</b>	<b>Use Energy Seal Caulk</b>
1"	380 Linear Feet
1 1/2"	256 Linear Feet
2"	192 Linear Feet
2 1/2"	154 Linear Feet
3"	127 Linear Feet
3 1/2"	110 Linear Feet
4"	96 Linear Feet
4 1/2"	85 Linear Feet
5"	76 Linear Feet
6"	63.5 Linear Feet

## Product Facts

<b>Shelf Life</b>	<ul style="list-style-type: none"><li>• 1 Year</li></ul>
<b>Application Temperature</b>	<ul style="list-style-type: none"><li>• 40°F to 90°F</li></ul>
<b>Application Methods</b>	<ul style="list-style-type: none"><li>• Chink Pump</li><li>• Bulk-loading gun and follow plate</li><li>• Ratchet ( cartridge ) caulking gun</li><li>• Application bag</li></ul>
<b>Surface Preparation</b>	<ul style="list-style-type: none"><li>• Clean and dry</li><li>• Backing material</li><li>• Bond breaker tape on bare wood</li><li>• Best applied <b>after</b> the home has been stained</li><li>• If an <b>oil-based</b> stain has been applied, allow stain to dry at least two weeks before applying Perma-Chink chinking.</li></ul>
<b>Frequency</b>	<ul style="list-style-type: none"><li>• One time application</li></ul>
<b>Special Instructions</b>	<ul style="list-style-type: none"><li>• Apply to approximately 3/8" thickness</li><li>• Avoid application in direct sunlight</li></ul>
<b>Drying Time</b>	<ul style="list-style-type: none"><li>• Drying time and curing time are two entirely different terms. In warm or hot weather, Perma-Chink will begin to skin over in as little as ten minutes while a complete cure may take three to four weeks. Cooler weather will slow both the drying time and curing process.</li></ul>

Request a copy of the “Log Home Sealant Application Guide” from [LogFinish.com](http://LogFinish.com) for additional information about applying and maintaining Perma-Chink Log Chinking. (hyperlink needed)

## Colors



## Measuring and Calculating Linear Feet

When it comes to **ordering sealants** like Perma-Chink there are **two dimensions** that **you need to know** to **determine how much product you will need**:

1. **Width of the gaps or joints. Determine gap width by:**
  - If it is a **chink joint** on a **squared log** it's the **average distance between upper and lower log surfaces**.
  - If it is a **round log chink joint** you **first** have to **insert a length of proper size Grip Strip** and then **measure the distance between the top and bottom logs about 3/8 of an inch in front of the surface of the Grip Strip**. (hyperlink needed)
  
2. **Cumulative length (linear feet) of those gaps and joints. Calculate linear feet by:**
  - **Keep it simple** by **measuring one wall at a time** then **add all of the walls together** after you have **completed all individual wall calculations**.
    - a. **Start by measuring the length** of the wall with a **tape measure**.
    - b. **Count the number of joints** you need to seal. Usually it is the **number of log courses minus one**.
    - c. Then **multiply the length of the wall by the number of joints you need to seal**, this will give you the **linear feet of sealant required** for that wall.
    - d. **Don't worry about subtracting the windows or doors** unless they take up a **substantial portion** of the **wall area**. **You will need to seal around them anyway**.

- If you are **planning to run a bead of sealant** in the **corners** or **other vertical seams of round logs** you need to know the **height of the wall** then **multiply the height** by a **factor of 1.25** to **compensate for the increased surface area** created by the **curvature** of the logs.

Once you have determined both the width of the sealant joint and total number of linear feet, go to **the Perma-Chink Calculator**. (hyperlink needed) The **calculator will tell you the number of pails required** to complete your project. If you were **thinking about using tubes consider this**, the **price difference between two pails** of Perma-Chink and an **equal amount of material in tubes more than covers the cost** of a **Cox bulk loading gun and follow plate**. (hyperlink needed)

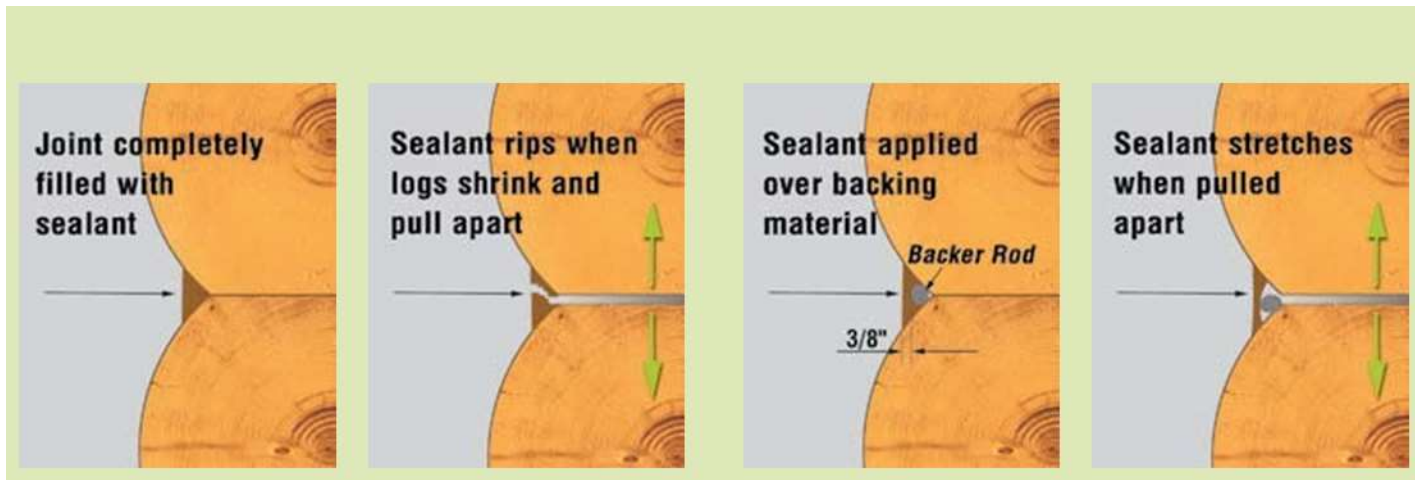
## Surface Preparation

### Please Note:

- **Best to apply** Perma-Chink **after walls** have been **cleaned** and **stain is applied**, but **before** Lifeline Advance Top Coat ( if this is the product of choice ). If an **oil-based** stain has been applied, *allow stain to dry at least two weeks* before applying Perma-Chink chinking.
  - **Do not apply to oily or glass smooth surfaces.**
  - **Some paraffin based stains and sealants may cause adhesion problems** (if in doubt, **test small area for adhesion**).
1. **Chinking area must be clean, dry and free from loose or foreign materials.**
  2. **Before starting, inspect the installation of all backing materials.** Where **individual pieces of backing join** to one another, **make sure** there are **no gaps, ledges or discontinuities** so that they **don't show through after the sealant has cured**. **Smooth, trim or bridge gaps with tape as necessary.**

## Backer Rod and Grip Strip

**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** it and can be **pushed into a crevice without needing** to be **nailed or stapled**.



## Weather

- **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 **airspace** between the wall and the plastic to **facilitate drying**.
- Avoid **applying sealants** in **cold weather (below 40°)**. It is **important** that the **logs** be **free of frost** and **dew** in order to **ensure** that the **sealant adheres tightly** to the wood.
- **Apply** when **sealant** and **surface temperatures** are **between 40°F** and **90°F**
- **Do not apply** in **direct sunlight**, especially on **south** and **west** walls. If **newly applied chinking** is **exposed** to **sunlight blisters** may **develop**. 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.
- **Do not apply** if **rain** is **expected** within **24 hours**

**Please Note:** **Temperature** and **humidity** are **largely responsible** for **log movement**. When the **temperature rises**, the **logs** will **expand**, and at the **coldest temperature**, they will **contract**. When you **apply sealant** during **cold, damp conditions** the **logs** will more than likely be at the **smallest dimensions** (after some normal shrinkage may have occurred). When the **weather dries out** and **warms up**, the **sealant** will normally **relax**. Conversely, if you **apply sealant** during **hot, dry conditions**, the **joint** will be at its **smallest point**, and **when temperatures fall** or even **turn very humid**, the **logs** may **contract** and put the sealant in stress. **Sometimes** the **contraction** or **movement** may be **severe enough** to **tear** the sealant.

## Application

**Apply** Perma-Chink log home sealant **after staining** for the **best finished appearance** and **least total labor** to **avoid getting stain** on the **new chinking**.

- **Best:** **after** application of Lifeline, but **before** Lifeline Advance clear topcoat (Lifeline Advance should be applied over Perma-Chink log home sealant, making it easier to clean in the future.)
  - **Second Best:** **after** application of Lifeline stain and Lifeline Advance topcoat.
  - **Worst:** **Over a fresh application of oil based stain.** Oil based stains **must be allowed to dry for at least 2 weeks.** Then, **clean the chinking surface with alcohol to remove dust and oily residues.**
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- **Wear old clothes and shoes.** Perma-Chink is **not easily removed from fabric.** Discard used rags, etc. in **proper disposal containers.**
  - **Always maintain a clean working area.**
  - When ready to **quit for the day,** **leave bag or gun containing material in a moderately warm place.** The **open ends** of the **bag or gun** will **form a "plug";** this **will prevent the rest of the material from curing.**
  - When ready to **begin again,** **squeeze the plug out, discard hardened material and continue.**
  - When **reusing an open bucket of material,** **be sure to remove any partially cured "skin" before filling bag or gun.**



1. **Cover the edges of the seam with a painters tape to avoid getting chinking on the wood surface.**
2. **Cut the applicator tip to the desired diameter of the sealant bead you want to apply.**
3. **Begin by holding the applicator tip firmly against the seam and apply a bead of sealant.**
4. **Apply enough sealant to maintain a wet thickness of at least 5/16" and no more than 1/2" across the entire seam after tooling.**
5. **Apply as much sealant as you can tool smooth in about 15 minutes to avoid a dried skin before final finishing.**
6. **After the joint is filled, trowel out to approximately 3/8<sup>th</sup> thick across the entire joint, making sure there is good contact between the sealant and the wood.**

7. Do not spray with water at this time! Be careful to maintain proper thickness especially in corners.



8. All joints should be tooled by spraying a small amount of water onto the chinking and smooth to the desired finish. Do not saturate the surface with water. If it begins to run you have applied too much. Always trowel in such a way as to form a good seal to the wood. Maintain a depth a little more than 1/4", as the material will shrink slightly when cured.

**Tip:** Occasionally check the sealant using a toothpick to see if you are maintaining proper thickness. Once the sealant is roughly in place with air worked out of it, spray it with a light mist of water and tool smooth with a trowel or spatula.

**Tip:** If you used masking tape at the edges of the Perma-Chink, remove it now and smooth out edges with your tool.

## Tips on How to Insure a Proper Chink Joint

### *Do Not Under Fill a Chinking Joint*

It is better to fill a joint deeper than it is to make it too thin; you need an adequate mass of material to absorb movement that is created by logs expanding and contracting with the seasons.

- Regardless of the joint width, no joint should be deeper than 1/2".
- Proper backer material should be used to bring the depth up to within 1/2" of the surface.
- Do not fill excess voids with chinking or caulking.

### *Two Point Adhesion*



Chinking or caulking must be able to move when the wood moves.

- The sealant material should adhere to only the surfaces that move, usually the top and bottom logs. If all

the contact area is sealed, there will likely be a tearing at the point of the most stress.

- Using a **proper backer material** will allow the material to release if movement occurs, while still maintaining an adhesive seal on the log.
- **Proper backer materials** are **closed** or **open cell backer rods**, or various **"breaker" tapes** may be used.

(add

hyperlink)

### ***Caulking Reservoir***

A **caulking reservoir** must be created so that there will be **enough mass to allow movement** of the wood and sealant. For example, if a product advertises 50% elongation, this tells you that a space must be created which is two to four times larger than whatever movement is expected of the wood. Basically if you expect an 1/8" movement, your joint width should be 1/2" to 3/4".

- The **larger** the **starting size allowed**, the **less likely** it will be for **log movements to exceed the sealant's capabilities**.
- A good rule of thumb is that **gap width** should be a **minimum of one sixth** of the **log diameter** (i.e. 8" log/6=1.3" finished joint width)

### ***Tooling and Finishing of Joints***



- **All joints** should be **tooled** by **spraying** a small amount of **water** onto the **chinking** and **smoothed** to the **desired finish**.
- **Always trowel** to form a **good seal** to the wood. **Maintain a depth** a little **more than 1/4"**, as the **material** will **shrink slightly** when cured.



## Full Round Log Construction



- For full-round log construction, the **finished width** of the chinking seam should be **approximately 1/6 of the log diameter** (i.e. if your logs are 15" diameter, the chinking seam should be about 2-1/2 inches wide.



- **Select the correct size trapezoid rod that fits flush** with the logs. Be sure that **edges are flush** with log surface and **do not protrude**. Edges that protrude may cause a "thin" or weak point in the finished chinking.

- **Press rod into place and glue or staple securely**. For logs where 3/4" trapezoid rod is too big to fit properly, use 1/4", 3/8", or 1/2" round rod. There **should be no "give"** to properly installed **backing material**.

- When applying chinking, there should be a **minimum depth of 1/4" over the entire rod**, not to exceed 3/8", **use a trowel to smooth**, obtain a **finished look** and **proper seal** to upper and lower logs.

## Square Log Construction



**Please note:** It is **always best to install backing materials** such that the finished chinking application **does not result in a horizontal lip or ledge** at the bottom edge of the seam where **rainwater can accumulate**.

### *Foam Backer Systems*

- Many **pre-cut log systems** will furnish an **EPS (Expanded Polystyrene)** or **Beadboard** or it may be up to the **applicator to install the board prior to the chinking application**. In either case, the **board should be installed as per the instructions** of the home manufacturer.
- The **board should fit snugly** into the **chinking area**, with **no gaps** or **sharp edges** for the **chinking to stretch over**. Any **fasteners** used to secure the board should be **galvanized to prevent rusting**. **Do not sink fasteners below the surface** of the backer; this will **cause a "dimple"** in the **surface** once the chinking material has cured. **Remember, the smoother the backer, the smoother the chinking** will be.



- If the **foam is not furnished with the home**, efforts should be taken to **secure the proper board**. **Using improper boards may cause**

**"blistering"** from **outgassing** of the board. **Always use EPS (Expanded Polystyrene) or Beadboard. Do not use Pinkboard, Blueboard or any other board that is not Expanded Polystyrene.** Other extruded boards usually have a thin, transparent plastic film on at least one side. **Beadboard has no film installed, and is easily obtained at most building supply stores.**



- Log systems that are **hewn flat on two vertical sides** should have an **Expanded Polystyrene bevel cut to fit the log profile. Once installed, it should be stapled in place.** All **"butt" joints** should be **fitted together tightly** and if **any gaps are present, they should have masking tape applied over the voids (see picture).** Be sure to **pre-cut the Beadboard slightly larger than the joint size, which makes it easier to handle.** A **hot knife should always be used for cutting and installation.**

- Log systems that are **hewn or sawn on all four sides** should have **Expanded Polystyrene cut to fit snugly into the chinking area and pressed firmly into place** taking care not to leave any gaps or voids between the logs and foam. All **"butt" joints** should **fit as tightly together as possible.** Any **voids or gaps** should be **taped over before applying** any chinking. Any **fasteners** should be **galvanized and installed** as not to sink them **below the surface, this could cause dimples in the finished chinking.**

### Log on Log, or Solid Log Wall Systems

- **Install masking tape over the vertical face of the joint. Do not cover the very top and bottom of the horizontal area** the chinking must adhere to.
- **Apply Perma-Chink at the recommended 1/4" - 3/8" thickness, making sure the chinking is applied wide enough to go beyond the backer tape and adheres to the log surfaces.**

### Hard Board Spline Systems

- **Install furnished spline in accordance with the manufacturer's instructions.**
- **Spline board should fit tightly to upper and lower logs, with no gaps at seams or joints. In some cases, there will be a slot in the bottom of the upper log to slide the spline into, which creates a "floating" spline to accommodate any movement.**
- **Apply Perma-Chink directly to the spline at the recommended 1/4" -3/8" thickness.**

### Restoration of Failed Mortar

- Use **trapezoid or round backer rod** to **fill horizontal gaps and cracks** where **mortar has separated from logs due to shrinkage**. **Expanding foam** may also be **used to fill** these areas. **Be sure to trim away excess before applying** any chinking.
- **Expanded Polystyrene** may be **used to fill large gaps and voids** where **mortar has been removed**.
- **Old mortar does not need to be removed prior to applying** Perma-Chink, **if the mortar is solid and not crumbling**.
- Perma-Chink is then **applied over the entire surface**. **Always go past the mortar to get appropriate contacts** to the logs.

## Clean Up

**Please note:** 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**.

1. **Remove masking tape**.
2. If **properly applied**, the **cleanup area** for chinking should be **confined to the tube and utensils used**.
3. **Warm soap and water** is **sufficient for proper clean up**.

## Storage

**Store** Perma-Chink chinking at **moderate temperatures**, in a **clean, dry place** and **out of direct sunlight**. **Do not allow the material to freeze**. **Do not store in close proximity to radiant heat sources** like **fireplaces or wood stoves**, as the **excessive heat may cause the material to start curing**.

## Shipping

Perma-Chink is **available for shipment to all 50 states** via **FedEx**.