Perma-Chink Systems News

Fall Issue

The Wood Home Care and Maintenance Authority

Reminders:

Sign up online for Live Webinars and learn from our experts about Log Home Care.

You can call our toll-free numbers **from 8 AM - 8 PM** (ET)

Questions about your project?
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In today's issue:

www.permachink.com

An Ounce of Prevention is Worth a Pound of Cure

■ *Your log home exterior fall maintenance*

Owning a house, especially a log home, as any homeowner will tell you, is a never-ending job. A new repair job seems to come up just as you finish one. One way to stem some of those repairs is by following a yearly maintenance schedule, like the one that follows for the fall season. And it is much easier to do it now rather than wait till the weather turns. It will take a short time for each task, but the result is well worth it: You'll be able to keep your home in tip-top condition.

On page 6 you will find a detailed checklist to help you look for important steps during inspection. Use a checklist of things that are relevant to your home and record them step-by-step. It's easy to forget what to look for by the time you get to the third or fourth wall.

Before you start your inspection give your home a wash down with *Log Wash*, it will help to remove any dirt and pollen from your log wall. At anytime you have a question, please give us a call and we will guide you through the inspection process. Preparing your home for winter in the fall can make life so much easier for you in the cold, dark winter months ahead.

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How to Seal Checks in Logs and Siding

It is virtually impossible to prevent logs from developing cracks and checks as they age and dry. That's because as a large piece of wood seasons, mechanical stresses build up until the surface stress becomes so great that the wood cracks. We call these stress cracks “checks.”

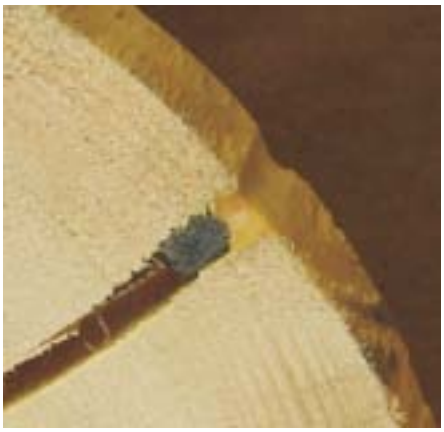
Do checks need to be sealed?

Upward facing checks can collect water increasing the interior moisture content of the log. If they continue to collect water and the wood remains damp, they can eventually result in internal wood decay as well as provide nesting sites for carpenter ants and other insects. It is not necessary to seal checks on the bottom half of round logs since they do not collect water but for a uniform appearance you may want to seal them too. It is not usually necessary to seal checks or fissures that are less than ¼” wide since they can't accumulate that much water.

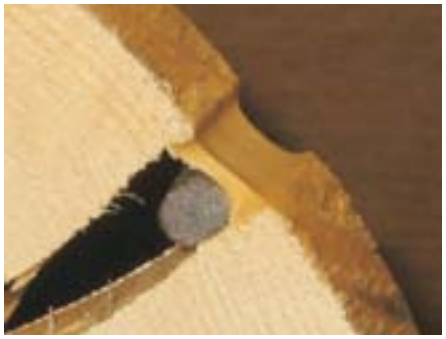
If your home is new and the logs or siding are green, it may be best to wait a year or so before addressing the checks. This allows the wood to reach an equilibrium with its environment and by then most of the larger checks will have opened. On seasoned wood or an older home that's in the process of being refinished you can seal the checks either before or after applying a stain.

Check Mate 2

Checks and splits in logs present a different set of dynamics than those typically addressed by a caulk. They open and close as the log's moisture content varies throughout the year. The opening width of a check may change as much as 50% from summer to winter. Most sealants are designed to cope with a different set of conditions and are ill suited for sealing checks. Check Mate 2 is specifically formulated to meet the particular requirements for sealing checks that appear in logs and log siding.



When initially applied 3/8” thick in a check the Check Mate 2 bonds to the sides of the check. As the check opens, the Check Mate 2 stretches to maintain a water-tight seal. The only role the Backer Rod plays is to maintain a Check Mate 2 thickness of 3/8” during the application.



Clear

Medium Brown

Light Brown

Dark Brown

Red Brown

Yellow Brown

Gray

Cumberland River Retreat

A quaint hide-a-way and tribute to a family patriarch

By Joshua Beasley, Honest Abe Log Homes

Randy Fudge, President of Honest Abe Log Homes, remembers spending many Summer holidays on his sister's farm near Burkesville, KY. His sister Charlotte and brother-in-law Danny purchased a 150 acre farm in 1990.

For years following, the family would gather on the bank of the Cumberland River to picnic and fish. "We always seemed to gravitate to this one particular spot down by the river," Randy recalls with a grin, obviously reliving fond memories. "Someone, often times my Dad, would always mention that we needed to build a cabin on the site one day." The family kept on saying, "one day", and that day finally came about 15 years later.

As the cabin construction began in 2005, so did the rewards and challenges. "We were doing it all on the weekends, so it was a pretty casual build and took longer than even I expected" says Randy. Even though the cabin is small, they took their time. Randy's niece Allison often helped along with friends like Dale and Ann Payne, and co-worker Rachel Meadows, who enjoyed spending time helping them. A drive of over a mile is required from the highway, passing by countless rows of corn and soybeans to reach the site near the river.

The cabin itself is only 560 square feet, and was initially designed for the company to use at log home shows that are hosted around the country. The family adapted the design to best suit the location, but kept the size small and cozy.

Since its construction, the family has used it as a base for fishing, canoeing and enjoying their farm. "I don't use it as often as I would like to," said Randy, "But it's a great place to escape, enjoy the peace and quiet, do a little fly fishing, and Abbey my Labrador loves having the extra space to run around." The family agrees that autumn is probably their favorite time of the year, when a small fire in the pavilion feels perfect. It has even hosted a few Honest Abe events and occasionally houses guests of the family.

The cabin was built from a custom design, using Honest Abe's 8" x 8" D-Log profile, offering exceptional energy efficiency. It also features the company's Heavy Timber Roof and Ceiling Systems, which utilized large exposed beams for its structure. The family chose to use Lifeline Ultra-2 in Driftwood by Perma-Chink Systems for the stain, providing a washed and naturally weathered look to blend into the farm and river surroundings.

While some may expect company executives to have sprawling vacation homes with plush amenities in exotic locations, Randy prefers the simplicity of their cabin with the accompaniment of friends and family close to home. This tiny cabin located on the waterfront of the Cumberland River provides the perfect location to relax, be appreciative and honor the past, while building many more memories for the future.

For more information and floor plans contact Honest Abe Log Homes www.honestabe.com

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Shifting Trend for "Green"

■ What makes our Lifeline™ stains and finishes green?

By Sean Gahan - Senior Chemist

Green chemistry can be defined as the design, development, and implementation of chemical products and processes to reduce or eliminate the use and generation of hazardous substances and their negative impacts on the environment. All steps in this process influence the impact that this new material or product will have on the environment and the people and things (plants & animals) that interact with it as a whole or its parts.

The development of a "Green" finish starts with selection of the raw materials necessary to formulate a product with the physical properties required to protect a substrate (i.e. wood, metal) from environmental and self degradation. These raw materials include the resin, surfactants, solvents, co-solvents, coalescent solvents, biocides, pigments, fillers, colorants and UV inhibitors.

National and regional regulations of Volatile Organic Compounds or VOCs have placed a significant effort on improving both the indoor and outdoor air quality for the areas that we live. Interiorly, coating products including paints, primers, stains, and wood finishes emit unhealthy VOCs. Exposure to these VOCs may cause a range of symptoms, from eye irritation and headaches to more severe effects. For exterior applications, some VOCs have the potential to photochemically react with NOx, a byproduct of combustion, to form ground level ozone, a key component in smog. Long term exposure to ground level ozone can result in the development of respiratory issues as well as other health issues.

These VOC regulations have placed an emphasis on alternative lower VOC raw materials that enable a finish to remain compliant within a certain region as well as producing a material that is more eco-friendly.

Now back to the raw material selection process.

1. The trend for the evolution and development of "Green" coatings and finishes is shifting heavily towards water-based technologies and products. First of all, water is characterized as the universal solvent, a solvent that is capable of dissolving many different substances. Water is responsible for 60% of our body by weight and covers approximately 70% of the Earth's surface.

2. Surfactants play an important role in processing and numerous film formation processes of a coating. Alternative surfactants chemistries to alkylphenol ethoxylates (APEO) should be selected since alkylphenol ethoxylates are considered to be very toxic for aquatic life. In Europe these surfactants are no longer allowed.

3. Choosing an in-can preservative, or bactericide that protects the product from spoiling on the shelf for a limited period of time, that does not contain formaldehyde or is a formaldehyde donor. Formaldehyde is a known carcinogen.

4. Select a resin that has lower glass transition temperatures (Tg). These resins are typically softer (more flexible) and require less coalescent solvent (less VOC) to form a uniform film at low temperatures.

5. Select alternative co-solvents. Co-solvents that are used in water-based stains and finishes are glycols (antifreeze) and are the main source of VOCs. These co-solvents impart freeze-thaw stability and control open time or working time before drying while on the wall. Plasticizers are typical alternatives that soften the

(Continued on page 5)

(Continued from page 4)

resin (#4) and contain higher boiling point solvents that only minimally volatilize (less VOCs) and dry slower.

6. Use of renewable or recycled materials as fillers or additives.

7. Use regionally manufactured or mined materials.

In addition to these points, improving the manufacturing process is critical to producing a "green" finish. For example, minimizing the waste generated from each production batch and reworking any waste into subsequent batches is important. Manufacturers can also recover any washings from the mixing tank that has been used to produce the batch of finish.

These are the steps we take here at Perma-Chink Systems to manufacture our *Lifeline*® brand of wood finishes.

Animal Council Totem Pole

In a small town word travels fast. When I told a few people what I wanted to do and needed a big tree, word got out and I had lots of people I didn't know calling me, offering trees. The tree that I got had it's top broke off in a storm and was what the California Department Of Transportation called a " Hazard tree". The tree was about 126 foot tall before the top broke off. The sixty foot we selected was almost too much for the big 966 Loader. . I felt guilty but would not give the word to cut some more off of the log. This sixty foot log was from a live tree with the bark on. So it was estimated to weigh about 35 thousand pounds. It was about five foot at the base with the bark on. Impressive load for the logging truck. We put it in our RV parking spot. Once I started carving I would have anywhere from five to fifty people stop by each day to ask questions and to just watch. You could smell the Sugar Pine quite aways from the pole. It took about seven months to carve and paint the pole.

Ron Schmidt, a retired U.S. Forest Service Engineer, designed the base. Besides the steel there is a 6'x3' culvert that has both ends capped with wood. This was to keep the mass but reduce the weight of the concrete base. Surrounding this culvert is a rebar cage. Eight steel pads hold the pole at the top of the steel holder and six similar pads hold the bottom of the pole three to four inches above the concrete. This allows us to plumb the pole and allows free flow of air all around the pole.

We were able to rebuild this landmark because Perma-Chink Systems Inc. stuck with us even when others backed out as it got more expensive when we discovered more rotten wood hidden in the pole. Too many talk the talk but bail when it comes to walking the walk. I will always trust Perma-Chink Systems Inc. We had others that stuck with us too but Perma-Chink's help was essential to success of the project. Without your products we could not have done it. Thank you.

John D. Welch
sculptor/artist

For more info visit www.shingletown.com

Log Home Inspection Checklist

	Wall A	Wall B	Wall C	Wall D	Wall E	Wall F
Are gutters and downspouts clean and working?						
Overall condition of roof and dormers.						
Are shrubs and tree limbs away from the roof, walls and foundation?						
Sprinklers not hitting the wall?						
Check eaves and fascia.						
What about the window and door trim?						
Check plumbing and electrical penetrations.						
Are crawl space vents clear and working properly?						
Are there any signs of leaks around windows?						
Are there cracks, tears or adhesion loss in chinking or caulking?						
Are there any new checks that may need sealing?						
Are there any signs of insect or decay infestations?						
Are the exposed log ends showing signs of water penetration?						
Does the topcoat still look to be intact or is it becoming dull?						
Is the color coat showing signs of fading or darkening?						
Have any discolorations appeared under the finish?						
Are there any signs of peeling around checks and fissures?						

Company Stores

Washington/Western Division
Redmond, WA 98052
1-800-548-1231

Tennessee/Eastern Division
Knoxville, TN 37914
1-800-548-3554

Sevierville, TN 37862
1-800-548-3554

Minnesota Branch
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Colorado Branch
Rifle, CO 81650
1-800-433-8781

Montana Branch
Stevensville, MT 59870
1-800-479-7090

Pennsylvania Branch
Petersburg, PA 16669
1-800-257-4864

www.permachink.com

Stocking Distributors

Canadian Log Home Supply, Central & Eastern Canada
1-800-746-7773
www.canadianloghomesupply.com

Log Home Center, Indiana
1-800-773-6223
www.loghomecenter.com

Timeless Wood Care Products, Michigan
1-800-564-2987
www.timelesswoodcare.com

Renovation in Tennessee #5

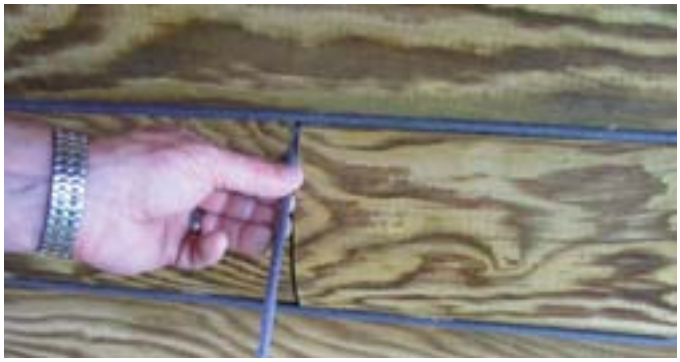
Prepared to Deal with Unexpected

By Tony Huddleston

Picking up where we left off during the last chapter, we started the joinery sealing by installing backer rod in all areas that *Energy Seal*® log sealant will be applied. This included the "butt joints" where log ends meet within the wall since they too may allow water and air to enter the home.

Installation of the small ¼" backer rod is sometimes a challenge due to the design of the joint area. Here are some tips:

1) Use small "dabs" of the *Energy Seal*® 6 to 8 inches apart to imbed the rod as you go.
2) Do not stretch the rod as you install it.
3) Try to use one continuous piece of backer rod per joint section.
4) If you do have to use more than one piece, make sure to apply masking tape where the ends meet so the sections will not show after the *Energy Seal* cures.



While the backer rod was being installed each of the log ends were being sanded smooth to allow the ends to better match the wall surface. Once the entire home is finished with two color coats of *LifelineUltra-2* the log ends will be coated with a coat of *Log End Seal*® to prevent any water from "wicking" from the ends.

Remember the homeowner decision we briefly mentioned in the last session? They chose *Lifeline Ultra-2* in "Wheat" because it is a highly pigmented natural wood tone that has excellent resistance to UV exposure and helps to hide imperfections that are visible on the surface.

The decision was also made to apply the finish after the lightly textured *Energy Seal*® had been applied and allowed to cure. Using this method, the sealed joints will blend in nicely with the overall appearance of the surface.

Once the backer rod was installed and the log ends were prepared, it was time to start the application of the *Energy Seal*®. We used two 1 Qt. bulk-loading guns with a follow plate to apply the sealant. *Energy Seal*® is lighter than most conventional caulks, so it is easy to pull it into the gun and apply into the joinery. As this home is rustic we decided give it a somewhat rough appearance using a spatula and a spray bottle of plain water. This process only requires a light touch and results in a perfectly sealed joint with just a little practice.

Now it seems we are getting to the "short rows" and the home is really taking shape. In the next chapter we will be applying two coats of finish, applying the *Log End Seal*, the clear top coat, and installing new window trim, as well as addressing the "butt joints".

We have been informed by Phil & Melissa that we have significantly reduced their electric bill by sealing the air leaks, and we have almost totally eliminated the intrusion of unwanted insects.

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17635 NE 67th Ct.
Redmond, WA 98052
www.permachink.com

The Wood Home Care and Maintenance Authority

Don't Miss Out

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FALL 2012

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Remember this...

Perma-Chink® and *Energy Seal*® are freeze and thaw stable. That means that even if they become frozen, they can still be used once they have thawed but they will require a good mixing to assure a uniform consistency. However, this does not mean that either *Perma-Chink* or *Energy Seal* should be applied while they are extremely cold. If they are cold (below 50°F) they can become difficult to run through any type of chink machine, caulking gun or other tool.

So if you plan to apply any of our sealants in cold weather, we recommend that you store the sealant in a heated room for at least 24 hours before using it. That way it will be at room temperature and will be at the consistency that's best and easiest for application.

Join our E-Mailing List and learn more about our products.