

Perma-Chink Systems News

Summer Issue

The Log Home Care and Maintenance Authority

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By entering a few key words, visitors will find answers and have access to articles about all aspect of log home care and maintenance and use of Perma-Chink products.

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Cleaning Wood Surfaces

■ Guidelines for Cleaning Wood Surfaces Prior to Applying LIFELINE Stains

By Vince Palmere

Over the past few years we have discovered many things about cleaning wood surfaces. First and foremost is that chlorine bleach is not a good product to use. In addition to its potential for damaging wood fibers and existing finishes, its use and misuse contributes to a number of problems including the loss of film adhesion, discolorations due to tannin extraction and the formation of iron tannates, streaks, blotches and premature failures of the finish system.

We have also discovered that a number of wood and deck cleaners available at paint and hardware stores, home improvement centers and Do-It-Yourself outlets contain components that interfere with the proper performance of our finish systems. With this in mind we have decided that the ONLY cleaning products that we approve for use with our finishes are those products supplied by Perma-Chink Systems, Inc. We are not doing this to increase our sales of cleaning products. It is simply because we have tested our cleaning products with our finish systems and have confidence that when properly used and applied, their use will result in the best possible appearance and performance of the final LIFELINE finish.



Honest Abe log home

We cannot say the same about the use of other types and brands of wood cleaners and strongly discourage their use with any of our LIFELINE stains.

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Volatile Organic Compounds (VOCs)

■ FAQs

By Vince Palmere

Lately there has been a lot of talk about VOCs and how they relate to products used on log homes. Rather than try to explain them in an article we've taken some of the most frequently asked questions that we have received and addressed them individually.

What are VOCs, and what are the risks posed by VOCs to the environment?

VOCs are Volatile Organic Compounds, typically petroleum based solvents and other liquids contained in coatings, sealants, cleaners, fuels and other products that evaporate into the atmosphere. Once in their vapor state they have been implicated in both the reduction of the ozone layer and contributing to the green-house effect. In addition, many of these compounds are designated as health hazards. VOCs are typically measured in terms of grams per liter (g/L). If you look on a can of oil-based paint or stain you will see the VOC content range between 150 grams per liter and 550 grams per liter. The higher the number, the more VOCs are contained in the product.

What are some of the VOC restrictions placed on stains?

Stains are classified as architectural coatings and both state and federal agencies have limited the amount of VOCs allowed in architectural coatings. Some states like California, Virginia, Pennsylvania, New Jersey and others have placed VOC limits lower than those mandated by the Federal government which is why many oil-based stains are no longer allowed to be sold in these states. Within the next few years it is expected that both state and federal allowable VOC limits will continue to decrease.

What kind of challenges have the VOC restrictions posed to Perma-Chink Systems?

Since Perma-Chink Systems manufactures and sells only water-based coatings, VOC restrictions have not had much of an impact on us other than increasing the

demand for our products. However, there is one method of measuring VOCs that could possibly have a minor impact.

Back when VOCs first became an issue the solvent-based coating manufacturers got together to lobby that it was unfair to compare a water-based coating system with a solvent-based system. The result was a method of determining the VOC content of water-based products by first removing all of the water. Even if a product contained 90% water, this method only looked at the remaining 10% of the components. Although this method of determining VOCs in water-based coatings has fallen out of favor by many regulating agencies, it is still used by some of the states.

All of our products currently meet the VOC requirements for all 50 states plus Canada. However, when developing new products we must keep in mind all methods of measuring the VOC content of the product.

Is there any difference in the quality, color and durability of low VOC water-based stains versus oil-based stains?

Over the past few years almost all new innovations in coating technology have been in low VOC water-based systems. This new technology has allowed the development of high quality products like our *LIFELINE* brand stains and *Advance* Topcoats that not only look great but meet all of the requirements of a log home.

Recent advances in polymers, UV light inhibitors and mildewcides have significantly improved the look, longevity and performance of water-based coating systems. For those manufacturers like Perma-Chink Systems willing to make the investment, this new technology has allowed us to develop water-based products that look better, last longer and outperform the best oil-based product ever made.

On the other hand, one way that high VOC oil-based coating manufacturers have lowered their VOC content is to add fillers such as calcium carbonate to their coatings. The subsequent reduction in solvent content has, in most cases, decreased the attractiveness and performance of these products.

(Continued on page 3)

Volatile Organic Compounds (VOCs)

■ FAQs

(Continued from page 2)

Why is it important for Perma-Chink Systems to offer low-VOC products to your customers?

Since our inception back in 1981 Perma-Chink Systems has always had a concern for our environment and we have always taken the environmental impact of a product into consideration during its development. In retrospect this was and is a very wise decision which has resulted in our considerable growth over the years as people become more aware of their influence on the quality of our environment.

Aside from the environmental impact, are water-based products safer to use and apply?

Most water-based coatings have little if any odor and can be applied both inside and outside a home without concern. In addition, water-based coatings can be cleaned from brushes and spray equipment with just soap and water. On the other hand, oil-based coatings must be cleaned with mineral spirits which releases even more VOCs into the atmosphere.

If I'm used to using oil-based stains, what differences will I see applying your LIFELINE water-based products?

It really depends on what oil-based product you have used. The biggest difference you will initially notice is that when applying LIFELINE stains it is not nearly as important that the wood be absolutely dry. Most oil-based products require a wood moisture content of less than 18% before application. Since LIFELINE stains allow water vapor to escape from the wood, they can be applied to fairly green logs without a problem. Another difference is the application rate. LIFELINE stains and topcoats are designed to be applied in thin coats, typically 350 to 600 square feet per gallon. Most oil-based products require an application rate of 150 to 250 square feet per gallon. So even though the cost of LIFELINE may initially appear to be higher than an oil-based stain the difference in application rate will more than make up the price difference when figuring out the total cost of the job.

Besides low-VOC water-based stains does Perma-Chink Systems make other earth-friendly products?

In addition to our stains, Perma-Chink Systems offers a wide range of sealants including *Perma-Chink*, *Energy Seal*, *Stack-n-Seal*, *Check Mate*, *QSL* and others. **All of our sealants are low VOC water-based products.** We do not make any oil-based products.

One of the biggest impacts Perma-Chink Systems has made in removing toxic materials from our environment was introducing borate wood preservatives to the log home industry. For those unfamiliar with borates, they are composed of borax and boric acid, the same compounds found in eye wash solutions and laundry additives. Fortunately, although they are quite low in toxicity to humans and animals, they are quite effective in eliminating and preventing insect and decay infestations in wood.

Prior to 1989 the only products available to prevent infestations of wood boring beetles, termites and decay in existing log homes were highly toxic, carcinogenic or corrosive. Perma-Chink Systems changed that by developing the first usable borate system that could be applied in the field. Although initially developed for log homes, this technology soon spread to other industries as well and today there are literally millions of log and traditionally built homes protected with the borate technology invented by Perma-Chink Systems. We currently offer four borate-based wood preservatives, *Shell-Guard Concentrate*, *Shell-Guard RTU*, *Armor-Guard* and *Cobra Rods*.

Do we put the *Shell-Guard* on the inside?

To protect the log completely against the target organism you must get the required amount of active ingredient into the entire surface of the log per the label instructions. The simplest way is to apply *Shell-Guard* to both sides of the logs before chinking or staining.



Cleaner Brand Selection

■ *Compatibility Issues*

By Sean Gahan, Senior Chemist

As the cold weather fades away, we look forward to getting outside to enjoy the great outdoors. Many of you are making lists of jobs that need to be done around the exterior of your log homes. These jobs may include applying a finish system for the first time to your new dream house or updating your finish after several years of weathering. Perhaps you plan to just clean your home as part your annual maintenance routine. All of these jobs have one common element, cleaning.

Cleaning serves a critical role in the performance and longevity of the applied finish system. As we at Perma-Chink Systems have repeatedly expressed through our newsletter articles, on the phone when explaining our systems and during presentations at our free seminars, surface preparation prior to applying any finish system is the most important step in the process.

The purpose of cleaning is to make certain that a new finish is applied to a clean, sterile surface. We cannot emphasize this point enough. Failure to properly clean the surface can result in numerous problems including but not limited to the formation of discolorations underneath the finish or premature adhesion failure of the finish system. Ensuring that the cleaning process is done correctly can ultimately save you a tremendous amount of time, money and aggravation.

Let us move along to the selecting the proper cleaner. The compatibility of the cleaner with the finish system is a very important fact to consider prior to starting the cleaning process. Some brands of wood cleaners are advertised as **Cleaners, Conditioners and Brighteners**. These products are multi-component products that may contain materials that are not compatible with all types of finishes, including ours. Some brands of wood cleaners may leave residues that prevent adhesion of our stains even after considerable rinsing while others may damage the wood to the extent that adhesion of our stains may be inhibited or become a problem. Some brands of wood cleaners, especially those labeled as Deck Cleaners, are designed for the subsequent use of oil-based stains, not water-based products like our *Lifeline Endure Deck Finish*.

There is no way of determining all of the components in a store brand cleaner. Typically a brand of cleaner that's found in major home improvement stores or local hardware stores is designed to be used with the same brand of paint, stain or coating. The compatibility of these products is optimized to enhance the performance and work together with the same brand finish or coating. Rarely are these products tested with any other brand of finish to ensure general compatibility. The same thing applies to Perma-Chink products. Let's face it, there are way too many products and formulations on the market for manufactures to effectively cross-check the compatibility of all the combinations of cleaners and finish brands.

Perma-Chink Systems sells "systems" of products and our cleaners make up one part of that "system." I would strongly recommend that when using any of our finishes you use one of our cleaners that we have thoroughly tested to ensure compatibility and performance with our "systems." If you choose to step outside of our system and use a cleaning product not supplied by Perma-Chink Systems, we have no way of determining or anticipating the subsequent impact on performance and longevity of our finish product. Consequently, you will risk an uncertain and potentially frustrating outcome. No matter which Perma-Chink Systems cleaner you use, always use pH strips as a quantitative tool for determining when the cleaner has been thoroughly rinsed from the surface of the wood.

Please contact Perma-Chink Systems with any questions that you have concerning our cleaner choices, the use of pH strips or any of our other products. We are here to help you sort through this information, so that you can make informed decisions about the products that are used to protect your home.

techservice@permachink.com

(Continued from page 1)

■ Guidelines for Cleaning Wood Surfaces Prior to Applying LIFELINE Stains

New Log Homes - Unfinished

1. If the wood has not grayed, wash the surface with a two cups per gallon *Log Wash* solution and a pressure washer no more than four days prior to staining. Rinse well and allow the wood to dry.
2. If there are signs of grayed wood, use *Wood ReNew* according to the label instructions along with a pressure washer. Rinse well and allow the surface to dry before staining. If more than four days pass before the home is ready for staining, wash the surface with a two cups per gallon *Log Wash* solution, rinse well with a garden hose and allow it to dry.
3. If after steps one or two there are still dark streaks or discolorations on the surface, use a solution of *OXcon* oxalic acid on the entire wall according to the directions for use. Rinse well and allow the wood to dry before staining.

Older Log Homes That Have Had a Previous Finish Removed

1. If there are no signs of gray surface wood, wash the surface with a two cups per gallon *Log Wash* solution no more than four days prior to staining. Rinse well and allow the wood to dry.
2. If there are areas where grayed wood is still evident or if the wood has darkened after the finish was removed, use *Wood ReNew* according to the label along with a pressure washer. Rinse well and allow the wood to dry before staining. If more than four days pass before the home is ready for staining, wash the surface with a two cups per gallon *Log Wash* solution, rinse well with a garden hose and allow the wood surface dry.
3. If after steps one or two there are still dark streaks or discolorations on the surface, use a solution of *OXcon* oxalic acid on the entire wall according to the directions for use. Rinse well and allow the wood to dry before staining.

Log Homes with an Existing Finish That is Still in Good Condition

1. If a maintenance coat of *LIFELINE* stain or topcoat is going to be applied over an existing finish, wash the surface with a two cups per gallon *Log Wash* solution no more than four days prior to staining. Pressure washing is not recommended. Rinse well and allow the surface to dry. (For maintenance cleaning of finished surfaces that are not going to be stained or topcoated, use a one cup per gallon *Log Wash* solution).

New Decks

1. If the deck is made of pressure treated wood or green wood, allow it to season for at least two months before cleaning and staining.
2. Clean the deck with a two cups per gallon *Log Wash* solution and a pressure washer. If the wood has turned gray, use *Wood ReNew*. Rinse well and allow the wood to dry before applying the first coat of *Endure Deck Finish*.



Older Decks

1. If the deck shows any signs of a previously applied water repellent, paint or stain other than *Endure*, it MUST be removed prior to proceeding to the next step.
2. Clean the deck with a two cups per gallon *Log Wash* solution and a pressure washer. If the wood has turned gray, use *Wood ReNew*. Rinse well and allow the wood to dry before applying the first coat of *Endure Deck Finish*.

Prelude™

■ Clear Water-Based Wood Primer

A few years ago we introduced *After Blast*™, a clear water-based primer that could be used on media blasted wood surfaces to avoid over-absorption of our pigmented stains. Since then we have had many people tell us how well it works on other types of porous wood surfaces or situations where repairs or additions result in a noticeably different shade after staining.

In doing a search for clear primers we found that there are very few products available and most that we did find were either solvent-based or not suitable for use on wood. With this in mind we decided to change the name of *After Blast* to *Prelude* to avoid the impression that this product is for use only after media blasting and to more accurately convey its multitude of uses.

Rough cut siding is especially suitable for the use of *Prelude* since its high porosity and rough surface texture makes it difficult if not impossible to attain a color that matches log walls. This can be seen wherever rough cut siding has been used on the gable ends of log homes. Another place that *Prelude* has found a use is on old, weathered wood surfaces once the grayed wood has been removed. The resulting surface is quite porous and very susceptible to over-absorption of a pigmented stain resulting in a much darker than expected color. A primer coat of *Prelude* will help prevent this from occurring.

For those of you who have used *After Blast* in the past, the only difference between *After Blast* and *Prelude* is the label. There have been no changes to the formulation and it still contains UV Boost to help retard graying due to ultraviolet light exposure. Hopefully the expanded label and name change will better inform contractors, applicators and homeowners about the benefits of using *Prelude* any time you plan to use a transparent water-based stain on porous wood surfaces or whenever a repair or addition may end up standing out from the rest of the wall.

Just remember, *Prelude* is a primer and is not a stand-alone clear coat or topcoat.



Without Prelude

With Prelude

The Log Home Care & Maintenance Authority

Company Stores

Washington/Western Division

Redmond, WA 98052
(425) 885-6050
1-800-548-1231

Tennessee/Eastern Division

Knoxville, TN 37914
(865) 524-7343
1-800-548-3554

Sevierville, TN Branch

Sevierville, TN 37862
(865) 774-3307

Minnesota Branch

Rice, MN 56367
(320) 393-3088
1-877-244-6548

Colorado Branch

Rifle, CO 81650
(970) 625-1966
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(406) 642-3544
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www.permachink.com

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1-800-746-7773

www.canadianloghomesupply.com

**Hess Log Home Supplies,
Pennsylvania**

1-800-257-4864

www.hessloghomesupplies.com

**Log Home Center,
Indiana**

1-800-773-6223

www.loghomecenter.com

**Steels Industrial Products, Ltd.,
Western Canada**

1-877-846-7502

www.steels.com

**Timeless Wood Care Products,
Michigan**

1-800-564-2987

www.timelesswoodcare.com

Custom Built Home

■ **Featuring 15,000 sq.ft. log home on Norris Lake in TN. Builder Roger Hill**

By Donna Crisp



Lifeline Ultra-2 #880 Natural (two coats) with *Lifeline Advance Gloss* topcoat on the exterior and *Energy Seal* Natural Pine #520 sealer.

This beautiful custom built dream home is owned, built and designed by Roger Hill, who is a contractor and has his own family owned business, R & H Construction. Roger and his wife Lisa have two children and are very much looking forward to moving into their new home in August of this year. And they love our environmentally friendly products!

Check Mate 2

Perma-Chink Systems has been offering *Check Mate* to log home owners since the late 1980s. It is the only product specifically designed for sealing checks in logs. We are constantly exploring ways to improve our products which led us to the development of *Check Mate 2*. There are some distinct advantages of *Check Mate 2* over the previous *Check Mate* formulation.

Check Mate 2 dries and cures more rapidly and once cured, will not turn white or get soft when exposed to water.

Check Mate 2 is not shiny which means that it will better blend in with the surrounding wood.

Check Mate 2 accepts a stain.

For more information visit our website or give us a call.



Distinguish Your Log Home

Environmentally Friendly products to seal, protect and beautify your log home

Premium Exterior Stain
LIFELINE ULTRA-2™
the longest lasting protection you can buy

5 Year Warranty!
Contact us for details

Free catalog and color samples
Call now!

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

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Issue #2

The Log Home Care and Maintenance Authority

Don't Miss Out FREE

Application Workshops/Seminars

Summer 2007



June 2 Seveirville, Tennessee

June 23 Spokane, Washington

July 21 Rifle, Colorado

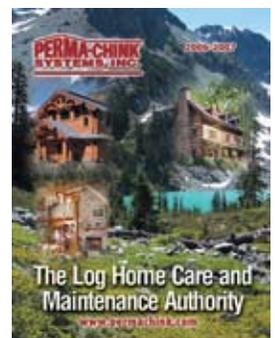
Please check our website for more dates as we
update them regularly.

If you would like a referral to an experienced contractor to perform an inspection or to help you with your log home project, contact your nearest Perma-Chink Systems, Inc. location.

Free samples of many of our products are available upon request. Call your nearest Perma-Chink Systems store.

WE SPECIALIZE IN ENVIRONMENTALLY FRIENDLY PRODUCTS!

Perma-Chink Systems Free Product Catalog



order on line at:

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Come See Us at these Log Home Shows

Fall 2007

- | | |
|-----------------|--------------------|
| September 7-9 | Salt Lake City, UT |
| September 14-16 | Cincinnati, OH |
| September 21-23 | Atlanta, GA |
| September 21-23 | Chicago, IL |
| September 28-30 | Denver, CO |
| September 28-30 | Baton Rouge, LA |
| September 28-30 | Sevierville, TN |

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