



## NO VOC Seal Once Water proofer vs. Aging Compounds, Competitor Oil Based And Semi-Transparent Stains

**Montana Timber Products Ranchwood and AquaFir siding and timber product lines commonly serve as a substitute for reclaimed barn wood and alternative to cedar. With use of Seal-Once, Montana Timber Products Doug Fir kiln dried substrate provides a competitive aesthetic, performance, and cost alternative to commonly used siding applications.**

Historically, many siding products have utilized cedar with commonly used stains and sealants because the substrate is more rot resistant than other types of wood siding. Most stains and sealants sold today are petroleum based and use an out-dated beading technology to repel water such as bees wax, silicones and beading agents. These applications sit on top of the substrate and attract dirt. Consequently, these formulas require reapplication as they wear away more quickly. They also do not prevent mold and mildew very effectively. The tinted products begin fading within the first year of application and the wood begins to absorb water. This water absorption causes mold and mildew and in time without maintenance the wood begins deteriorating.

It is generally known that for oil applications to work they require solvents which have a higher level of VOC's. Over time, most coating manufacturers have responded to environmental regulations by lowering VOC levels simply by reducing the volume of solvents. These changes may subtly alter a products performance in other ways.

Prior to Montana Timber Products launching its **Ranchwood and AquaFir** product lines, **Seal-Once** went through extensive ASTM testing for the following: Water Absorption, Vapor Emission(breathability), Salt/Chloride resistance, mold/ mildew on wood and acute toxicity test on shrimp lave and invertebrates . Seal-Once exceeded all tests requirements. No other products, especially in the retail commercial markets, have done such testing on their petroleum, chemical base products. The product is also approved by the State of N.H. DES (department of environment service) to use over fresh and salt water.

Seal-Once is a water base Eco Friendly, non toxic, zero VOC (volatile organic compound) sub-micron particle that sinks into the surface of the wood, forms a polymer inside the wood and prevents water from infiltrating beneath. Seal-Once uses a blend of polymers designed to move with a wood's natural expansion and contraction cycles. Seal-Once allows trapped moisture along with mold/mildew to evaporate to the surface thus drying out the wood and preventing mold/mildew to re-occur. ***Seal-Once works just like a breathable lining in clothing.***

- Seal-Once water based nano-technology has no VOC's. By comparison, a typical film forming wood finish generally stops working in 6 months to 2 years on horizontal surfaces and 1 to 3 years on a vertical surface.
- Seal-Once is *Green Spec Listed* and *can contribute to Leed credit 4.2.*
- Seal-Once products do not change color, become yellow or streak.
- Seal-Once offers a 10 year warranty on vertical surfaces and 6 years on horizontal surfaces against water ingress.
- In this age of Green Technology, you can serve the environment well by recommending Seal-Once-the only product on the market that is environmentally safe, contains no VOC's, toxins or irritants and is non-flammable compared to short lived petroleum, chemical base semi-transparent stains(read their warning on the label).
- Seal-Once is nonflammable.
- Seal-Once is available for sale from Montana Timber Products at time of reapplication.

### **Montana Timber Products Tint Methodology-What is the difference between Seal-Once pigments and competitor's pigments?**

Seal-Once pigments are UV stable and non toxic. They have been designed to react to UV light by converting UV energy into thermal energy. Basically that means that Seal-Once pigments are baked into the surface not baked out, as is the case with our competitor's products. This is the reason our pigments protect a surface for up to 10 years. Competitor's pigments are made from organic materials. Organic materials, such as those found in various *Aging Compounds* can deplete in up to 18 months as they are either washed away by the elements, or baked away by the sun. Also competitors' pigments may be toxic.

Seal-Once provides semi-transparent, trans oxide, iron oxide water base, non-toxic, low VOC tints for UV protection and color.

- The darker the tint the longer the UV protection.
- We estimate at least 5 plus years for the darker tints. The lighter tints such as should last 3 to 5 years before recoating is necessary for UV protection.

### **Seal-Once Wood Waterproofer vs. The Competition**

	<b>Seal-Once</b>	<i>Cabot</i>	<i>Thompsons</i>	<i>Sikkens</i>	<i>Olympic</i>	<i>Behr</i>
<i>No VOC's</i>	<b>X</b>					
<i>Non Toxic</i>	<b>X</b>					
<i>Eco Friendly</i>	<b>X</b>					
<i>Breathable</i>	<b>X</b>					
<i>Non Combustible</i>	<b>X</b>					
<i>Supported by State Environment Agency</i>	<b>X</b>					
<i>Performance in Years</i>	<b>up to 10</b>	2	2	6	2	2
<i>Penetrates Wood Surfaces</i>	<b>up to 3/8"</b>					
<i>Safe to Use Over Fresh or Salt Water</i>	<b>X</b>					
<i>Stainable/Paintable After Treatment</i>	<b>X</b>					
<i>Easy Clean Up</i>	<b>X</b>					
<i>Can be Applied to Interior Surfaces</i>	<b>X</b>					
<i>No Color Change</i>	<b>X</b>					
<i>Will Not Streak</i>	<b>X</b>					
<i>"Will Not Harm Fish, Pets, Plants or People"</i>	<b>X</b>					

#### **How do we know that Seal-Once is so safe?**

Seal-Once has been tested for acute toxicity by Huther Associates, a nationally known environmental testing organization located in Denton, Texas. The test species used were fish and shrimp larvae, as they are 1000 times more susceptible to toxicity than a 6-inch goldfish. During application, tests were conducted in liquid form, the result – no toxicity was found. Also, when materials treated with Seal-Once are immersed in fresh or salt water, they do not leech out, or become hydrolytically unstable. These are some of the reasons the State of New Hampshire supports use of this product throughout the state.

#### **How does Seal-Once provide such great protection, how does it permeate the surface up to 3/8 of an inch?**

Unlike today's market leaders, Seal-Once base materials are newly developed, environmentally stable, and safe polymers. When looked at under a microscope, these materials are much

smaller and lighter than today's market leaders. In fact, Seal-Once measures 100 times smaller than a micron, roughly equivalent to a fraction of a millionth of an inch. Consequently, when applied to a wood or concrete surface, Seal-Once permeates the external surface more deeply, thereby sealing and protecting the surface for a longer period of time.

### **Does Seal-Once permeate all surfaces 3/8 of an inch?**

Each surface has its own characteristics. Age of the wood, porosity, type of wood, previous treatments, etc., all affect how deeply Seal-Once penetrates external surfaces.

### **What does "beading" really mean?**

The more beading you see, the better your wood surface is waterproofed and protected. The truth is more beading indicates the applied product is sitting on top of the surface. It tells you it has not permeated. That is why all leading brands of clear and tinted waterproofers suggest you reapply every year. The product does not permeate the surface and is washed away by the elements, or bleached out by the sun.

Products that create beading use wax or wax silicone derivatives that typically last 3 to 12 months. The formation of beads will collect dust and hold a larger volume of water on horizontal and vertical surfaces. Over time this will wear down the surface of a horizontal board due to abrasion. In seams and cracks the beading material will have the same effect with the collection of debris. Later the beading material will retain moisture far longer than the sheeting method of a repellent. This will cause more damage by creating conditions which will optimize bacteria and fungus growth.

Beware of the claim made by most manufacturers that their product penetrates the surface. How can this be so when the wax covering the surface causes beading? Seal-Once is a sheeting type product unlike beading materials. It acts like a car polish maintaining a cleaner surface longer as it sheds water in thin sheets which will not suffer the accumulating effect of beading. For this reason Seal-Once does not contain any beading additives.

**Re-Application of Seal-Once:** Once substrate is fairly dry and clean, apply two coats of Seal-Once. Substrate can be damp (do not allow to dry between coats). You should apply three coats if the wood or decking is aged and very porous.

**Results:** The mold and mildew has undoubtedly penetrated the wood or decking and will continue to come to the surface for some time. Seal-Once allows water vapor emission to occur thus allowing the trapped moisture to rise to the surface. Apply another solution of water/bleach/dawn and wash mold away. Continue this until mold/mildew is gone. Do not reapply Seal-Once. No additional water will be able to penetrate from the surface because the

wood or decking is now protected by Seal-Once. In time, the mold and mildew will dry up. This process could take several months to occur.

**Can Seal-Once prevent airborne mold?** Seal-Once cannot prevent airborne mold. But what it will do is prevent the mold from attaching itself to the wood and concrete because there is not enough moisture present to allow the mold to anchor itself. The mold cannot survive and it will gray as it decomposes and will be easy to remove.

**Is Seal-Once a silicone, latex or acrylic?**

Seal-Once is none of the above. Seal-Once is a deep penetrating, complex co-polymer. Competitor products are primarily surface treatments.

**What is meant by “let the surface tell you what treatment is necessary”?**

Basically it tells us to test our surfaces before deciding best treatment. Let's say you last sealed a surface one year ago. The surface looks dry or is cracking, splitting or warping. If you spill water on that surface and it immediately soaks in, the surface is telling you it needs additional waterproofing. If you notice after a rainstorm that the rain water is soaking into the wood, then additional waterproofing is necessary. On the other hand if you spill water on a wood surface and it runs off the surface, then waterproofing is unnecessary, and as previously mentioned wasteful. If moisture is readily accepted into the substrate then it is ready to accept waterproofing.

**How do I get the most for my money when applying a water proofer?**

Follow these four simple steps:

1. Assure the surface is free of algae, mold, mildew, etc.
2. Assure the surface is ready to accept a water proofer.
3. Apply when temperature is over 35°, air is dry, with no imminent rain.
4. Apply the water proofer on a surface until it rejects further treatment. That is, apply the water proofer until it stops soaking in. Older porous wood may accept two, or even three, applications before the surface voids fill up. You do not need to wait until your first application has dried. Continue to apply product until the surface voids fill up.

**Does Seal-Once protect against hydrostatic pressure?**

No.