



## Frequently Asked Questions

### **What's so special about C2 Guard and how does it work?**

Using C2 Guard is like putting a protective layer of bark back onto a piece of milled lumber, thereby protecting and fortifying it from elements like water.

The particle size of commonly used waterproofing and stain products is too large to penetrate the surface of most woods, even soft woods, but especially very dense hardwoods. Other stains and wood preservatives essentially sit on the surface, providing little more than a temporary topical barrier. C2 Guard breaks the surface tension and allows the nano particles to fall through the surface, deep into the pore structure of the wood, filling up hollowed cell walls that exist at the deepest levels. Once absorbed, a bond occurs, forming a flexible co-polymer barrier from within the substrate that becomes part of the ongoing cellular structure. This barrier stops water intrusion completely, yet allows moisture and vapors to escape, preventing the effects of mold and mildew, dry rot, cracking, peeling and cupping of wood.

### **What is nanoparticle technology and why does C2 Guard employ this technology?**

C2 Guard's technology works like no other product on the market today. Unlike competitive products, C2 Guard's state of the art raw materials are safe, environmentally stable polymers. When examined under a microscope, these materials are much smaller and lighter than their competitors.

In fact, a nanometer is 1,000ths of a micron, 1/39,000,00 of an inch. Consequently, when applied to wood or concrete surfaces, C2 Guard's nanoparticles penetrate the external surface more deeply, thereby sealing and protecting the surface for a longer period of time.

### **Why should I use C2 Guard versus other products on the market?**

C2 Guard is unique in that it breaks the surface tension and allows nanoparticle polymers to penetrate deep within the wood, creating a barrier that becomes part of the cellular structure of the wood. This barrier stops water intrusion for up to six (6) years on horizontal surfaces (like decks) and ten (10) years on vertical surfaces (like fences and siding).

Most common sealers and waterproofers on the market today are water-repelling stains and contain preservatives made of oil, paraffin wax and silicates. When applied, they create a hardened shell that helps prevent moisture absorption. However, these products merely sit on the surface of the wood and once they break down, they no longer repel moisture. Water will then be absorbed, subsequently destabilizing the wood, and the cycle of deterioration begins.

### **Is C2 Guard cost-effective?**

C2 Guard eliminates the need to reapply a waterproofing product every year or two. Current stain and waterproofing systems are high maintenance, requiring frequent reapplication. These reapplications are costly in terms of both product and labor costs, whether you are doing it yourself or employing a professional tradesman.

Use C2 Guard to protect your investment from the start. There's no need to replace current wood with composite decking. Your original investment in the beauty of natural wood, with its endless variation, nuances and textures



was a good decision. C2 Guard provides an easy, effective and long-lasting maintenance program that both protects the investment value of your beautiful wood and provides a beautiful visual aesthetic.

Exotic woods, such as IPE, mahogany, teak and kayu are problematic to maintain, as the traditional oils used to rejuvenate them require maintenance coats year after year. C2 Guard is as equally effective on the hardest and densest woods as it is on softer woods such as cedar, redwood, pine and fir. The combination of polymers in C2 Guard soak deeply into the wood fiber and form a flexible, water-shedding membrane from within the wood.

#### **How do I properly prepare the surface (wood or concrete) before applying C2 Guard?**

Follow these four simple steps:

1. Assure the surface is free of algae, mold, mildew, etc. by using C2 Wood Cleaner. Scrub the affected area with a cleaning mixture and a scrub brush and rinse with a garden hose or pressure washer no more than 1250-psi using wide fan pattern. Leave solution on concrete for 15 to 20 minutes. You can reapply if needed.
2. Assure the surface is ready to accept C2 Guard by testing to make sure the product absorbs and does not roll off.
3. Apply C2 Guard product when temperature is over 35° and air is dry, with no imminent rain. Use brush or sprayer.
4. Apply second coat wet on damp. Do not allow previous coat to dry completely before applying the next coat. Older, porous wood might require additional coats.

#### **How safe is C2 Guard? Is it toxic?**

C2 Guard contains no toxins and emits low to no odor. It does not contain nitrates or phosphorous compounds, aluminum, arsenic, barium, cadmium, chromium, copper, lead, mercury or other heavy metals or silica.

C2 Guard has been tested for acute toxicity by Huther Associates, a nationally known environmental testing organization. The test species used were fish and shrimp larvae, as they are 1,000 times more susceptible to toxicity than a 6-inch goldfish. During application, tests were conducted in liquid form and the results showed: no toxicity was found. Also, when materials treated with C2 Guard were immersed in fresh or salt water, they did not leach out or become hydrolytically unstable.

Plants and vegetation are not affected by C2 Guard application.

#### **Why is it recommended to wait up to 6 months before waterproofing a pressure-treated lumber surface?**

Market leaders recommend waterproofing of pressure treated lumber as soon as three (3) months. As you know pressure-treated lumber is heavily treated with chemicals and other materials when it is manufactured. Also, pressure-treated lumber is very dense. Because of these two factors, pressure-treated lumber is usually not ready to accept a waterproofing treatment for at least 3 months. However, the consumer following the advice given by the market leaders buys the product and takes the time to apply it. Because the pressure-treated lumber has not dried out enough, it accepts a limited amount of the application, which washes away relatively quickly. The consumer continuing to follow the instructions waits one to two years before the next application. During that period, the wood dries, splits, cracks or warps because it has inadequate waterproofing protection.

So when should a nanotechnology waterproofer be applied to a pressure-treated surface? Timing of application depends upon at least two factors: One is the weather. If you live in New England, your wood surface is covered in snow for much of December through March. If you live in a southern state, your pressure-treated lumber is subjected to constant sunlight. Therefore, the elements play a key role in applying this type of waterproofer. The second factor is the readiness of the pressure-treated lumber to accept a sub-micron waterproof treatment. The



best way to test for readiness is to purposefully spill water on the surface to be treated. If it readily soaks in, the surface is ready. If it sits on the surface in a puddle or pool and does not soak in, it is not ready to be treated.

**Is C2 Guard a silicone, latex or acrylic?**

C2 Guard is none of the above. C2 Guard is a deep-penetrating, complex co-polymer.

**Can C2 Guard prevent airborne mold?**

C2 Guard cannot prevent airborne mold from existing. It will, however, prevent the mold from attaching itself to the wood and concrete because there is not enough dirt and moisture present to allow the mold or mildew to anchor itself. The mold cannot survive and it will gray as it decomposes, making it easier to remove.

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

The Beading Myth: The more beading you see, the better your wood surface is waterproofed and protected. The truth is that more beading indicates the applied product is sitting on top of the surface and probably contains a significant amount of wax. It tells you that the product has not penetrated deeply. That is why all leading brands of clear waterproofers suggest you reapply every year. These products do not penetrate the surface and are washed away by the elements and/or bleached out by the sun.

**What does "two coats, wet on damp" mean?**

Wet on damp means to apply a liberal, uniform coat onto the wood substrate, and then within 10 to 15 minutes, return to that section and apply a second coat while the C2 Guard is still slightly wet or damp. This is recommended for three reasons: First and foremost, this type of application ensures that the maximum amount of nanoparticle polymers penetrate deep into the cellular structure of the wood and provide the water-shedding benefit you want to achieve. Second, it insures there are absolutely no "misses" in your application. Total coverage is required for the product to perform at its expected high-functioning level. Third, when applying tinted C2 Guard for wood, the wet-on-damp application allows you to have a more even distribution of the color across the substrate.

**Will C2 Guard for Wood, tinted to a color, fade like other stains?**

The simple answer to this is yes. However, it will retain its color remarkably well compared to most all other stains for the following reasons: C2 Guard employs an incredibly fine-grind European tint system, along with trans oxide pigments, all formulated to maximize fade resistance. Superior color retention is one of the biggest attributes of C2 Guard, but everything fades under the sun, even automotive finishes. Those substrates with greater exposure to the sun will fade faster, such as the south and west faces of buildings and fencing, as well as fully exposed decks and the like. Substrates protected from the harmful UV rays of the sun will retain their color for extended periods—years, even decades. The advantage of the C2 Guard program is the ease with which re-coat of faded surfaces can be accomplished. Simply give the surface a bio-wash clean, utilizing C2 Wood Cleaner (alternately, a careful power washing is very effective) and brush, pad or spray on another coat of C2 Guard with tinted C2 Guard. Since C2 Guard will never peel, there's no need for time-consuming sanding and scraping. Always consult your C2 Guard dealer for detailed instructions on the easy maintenance and re-coat of C2 Guard.

**I like the color of wood "as-is." Will C2 Guard in clear maintain this color?**

In all likelihood, the answer to this is a qualified no. The natural tannins in woods, such as cedar, fir, redwood and mahogany are what give these woods their natural, beautiful color. Many people understandably wish to retain this without further adulteration. The problem is that these natural tannins lack UV stability. They quickly lose their natural color pigmentation when exposed to sunlight. Therefore, we need to give the sun something to work on—stains that are more concentrated with light-fast pigments will not arrest fading, but will keep your surface looking better longer, extending re-coat cycles. Consult your C2 Guard dealer for specifics relating to your project.



**How soon after rainfall or pressure washing can I apply C2 Guard?**

Wood should be dry, though some degree of dampness is acceptable, depending on desired application methods. In a typical application, the wood should be surface dry for at least two hours for best results. Generally, you can power wash your substrate early in the morning and stain by noon. If rainfall is imminent, you should stop the application and protect your recently finished work. If you are applying in sunny conditions as opposed to shade (shade is always preferred), we recommend that you lightly mist the substrate with water, let the wood fibers recover for 10 to 30 minutes, then apply two coats of C2 Guard, wet on damp. Always consult your local C2 Guard dealer for detailed application instructions.

**Can I apply C2 Guard in full sun?**

It is always recommended to apply this type of product in the shade. By planning your work, it is generally possible to stay in the shade. However, if this is not possible, mist the substrate with water, let the wood fibers recover for 10 to 30 minutes (the surface of the wood should be just dry), then continue to apply C2 Guard.

**How often will I have to re-coat with C2 Guard?**

There are two separate and distinct parts to the answer to this question. The first part is preservation of the wood itself, and the second part is the visual aesthetic you want to create and maintain.

C2 Guard for Wood is designed first and foremost as a wood stabilizer and preservative. It accomplishes this through its combination of nanoparticle polymers that penetrate deeply into the surface and provide a remarkably long-lasting, water-shedding barrier, eliminating the single biggest enemy of all exterior woods—water. Therefore, from the standpoint of preservation of your investment in the wood, properly prepared and applied, you will not have to re-coat C2 Guard for at least 6 years on horizontal surfaces and 10 years on vertical surfaces.

Regarding aesthetic issues, such as fading, rub-off or other disfiguration due to use or exposure, the solution is often to touch up or blend in a small amount of additional material onto the affected areas only. Resist reapplying to the entire substrate until the level of deterioration is widespread and an entire refresher coat is needed.

The fact that you will eventually have to re-coat your stained area is inevitable. The significant benefit of the C2 Guard program is that C2 Guard will never peel, and you will not have to scrape and sand the worn surface; merely clean and re-coat.

**Where can I use C2 Guard?**

C2 Guard (all types)/Composite materials: decks, fences, docks, piers, shingles, shingle siding, wood playgrounds, planters, furniture and any concrete/masonry surface.

**Does C2 Guard have color or is it a clear coat?**

C2 Guard is available in clear. There are also semi-transparent stains available for tinting. Please see our website for available wood stain colors. <https://c2paint.com/pages/c2-guard-colors>

**Can I use C2 Guard on composite decking and will it help eliminate mold and mildew problems?**

Yes, C2 Guard will penetrate composite-type products and create a water-shedding condition. Clean surface molds before application. Mold will continue to migrate up through the C2 Guard and onto the surface, where it can be cleaned off. This may happen several times before all mold and mildew are expunged from the substrate. Because mold requires moisture to survive, C2 Guard cuts off its lifeline and the mold or mildew issue is solved.

**Can I use C2 Guard on my boat and/or deck?**



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C2 Guard is the perfect product for use on boats, decks and any other wood structures that are exposed to the elements. It's approved safe for use over fresh and saltwater. When C2 Guard dries on a substrate, it does not leach out or become hydrolytically unstable; however, it may be removed by wearing the substrate away or by the application of strong oxidizers. C2 Guard is approved by the State of N.H. Department of Environmental Services (DES) for use over water. Marine formulas for wood and concrete and masonry applications are available.

**Can I paint on top of C2 Guard?**

After treating raw wood with C2 Guard, simply prime and paint as usual. C2 Guard is non-film forming and will not affect the wood surface.

**Where can I get C2 Guard?**

Find the nearest local C2 Guard distributor at <http://c2paint.com/apps/store-locator>. Or you can also order directly from [www.C2paint.com](http://www.C2paint.com).