

Penetrating Oil Wood Finish & Deck Sealer



**Deep Soaking Protection
Ideal for Decks, Fences, Siding & More!**



- ◆ **Environmentally Friendly**
- ◆ **Made with 100% Pure Hemp Seed Oil**
- ◆ **Very Low VOC's (Volatile Organic Compound)**
- ◆ **0% HAP's (Hazardous Air Pollutants)**
- ◆ **Contains Formaldehyde Free: Mildewcide, Algicide & Fungicide**
- ◆ **High Solids - Maximum Coverage Single Coat Application**
- ◆ **Extremely High UV Resistant**
- ◆ **Deep Penetrating into Wood**

Hemp Shield™ Wood Finish & Deck Sealer was developed using materials which contain little or no Volatile Organic Compounds (VOC's). Only the tinting additives contain very low levels of VOC's. The original "Clear" formula Hemp Shield™ Wood Finish & Deck Sealer is virtually 100% VOC free*.

Hemp Shield™ Clear

Before Treatment

After Treatment



Hemp Shield™ Products are available
now at **The Online Store**
For More Information,
Visit The Online Store at:
WWW.HEMPSHIELD.NET



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Hemp Shield Wood Finish and Deck Sealer



Introducing Hemp Shield™

Penetrating Oil Wood Finish and Deck Sealer™



Hemp fiber is used in clothing, automobile body parts, building materials, textiles, and high quality paper worldwide, However, the adoption of hemp seed oil as a product base has, until now, remained limited mostly to food, cosmetic, and personal care products.

— That was before Hemp Shield —

Now, there is dramatic new data showing that properties found in hemp seed oil can offer exceptional performance improvements when incorporated into wood finishes. Hemp Shield is the first and only penetrating wood finish containing 100% hemp oil that is produced in the United States. Hemp Shield is suitable for wooden decks, fences, stairs, siding, shutters, furniture — anything wooden that is exposed to the weather. In extensive tests, Hemp Shield outlasted all comers, including the highest priced deck finish on the national market. Hemp Shield's finish is extremely UV resistant, and the trans-oxide pigments used in shaded varieties of Hemp Shield™ provide long lasting color to outdoor wood that does not hide the grain. Hemp Shield's unique hemp oil formulation represents a major advance in preservation of outdoor wood — a back-to-the-future choice that, by reviving use of an agriculture based oil feed stock, has created a sustainable, environmentally friendly finish that outlasts the most expensive petroleum based finishes. Hemp Shield also resists environmental attacks from mildew, algae, and fungus, and, in "Clear" formulation, contains 0% volatile organic compounds (VOCs) like formaldehyde, and no other hazardous air pollutants (HAPs). Non-toxic, environmentally friendly Hemp Shield Wood Finish and Deck Sealer offers superior performance in a truly 'green' waterproofer and protectant for outdoor wood.



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Why Choose Hemp Shield?

The growth of environmental awareness and the realities of post-peak petroleum supply have combined to produce a paradigm shift in consumer's demands and producer's resources that has created new markets and product types in the paint and coatings industry. Hemp Shield products speak to the 21st century consumer's desire and manufacturer's need for safe, non-toxic, eco-friendly, sustainably sourced wood finishes that exceed current wear standards, are easy to apply, and look good.

Safe: Compounded almost entirely from hemp oil and water, Hemp Shield has a very high boiling point and vapor pressure. This means that, unlike conventional deck sealers that can contain 47% or more volatile organic compounds (VOCs) such as methanol, formaldehyde, ethyl-toluene, aliphatic hydrocarbons, and acetone, Hemp Shield releases very few fumes during application and drying. In contrast, the low boiling point, low vapor pressure, flammable and toxic chemicals in national brand sealers are released into the atmosphere at normal room air temperature. Hemp Shield is so safe it is approved for shipment via air freight, one of only a handful of commercial coatings that can make that claim.

Non-Toxic: Hemp Shield is made primarily of industrial grade hemp seed oil and pure water. It does not contain any of the 280+ chemicals listed as hazardous air pollutants (HAPs) by the Environmental Protection Agency. In "Clear" formulation, Hemp Shield contains 0% volatile organic compounds (VOCs). In color formulations the color pigments are suspended in a solution which contains 3% or less VOCs. When these pigment solutions are incorporated into Hemp Shield products, the results are the lowest overall VOC percentages in any nationally available deck sealer.

Eco-friendly: During application, Hemp Shield Wood Finish and Deck Sealer releases no HAPs, and only very small amounts of VOCs into the environment. Drips and spills will not contaminate the soil under and around structures protected with Hemp Shield. In service, Hemp Shield is released from the treated wood mainly through wear. In contrast, surface waterproofers, especially those that are urethane based, erode and dissolve in a short time, delivering their chemical load into the soil and water.



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Sustainable: After water, the major component of Hemp Shield is hemp seed oil. Hemp seed oil is made from an especially sustainable, versatile, economic powerhouse crop — Industrial Hemp. Henry Ford called hemp, "the peanut of fiber crops." Hemp crops take 120 days to produce hemp oil versus the millions of years needed to create petroleum. Compared with seed oil crops such as cottonseed, linseed, and canola, hemp seed produces 2 to 3 times the oil per acre.

Performance: Hemp Shield Wood Finish and Deck Sealer was designed to provide excellent durability under field conditions, and to meet or exceed the requirements of the following American Society for Testing and Materials (ASTM) standards.

1. ASTM D 1006 — Exterior Exposure Tests of Paint and Wood
2. ASTM D 3456 — Exterior Exposure Tests for Susceptibility of Paint Film to Microbiological Attack
3. ASTM D 3719 — Quantifying Dirt Collection on Exterior Panels
4. ASTM D 4587 — Accelerated Exposure Tests for Tannin Bleed Through

Hemp Shield products have been tested for industrial use in three (3) settings, a real world trial with a new line of white oak furniture, an ASTM Accelerated Aging Chamber test where, exposed to heat, humidity, and UVB light, it out-last-ed all competitors, including Thompsons Water Seal™ and Cabot's Deck Stain™, and an ASTM D 4587 tannin bleed through test on cedar. The tannin test was conducted for a manufacturer of pre-finished decking comparing the national brand of deck sealer (Miller's) they currently use and Hemp Shield in "Clear" formulation. In these tests, Hemp Shield out performed all competitors.



Made with
Canadian Hemp Oil





Hemp Shield Wood Finish and Deck Sealer



Accelerated Weathering Chamber Test Results All Tests Were Done In Clear & Shaded Varieties, On Douglas Fir, Redwood & Cedar				
Product	Thompson's	Cabot's	Restorex	Hemp Shield
Hours of Heat, Moisture & QUV/B Exposure	100 Fail	100 Pass	100 Pass	100 Pass
	200 Fail	200 Pass	200 Pass	200 Pass
	300 Fail	300 Fail	300+ Pass	300 Pass
	400 Fail	400 Fail	400 Fail	400 Pass
	500 Fail	500 Fail	500 Fail	500 Pass
	600 Fail	600 Fail	600 Fail	600 Pass
	800 Fail	800 Fail	800 Fail	800 Pass
	1000 Fail	1000 Fail	1000 Fail	1000 Pass

Tannin Bleed Through Test

Tannin is a dark brown, acrid oil found in many trees, including oak and cedar. In outdoor use, tannin will become concentrated, staining and darkening the wood's surface, especially following the grain.

In the ASTM test shown below, cedar 2X4's are masked, the sealers are applied to the test areas, and each board is exposed to a 500 hour torture test of heat, humidity, and intense ultra-violet (UV) light. The masked edges show the test stock's original appearance.



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The Miller samples are darkened and discolored by tannin from below, with the surface finish almost completely removed by UV and humidity from above. In contrast, the Hemp Shield samples are nearly unmarked, with only a few visible stains. The Hemp Shield finish has preserved the original tone and color of the wood, while the boards treated with Miller have been visibly greyed where tannin has not completely discolored them.

Miller NW Oil Stain, "Clear"



Hemp Shield, "Clear"



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Penetrating

Hemp Shield Wood Finish and Deck Sealer is unlocking the special properties of hemp oil to offer significant improvements in finishes for exterior wood. This natural seed oil is much more readily accepted into wood fiber than other plant or petroleum sourced oils.

Hemp Shield Wood Finish and Deck Sealer uses a two-step engineering process to modify our 100% pure virgin hemp oil into a stable, water reducible base for wood coatings. Due to the extremely small particle size attained by the modified hemp oil, it is drawn deep through the wood fibers. As Hemp Shield travels into the wood, it delivers the specially formulated biocides and fungicides incorporated in the Hemp Shield formula.

User Comments

The following reports were offered by consumers who are not employees, or related to employees, of the Hemp Shield Company. These consumers purchased their Hemp Shield products at retail, and were not compensated for their statements.

Paul Mahlberg, Upper Midwest Application Date — April, 2011

"It looks great! The sealer went on well. Marilyn likes it very much — it's easy to clean — to sweep, that is."

Additional Comments — August, 2011

"I do like your hemp sealer on my deck. Great stuff!"

Barry Barker, Coast Range, Veneta, Oregon Application Date — August 28, 2010

"When I started putting on the Hemp Shield, I was pleasantly surprised at how easy it was to apply. I'm not much of a painter, so there were plenty of drips and splashes, especially from the railings. Even after a half hour of sitting, the drips, splashes and other mistakes, like where I walked on wet boards, disappeared completely when I went over them with the Hemp Shield. Even though I put it on during a hot summer day there were no overlap marks from the roller."



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"Other things I like about Hemp Shield is it barely changed the wood's color — what I expect from a product sold as "clear" — and when it rained last week the deck wasn't slippery at all. Also, the cleanup was about the easiest I've had painting. I hardly needed soap, except to make sure the brushes and roller were completely cleaned."

Additional Comments — August, 2011

"After a year of exposure to Willamette Valley weather, Hemp Shield is still protecting my deck. The best thing I've noticed long term is that the deck is not slippery when wet, a big problem with every other deck sealer that I've used."

Bruce Gates, Marcola River Road, Springfield, OR Application Date — April, 2011

"I think that Hemp Shield is a fine product. We just finished building our home and have used the product in several places throughout. I am particularly happy concerning our use of Hemp Shield on our swimming pool deck. We get lots of rain in Oregon, any deck seal needs to protect against mildew, moss, rot, etc. This product has done so."

"It is also easy to apply, with a water base the cleanup is also easy. The price is comparable with other deck sealers."





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Paul Petock, McKenzie River Valley, Oregon
Application Date — June, 2011

"I own a custom built house overlooking the McKenzie river in Oregon. The house is sided with 1" thick cedar. I was looking for a product to reseal and stain the house with. The house was built in 1964 and has not been stained from its construction. After much research I went with Hemp Shield with a chestnut color."

"I was surprised how well the product covered the weathered wood, and happy how little it took to cover the entire house. It was also a simple clean up with soap and water. I like your product so well I will be using the clear on my interior redwood walls."





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David Gonzales, Manitou Springs, Colorado
Application Date — June, 2011

Carving logs, stumps, and even whole trees in the dry climate of the Colorado Rockies, his finished works often suffered severe cracking. A life-long sensitivity to the volatile chemicals found in major brand wood sealers lead David to Hemp Shield when a major commission — a pine tree carved top to bottom — began to crack.

David's story:

"I have been carving for many years, and I am extremely sensitive to toxins and smells. I carve with electric chainsaws and I only work with earth-friendly paints and sealants, which is what first interested me in Hemp Shield."

"I was hired to carve a 17 foot pine tree with a hawk, 4 raccoons, and 2 bears. In Colorado the weather is dry and it is typical of pine to crack as I am working, which is what occurred while carving this particular commissioned piece."

"Hoping to find a product that would penetrate the wood deeply and curb the cracking, I decided that I would go out on a limb and try something new — Hemp Shield. After I painted the carving, there were numerous cracks throughout the piece. I began to apply the Hemp Shield and noticed that the cracks began to close up. I have never seen a wood sealer work in this way and I have tried many that are on the market today."

"The person who hired me to do the carving was ecstatic because the Hemp Shield rectified 95% of the cracks in the wood. I called several months later to see if there were any cracks occurring within the wood and there were none. This astonished me because usually some cracking does occur, especially outdoors in the hot sun. Since then, I have ordered several gallons for my wood carving projects. On so many levels, I am utterly impressed with how well Hemp Shield works."





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David Gonzales Pine Tree Sculpture





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**Rick Ahern, General Manager/Partner Telemark Resort & Convention Center,
Cable, Wisconsin, Application Date — April, 2011**

"Telemark Resort in Northern Wisconsin recently started a renovation of our main lodge building. We researched wood finishes and sealers that would provide a lasting and economical solution for our cedar interior and exterior surfaces. We also wanted a product that was chemical free and easy to apply. We ordered 200 gallons of Hemp Shield. We found the application to be easy and the coverage to be greater than our expectations. All of our expectations were exceeded including assistance from Ken in directions for the application."

"We will continue to use Hemp Shield as we refinish the exterior of the lodge and look forward to working with Ken and Hemp Shield."





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Jerry Belsha, Owner Quiet Window Mfg.

Long Beach, California, Application Date — August, 2012

Southern California manufacturer Jerry Belsha recently tested Hemp Shield for use on a new line of white oak furniture. He posted the following comments on the LinkedIn Doors & Windows Manufacturers Group, a business-to-business networking group:

"Just completed our test and I must agree with you, David. One coat was quite sufficient!"

"The white oak is fairly tight grained but it took the finish nicely. Minor puddling was unavoidable but a simple wipe with a rag was all it took to remove the excess; somewhat like using the old-time wood stains (slop it on, wipe it off). Humidity was high the day of application so dry time was extended into the second day."

"Very pleased with the satin finish as well as the color intensity of the tinted product. Comparing the Hemp Shield colors to the Penofin product, Hemp Shield wins hands down. Thank you for a most excellent product!"

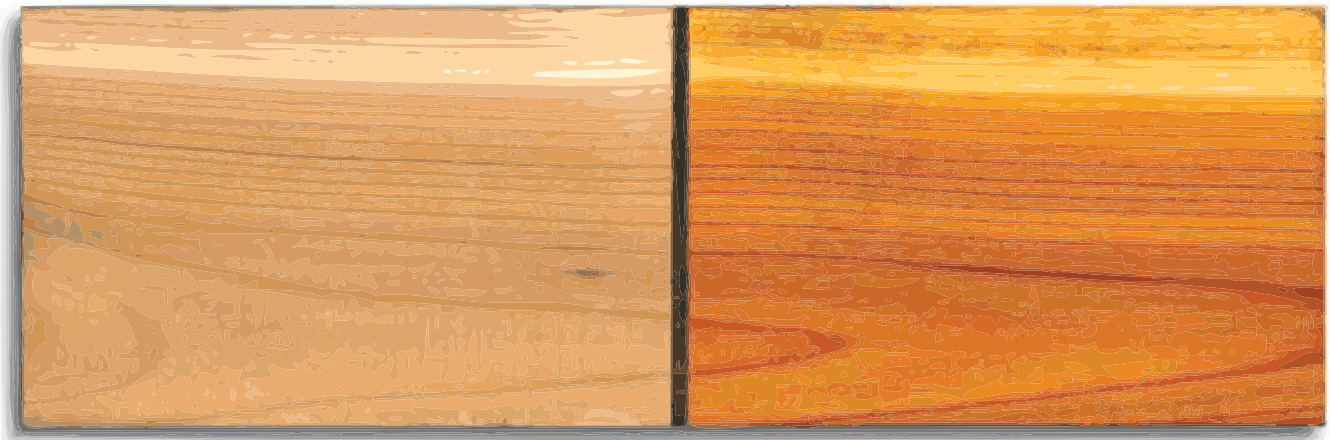
Teak Doors Before & After Hemp Shield



Teak companionway doors shown while receiving a coat of "Clear" Hemp Shield Wood Finish and Deck Sealer.



Hemp Shield Wood Finish and Deck Sealer



Hemp Shield 'Clear' On New Fir Baseboard



Hemp Shield 'Chestnut' On Weathered Cedar



**Hemp Shield
'Shades'
On Cedar**

