

ZeraShield™ W

Waterborne Epoxy Fortified Wood Sealer & Stain

ZeraShield™ W is an advanced nano-based two-component epoxy that penetrates deep into the porosity of wood substrates in a single coat application, thus consolidating wood fiber and discouraging the growth of mildew and algae. It contains UV-blocking additives to prevent the destructive damage of direct sunlight exposure.

WHERE TO USE

ZeraShield™ W is ideally suited for sealing and staining pressure treated wood and can be used on interior or exterior wood surfaces including porches, decks, stairs, railings, walkways, sundecks, fences, wooden balcony decks, patio furniture, chairs, wood siding and all other natural wood surfaces.

Why do common deck sealers fail?

Among other exterior building materials, wood decks are subjected to the full impact of the harshest climate conditions of all, such as destructive UV rays, acid rain, humidity and elevated temperatures during the summer months. In many cases water can soak into unprotected wood via small or large cracks in the wood surface. This further deteriorates the wood species and eventually causes it to rot. In the winter, temperature changes from freezing to thawing periods cause the expansion and contraction of wood, making it very tough for any sealer to withstand.

Most deck stains on the market are oil based. Although they are effective in repelling water, the oil-based stains are made from natural oils which actually promote the growth of algae and mildew as oil is a source of metabolic energy. This is why all oil-based sealers contain mildewcides to act as a poison and inhibit the growth of these organisms in order to protect the sealer. However, mildewcides are degradable and over a period of time, with the combination of ultraviolet (UV) sunlight and exposure to rain and snowmelt, they will wash away. Once the effectiveness of these mildewcides is gone, the mildew and algae begin to feast on the deck sealer turning the wood grey.

Unlike oil-based stains, ZeraShield™ W is a two-component epoxy-based synthetic structural polymer that contains no oil or other degradable materials. It is specially created for the outdoor environment and is highly resistant to UV damage and mildew/algae growth. It adheres very strongly to wooden surfaces thereby extending the life of the sealer and the deck.

BENEFITS

- Low odour, safe and non-toxic
- Offers a beautiful and translucent finish that will highlight the wood's grain pattern
- Impervious to water, rain, snow, oil and household chemicals
- Slows down the aging (silvering) process of wood
- Resistance to rotting, insect damage, decay, flaking and peeling off
- Breathable with an excellent film barrier
- Flexible to accommodate the natural expansion and contraction of wood
- Ample working time yet fast curing (5 hours)

MAINTENANCE

ZeraShield™ W will protect your deck for many years and is easy to maintain by simply applying a single coat every 3 years (5 years for vertical surfaces). There is no need to strip the deck every time; power washing is sufficient to prepare the surface.

HANDLING PROPERTIES @ 23°C (74°F)

Mixing Ratio, by volume (A & B only)	2 parts A: 1 part B
Pot life (working time)	2 hours
Setting time (drying out)	5-6 hours
Full cure and maximum resistance	7 days

COLOURS

ZeraShield™ W is available in a clear finish as well as in the following five colours (all offered as low-sheen translucent finish): Natural Pine, Cedar Tone, Driftwood Grey, Rustic and Redwood.

PACKAGING & COVERAGE

ZeraShield™ W is sold as **three-part system**; Part C contains the (colourant) stain, nano and flattening additives.

The complete unit is 3.79 litres (1 U.S. gal.)

Coverage is 150 - 200 sq. ft. per one U.S. gallon unit depending on the porosity of the wood.

APPLICATION GUIDELINES

- Allow new wood to weather for at least couple of months outdoor during the summer time to adequately dry. Ensure the moisture content in the wood is as low as possible prior to proceeding with the application. This will facilitate maximum penetration of ZeraShield™ W wood sealer/stain, and reduce the risk of future infestation by fungi or insects. Too much moisture in the wood will prevent penetration leading to problems later on.
- New decks should be thoroughly cleaned to remove any “mill glaze”. This is the glossy film that develops on milled wood during the production process. When lumber is being cut, the lumber planers working at high speeds generate high temperatures which cause the wood sugars to form a glaze on the surface of most newly milled types of wood like pressure treated pine and cedar. Use a strong solvent cleaner (contact Zeraus for recommendation) then thoroughly rinse. Both unpainted or new wood should be sanded with 80-100 grits sandpaper or pressure washed to create clean porous surfaces.
- Wood should be clean, dry, porous and free of mildew. Any old paint or sealer must be removed. Do not use ZeraShield™ W over painted or varnished surfaces. **ZeraShield™ W does not adhere to oil-based sealers.** Surfaces must be stripped prior to application of the product using a commercial paint stripper, then neutralized and thoroughly rinsed with plenty of water, and finally sanded to bare wood using 80-100 grits sandpaper. All cracks must be filled with epoxy gel (ZeraBond), allowed to dry for 4-5 hours then sanded.
- Once the material (A & B) is mixed, you have to use up all of the stain on the job. Do not overcoat with sealer; applying too much stain on the wood leads to a buildup of material, forming a film which would ultimately dry out, crack, peel off or leave unsightly white spots.

- As for most exterior coatings, it is critical that deck finishes be applied under proper weather conditions. Ideally, the stain should be applied in the temperature range of 12 to 30 degrees Celsius (54 to 86 degrees Fahrenheit) and with relative humidity under 75%. Avoid applications under direct sunlight to prevent bubbling or rapid drying.
- Ideally, the product should not be applied if precipitation is forecasted for the 24-hour period after coating. This will prevent the possibility of water spotting or whitening spots on the wood surface. Once the sealer dries overnight it will be resistant to water and rain.

MIXING

Pour Part B into the Part A container and mix thoroughly for one minute using a mixing blade and drill at slow-medium speed. Then add Part C in and mix for 2 minutes. Allow to stand in the shade for a **15-minute induction time** before use.

APPLICATION

ZeraShield™ W can be applied by a variety of methods. The best result is achieved by using high quality brushes. If using an airless sprayer, use a tip between 0.011 and 0.015, and use the lowest pressure that produces a uniform spray pattern to minimize fogging and over-spraying. When you spray, always back brush to ensure a uniform application. Individual planks should be coated along their entire length to prevent overlap marking. A roller is not the recommended method because it generates bubbling on the wood surface and does not promote penetration of the sealer.

Before applying the stain, test on a sample piece of wood from your deck or on a hidden section to verify the colour and the look you want. Stir the mixed stain periodically during application to ensure colour uniformity.

Pour a workable amount of the mixed stain onto a paint tray. Apply stain liberally to the point of saturation as long as the wood still allows for absorption but do not over-apply. Do not allow puddles to form; remove any excess sealer/stain immediately before drying. Always maintain a wet edge and do not disturb it once applied and beginning to set. All exposed ends of the plank should be coated until all wood pores are saturated to prevent moisture infusion and to stabilize the moisture content of the wood.

Dry to touch: 5-6 hours depending on temperature and humidity. Allow 24 hours for deck to completely cure before using. High humidity and lower temperatures can greatly increase dry time.

NOTE: ZeraShield™ W will appear milky when applied but will become clear as it dries. Depending on the relative humidity and temperature during the application, it may take longer to dry.

LIMITATIONS

- **ZeraShield™ W** should be applied above 10°C (50°F) and below 75% relative humidity (good air flow will also greatly assist in water release).
- Maximum wet film thickness should be 6 mils or less per coat, with at least 5 hours of drying time in between coats (poor water release may result in low gloss or hazy films).
- Slight colour fading may occur over long-term exposure to direct sunlight. The colour fading would be uniform and should hardly be noticeable.

CLEAN UP

Clean all tools and equipment immediately after each use with soap and water.

SHELF LIFE

Maximum one year from the date of manufacture if kept in the original unopened container under room temperature. Keep from freezing.

FIRST AID

INHALATION: In the case of overexposure, remove to fresh air.

EYE CONTACT: Flush eyes immediately with large amounts of running water for at least 15 minutes while holding eyelids open until irritation subsides.

SKIN CONTACT: Wash immediately with plenty of soap and water. Remove and clean all contaminated clothing and laundry before reuse.

INGESTION: If swallowed, drink two glasses of water. Do not induce vomiting. The part B of the product is corrosive. Get prompt medical attention.

EFFECT OF OVEREXPOSURES

INHALATION: Water based product. No hazardous VOC's.

EYES: May cause irritation (Part A) or severe irritation (Part B)

SKIN: This product may cause skin irritation and/or sensitization after repeated contact.

INGESTION: Low toxicity, causes irritation.

SAFETY PRECAUTIONS

- **Keep containers closed.**
- **Wash thoroughly after handling**
- **Avoid breathing vapours**
- **Wear safety (protective) glasses and latex gloves**
- **Avoid contact with eyes, skin and clothing**
- **Do not flush down the toilet or sink**
- **Keep away from children**
- **Close container tightly after each use**
- **Do not re-use containers**

Part A:

- Moderate eye irritant
- Moderate skin irritant
- Moderate respiratory irritant

Part B:

- Severe eye irritant
- Moderate skin irritant
- Moderate respiratory irritant

Part C:

- Mild eye irritant
- Mild skin irritant
- Moderate respiratory irritant

WARRANTY

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