

How to use Defense Products (Deck Defense™ and Log & Timber Defense™)

Proper treatment and care of your horizontal and vertical structures can add beauty and longevity to your entire living space. To help seal and protect your deck, fences, or railings we recommend using our waterborne finish Deck Defense™. For vertical structures such as wood siding, trim, timber frame, beams, and rough-cut cedar we recommend Log & Timber Defense™.

Defense products work by penetrating several layers deep into the wood fibers creating a lattice network that strengthen and protect your wood from the inside out. These products are formulated for better performance, longer life, easier application, and upkeep. They also will not flake or peel when applied according to labeled instructions.

All structures should have a surface moisture less than 20% before applying a Defense product. High moisture content will hinder the penetration and adhesion of the finish. If constructing a new deck, boards should be placed bark side down. Also, if the boards have a high moisture content, they should be placed in direct contact with one another when laid down. As the boards dry a gap will open for proper airflow and drainage. If you gap them when they are too wet, the gaps between the boards will likely be too large. Having to estimate what the final gap will be, can be avoided if moisture equilibrated kiln dried boards are used. Finally, let the new boards season for several months prior to application of a finish. This will allow time for the wood to shrink completely and come to an equilibrium with its environment.

Wood Preparation

In situations where a Defense product is going to be applied on an established deck, the deck must be free of the existing finish, in addition to being clean and dry. The cleaning solution required depends on the condition of the boards.

Log Wash™ is an excellent wood cleaner to remove dirt, grime, pollen and surface stains from bare wood (use two cups per gallon of water).

Cedar Wash™ is a ready to use cleaner designed specifically for wood with high extractives content such as Southern Pine, Spruce, Douglas Fir and Cyprus wood.

Wood Renew™ is used when the wood surfaces have been damaged. i.e., grayed wood and mill glaze. It will restore the wood back to its natural color. Wood Renew™ is also the preferred method for preparing deck boards for staining. It is important to follow all labeled instructions when using this product.

Sanding is used to remove surface imperfections. Although labor intensive, sanding helps to increase mechanical adhesion, provides for better color uniformity and aids in opening the substrate to promote better penetration of the stain. 40 – 60 grit sandpaper is recommended for decks. Always sand in the direction of the grain. When finished with the sanding, clean the surface using our Log Wash™ solution.

Finish Removers are used to remove an existing finish. There are two relatively safe waterborne finish removers designed to soften the finish so that it can be removed mechanically using a pressure washer.

- (1) **S-100™**: Is supplied as a ready to use high pH gel. The gel helps it to remain active for an extended period.
- (2) **Strip It®**: Is supplied as a ready to use pH neutral finish remover. It is designed to remove multiple layers of finish at a time.

We recommend that you obtain samples of each and test both to determine which works best for removing your finish. Follow all labeled instructions.

Rinsing is very important to completely remove the cleaning solution and debris. Use pH strips to test the rinse water run off to make sure the rinse water is between 6.5 – 7.5. Inadequate rinsing will lead to unnecessary problems and shorten the life of the stain. After rinsing allow the surface to completely dry before application of a finish.

Application Guidelines:

- **Surface Preparation:** Must be applied to clean, dry surface.
- **Application Weather Consideration:** Do not apply if rain is eminent within 6 hours.
- **Personal Protective Equipment:** Although Defense products are considered non-toxic, gloves are recommended when applying.
- **Protect from overspray:** Wet down and cover nearby vegetation and adjacent surfaces. Keep these areas wet during application and rinse promptly when finished.
- **Mixing:** Mix thoroughly initially and every 15 min. to ensure color uniformity. Do not use powered mixing equipment.
- **Boxing:** We recommend boxing pails together if using different batch numbers. This will help with uniform color.
- **Application Methods:** Low-pressure pump-up sprayer, Paint Pads (for deck application), quality brush, or roller. Apply in a flooding manner to completely cover the surface of the wood, allowing the product to soak into the wood. Back-brush the finish into the wood using a quality brush.
- **Maintain a wet edge:** Work in small sections to help maintain a wet edge. This will help prevent lap marks.
- **Work in the same direction:** When applying the finish apply in the direction of the grain and stop only at natural breaks such as board ends to prevent lap marks.
- **Application Surface Temperature:** 40 – 90 degrees Fahrenheit:
- **Number of Coats:** Defense products works great as a one coat stain. However, for color or if the surface appears blotchy, a second coat may be applied. The second coat should be applied wet on wet. If it is not, wait one week before application of a second coat.
- **Drying Times:** Drying times will vary with application, airflow temperature and humidity. Under ideal conditions Defense Products will dry to the touch in 20-30 minutes. For horizontal surfaces wait 4 - 6 hours before walking on the surface and 24 hours before replacing heavy furniture.
- **Coverage Rates:** Coverage rates will vary considerably based on the type of substrate and methods of application. A second coat will require much less. Below are some approximations of coverage rates based on the type of wood.

- **Rough Sawn Wood:** Rough sawn wood such as fences will soak up a large amount of stain. Perhaps as low as 100 – 175 ft² per gallon
- **Older mature decks:** 175 – 250 ft² per gallon
- **New Wood:** 250 – 300 ft² per gallon
- **Protect from Freezing:** Although freeze thaw stable, this will ensure any possibility of degradation.

Clean Up:

If cleaned soon after application, tools and equipment are easily cleaned with soap and warm water. Dispose of unused product in accordance with local, state and federal guidelines.

Maintenance:

Good maintenance for decks as well as for other wood surfaces will prolong the need for re-staining or removal. Defense products will not flake or peel when properly applied. Clean with log wash when needed. We recommend using one cup concentrated log wash per gallon water. Expect to see more wear in high traffic areas such as steps and traffic patterns. These areas can be recoated easily where needed after cleaning with log wash. We discourage using a clear topcoat over Defense products. A topcoat will prevent any future recoating.