

**An environmentally sound, non-arsenic-based natural alternative to costly composite flooring that maintains its structural and aesthetic integrity.**

**Since 1976, Culpeper has been the innovative leader in wood protection for families. Culpeper offers the rich, natural beauty of real wood combined with revolutionary treatment to protect against weathering and rot. It's Culpeper thinking that makes good wood great.**

One of the natural characteristics of wood is its propensity to absorb or lose moisture depending on exposure and weather conditions. The water repellent additive reduces, but does not eliminate, the amount of shrinking, expansion, checking, warping, etc. that may occur as the wood tends to equalize with the weather conditions. This is extremely true in areas of the country where there is a wide swing between hot, dry weather and damp, wet, or humid conditions.

Porch flooring will lose moisture when exposed to hot, sunny conditions or will absorb moisture when exposed to wetting conditions. Extended periods of wet weather, roof drainage onto the deck, damp crawl spaces and condensation will increase the moisture content of the wood causing it to swell. Hot, dry weather will reduce the moisture in the wood causing it to shrink. This is a natural characteristic of wood.



# MOTHER NATURE'S EFFECT ON WOOD FLOORING

## MOISTURE CONTENT & MATERIAL ACCLIMATION

Treated flooring must be kept dry prior to installation. If wet wood is installed, it will shrink as it dries, leaving excessive spaces between the boards. A period of acclimation should be given to the treated porch flooring. Also, if "wet" treated wood is used for the porch substructure, it is necessary to allow time for these materials to reach an equilibrium moisture content (EMC) with the exterior conditions, prior to flooring installation. The amount of time depends on the time of year and climate conditions (2 to 6 weeks). This practice will reduce potential problems of buckling or separation of the flooring if installed on the substructure too soon. If re-dried treated wood is used for substructure materials, no waiting is required.

Proper acclimation of the flooring begins with its delivery to the job site. The material should be unloaded in a dry place and stacked on stringers to permit adequate air circulation. A layer of polyethylene should be positioned directly under all packages of flooring to prevent moisture absorption from the ground. If the temporary storage area is not fully protected from precipitation, the flooring must be loosely covered for protection from moisture (4-mil polyethylene is commonly used), yet allowing adequate circulation of air within the package. If at all possible, do not store the flooring in an area that receives direct sunlight most of the day, or in an enclosed, heated space. These conditions can allow the flooring to equalize at a moisture content too low for its intended use.

In warm weather, one to two weeks is generally considered an adequate acclimation period for porch flooring. The final average moisture content of wood materials used in exterior applications is 12% for many areas of the continental United States.

## PORCH FLOORING INSTALLATION & FINISHING

Before installing the porch flooring, the installer should measure the width of the pieces. Dimension variations should be noted and taken into consideration when installing the boards. Other factors to be considered would be the degree of direct sunlight exposure, shade, rain exposure, roof drainage, ventilation and wind. Flooring should be installed carefully to avoid splitting. Good judgment should be used to determine the approximate spacing between the boards.

When installing and finishing pressure treated porch flooring, we recommend that the same standard good construction practices used for untreated flooring be followed.

Treatment of porch flooring prevents termite and decay attack when used for its intended purpose. It does not

change any of the natural characteristics of the wood. Unlike interior flooring, T&G porch flooring is fastened directly to the floor joists. No additional nailing base is needed. A minimum 1/2" expansion space is maintained between the flooring area and house (or wall) to allow for dimensional change. This space can be concealed with decorative exterior trim (also acclimated).

Each piece of flooring is blind-nailed at every joist, using hotdipped galvanized 8d ring-shank nails. Extend floor to create a 1" overhang beyond the band joist. Upon completion of the flooring installation, sanding the floor is recommended when a extra smooth finish is desired.

To maintain the optimum performance of a porch following proper design, material specification, installation and finishing, a regular maintenance program should be undertaken. Inspection for water accumulation, integrity of the soil barrier, and any raised fasteners are just a few items to include in a periodic examination of the structure. Take necessary corrective action as soon as possible. Refinishing porch flooring can be expected every 3 to 5 years, depending upon weather conditions and the amount of exposure to direct sunlight.

## PORCH DESIGN CONSIDERATIONS

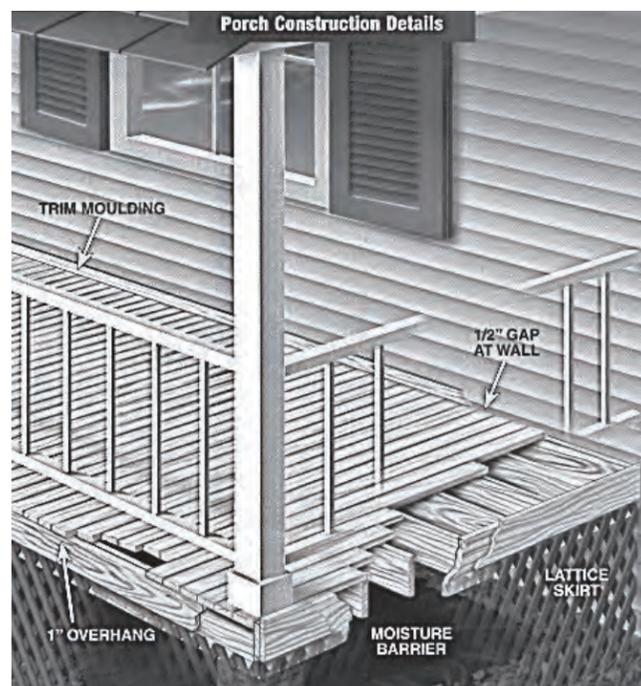
Attention to proper porch design is as important to the longevity of the structure as are the details of porch flooring specification and installation. Inadequate air circulation

beneath the porch and trapped moisture between framing components will greatly reduce the serviceability and long-term appearance of the porch.

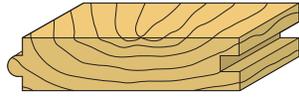
**The following recommendations are key elements to the proper design & construction of a fully-covered porch:**

- Slope the exposed soil underneath the porch away from the center to permit runoff of any water that may accumulate.
- To reduce the upward migration of moisture from the exposed soil underneath the porch, cover with a soil barrier (4-mil polyethylene is acceptable), leaving two feet of exposed soil inside the perimeter of the porch. Anchor edges of this barrier with gravel.
- Encourage air flow beneath the porch by using ornamental vents or lattice skirting.
- Slope the porch framing 1/4" per foot away from the house to permit adequate water runoff.
- Vent columns and newell posts at top and bottom.
- Check with your local building code department to be sure all code requirements are satisfied within your porch design.

Any mis-manufacturing of this product must be noted prior to installation or becomes sole responsibility of purchaser. Proper precaution must be taken to keep flooring dry prior to installation. Culpeper Wood Preservers does not recommend or warrant the use of T&G material for uncovered exterior decking.



## PENTA WR PORCH FLOORING



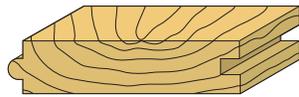
### SPECIFICATION:

**Select grade of 1 x 4 Southern Yellow Pine, manufactured to SPIB Standard Matched Pattern. Flooring is treated with water repellent Pentachlorophenol (Penta WR) for above ground use.**

Penta WR is the shortened name for the chemical preservative, Pentachlorophenol, which is dissolved in mineral spirits (a carrier) with a water repellent additive. Mineral spirits as the carrier evaporates rapidly producing a wood product that is clean and paintable.

Treatment with Penta WR does not add moisture to the wood. Consequently, there is a minimum of raised grain and expansion of the treated product. At time of shipment, the moisture content of Penta WR flooring is approximately 19 percent, which is preferred by most builders due to the wide variation of conditions under which the wood will likely be used, and meets building code requirements for dry lumber.

## CA PORCH FLOORING



### SPECIFICATION:

**Select grade of 5/4 x 4 Southern Yellow Pine, manufactured to SPIB Standard Matched Pattern. Flooring is treated with CA preservative (above ground contact), water repellent, and re-dried after treatment to an average moisture content of 19% or less.**

Pressure-treated porch flooring with CA protects the wood against termite and decay attack and is covered under the conditions of our published Limited Warranty.

In CA porch flooring, the specification of material to be kiln-dried-after-treatment (KDAT) is extremely important.

Re-drying the treated material will return each piece to a workable moisture content, generally to 19% or less. The advantage of KDAT flooring material is its enhanced dimensional stability.

## PORCH FLOORING INSTALLATION & FINISHING

To further restrict the movement of the flooring, a sealer should be applied. A coat of high quality, mildew resistant, exterior oilbased primer is recommended. Consider applying a final coat of oil-based porch enamel to the tongue and grooves (also to the end of any piece that will be adjacent to the house) and installing it while the paint is still wet. This procedure not only assures an effective seal against moisture penetration, but also provides a good bond between floor boards.

## PORCH FLOORING INSTALLATION & FINISHING

Upon completion of the flooring installation, sanding the floor is recommended when an extra smooth finish is desired. Due to the nature of oil-borne Penta WR preservative, painting or coating is not recommended for 90 days after installation.

**Penta WR pressure treated porch flooring is not recommended for use:**

- In residential, industrial or commercial interiors
- Where a waterproof decking is desired above a living space
- Where it is to be nailed directly to a plywood subfloor
- Where there is little or no ventilation in the crawl space
- Where it will be in frequent or prolonged contact with bare skin
- Where it may come into direct or indirect contact with drinking water
- Where the preservative may become a component of food or animal feed
- In the interiors of farm buildings where there may be direct contact with domestic animals or livestock
- As an exposed deck

Upon completion of the flooring installation, sanding the floor is recommended when a extra smooth finish is desired. One coat of primer and two coats of oil-based porch enamel to the surface and exposed ends is recommended. Solid-color stains should never be used on a porch floor due to their low resin content.

**CA pressure treated porch flooring is not recommended for use:**

- Where a waterproof decking is desired above a living space
- Where it is to be nailed directly to a plywood subfloor
- Where there is little or no ventilation in the crawl space
- As an exposed deck

## CARE & HANDLING FOR PENTA WR & CA PORCH FLOORING:

THIS PRODUCT IS  
**KILN DRIED**  
AFTER TREATMENT

- Keep product DRY until installation.
- Seal with a quality primer and paint or stain upon installation.

**CULPEPER**  
WOOD PRESERVERS

Headquarters

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