

# IN-WOOD®

## PENETRATING WOOD PROTECTION AND STAIN

### Technical Data & Application Instructions

#### PRODUCT DESCRIPTION

IN-WOOD utilizes state of the art wood protection technology in combining the highest quality oils with microscopic Trans-Oxide pigments, allowing maximum penetration for long term performance. Trans-Oxide pigments, at approximately .01 micron, are 1/15 the size of standard paint or stain pigments. These Trans-Oxide pigments allow for superior penetration and ultraviolet protection. The UV transmission is reduced to nearly 5% compared to the 50-65% transmission of common pigments found in semi-transparent stains. A natural version is also available for maintaining wood in its present or natural state.

IN-WOOD protects the wood fiber against degradation from water, ultraviolet radiation (sunlight), and fungi. The penetrating natural oils of IN-WOOD contain a combination of powerful microbicides. These microbicides have a broad spectrum of protective activity and can actually help maintain the wood in its original state.

Due to the deep penetration qualities of IN-WOOD, it does not form a "paint-like" film. The natural wood grain beauty is maintained with a finish that will not peel, flake, or crack.

IN-WOOD contains far more protective ingredients than ordinary wood preservatives. These ingredients are absorbed deeply into the wood, providing superior protection compared to conventional finishes and stains.

#### BASIC USES

New as well as old or weathered wood can be stained and weatherproofed with IN-WOOD. Cedar roofing can be maintained mildew free. Wood decking can be preserved without worry of peeling. Virtually any wood surface, interior as well as exterior, can be enhanced with the protective qualities of IN-WOOD.

IN-WOOD is also an excellent choice for the protection of wood docks and planking. The microbicides used in the formulation are not classified as carcinogenic. The cured IN-WOOD penetrant will not release toxic chemicals into lakes, rivers or other waterways.

#### TYPICAL PROPERTIES

1. **Solids by Weight:**  
45% (±1) [ASTM D2369]
2. **Solids by Volume:**  
40% (±1) [ASTM D2697]
3. **Viscosity:**  
5-10 cps [ASTM D2196]
4. **Flash Point:**  
110°F [ASTM D3278]
5. **Weight per Gallon:**  
7.2 lbs. (3.3 kg) (±0.2) [ASTM D1475]
6. **Dry Time:**  
12 to 24 hours at 75°F, 50% R.H. [ASTM D1640]
7. **VOC:**  
<475 grams/liter

#### ADVANTAGES

1. **Deep Penetration:** Ultra low viscosity allows IN-WOOD to penetrate into pores and micro-openings within the wood.
2. **Repels Water:** Exceeds military specification MIL TT-W-572 for water repellency. Prevents damage from water and subsequent effect on fiber breakdown from winter freeze-thaw cycles.
3. **High Solids or Natural:** Trans-Oxide colors block out harmful UV rays, preventing degradation of the wood fibers. Natural also contains an ultraviolet absorber to invisibly protect the wood fibers.
4. **High Solids:** IN-WOOD'S 40% solids content by volume can be compared to the 5% to 12% solids found in many natural wood preservatives.
5. **Mold & Algae Protection:** Prevents unsightly discoloration caused by Trichoderma, Gliocladium, and Penicillium surface mold as well as discoloration from green or black mycelia spores.
6. **Sapstain Protection:** Prevents discoloration produced from sapstain fungi hyphase which ranges from gray to blue.
7. **Wood Decay Protection:** Prevents decay caused by enzymatic decomposition of the cell wall constituents by Chaetomium Globosum, Coniophora Putean and Poria Incrassata fungi.
8. **Safe To Use:** The microbicide has been evaluated as having very low acute and dermal toxicity; lower than many commonly used food additives and oral drugs.
9. **Resistance to Sulfide Staining:** Industrial areas containing sulfide fumes will darken ordinary finishes. IN-WOOD is not affected by sulfide fumes.



## **COLORS**

**IN-WOOD** is available in Natural and several standard, natural-tone Trans-Oxide colors. A wide variety of colors and tones can be obtained by intermixing the Trans-Oxide colors or by mixing colors with Natural.

## **PACKAGING & MIXING**

**IN-WOOD** is packaged in 1-gallon (3.8 l) and 5-gallon (19 l) containers. Stir material thoroughly from the bottom of the can before application.

## **SURFACE PREPARATION**

Surface must be clean, dry, and free of dirt, grease and other foreign matter. Certain types of wood have more surface imperfections than others. Because **IN-WOOD** is semi-opaque, care should be taken to make sure that any undesirable surface imperfections are corrected prior to application. New wood should either be allowed to weather or should be treated with a surface conditioner prior to the application of **IN-WOOD**. This will maximize penetration and protection. Ask your UNITED Representative for further information.

## **APPLICATION**

**IN-WOOD** may be applied by brush, roller, spray or dipping. Surfaces must be clean and dry. Deep penetration into the wood fibers can only take place when the moisture content in the wood is relatively low.

Application rates will vary with surface texture, porosity and method of application. Coverage will average 150 to 300 sq. ft. per gallon (3.7 to 7.3 m<sup>2</sup>/l). It is important to maintain a wet edge to avoid lap marks. This will ensure that an even, uniform appearance is achieved. For best results and maximum durability, generously apply **IN-WOOD** to the surface almost to the point of running, then brush or roll the excess material into the wood surface. On most new or tight-grained surfaces, one coat is all that is recommended. Weathered or porous surfaces may require 2 coats to adequately seal the substrate.

If a second coat is required it must be applied the same day, before the first coat has a chance to cure. Do not allow excess material to build on the surface.

## **APPLICATION (cont.)**

**IN-WOOD** cannot be applied to previously painted surfaces unless all of the previous paint has been removed to expose the bare wood. In some cases this can be accomplished through the use of a high power pressure washer.

Thinning of **IN-WOOD** is not necessary. Tools and equipment are easily cleaned with UNITED's **Turpolene** or Mineral Spirits.

## **WARRANTY**

**IN-WOOD** is warranted warrants for a period of (5) five years from the date of purchase against **CRACKING, PEELING** or **FLAKING** from a properly prepared wood surface, when applied according to UNITED's printed Application Instructions.

**IN-WOOD** may experience slight fading or surface wear as it ages, although the wood will remain protected. Periodic recoating will ensure an aesthetically pleasing finish.

This warranty does not apply to damage or failure caused by breakdown of the underlying wood substrate or misuse of the surface. In the event the **IN-WOOD** fails to conform to this warranty, UNITED will supply replacement product at no charge. Any and all labor costs are specifically excluded from this warranty.

## **PRECAUTIONS**

In the liquid state, **IN-WOOD** contains hydrocarbon solvents (mainly mineral spirits). When applying **IN-WOOD** to an existing dock or other marine application, utilize a brush or roller to apply the material rather than spray equipment. Every attempt should be made to prevent the solvents contained in **IN-WOOD** from entering the water.

Provide adequate ventilation during application. If **IN-WOOD** contacts the skin, clean with soap and water. In case of contact with eyes, flush with water for 15 minutes and see a physician if irritation persists. Refer to **IN-WOOD** Material Safety Data Sheet (MSDS) for complete safety information.



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