



Wood Seal Application Guide

Description

Wood Seal™ is a post-application interior only finish fire retardant treatment for raw untreated softwoods. Wood Seal™ meets Class B standards when tested to the ASTM E 84 Flame Spread Test. It is a mix of proprietary ingredients, which forms a slight intumescent foam layer and carbon char when the treated wood is exposed to fire. Once the carbon char is established, there will be minimal flame propagation, smoke evolution, or afterglow.



Recommended Spray Equipment

Wood Seal™ needs to be applied with a hand pump sprayer or a high volume low-pressure system (HVLP) spray gun for best results. For smaller jobs and touch-ups, brushing and rolling will be adequate.

Coverage Rate

Softwoods	150 sq. ft./gal
Hardwoods	350 sq. ft./gal

Substrate Preparation

Ensure that the untreated raw wood is free of dirt, grease, loose particles, and any foreign matter before. Wood Seal™ will not penetrate through stains and paints.

The substrate should be sanded using 120, 150, or 180 grit sandpaper before coating. Sanding will drastically help the penetration process of the Wood Seal™ into the wood.

It is essential to check the moisture content of the wood before the application of the Wood Seal™. The moisture content must be below 11%. If the moisture content is above 11%, the penetration of the Wood Seal™ may be severely compromised.

Testing

ASTM E 84	Class B Rated
	Flame Spread Index 35
	Smoke Development: 95

Compatible Woods

Wood Seal is a penetrant, meaning that the product must penetrate and absorb into the molecular fibers of the wood. Softwoods are less dense and allow for ideal absorption.

- Southern Yellow Pine
- Cedar
- Douglas Fir
- Spruce
- Larch
- Reclaimed Woods

If your project is utilizing hardwoods, please see the hardwood application instructions.

Application Temperatures

Air Temperature	60°F – 90°F
Humidity Range	35 - 80%
Surface Temperature	60°F – 90°F
Application Product Temperature	60°F – 90°F

Drying Times

Dry To Touch	2-4 Hours
Dry To Stack	24 Hours

* Room Temperature 68F

Dry times are greatly affected by the porosity of the substrate, air movement as well as heat and humidity. Utilizing fans to move air across the coated surface will significantly reduce drying time. After treatment, a 48-hour conditioning period is necessary to ensure that the Wood Seal is fully cured.

Hardwood Application (Additional Steps)

When dealing with hardwoods on your project ,additional steps must be taken to assist the penetration process. Hardwoods are dense ,which makes liquids and products like Wood Seal difficult to penetrate.

The standard application instructions should be followed, but with a few exceptions. If these additional steps cannot be followed, Wood Seal should not be applied.

- Sanding is required to open the pores of the wood to increase penetration.
- The moisture content of the wood must be below 10%
- Before, During, and Post Application: Ambient temperature must be 50-80° F and the Relative Humidity below 55%. Utilizing a controlled environment is ideal.
- Use 350 sq. ft. per gallon for the coverage rate
- After applying the appropriate amount of Wood Seal, wait 5 minutes to allow the Wood Seal to absorb. Lightly wipe-off the excess material that has not penetrated. This will prevent wasted material from drying on the surface and becoming foggy and tacky.
- Allow 24 hours to dry. Use fans to move air across the coated surface to assist drying times and penetration.

Top Coating/Staining

Wood Seal has is a unique proprietary formulation that is solely focused on fire performance. Top coats and stains can sometimes react with Wood Seal due to the low Ph of the product. When a top coat or stain is required, it is the responsibility of the customer to check for the compatibility of the two products.

High Humidity Applications

Wood Seal is for interior use only and should never be applied outdoors. If the substrate may be subject to high humidity, the use of a sealer will be required. Flame Seal Recommends 421-6300 Chemlife 24 Conversion Varnish Sealer. All of Wood Seal's application instructions must be FULLY met before applying the Chemlife.

Field Testing

To test for general adequate treatment – Apply a flame or torch to a sample of the treated material. If the flame does not spread rapidly away from the heat source and goes out soon after the heat source is removed, then your substrate is probably sufficiently treated.

Red Dye

2oz per gallon of Red Food Grade Dye can be added to Wood Seal if required by the building inspector.

Troubleshooting

Hazy or Tacky?

If your wood becomes hazy or tacky, you may use a warm damp washcloth to remove the wasted material on the surface of the wood and allow it to dry for 24 hours. Repeat this process until the ideal finish is achieved.

Not Drying?

Decrease the humidity during and after application. Increase temperature in drying and curing area. Ensure that the substrate was not contaminated before the application of the Wood Seal

THE CUSTOMER IS RESPONSIBLE FOR FOLLOWING THE RECOMMENDED APPLICATION PROCEDURES. FAILURE TO ADHERE TO THE RECOMMENDATIONS GIVEN IN THIS GUIDE WILL LIKELY RESULT IN UNSATISFACTORY APPEARANCE OR FAILURE. THE COMPLETE COATING SYSTEM SHOULD BE CHECKED FOR REQUIRED PROPERTIES PRIOR TO THE START-UP OF PRODUCTION



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