



# TIMBER FINISHING

## PURPOSE

This section provides basics finishing procedures for clear and pigmented timber systems.

## INTRODUCTION

The procedures followed by manufacturers and applicators have evolved over time, from long and detailed methods suitable for the craftsmanship abundant in the past, to streamlined efficient processes required today.

Finishing systems still follow the basic steps required to achieve the desired result:

- Surface Preparation
- Staining (if desired)
- Filling (if desired)
- Finishing Process

The number of operations taken within this process may vary, depending on the type of the timber, the facilities on site and/or the degree of finish required. The basic procedure recommended by Watty for the ultimate finish is:

### Clear

- Prepare the surface, removing all surface contaminants, leaving it clean, smooth and dust free
- Apply a suitable stain (if required)
- Apply a suitable grain filler (if required)
- Apply a suitable sealer
- De-nib & dust-off
- Apply a full bodied top coat
- De-nib & dust-off
- Apply the final coat

### Coloured

- Prepare the surface, removing all surface contaminants, leaving it clean, smooth and dust free
- Apply a suitable undercoat
- De-nib & dust-off
- Apply a full bodied top coat
- De-nib & dust-off
- Apply the final coat

Some of the processes are discussed in detail below:

## SURFACE PREPARATION

Primarily, surface preparation involves sanding and repairing imperfections in the timber substrate. This is an extremely important stage in the finishing process, particularly when a clear finish is to be used, for any imperfections left undetected at this stage will affect the appearance of the final film, and often create unnecessary rework.

Sanding the bare timber with the correct grade of abrasive paper is critical to the final finish. Generally a coarse grade is used initially, and subsequent sanding is done with progressively finer grades to remove scratch marks from the timber surface.

Always sand along the grain, as grain scratches will be highlighted by the finishing operation. Any marks on the timber surface should be removed at this stage. Ensure all glue has been removed.

Depressions in the surface are usually the result of either hammer marks or dressing operations. If the wood fibres have not been broken, swelling the fibres with hot water, or ironing the damp surface with a hot iron through a damp cloth can often remove such bruising.

Natural cracks, knots or even nail holes. These are best removed by filling the surface with a suitable putty, then sanding to an even finish.



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### Dressing

To hide cracks and small holes, patch affected areas with timber putty. Traditional lacquer based putty (such as Wattyl Fullstop Putty) are ideal for nail holes and fine cracks. (Wattyl Fullstop Putty is not recommended for large holes or cracks.)

### Sanding

Sanding is a critical process in wood finishing to obtain a smooth finish. It enables the finish to preserve and protect the wood, but also enhances the beauty and grain pattern; features that will influence the final appearance of the piece. For the highest quality finish, all sanding dust must be removed.

### Staining

Staining is an important technique in finishing timber; it helps to highlight the grain of even common timbers, and can add interest and colour. There are two types of stains, pigmented and dye based. Pigmented stains do not penetrate as deeply, or as quickly as dye based stains.

Pigmented stains offer an advantage when staining timbers that have uneven areas of dense and porous fibres (such as some hardwoods, Ramin and Radiata Pine). Pigmented stains are easy to use and non-bleeding, they are also easier to repair. Bright colours are best achieved with pigment based stains. Wattyl offers a range of pigmented stains called Craftsman Pigment Stain (formerly Speed Stain). This pigmented stain also has very good resistance to UV light, reducing the rate of fading.

Dye base stains are best where strong, transparent, clean colours are required. Wattyl Craftsman Dye Stains (formerly 808 stains) are dye based, and are available in two versions; fast or slow. Craftsman Dye Stain Slow is ideal for wipe on/wipe off or spray on/wipe off applications. Its slower drying time prevents overlapping marks, when coating large pieces. Craftsman Dye Stain Fast is formulated for spray on/wipe off applications, where fast drying is necessitated by a fast manufacturing process. Craftsman Dye Stain Fast is particularly well suited where dark or deep colours are desired.

Toning can be achieved by adding 5% Craftsman Dye Stain into the intermediate coat, applied as a haze coat, before the final coat.

### Filling

To achieve a fuller finish, often referred to as *choaking* the timber grain, an application of Woodgrain Filler is applied to the timber. Wipe filler into the timber grain, then wipe off excess, allow to dry thoroughly. Check that Woodgrain Filler is compatible with the desired finishing system prior to application.



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### FINISHING PROCESS

#### CLEAR COATING

##### Sealing

To achieve a clear finish, the first step is to apply a coat of transparent sealer. This seals the whole surface and provides a smooth base for subsequent toning and topcoats. A popular misconception is that sealing is the principal method of achieving build. However, most sealers contain sanding aids, and are therefore more brittle than the final topcoat. Plus, an excessive build up of sealer may lead to a milky appearance, which hides the grain.

For the best results use the minimum sealer required, and use multiple topcoats to achieve build. The sealer should have good sanding properties to assist in achieving a smooth surface. In some cases the topcoat lacquer is used as a self-sealer, in preference to a specialised product.

##### Shading And Toning

Shading or toning are used in clear finishes after sealing to create intentional contrast, correction of unwanted colour variations, or to accent the wood grain. Toning is carried out using either a transparent coloured sealer or a toning lacquer as a haze coat before the final topcoat.

##### Topcoating

The final protective film is the topcoat. The system and topcoat used depend greatly on the intended end-use of the article.

#### COLOURED/PIGMENTED COATING

##### Undercoating

Pigmented finishes follow similar steps to clear finishes; however an undercoat is used instead of staining, sealing and toning the timber. Undercoat must be applied to a satisfactory thickness in order to fill any imperfections in the timber surface.

##### Topcoating

The topcoat is also the final protective film for coloured finishes. The system and topcoat should be selected based on the intended end-use of the article. Please note; slight variations may occur in colours from batch to batch, hence Wattyl recommend boxing batches together before commencing. Its' important to order sufficient topcoat to cover and finish the entire job.

For the most up to date information contact Wattyl Customer Service Hotline or visit the Wattyl Website.

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WEBSITE

Australia  
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<http://www.wattyl.com.au>

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0800 735 551  
<http://www.wattyl.co.nz>

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WATTYL AUSTRALIA PTY LTD (ABN 40 000 035 914)