

INTERIOR FINISHING

Stain-and-Clear Finish

A solvent-borne or water-borne finish system can be used for interior doors and may be a lacquer-based system. If a brush application is to be used, it is recommended that a pre-sealer be used prior to staining. For best performance, a minimum of two clear top coats should be used over stains.

Paint Finish

Doors should be sealed with a good quality bare wood primer followed by two top coats of a solvent-base or acrylic enamel.

FITTING AND HANGING

1. When hanging door, allow adequate clearance for swelling of door or frame in damp weather. Allow approximately 3/16" clearance for swelling when the door is installed in fully dry conditions. Jamb must be plumb.
2. Do not cut doors down in height by more than 2" (1-1/2" maximum from bottom or 1" on doors with UltraBlock® technology, 1/2" maximum from top). Care should be taken in cutting doors down in width to avoid exposing engineered components. Use a sharp fine-tooth saw for trimming ends of doors.
3. Caution must be used to avoid impairing the strength of the door when fitting for locks. Allow at least 1" of wood back of mortise.
4. Use three hinges on doors up to 7' in height and four hinges on doors over 7'. Hinges must be set in a straight line to prevent distortion.
5. Jamb and stops must be set square and plumb.
6. For best performance and to meet the standard Simpson warranty, any exterior door should be installed under an overhang or with sufficient protection. Adequate overhang depends on typical weather conditions of the area where the door is installed, but at the minimum means an overhang projecting a distance from the structure equal to one half the distance between the bottom of the door and the bottom of the overhang (see figure 1).
7. If an adequate overhang is not feasible, Simpson offers a selection of products warranted for this application, including a five-year limited warranty on doors featuring WaterBarrier technology and ten- and five-year limited warranties on Nantucket® Collection doors.
8. Do not use dark colored stains or paints.
9. Immediately after cutting and fitting (before hanging), seal all cut surfaces and ends of door with an effective quality sealer. See exterior and interior finishing recommendation for complete instructions.
10. Prior to exterior exposure, doors must be finished with complete finish system.
11. To minimize heat loss and save energy, use weather stripping.

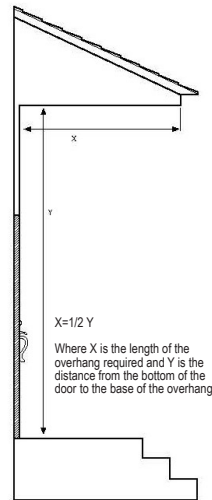
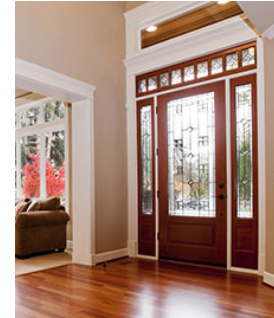


Figure 1



Care and Finishing Guide

Your Simpson® door has been handcrafted to last for years to come. And like any piece of fine furniture, it needs proper finishing and periodic maintenance to keep it performing at its best. For a long-lasting, beautiful Simpson door, please follow the instructions as outlined. Failure to follow Simpson's care & finishing recommendations will void the door's warranty.

FINISHING OPTIONS

Because Simpson doors are crafted with only the finest materials, you can choose from a wide variety of stain or paint possibilities. Paint dealers have a broad selection of color chips on hand to demonstrate the look you can achieve when staining fine wood such as Douglas Fir, Western Hemlock or Red Oak used in Simpson doors.

If you choose paint instead of stain, you can apply either oil-base or acrylic resin-base paints over an oil-base primer. However, take care in following the finishing instructions provided here. Also, be sure to evaluate the conditions your Simpson door must endure, such as direct exposure to severe climates, before deciding on the specific finish to use. All Simpson doors must be finished within 72 hours after installation to meet manufacturer's warranty.

CAUTION: If during the finish process you are having issues and/or identify problems with your door, stop finishing immediately and contact the company from where you purchased your doors.

HANDLING

1. Do not walk on any door units. Some units contain glass.
2. Avoid dragging doors across one another and keep doors clean.
3. Store flat on a level surface in a dry, well ventilated building.
4. Doors should be conditioned to average prevailing relative humidity of the locality before hanging.
5. Doors should not be subjected to extreme or rapid changes in heat or humidity. Avoid sudden changes such as forced heat to dry out a building.
6. If the doors are to be stored on the job site, all surfaces including ends and edges must be sealed with an effective quality oil-base sealer in order to prevent undue moisture absorption.

PREPARATION FOR FINISHING

1. Before applying the first coat of finish, remove all handling marks, raised grain and other undesirable blemishes by sanding all surfaces with 180 grit sandpaper. For doors with shaker sticking, lightly ease the outside edge of the sticking with sandpaper. To avoid cross-grain scratches, sand with the grain. Note: small amounts of grease, oil, or pitch can be wiped clean with denatured alcohol or turpentine.
2. Adjust or align components if necessary before finishing. Wood panels “float” and may be knocked into alignment with a wood block and hammer. Be careful not to damage door.
3. After sanding, clean the door thoroughly with a cloth to remove all dust or foreign material. Do not use caustic or abrasive cleaners.
4. Hang door before finishing, and then remove to finish properly. Doors must be properly sealed prior to installation of hardware and exposure to moisture or weather. Properly finish door immediately before prolonged storage.
5. All surfaces of the door must be properly finished. The edges (top, bottom and sides) should be coated with each and every coat of finish that is applied to the exterior surface of the door. Doors must be dry before finishing.
6. On doors that are glazed with clear glass, the finish used should be flowed from the wood slightly onto the glass. This will provide assurance against water leakage and protect the glazing compound “putty” from drying out. If you see excess putty, please view the short video on how to remove the excess putty.
7. NOTE: It is the finisher’s responsibility to protect glass prior to and during finishing. If using tape, conduct a test of the tape being used on a small area of the glass before applying to a large surface. After finishing, remove the tape as soon as possible.
8. On doors that have plastic film protection on glass, removal of plastic film protection immediately after applying the finish is required. Failure to remove the plastic film at this time may cause harm to the glass and will create difficulty in removing the film at a later time. Do not use razor blades or sharp objects to remove the film or clean the glass. These items will scratch the glass.

EXTERIOR FINISHING

Stain-and-Clear Finish

The recommended process for finishing Simpson doors is a 3-step process. Step 1: application of a wood conditioner. Step 2: application of a stain. Step 3: application of at least three top coats of a clear finish. When selecting the finishes for these three steps, select products that have been designed to work together.

A wood conditioner prepares the wood to accept finish uniformly and helps to spread the finish evenly. When selecting a wood conditioner, the type of conditioner needs to match the stain. For example a water-based conditioner for a water-based stain or an oil-based conditioner for an oil based stain.

Stains are available in a wide range of colors. Whatever color you select should have an alkyd-resin base. Under no circumstances should a lacquer-based finish system be used on exterior doors. The three (minimum) top coats may be a solvent-borne (oil-base, alkyd resin-base, polyurethane resin-base) or a water-borne (acrylic resin-base) clear finish.

The advantages and disadvantages of solvent-borne vs. water-borne clear finishes are as follows:

1. Solvent-Borne Advantages: Cures faster, harder and more water resistant. May be applied under variable weather conditions. Disadvantages: Subject to ultraviolet degradation and not as flexible or durable as water-borne clear finish.
2. Water-Borne Advantages: Very flexible, greater ultraviolet resistance, and good exterior durability. Disadvantages: Cannot be applied below 50°F, long curing period required, and may not fully cure for several weeks. Water-sensitive until cure is complete.

NOTE: Do not sand between coats of clear acrylic. All stain-and-clear finishes will perform measurably better if protected from the direct effects of sunlight and weathering, and refinishing will not be required as frequently.

Paint Finish

Either oil-base or acrylic resin-base exterior grade paints may be used with success on panel doors. Oil-base paints offer more resistance to the passage of water (liquid and vapor) than acrylic resin-base paints, but the latter have better durability and color retention.

Doors should be sealed with a good quality oil-base primer followed by two top coats of either an oil-base or acrylic resin-base paint. Of course, both primer and top coat should be made by the same manufacturer and designed to be used as a combination.

NOTE: Where possible exposure to direct sun or rain is a factor, to keep your wood doors beautiful, they require periodic resealing or painting dependent on weather or moisture exposure. Do not use dark colored stains or paint on doors exposed to sunlight, as some expansion and contraction of door parts may occur. Further, a dark colored stain or paint can void the door’s warranty unless you select the WaterBarrier® technology upgrade. Doors with WaterBarrier technology can be painted any color.

CAUTION: Simpson Door Company cannot evaluate all the available paints and stains, nor the customers’ specific application requirements. Your paint dealer should know of suitable finish systems that give satisfactory results in your region. It is highly recommended that top quality finishes be selected, and the application instructions on the container be followed explicitly. Sikkens Cetol Door & Window finish products are not to be used in finishing Simpson doors. This product has resulted in poor performance in the field. Use of Sikkens Cetol Door & Window products will void Simpson’s warranty.

High Exposure Finishing

1. Use an oil-base primer followed by at least three top coats of a high quality oil or acrylic-based paint on the exterior. Acrylic is more durable and has better color retention.
2. Use a silicone or caulking bead (must be compatible with paint) around the perimeter of each glass pane. This will seal the putty and prevent any moisture from running directly into the door.
3. Ensure all finish coats are allowed to flow into the glass area at least 1/16".
4. Ensure all coatings that go on the surface of the door are also applied to the top and bottom. Coat all six sides of every door, or your warranty will be voided.
5. Silicone the door bottom sweep onto the bottom of the door and apply a surface mount drip cap to the bottom of each door to allow for moisture runoff onto the sill.
6. For outswing units: Prior to finishing the top of the inactive door, be sure to fill the mortise pocket around the flush bolt prep with silicone or caulking. Moisture has a history of pooling up in this area on outswing units. Consider a thin layer of metal across the top of the door to keep moisture from direct contact with the wood.
7. Storm or screen doors may be mandatory to completely eliminate moisture problems. Storm doors must be vented to eliminate temperature build-up.
8. Performance Series® upgrades are recommended for high exposure door openings. Request WaterBarrier® and UltraBlock® technologies from your Simpson retailer to get the most life out of your door. And if you are selecting a French door, we strongly recommend specifying Simpson’s WaterBarrier® Technology.

Paint Finish Specifics

1. “Bridge” finish from face of door to moulding, ensuring there is no gap between moulding and surface of the door.
2. “Bridge” finish as noted above on inside of panel area where moulding meets panel and/or glass.
3. Ensure all moulding miters are well-coated, leaving no gaps.

Jamb-to-Sill Specifics

- Caulk at sill-to-jamb leg connection.
- Use corner pads where sill meets jamb.
- Flood flush bolt hole in sill with caulk or silicone.