

Instructions General Finishes Dye

Step 1: Preparation for Dye Stain

Before applying stain, all raw wood projects require preparation sanding. *If you skip this critical step, your finish may fail.*

Preparation for Raw Wood Projects

See our video: [How to Prep Sand Raw Wood](#)

1. Sand open-grain wood (e.g., oak, ash, mahogany, parawood) with 120-grit sandpaper, followed by 150-grit, then 180-grit.
2. Sand closed-grain wood (e.g., cherry, pine, maple, birch, alder) with 150-grit sandpaper followed by 220-grit.
3. Remove dust with a vacuum, compressed air, an oil-free tack cloth or a water-dampened rag.
4. Do not over-sand with fine-grit sandpapers; this will close and seal the wood grain, preventing ideal color absorption.
5. Do NOT use steel wool with water-based finishes; the particles will get trapped in the finish and rust.

Reducing Grain Raise on Raw Wood

To reduce grain raise, dampen the wood with water after prep sanding. Let dry completely, then lightly sand with fine-grade (220-320) foam sanding pad.

Step 2: How to Apply General Finishes Dye Stain

General Finishes Dye Stain Application Steps

1. Watch [product overview video here](#)
2. Test your entire finishing schedule first. Dye Stain is like ink, and once you apply it, there is no going back as it will sink like ink into the pores of the wood. Stain color can be affected by variances in wood, room lighting, and deepened with the application of a topcoat.
3. Stir stain to reincorporate solids that have settled to the bottom of the can before and throughout the application process.
4. Increase open time, if needed, with up to 5% [General Finishes Extender](#), if allowed by local regulations. Extender will improve flow and leveling and increase open time, which is helpful in dry climates. **California Residents:** Adding more than 2% of *GF Extender* will make the product non-compliant per SCAQMD Regulations. GF assumes no liability for the improper use of these products.
5. An initial coat of [General Finishes Pre-Stain Conditioner Natural](#) can improve color uniformity over difficult-to-stain wood species such as pine. However, it will limit color absorption and reduce blotchiness, so a darker stain may be required to get the depth of color you want.
6. NOTES on softwoods such as Pine, Pawlonia, or Poplar, the use of Pre-Stain Conditioner will reduce blotchiness but not remove it entirely. You may want to consider using GF's Wood Stain instead. And, regarding softwoods, an alternative technique instead of using Pre-Stain Conditioner is to add 10% High Performance to the Dye Stain. This will add enough solids to even out the finish and will lock in the color to reduce color pull when you apply the first clear coat.
7. Divide your project into manageable sections: top, side, drawer, door, table seam.

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8. Apply 1-2 coats. A second coat will create a deeper, richer color. Do not apply more than 2 coats.
 - **Hand application:** Apply a LIBERAL amount of dye stain using a cloth, a synthetic bristle brush, foam brush, pad applicator or roller. Use a light touch with the brush - just flood the surface without dragging the applicator. Dye Stain penetrates the surface fast; if not enough stain is used, the surface may dry too quickly, causing an uneven appearance. Stain one complete section, such as a side, top, or drawer, and immediately wipe off excess evenly with a cloth, paper, or shop towel before starting the next section.
 - **Spray application:** Before spraying, strain topcoat through a fine-mesh filter. Spray wet films at 3-5-mil thickness. HVLP: 1.1mm-1.3mm spray tip, medium air cap. Verify tip sizes with your equipment supplier. [See our general guide for spray tip sizes](#). Wear a full filter respirator (NIOSH/MSHA approved) and work in a ventilated space. Keep your gun at a 90° angle, 6-8" from the surface. On large, flat areas, use wet, even patterns 6-8" wide. For narrow surfaces, reduce the fan pattern to 2-3" wide to reduce overspray. Overlap each pass of stain 50% for even coverage. If coverage is even, there is no need to wipe. If you have issues with uneven coverage, wipe back the excess with an absorbent cloth. [Visit this FAQ for more information on spraying techniques](#).
9. Dry 2+ hours between coats in ideal conditions: 70°F/20°C; 50-70% humidity. Inadequate dry time is one of the top reasons for finish failure. If in doubt, wait longer. Increase dry time if humidity is over 80%.
 - Increase dry time if two coats are used.
 - Increase dry time if humidity is over 80%
 - o accelerate drying in humid conditions, add [General Finishes Accelerator](#) and work in a space with good ventilation and air movement. If you decide to re-coat before the recommended time, test dryness.
10. Allow final coat to dry 2-4 hours in ideal conditions: 50-70% humidity, 70°F/20°C.
11. Finish with 3 coats of General Finishes topcoat.

Warning: Do not use water-based products with Linseed Oils or Danish Oils.

Step 3: Topcoat Over Water-Based Stain

Always seal **General Finishes Water Based Wood Stain**, **General Finishes Dye Stain** and **General Finishes Enduro Ready-To-Match (RTM) Water Based Wood Stain** with 3 coats of topcoat. More coats will not improve durability.

Grain Raise

After the first coat of topcoat has dried, you can knock down grain raise by lightly sanding with a 220 sanding pad. [Watch Grain Raise video here](#).

Recommended Water-Based Topcoats

[General Finishes High Performance](#) can be applied by hand or sprayed; [General Finishes Enduro Clear Poly](#) is spray-only. Both topcoats dry clear and are great for high-use surfaces, such as kitchen cabinets and tabletops. [General Finishes Flat Out Flat](#) is our flattest topcoat, suitable for projects that do not receive major wear.

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Recommended Oil-Based Topcoats

When sealing with General Finishes oil-based topcoats, [General Finishes Arm-R-Seal](#) and [General Finishes Gel Topcoat](#), let water-based stain dry a minimum of 24 hours first. Oil-based topcoats amber increasingly over time.

Toning with Stains

Toning is the process of adding colorant (tinting), either dye or pigmented stain into a topcoat and then applying over an entire piece to subtly deepen the color. All of GF water-based stains can be used: Stock base colors of RTM stains, Water-Based Wood Stains or Dye stains. If you are new to toning, we recommend starting with GF Dyes Stains, which can be easier to use as they only contain dyes and no pigments.

All General Finishes water-based topcoats except for Conversion Vanish can be tinted to create lightly colored finishes for toning. It is **YOUR RESPONSIBILITY TO TEST** to your satisfaction before application to your entire project.

There are limits anytime you add pigments or dyes to water-based topcoats. Toning should always be done in small increments to achieve the desired color. If you are starting with a light honey tone door and you want to create an Espresso color this will take multiple coats of color including base coat of stain followed by several toning coats. It is impossible to achieve a radical change in color in coat application.

A good rule to follow when tinting is starting with a minimal amount of stain or dye, 5-10% by volume. Some colors work better than others. Normally 1-2 ounces of stain per quart of clear topcoat is sufficient to create a toner. Always test color first and strain material through a fine mesh filter to remove any undissolved particle of pigment. Once you have achieved the desired color tone apply a clear topcoat to lock in the color.

Some tinting recommendations are:

- Do not exceed 13 ounces per gallon. Excess amounts of colorant can create surface defects and decrease the viscosity (causing drips, sag, etc.).
- Tinting a product black only requires about 6 to 8 ounces (based on strength of colorant).

Creative Finishing Techniques Using Dye Stain

Custom Colors using Dye Stain Reducer

Create custom color Dye Stains by adding [General Finishes Dye Stain Reducer](#) in 10% increments until you achieve the color you want. It is not possible to mix too much of our Dye Stain or Reducer together. Do NOT Use Water to Lighten General Finishes Dye Stains. Dye Stain Reducer has ingredients that help keep color molecules dispersed evenly in the can.

Layering Dye Stain

Use Dye Stains to highlight the depth of the grain, to even out color saturation, and to achieve deeper colors under other stain applications. Example: Use Amber or Yellow Dye Stain for a golden glow under [General Finishes Gel Stain](#) or [General Finishes Water Based Wood Stain](#).

Toning

Dye Stains can be used as a toner when mixed with water-based topcoat. A 10-20% stain to topcoat ratio is recommended for a slight color change.

Cleanup of Water Based Products

Application tools and materials containing water-based products can be cleaned with soap and water immediately after use.

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Product Spills

Spills may be able to be removed from fabric and carpet if cleaned immediately with soap and water.

Storage of Water Based Products

Please be mindful of the way water-based products are stored and how long they have been in storage. They are not a forever product.

Life of Product

Water-based products do not last forever, even when unopened. General Finishes products are **best used within 1 year**. However, the life of the product may be extended several more years with proper care and storage (see Storage Tips below).

Water-based products **can last 3-5 years if** the can is unopened, in good condition and stored in correct temperatures.

Product that is 3 years old will not look like product that is 6 months to 1 year old. You will see more stratification or separation as the product ages. Always stir thoroughly before using.

Foul Smell

If your product has a foul smell, it is contaminated and no longer in useable condition.

Clumps & Settling

Gravity can cause some solids to settle on the bottom of the can and slight separation on the top. This is normal. If working with older product stir with a paint mixing attachment on a drill.

If the solids dissolve and clumps smooth out after mixing from the bottom, the product is in good condition for use.

Inability to reincorporate large, chunky lumps after stirring for several minutes is an indication that the product has frozen and can no longer be used.

Storage Tips

See video tutorial: [Tips on Storing Leftover Finishes](#)

Water-based finishes crystalize and form a skin due to evaporation when the air-tight seal on a can is broken at first use. The following best practices will increase the life of your product:

1. Pry open sealed lids with a paint can opener by hooking under the lid's rolled edge. The use of a screwdriver can disfigure the rim and lid, impairing a complete seal.
2. Keep lid closed while working. Pour what you will use into a bowl, paper cup, or plate, and close can lid as you work.
3. Clean the chime of the can thoroughly with a paper towel before closing to create a complete seal. Product falling into the chime can be minimized by using a pouring lid, such as Fitsall. Avoid wiping used brushes on the lid.
4. Pound the lid in place using a rubber mallet to avoid distorting the chime or lid. Dents in the lid from direct contact with a hammer can impair a complete seal. Alternatively, place a flat piece of wood over can lid and firmly pound shut.

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5. Store in moderate temperatures. Avoid temperatures below 50°F/10°C or above 100°F/26°C. Keep from freezing. Frozen and heat-damaged product cannot be revitalized. Temperature-controlled spaces, such as a basement, are ideal for storage. Do not store product in an attic, garage, in direct sunlight, or next to something warm like a water heater or furnace.
6. Store can upside down to create a liquid seal, minimize evaporation and reduce the chance of crystallization. Decant remaining product from the can before stirring.
7. Decant leftovers to a smaller container when the finish is almost used up. Alternative storage containers for water-based products are plastic FIFO bottles or glass bottles. Do not fill metal-lidded containers completely to prevent them from rusting.

The following water-based product mixtures can be stored:

1. Product thinned with up to 15% [General Finishes Extender](#) or [General Finishes Accelerator](#) can be stored, with the exception of thinned [General Finishes Water Based Wood Stain](#).
2. Mixtures involving colors & sheens within the same product line, such as:
 - High Performance Satin + High Performance Gloss
 - Snow White Milk Paint + Coastal Blue Milk Paint
 - Amber Dye Stain + Merlot Dye Stain

The following product mixtures should NOT be stored:

- Any water based product with thinned tap water; water often contains bacteria that will adversely affect stored paint.
- Topcoat + Stain or Paint
- Milk Paint + Chalk Style Paint
- Water Based Wood Stain + Dye Stain

Warnings and Warranties

Dye Stain Warnings and Warranties

Compatibility

Do not use water-based products with Linseed Oils or Danish Oils.

Limited Warranty

General Finishes products must be tested to your complete satisfaction before using. General Finishes will not be responsible for color satisfaction, misapplication, nor compatibility with other manufacturer's products. General Finishes will be responsible only for the cost of our products, and not for costs such as labor, damage, or project replacement.

Contamination and Compatibility

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Our finishes are engineered as a system and are compatible with each other. General Finishes cannot guarantee an ideal refinish when applying our products on top of or combined with another company's products or over surfaces that have been in contact with waxes, polishes or sprays containing contaminants such as silicone. Test for adherence and aesthetics before beginning.

FIRST AID: Seek immediate medical attention if symptoms occur due to the following. **EYE CONTACT:** Remove any contact lenses. Flush eyes with water for 20+ minutes while lifting upper and lower eyelids. **SKIN CONTACT:** Wash thoroughly after handling. **INHALATION:** Move to fresh air and loosen clothing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. **INGESTION:** Call physician immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Prop 65 WARNING:

No chemicals were found in this product which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to [California Proposition-65](#).

WARNING: Keep out of reach of children. Do not swallow. Avoid contact with eyes. Keep container tightly closed when not in use. Wash thoroughly after handling.

WARNING:

- Amber, Blue, Cinnamon, Dark Brown, Empire Red, Light Brown, Medium Brown, Orange, Pewter, Green, Vintage Cherry, Yellow:
WARNING HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION.
- Ebony:
No related warning.
- Merlot:
WARNING HARMFUL IF SWALLOWED. CAUSES RESPIRATORY TRACT AND EYE IRRITATION.