

## 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. Stir stain to reincorporate solids that have settled to the bottom of the can before and throughout the application process.
2. If desired, thin with up to 15% distilled water or **General Finishes Extender**. Start by adding 5% in increments until you reach the desired consistency. Extender will improve flow and leveling and increase open time, which is helpful in dry climates.
3. 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, so a darker stain may be required to get the depth of color you want.
4. Test your complete finishing process beforehand. Stain color can be affected by variances in wood, room lighting, and deepened with the application of topcoat.

5. Divide your project into manageable sections: top, side, drawer, door, table seam.
6. 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. 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](#).
7. 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%.
  - To 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.
8. Allow final coat to dry 2-4 hours in ideal conditions: 50-70% humidity, 70°F/20°C.
9. 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.

### **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.

### **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.

## 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.

## Cleanup of Water Based Products

Application tools and materials containing water-based products can be cleaned with soap and water or GF Brush & Gun Cleaner immediately after use.

## **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**

### **Life of Product**

Water-based products do not last forever, even when unopened. General Finishes products are best used within 1 year of the manufacture date listed on the bottom of the can. The life of the product may be extended with proper care and storage.

### **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 paint, use 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.

### **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. Paint in 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.
5. Store in moderate temperatures. Avoid temperatures below 50°F/10°C or above 80°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**

**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, including compatibility with other manufacturers products. General Finishes will be responsible only for the cost of our products and will not be responsible for any costs such as labor, damage, or replacement costs.

### **Contamination and Compatibility**

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.

**Danger:** Contents are COMBUSTIBLE. Keep away from heat and open flame. Application materials or other waste soaked with this product may spontaneously catch fire if improperly discarded. Immediately after use, place rags, steel wool or waste in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

**CAUTION:** Contains ALIPHATIC HYDROCARBONS. VAPOR HARMFUL. Use only with adequate ventilation. DELAYED EFFECTS FROM LONG-TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating & inhaling the contents can be harmful or fatal.

### **Warning**

If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log onto [www.epa.gov/lead](http://www.epa.gov/lead).

Do not swallow; first aid: drink water to dilute product. May cause eye and skin irritation; first aid: flush eyes thoroughly with water.

**FIRST AID:** In case of eye contact, flush thoroughly with large amounts of water for 15 minutes and get medical attention. For skin contact, wash thoroughly with soap and water. In case of respiratory difficulty, provide fresh air and call physician. If swallowed, do not induce vomiting. Get medical attention immediately.

### **Warning**

This product contains a chemical known to the State Of California to cause cancer and birth defects. Do not swallow; first aid: drink water to dilute product. May cause eye or skin irritation; first aid: flush eyes thoroughly with water.