Varathane®

SINCE 1958

WOOD'S FIRST CHOICE™

COMPLETE

WOOD FINISHING GUIDE

GETTING THE BEST RESULTS... EVERY TIME

STEP 1

PREP

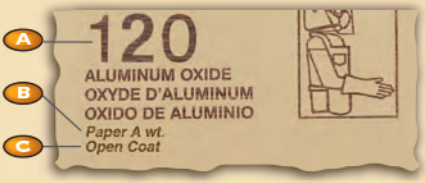
SANDING AND DUST REMOVAL

SAND IT SMOOTH

The first step to a professional looking finish is a good sanding job. Start by selecting the right sandpaper. Buy GOOD sandpaper! Inferior paper will wear out quickly, load up rapidly with sanding dust and create broad, deep scratches that are difficult to remove. To obtain an even finish, make sure to keep your surface clear of dust during sanding. Begin with a lower grit (120) and work progressively higher (220 or 240). Clear dust between steps.

See cautions on label if sanding old paint.

PAPER SELECTION



- **A** **Grit Number**– The larger the number, the finer the grit.
- **B** **Weight**– "A" weight paper is the lightest, most flexible kind. Best for most jobs.
- **C** **Grit Spacing**– For pre-finishing sanding use open coat (more space in between grit to allow escape for dust). For finish sanding use close coat.

- **USE A SANDING BLOCK FOR LARGE, FLAT AREAS**

WIPE IT CLEAN

Be sure to thoroughly clean surface when sanding is finished. Use a rag dampened with mineral spirits to remove dust. Turn rag frequently and re-moisten to prevent spreading the dust around.

- **USE A VACUUM WITH BRUSH FIRST FOR LARGER AREAS**

STAIN

STAIN SELECTION

WHY STAIN?

There are many reasons to apply a high quality, premium wood stain.

- Change or add color and richness.
- Even out the color of multi-type wood projects.
- Match the look of high-end furniture manufacturers or mimic an antique in your home.

TYPES OF STAIN

- **Oil-based** stains are the easiest to use, fade less than other stains, provide consistent results & give the most flexibility for topcoats.
- **Water-based** stains are the easiest to clean and fastest drying but they do not penetrate as well and cause the grain to raise.
- **Gel-based** stains are ideal for fiberglass, metal, wood, and vertical surfaces.

NEW SOYA OIL VS. LINSEED

There are now two main types of oils used as a base for stains. Previously, most oil stains were made with linseed oil.

Varathane® Premium Wood Stains are made with ultra-clear soya oil.

Soya allows the true beauty of wood to show through, where linseed oil mutes or covers up the purity of the wood.

Soya oil has two advantages:

- **Deeper Penetration**
  - better grain enhancement
  - richer color presentation
- **Clearer Color**
  - does not contribute unwanted color to the stain
  - richer, cleaner, brighter colors

What You Need

- Stain & Scrap Wood
- Applicator Brush/Cloth/Pads
- Rubber Gloves & Goggles
- Stir Stick & Dropcloth
- Rags & Mineral Spirits

Stain Application

For Best Results

1) Be sure to test your stain to verify the desired color. To test, apply the stain in an inconspicuous area. When testing on soft wood, be sure to sand and condition the test area.

2) To achieve a lighter color, wipe the stain immediately after application. For a deeper color, either allow the stain to rest for one hour before wiping, or apply additional coats of stain.

3) Stir the contents thoroughly before use. Apply with a brush or clean, lint-free cloth. Apply the stain across the grain until the wood is saturated on top.

4) Wipe the excess stain off in the direction of the wood grain. Do not let the stain dry before wiping excess.

5) A second coat can be applied after two hours.

NOTE: Do not sand between coats.

6) Allow the stain to dry. Check can label for drying time.

Stir Less Often

With Varathane stains, you stir less often because of its anti-settling formula.

Pro's Quick-Tip

"It's better to apply stain to a vertical project by wiping instead of brushing to avoid dripping."

STEP 3

PROTECT

TOPCOAT SELECTION

WHY A TOPCOAT?

After taking the time to prepare and stain your project, you want it to last. A protective topcoat will prevent damage from spills, scratches and wear while making the wood look great!

There are different topcoats available based on:
- desired appearance
- protection needs

OPTIONS

- **Polyurethane** – excellent durability and scratch resistance
  - **oil-based** topcoats for a warm, golden glow
  - **water-based** topcoats for a fast drying, crystal clear finish
- **Lacquer** – Quick drying, superior clarity
- **Shellac** – Natural, colorable topcoat for average moisture and weather resistance

CHOOSE THE RIGHT APPLICATOR

BRUSH-ON: For topcoat application we suggest using a premium grade, natural bristle brush for oil-based topcoats or a synthetic brush with a chisel shape and split ends for water-based topcoats. Inferior brushes will make it difficult to obtain a clean, even coat.

- TAKE CAUTION IF USING FOAM BRUSHES TO AVOID BUBBLES

For more helpful tips and project solutions visit

woodanswers.com

What You Need

- [ ] Topcoat
- [ ] Rubber Gloves & Goggles
- [ ] Applicator Brush/Cloth/Pads
- [ ] Stir Stick & Dropcloth

Multicoat Application

Brushing It On

When you brush on a topcoat, there are two things you need to watch for… brush marks and bubbles. Most brush marks result from going back over the surface too often. Bubbles come from a variety of sources, including a poor-quality brush and careless brushing habits. To avoid bubbles, stir can contents gently (never shake). After dipping your brush, do not scrape excess material on the side of can.

Wiping It On

When applying a topcoat such as Danish Oil and other wipe-on polyurethanes with a cloth, wipe on each coat quickly, as if you were wiping down a table top with water. Don't go back over the surface or you'll drag the topcoat and create lines.

More Coats

Recoat only when previous coats have dried clear and feel hard. Follow the manufacturer's label for drying times. Apply three or more additional coats for added protection.

With **oil-based** topcoats, the more coats you apply, the darker and richer the wood will become.

With **water-based** topcoats, sand any "grain-raise" smooth before applying the final coat.

Lightly Sand Between Coats

Note: Sanding between coats is not necessary, but it will provide a better finish.

After a coat has dried, use 220 or 240 grit sandpaper or extra fine steel wool to lightly sand surface. This will ensure good adhesion of the succeeding coat. Sanding produces a white film over the finish, but will disappear as you apply the next coat. Do not sand the final coat.

Do not use steel wool with a water-based topcoat, as rust may develop after the finish is applied.

Pro's Quick-Tip

"Use a premium topcoat to turn a good piece into a masterpiece… and make it last."

What You Need

- [ ] Sandpaper - 120, 150, 220 or 240
- [ ] Sanding Block
- [ ] Vacuum with Brush
- [ ] Clean Rags & Brush
- [ ] Wood Conditioner

Filling and Conditioning

Fill It In

Some open-pore wood species or woods with large imperfections, may need a wood filler to obtain a continuous, unblemished finish. A variety of filler products are available. Follow manufacturer's instructions. Sand after filling.

- Use a squeegee for large, flat areas

Seal Soft Woods

Using Varathane® Premium Wood Conditioner on softer woods before staining will prevent "blotching" caused by variations in wood's density. Woods such as pine, fir, maple, and poplar vary significantly in density within a single board. Softer areas absorb more stain than harder areas, making the soft spots darker.

Seals deep pores and allows stain to penetrate evenly.

Pro's Quick-Tip

"Conditioning is a quick easy way to gain the professional look you desire."

Glossary

Additives – Special chemicals added to finishes to improve performance, application and the final appearance of the finish.
Blistering – The formation of blisters in finish by the local loss of adhesion and lifting of the film from the underlying substrate. Usually caused by the application of finish on a surface containing an excessive amount of water or volatile material.
Burnishing – Damage due to surface abrasion.
Chalking – Formation of a powder on the surface of the finish caused by disintegration of the resin during weathering.
Chip Resistance – Measure of a finish's ability to resist chipping.
Chipping – The breaking away of a small portion of the finish due to its inability to flex under impact or with thermal expansion and contraction of the substrate.
Clear Coating – A transparent protective and/or decorative film; generally the final coat of sealer applied to projects.
Coating – A paint, varnish, lacquer or other finish used to create a protective and/or decorative layer.
Color Retention – The ability of a finish to keep its original color. Major threats to color retention are exposure to ultraviolet radiation and abrasion by weather or repeated cleaning.
Cracking – Splitting of a finish usually as a result of aging.
Curing – Process whereby liquid coating becomes hard film.
Diluent – A liquid used in coatings to reduce the consistency and make a coating flow more easily. A diluent may also be called a "Reducer," "Thinner," or "Reducing Solvent."
Dries To Handle – Degree of cure at which a film will resist deformation due to handling.
Dries To Touch – The state of dry at which a coating film will not transfer onto an item touched lightly against it.
Dry Time – Time allotted for an applied coating film to reach a set stage of cure or hardness.
Durability – The ability of coatings to hold up against destructive agents such as weather, air pollution, sunlight, detergents, abrasion, or marring and continue to look attractive.
Fading – Gradual loss of color due to chemical or physical change, due to pigment degradation from sunlight.
Flammable – Any liquid having a flash point below 100°F.
Flat – Finish free from gloss or sheen.
Flexibility – The degree to which a coating is able to conform to movement or deformation of its supporting surface without cracking or flaking.
Frosting – A white crystalline deposit that develops on the surface of a coating.
Gloss – The shine, sheen, or luster of the surface of a coating.
Immersion – Referring to an environment which is continuously submerged in a liquid, often water.
Inhibitor – Any substance which slows or prevents a chemical reaction or corrosion.
Insoluble – Not soluble; cannot be dissolved.
Lacquer – A fast-drying usually clear coating that is highly flammable and dries by solvent evaporation only. Can be reconstituted after drying by adding solvent.
Lacquer Thinner – A solvent blend of ethyl alcohol, ethyl acetate and toluene.
Lifting – Softening, raising or wrinkling of a previous coat by the application of an additional coat; often caused by coatings containing strong solvents.
Luster – The gloss of a finish.
Matte – Having a dull or lusterless surface.
Mineral Spirits – Used as a thinner for paints and varnishes.
Naphtha – A petroleum distillate for clean up and thinning solvent-based coatings.
Nitrocellulose – Chemical combination of cellulose and nitric acid which is known for its durability, toughness and extremely fast-drying properties. Also provides an excellent gloss that can be polished to an even higher gloss.
Oil-Based – Finishes that dry by the cross-linking of certain unsaturated plant oils known as drying oils.
Pigment – A natural or synthetic material which, when dispersed in a paint resin, contributes to the physical and performance properties of the paint such as coverage, color, gloss, and corrosion resistance.
Polyurethane - Any of various resins, widely varying in flexibility, used on tough chemical-resistant coatings, adhesives, and foams.
Porous – A surface that contains small pores or holes and will readily absorb liquids.
Recoat Time – The time required for a film to dry prior to the application of a second coat.
Relative Humidity – The ratio (%) of the amount of moisture in the air compared to what it could hold if saturated at the temperature involved.
Respirator – Mask worn to protect from fumes and dust.
Satin – Sheen lying between semi-gloss and flat.
Semi-gloss Finish – A finish that has a low luster sheen.
Solvent – Liquid used to dissolve or disperse other paint ingredients, also controls viscosity of the coating.
Solvent Acrylics – Made by chemically combining various acrylic monomers, either alone or in combination. They are known for drying quickly and can be recoated at any time.
Substrate – Any surface to which a coating is applied.
Tint – A color produced by mixing a colored material, dye, or pigment with white pigment or paint.
Toluene – A solvent used to thin lacquers and enamels.
Top Coat – Usually the final finish applied to a surface.
Transparent – A coating which light can penetrate, allowing visibility of the surface underneath.
Turpentine – Distilled pine oil, used as a cleaner, solvent, or thinner for oil-based coatings.
UV Inhibitor – Coating additives that absorb or reflect UV radiation and prevent it from damaging the substrate under the coating.
Viscosity – (Finish "thickness;") the property of a fluid whereby it tends to resist relative motion within itself.
Volatile Organic Compound (VOC) – Organic chemicals and petrochemicals that are emitted as vapors while evaporating. In paints, VOC generally refers to the solvent portion of the paint which, when it evaporates, results in the formation of finish on the substrate to which it was applied.
Water-based – Coatings in which the majority of the liquid solvent is water.
Wrinkling – A finish defect in which the films surface skins over and then absorbs liquid within the film. The absorption results in swelling of the surface skin with the formation of a wrinkled texture.
Yellowing – Development of yellow color upon aging.

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