Finishing for the Woodworker

A poor finish will make a great piece look good
A good finish will make a good piece look great

Preparing to Finish

- ➔ The first step to any finish is to start with a better sanding wood surface.
- ➔ All finishes tend to magnify the surface underneath the finish; therefore, the applied finish will accentuate any defects.
- Consider sanding as the cornerstone a building – if not completed well, the building will collapse!
- **Tear Out?** Try using ***Sanding Sealer*** or a half & half combo of ***Sanding Sealer and Turpentine***. Also, ***Mineral Oil*** can be used.
- **SANDING**
  - Start at the lowest grit needed – if you need to start at 80, start at 80.
  - Remember, the first grit is used the most. Once you get past the first, your sanding will go faster because the *rough* spots are gone.
  - **Power Sanding** –
    - **Belt Sanders, Random Orbital Sanders**
    - **Pneumatic Sanders** – Pneumatic sanding devices attached to an air compressor are very useful. Grex Power Tools AOS368 – 2" 105" Angle Random Orbital Sander (www.grextools.com) $112 at Amazon.com
    - **High Speed Die Grinder** with buffing attachment
    - **Power Drill** – Any corded drill can be adapted for sanding!
  - **Compressed Air** – Blow off sawdust once done. Also wipe with cloth or paper towel

Filling Gaps or Holes

- Many different products can be used to fill holes and decorate the turning.
  - Inlace; Metal Leafing; Surface Inlay; Charcoal, etc.

Why Bottles?

- Buying in larger quantities is cheaper but opening and closing the larger containers lets air in and can spoil the product Mixtures easier to maintain

Finishes

- The wood and your final use for the piece will determine the finish
- Finishes are used to enhance the quality and look of a piece
- When applying finishes, protect your skin by wearing gloves
- Remember that many finishes are toxic and flammable – DON'T SMOKE AROUND FINISHES
- Drying time for finishes varies due to temperature and humidity in your finishing area as well as the finish that is used.
- **Shellac-Based Finishes -** Premixed vs. Mixing Your Own
  - Color – blonde, orange, garnet, beige, lemon
  - Mix flakes with ***Denatured Alcohol***
  - Dedicated Brush
  - Purchase flakes through Highland Woodworking, Shellac Shack, and other places on the web
  - Premixed shellac is widely available – shelf life can be an issue.
    - **Zinsser Bulls Eye SealCoat** – 2lb cut of clear dewaxed shellac
    - **Hut Crystal Coat / Mylands Friction Polish**

The Shellac Shack [www.shellacshack.com] is a good place to buy flakes. Each order of flakes (blonde is about $22 per pound) comes with instructions.

- The term cut refers to the quantity of shellac (in pounds) in a gallon of alcohol. Thus a 2 pound cut means 2 pounds of shellac flakes dissolved in a gallon of alcohol. Rarely if ever do you mix that much because you should only make enough to finish your project.
- A chart for mixing 8-10 oz of finish at various cuts:
  - 1 pound cut …. 1 oz flakes …. 8 oz (1 cup) alcohol
  - 2 pound cut …. 2 oz flakes …. 8 oz (1 cup) alcohol
  - 3 pound cut …. 3 oz flakes …. 8 oz (1 cup) alcohol
- When dissolving flakes, it is best to crush them as they will dissolve much quicker. A coffee grinder is a good tool to use. Dissolving can take 24 to 36 hours to completely dissolve. Shake or stir regularly to encourage dissolving.

- **Polyurethane Finishes**
  - Liquid plastic resins that dry to a durable satin or gloss finish
  - Composed of vegetable oil acids, nitrogen compounds, and isocyanates in a mineral spirits carrier.
  - Can cause a slight amber color on light colored woods due to the oil
  - Water based polyurethanes are used on light colored woods
  - Sand between coats
  - Standard allows recoating in 4-18hrs whereas water-based can be recoated in 1-4 hrs
- **Oil Based Finishes**
  - Many commercial products but many woodworkers prefer to handcraft their own formulas
  - Apply thin, even coats
    - ✓ ***Danish Oil (Watco)*** – natural, medium walnut, golden oak, light walnut, dark walnut, fruitwood, black walnut, cherry, red mahogany
    - ✓ ***Antique Oil (Olympic)***
    - ✓ ***Bush Oil***
    - ✓ ***Waterlox*** – Tung oil based finish. First coat penetrates and seals, and remaining coats build up surface.
    - ✓ ***Tung Oil***
    - ✓ ***Teak Oil***
    - ✓ ***Tried & True*** – original, varnish oil, danish oil
    - ✓ ***Sam Maloof's Poly/Oil & Oil/Wax*** - the poly/oil finish gives a satin to semi-gloss finish that is enhanced by the second step, oil/wax
    - ✓ ***Hemp Oil***
    - ✓ ***Odie's Oil*** – 50/50 blend of oil & wax – *Food Safe*
- **Specialty Finishes**
  - 1/3 rule – equal parts of 3 different products to create specialty finishes
    - ✓ ***Danish Oil, Boiled Linseed Oil, Wipe-On Poly***
    - ✓ ***Tung Oil, Boiled Linseed Oil, Wipe-On Poly***
- **Lacquer Finishes**
  - Builds a durable crystal clear film that gives depth and clarity to the wood surface
  - Easy to apply but is most difficult to do well
    - ✓ ***Deft***
    - ✓ ***CAB Acrylic or Luster Lacquer or (Valspar)***
    - ✓ ***Clear Brushing Lacquer (Minwax)***
    - ✓ ***Qualalacq Lacquer (Behlen)***
    - ✓ ***Clear Lacquer Finish (Watco)***
    - ✓ ***Lacquer & Sealer (Luthier's)***
- **Non-Toxic Finishes**
  - Finishes that can be used on pieces that will be used for food
  - **Mineral Oil, Walnut Oil, Salad Bowl Finish, Butcher Block Oil, Lemon Oil, Nordic Oil**
  - **Non Toxic Beeswax Finish –** https://toymakingplans.com/non-toxic-toy-finish-how-to/
- **Waxes**
  - ***Carnuba or Beeswax, Briwax, Renaissance Wax, Hampshire Sheen, Liberon, etc.***
- **Dyes or Stains**
  - Can change the look of any piece
  - Water Soluable Aniline Dyes – premixed or your mixing
  - Intermixable Transparent Wood Stains (Woodburst)
  - Mixol Universal Tints
- **Paints**
  - New H^20 Sprays
  - Air Brushing