

Food Safe to Start, Food Safe to Finish

If we create wood finishes with ingredients that are either foods or food additives, then we can create wood finishes that are safe to work with.

Oils

Mineral Oil

- Petroleum derivative from oil refining industry. Laxative and lubricant.
- Does not spoil
- Available at Pharmacies and Grocery Stores.

Walnut Oil

- Pressed from walnuts. Food oil, used in salad dressing.
- Polymerizing Oil, Natural oil that will dry with heat.
- Available at Grocery Stores.

Waxes

Beeswax

- Comes from beehives. Used in candles, shoe polish, cosmetics, coating cheese, etc.
- Melting Point: 62 to 64 °C (144 to 147 °F)
- Soft Wax

Carnauba Wax

- Comes from leaves of Carnauba Palm, Brazil. Automotive and boat waxes, dental floss, release agent, and food coating. Vegan.
- Melting Point: 82–86 °C (180–187 °F)
- Hardest natural wax.

Coatings

Shellac

- India and Thailand, Resin Secretion of the Lac Beetle. Used as food glaze, wood finish, sanding sealer
- Melting Point: 75 °C (167 °F)
- Soluble in alcohol

Abrasives

Diatomaceous Earth

- Powdered form of fossilized diatom remains, hard-shelled microorganisms. Used as a filtering media, polishing compound, toothpaste, mechanical insecticide.
- Can be harmful to lungs, but modern versions do not contain crystalline silica and pose less are safer to use.

Solvents

Grain Alcohol/Ethanol

- Created from the fermentation of sugars
- Boiling Point: 78 °C (172 °F)
- The higher alcohol content (proof) the less water it contains.

Wax Sticks/Blocks

Ingredients:

- Beeswax: Softer, Matte Finish
- Carnauba: Hard, Glossy Finish
- Mineral Oil

Equipment:

- Double Boiler
- Heat Resistant Containers
- Stirring Stick/Utensil
- Insulated Cooler

Instructions:

1. Add desired wax to Double Boiler. Add Mineral Oil for softer wax sticks. Melt, stirring occasionally.
2. Once melted, pour Wax Mixture into Heat Resistant Containers.
3. If using Carnauba Wax, place the containers in an Insulated Cooler to allow the wax to harden slowly.
4. Allow to wax to fully harden before using. Beeswax can be placed in the freezer for a few minutes to make it easier to remove the wax from the container.

Butcher Block Wax

Ingredients:

- 4 Parts* Mineral Oil
 - 1 Part* Beeswax
 - Carnauba Wax (optional)
- * by weight

Equipment:

- Double Boiler
- Digital Scale
- Heat Resistant Containers
- Stirring Stick/Utensil

Instructions:

1. Add Beeswax and Mineral Oil to Double Boiler and melt, stirring occasionally.
2. Once melted, add small amount of Carnauba Wax if a harder wax is desired and melt. Stir to combine.
3. Pour Wax Mixture into Heat Resistant Containers and allow to cool for several minutes before using the wax.

Abrasive Polishing Paste Wax

Ingredients:

- 4 Parts* Mineral Oil
- 1 Part* Beeswax
- 1 Part* Diatomaceous Earth
- Ice

* by weight

Equipment:

- Double Boiler
- Digital Scale
- Heat Resistant Containers
- Wire Whisk
- Ice Bath
- Resealable Plastic Bags (optional)

Instructions:

1. Add Beeswax and Mineral Oil to Double Boiler and melt, stirring occasionally.
2. Once melted, whisk in the Diatomaceous Earth until evenly mixed, without any lumps.
3. Pour Wax Mixture into Heat Resistant Containers. Seal the containers in a plastic bag and squeeze out any excess air (if containers are not watertight).
4. Submerge the containers in the Ice Bath and allow to cool for several minutes before using the wax.

Liquid Shellac

Ingredients:

- 1 to 4 oz. (28.3 to 113.4 g) Shellac Flakes, by weight
- 1 cup (256.6 ml) Grain Alcohol or Ethanol, ~189 Proof, by volume

Equipment:

- Digital Scale
- Liquid Measuring Cups
- Glass Jars

Instructions:

Shellac is usually described in "pound cuts", which is the weight of shellac flakes dissolved in one gallon of alcohol, usually from one to three pounds. Here is how to mix up just eight liquid ounces at the appropriate ratios for the desired cut.

1. Select the weight of the Shellac Flakes from the chart below.
2. Add the Shellac Flakes and the Alcohol to the glass jar.
3. Seal the jar and shake to mix. It may take up to three days for the flakes to fully dissolve.

1 lb Cut	2 lb Cut	3 lb Cut	4 lb Cut	Add to 1 Cup of Alcohol
1 oz. Shellac	2 oz. Shellac	3 oz. Shellac	4 oz. Shellac	

Food Safe Friction Polish Liquid

Ingredients:

- 1 Part* Liquid Shellac
- 1 Part* Grain Alcohol or Ethanol, ~189 Proof
- 1 Part* Walnut Oil

* by volume

Equipment:

- Liquid Measuring Cups
- Small Plastic Drink Bottles, PET or PETE (Recycle #1)
- Paper Towels (for application)

Instructions:

1. Pour equal volumes of the Shellac, Alcohol, and Walnut Oil into the plastic bottle.
2. Seal the bottle and shake to mix.
3. Apply to woodturning with a paper towel while lathe is running. Keep paper towel moving with pressure. Friction builds up heat to evenly spread and cure the finish.

Food Safe Friction Polish Cream

Ingredients:

- 10 Parts* Liquid Shellac
 - 10 Parts* Walnut Oil
 - 1 Part* Carnauba Wax
- * by Weight

Equipment:

- Double Boiler
- Digital Scale
- Blender
- Airtight Containers
- Stirring Stick/Utensil

Instructions:

1. Add Carnauba Wax and Walnut Oil to Double Boiler and melt, stirring occasionally. Remove from heat and allow it to cool it to room temperature.
2. Combine the Wax/Oil Mixture and Liquid Shellac in the Blender and mix until smooth.
3. Store the Polish Cream in Airtight Containers.
4. Apply to work with a paper towel and run lathe to spread. Keep paper towel moving with pressure. Friction builds up heat to evenly spread and cure the finish.