

The background of the slide is a close-up, top-down view of a large pile of cut logs. The logs are of various diameters, from small twigs to large tree trunks, and are stacked in a somewhat chaotic but dense manner. The wood is a warm, light brown color, showing natural grain patterns and some cracking. The lighting is even, highlighting the textures of the wood.

Wood Stabilization

The ins and outs of making dangerous and unstable, unusable wood turnable



Soft or punky wood

Cracked wood



What is wood stabilization?

The basic principle of wood stabilizing is to take a piece of soft or punky wood and inject it with resin to create a stable, hardened wood blank that is safe to turn. The resin displaces air pockets throughout the grain structure, creating a dense blank that is nearly impervious to moisture changes and can be polished to a high gloss.

Accomplished using a thin heat treated resin polymer such as Cactus Juice under vacuum to move the material into the cellular areas.

Results of Stabilization

Pros

- Solid material to cellular level
- Can still be dyed
- Does not change wood color
- Still cuts like wood using standard tools

Cons

- Does not fill in cracks
- Some woods such as redwood are difficult to stabilize due to cellular structure

Materials and Tools Needed

1. Wood to be stabilized such as soft woods, punky woods, or soft hardwoods.
2. Vacuum chamber
3. Cactus Juice
4. Toaster oven or equivalent capable of 200 degrees



Process

- Wood must be very dry to allow material to get into cellular level.
- Place wood in vacuum chamber and cover with Cactus Juice by 1-2 inches.



- Place cover over vacuum chamber.
- Attach vacuum lines leaving escape valve open.
- Turn on vacuum adjusting escape valve till light foam can be observed.



Monitor until foam
subsides completely.

Leave under vacuum for
minimum 24-48 hours or
until bubbles stop rising.
Even the little tiny ones.



Process, continued

- Once bubbles have stopped, release vacuum slowly until stable with room.
- DO Not Remove Lid!
- Allow wood to soak up Cactus Juice for an addition 24-48 hours adding juice to cover wood if needed.
- Take wood out of juice and allow to drain on rack into pot or other container.



Wrap in aluminum foil and place on rack in toaster oven with drip pan beneath rack.

*Notice: cracks are **not** filled during stabilization*



- Bake @ 200 degrees for 1 hour. This may need to be repeated until fully cured.
- Unwrap and turn.



Notes to Consider

- Woods that are not punky may produce shavings
- Woods that are punky may turn producing very fine dust.
- Not all woods will fully stabilize. They may need pressurization as well as vacuum to be fully stabilized.