

# HOLD FAST™

## V822: 2 QUART WOOD STABILIZATION SYSTEM

Resin Stabilizing wood gives new life to woods that would normally not be usable for turning. Woods that tend to crack and check, such as spalted woods, now can become solid. Dyes added to the stabilizing resin can also create dramatic coloring effects.

The V822 system provides small batch economy in wood stabilization. Vacuum pulls the **STICK FAST™** stabilizing resin into the soft wood fibers to change it into pieces that can be easily turned.

### Components

- ◆ Clear acrylic viewing cover
- ◆ Main vacuum chamber 2 quart
- ◆ Anti-float plate

### Optional HOLD FAST™ items

- ◆ **HOLD FAST™** Vacuum Generator
- ◆ V825-20 small or V825-30 large Vacuum bag system for extra large pieces and includes all required fittings  
Note: V822, V823, or V820 vacuum chamber is required for bag system.

### COMPONENTS

- ◆ **Vacuum chamber :**  
Stainless 3.5 quart capacity. 6" x 7-1/4"  
Capacity: approximately 30 pen blanks 5/8"x5/8"x6" placed vertically.
- ◆ **Anti-float plate:**  
A hold down plate to keep wood completely submerged during the stabilization process. Locks with cam action.
- ◆ **Clear viewing top:**  
Clear high strength Acrylic, 1/2" thick. Fittings and 3/16" i.d. x 3' vacuum hose. The plugged second port is for an optional Stabilizing bag system for large projects.

### **Optional:**

- ◆ **HOLD FAST™ V811 or V812 Vacuum Generator:**  
This vacuum generator has a high efficiency venturi that can be used with economical air compressors: At 70 psi the Generator will produce 22+Hg vacuum, which is adequate but the process may take longer. For optimal performance 85 psi 2.5cfm compressed air the Generator will produce approximately 25+Hg vacuum with a higher vacuum volume.

### SET UP

- ◆ **HOLD FAST™** Vacuum Generator: Follow separate generator instructions. Can also be used for Vacuum Chucking.
- ◆ Main chamber vacuum seal: If not installed position the seal with the lip of the tank in the groove of the seal. The seal is removable for cleaning and emptying the tank.
- ◆ Connect the vacuum hose to the to the hose barb and the other end to the vacuum source. Place the Clear Viewing Cover on the Main Vacuum Chamber/large batch tank – centering it on top of the seal.
- ◆ Turn vacuum on and check for leaks.
- ◆ **Caution: Over 27" of vacuum may damage the chamber or cover.**
- ◆ The **HOLD FAST™** V811 and V812 Vacuum Generator should generate approximately 25" with compressed "air in" at 85 psi and approximately 21" at 70 psi. This can vary, depending on altitude and barometric pressure. Higher pressure up to 95 psi results in greater vacuum volume.
- ◆ Turn vacuum generator off to release vacuum.
- ◆ Note: The Vacuum Seal can be easily repaired with **STICK FAST™** CA Adhesive. Replacement seals are available.

### STABILIZING WOOD

#### LOADING THE TANK

- ◆ Place pen blanks or other wood pieces into tank vertically to achieve max loading. Always fill to a loose stack, leaving space for the resin to contact all of the wood surfaces.
- ◆ Place the anti-float plate on top of the wood. Use a flat screw driver in the slot of the cam to rotate the cam to lock against side of tank to prevent floating. Note: the cam is tight to rotate in order to keep the cam from backing off the lock point.
- ◆ Add catalyzed resin, covering the plate approximately 1/2"

#### VACUUM CYCLE

- ◆ Center the tank lid in position. Turn the vacuum generator on - adjust to 10" Hg vacuum to minimize resin foaming.
- ◆ View the reaction through the top. The resin will start to bubble and foam as air is pulled out of the wood.
- ◆ If the resin foam rises near the clear top reduce or turn off the vacuum. After the foam recedes, reapply the vacuum. You may have to do this a few times until excess foaming ceases. Air bubbles will continue to be visible throughout the process as air is pulled out of the wood to be displaced by the Resin.
- ◆ Increase vacuum from the generator slowly watching the foaming action not to overflow container until it reaches its maximum vacuum.

⇒ **Caution:** Maximum 27"Hg to keep from damaging tank and lid.

- ◆ Continue the vacuum cycle until the air bubbles stop forming.
- ◆ When complete - the wood should not float in the resin.

◆.The amount of time to achieve maximum saturation varies in relation to the size and density of the wood. Badly spalted wood will sometimes finish in 60 minutes. Large or dense woods may take 2-4 hours or more to fully saturate the wood. Stabilizing resin with dyes may take longer to saturate the color.

◆At times releasing all vacuum assists the saturation process. Turn off the generator and return to atmospheric pressure for a few minutes then resume the vacuum cycle.

### SMALL BATCH PROCESSING

When only a few pieces are to be stabilized, a smaller container can be placed inside the chamber to place the wood and resin in during the process. A weight will be needed to keep the wood submerged.

### COLORING WOOD WITH OUT USING STABILIZING RESIN

◆Wood dyes can also be pulled into woods using this system that do not need stabilizing to achieve dramatic results.

◆Dyes that are in soluble Denatured Alcohol are recommended. One to two days are required to dry wood.

⇒ **Caution:** Using strong solvents such as Acetone or MEK will damage system components and vacuum system.

## RESIN CURING PROCESS

◆**STICK FAST** stabilizing resin requires 190-200F heat to cure.

◆Once the vacuum cycle has been completed, remove the wood pieces and wipe off excess resin. Wood may be placed on top of foil to be able to observe the process or wrap the wood individually in aluminum foil to keep from dripping. Keeping space between each piece reduces cure time. Place the wood in an oven set to 190-200F. Recommend a separate gauge to insure correct temperature – a small toaster oven with a timer works well and keeps you out of your kitchen oven.

◆The curing time varies with the type of wood, the density and the thickness of the wood. Even two pieces of wood from the same tree can have different cure times. Generally 1-2 hours at 190-200F is required. The thicker or more dense the wood typically requires more cure time. If uncured resin is present on the surface additional cure time in the oven is required - suggest an extra 15+ minutes before checking again to see if it has cured. Some uncured resin is forced out of the wood during the curing process. Another indication that the resin has cured is when the resin coming out of the wood end grain is crusting or crystalizing.

◆**NOTE: DO NOT OVER COOK: Some uncured resin is forced out of the wood during the curing process.**

◆**Over cooking will continue to force resin out.**

### WARNING

Keep unmixed Stabilizing Catalyst away from all heat sources including the curing oven.

## DRYING WOOD

◆**STICK FAST™** stabilizing resin tends to work best with dry wood to be able to completely saturate the wood. Ideally a moisture reading of 8-12% is preferred. The water in green woods may restrict or dilute the resin in the wood and may also require additional curing time. Tests have shown that dry and wet woods can achieve excellent results but each piece of wood, even from the same log, has unique characteristics that can give varying results.

◆In addition, generally the harder the wood, the less the resin is likely to penetrate and the longer it takes to cure.

## DYEING WOOD

◆**STICK FAST™** Red, Yellow, Blue, Violet, and Black dyes are specially formulated for the stabilizing resin. Each piece of wood is unique and will pick up the colors differently. The wood should normally be left in the vacuum chamber longer to assure penetration.

## CHECKING **STICK FAST™** STABILIZING RESIN

### PENETRATION INTO THE WOOD

◆ An inexpensive black light with a light transmission of 395 nM will detect **STICK FAST™** stabilizing resin before or after it has been cured. In a completely dark room shine the black light on the wood to see evidence of the stabilizing resin.

## MAINTENANCE

### •CLEAN WITH SOAP AND WATER ONLY.

Solvents will damage the clear cover and other components.

•Clear Cover: clean after each use especially if the resin has contacted the surface during the vacuum cycle or fogging may occur.

•Tank and float plate: Unused resin may be used again.

Remove the seal before pouring unused resin out of the tank into a storage container.

•Seal: lightly lubricate with silicone grease.

### SAFETY PRECAUTIONS

◆ Always use Eye Protection.

◆ Use nitrile gloves (blue gloves).

◆ Do not use if modified or damaged.

◆ Follow Stabilizing Resin safety instructions

◆ **WARNING: Keep unmixed Stabilizing Resin Catalyst away from heat sources** - including the curing oven used. Unmixed catalyst as a dry powder may start to product hazardous fumes above 120F. Add water to bring back to a liquid if required.

Manufactured in the USA

by

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05-05-2014