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.
- 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 as required.

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 be flammable and start to produce hazardous fumes above 120F. Add water to bring back to a liquid if required.

Manufactured in the **USA**
by
TMI Products Inc.
www.TMIProducts.net

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HOLD FAST™

V825 VACUUM BAG WOOD STABILIZATION SYSTEM

Resin Stabilized 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 V825 Vacuum Bag Stabilization system provides large project capability 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.
- Two sizes of Bags available:
  V825-20: 20x20 or V825-30: 28x30

Additional Components Required

- Either V820, V822 or V823 Tank acting as accumulator.
- ***HOLD FAST™*** Vacuum Generator.

Each item is sold separately for maximum flexibility

Components

- **Vacuum Bags available:**
  - **V825-20: 20x20 bag**
  - **V825-30: 28x30 bag**

Two different sizes are available with all the fittings required. A flow through mesh included allows the resin to reach all surfaces during the vacuum process.

- **V820, V823 or V822 acting as Accumulator Tank:**

During the process the resin gets pulled up towards the vacuum generator. The Accumulator Tank traps that resin before it damages the vacuum generator. Remove the plug on the clear top and insert fitting with down spout.

- **Optional: *HOLD FAST™* Vacuum Generator:**

Our vacuum generator has a high efficiency venturi that can be used with economical air compressors: At 70+ psi, the V812 will produce 22+Hg vacuum, which is adequate but will take longer to saturate the wood with stabilizing resin. At 85 psi 2.5cfm compressed air the Hold Fast Vacuum generator will produce approximately 25+Hg vacuum with a higher vacuum volume. Note: achievable vacuum is affected by barometric pressure and/or altitude.

Set Up

- ***HOLD FAST*** Vacuum Generator: Follow separate generator instructions. Can also be used for Vacuum Chucking.
- Remove plug from chamber lid and replace with hose barb fitting with down spout tube. The down stem tube may need cutting depending on size of chamber used.
- Attach blue hose from bag fitting to lid fitting **WITH the down stem** that goes into the tank to prevent splashing the lid and entering into the vacuum generator.
- Open the bag and put the project in between the two layers of flow through screen. Make sure the flow through screen is over the vacuum port fitting allowing the vacuum to pull the resin completely around the project.
- If stabilizing a bowl pour the resin directly into the bowl almost full. A stand or bowl outside the bag will help stabilize the bowl during this process to keep from tipping over.
- If stabilizing a flat piece of wood tilt bag up and pour resin in.
- Zip lock seal the bag securely.
- Attach the vacuum generator blue hose to the Accumulator Tank fitting **WITHOUT THE DOWN STEM.**
- Turn on the vacuum generator and watch the process.
- If more resin is required during the process - add and then reapply vacuum.

Stabilizing Wood

Amount of resin required

- The amount of resin that will be absorbed into the wood will vary depending on how soft and absorbent it is.
- Generally, filling the bowl almost to the top is a good start. If you find the resin is not enough during the vacuum process, turn off the vacuum, open the bag and add more resin then continue the vacuum process.
- Any excess resin can be reused at a later time. After taking the project out of the bag it can be resealed and vacuum reapplied pulling the excess resin into the Accumulator Tank for easy pouring back into the bottle. Take seal off before pouring.
- **Caution:** do not to overflow the Accumulator Tank - the resin will go into the vacuum generator.

Vacuum Cycle

- Center the Accumulator tank lid in position. Turn the vacuum generator on - adjust to 10" vacuum.
- View the reaction in the bag. The resin will start to bubble and foam as air is pulled out of the wood.
- The resin foam will rise and overflow into the Accumulator tank; Air bubbles will continue to be visible throughout the process.
- Increase vacuum from the generator slowly watching the foaming action to minimize over flow until it reaches the maximum vacuum. **Caution:** maximum 27"Hg to keep from damaging tank and lid.
- Continue the vacuum cycle until the air bubbles stop forming.

Coloring wood with out using Stabilizing resin

- Wood dyes can also be pulled into woods that do not nee stabilizing to achieve dramatic results.
- Dyes that are in soluble Denatured Alcohol are recommended One to two days are required for the wood to dry.
- Using water soluble dyes with water will bring water back int the wood and will require several days to dry before turning.
- **Caution:** Using strong solvents such as Acetone or MEK wil damage the bag, components, and vacuum system.

Checking *Stick Fast*™ Stabilizing Resin

Penetration into the wood

- An inexpensive 395 nM transmission black light will detec ***Stick Fast***™ stabilizing resin before or after it has bee cured. In a completely dark room shine the black light on th wood to see evidence of the stabilizing resin.

NOTES

- The Accumulator Tank Vacuum Seal can be easily repaired wit Thin CA Adhesive. Replacement seals are available.
- Bag punctures can be easily repaired with tape. The bags ar light weight to allow them to conform to the shape of the project
- Once complete and ready for clean up the resin can be pulle into accumulator tank by resealing the bag and turning on th vacuum. Turn off before the resin get s close to the lid.

Resin Curing Process

- ***Stick Fast*** stabilizing resin requires 190-200F heat to cure.
- After vacuum cycle has been completed, remove the wood pieces and wipe off excess resin. Wrap the wood individually in aluminum foil or plastic wrap to keep from bonding together during curing.
- **Option 1:** Place wrapped wood in 2-3 mil bag and put bag into boiling water with the top of the bag above the water level. Ensure the wood is lower than the surface of the water by adding a weight or other means. Cure time is about half using boiling water instead of an oven and no temperature gauge is required. Less resin will be forced out using this option because the heat transfers faster and cures faster.
- **Option 2:** Place the wood in an oven set to 190-200F. Recommend a separate gauge to insure correct temperature – a small toaster oven works well and keeps you out of your kitchen oven. Keeping space between each piece reduces cure time.
- 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 30-40 minutes in boiling water or 1-2 hours at 190-200F in an oven is required. The thicker or more dense the wood typically requires more cure time. If uncured resin is present on the surface additional cooking time 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 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 with Resin Dyes

- ***Stick Fast***™ Red, Yellow, Blue, Violet, and Black dies are specially formulated for the stabilizing resin. Each piece of wood is unique will pick up the colors differently and normally should be left in the vacuum chamber longer to assure penetration. The amount of dye used will also vary on the wood.

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.