CACTUS JUICE INFORMATION - PLEASE READ BEFORE USING PRODUCT

Cactus Juice is a heat-cured resin used to harden and stabilize most porous material, especially wood. It comes pre-activated in quarts and ready to activate with the included activator in 1/2 gallon and gallon sizes.

Activating your Cactus Juice

Mix activator thoroughly before adding to the Cactus Juice. Contents may be liquid, paste or dry. If the activator is too dry, add some Cactus Juice to the activator bottle. Shake well and pour contents into jug. Shake jug vigorously to ensure proper mixing. If particles remain undissolved, allow to set a few hours and shake again. ***NOTE: activate the entire jug of Cactus Juice – do not mix smaller portions.***

Activated Cactus Juice has a shelf life of 8-12 months at room temperature. If kept in the refrigerator, it has been reported to last longer.

Items needed for stabilizing

- Cactus Juice
- Stabilizing chamber and a vacuum pump capable of achieving a minimum of 29” Hg. Higher vacuum will produce better stabilized blanks. An electric rotary vane vacuum pump is recommended since it may take over an hour of vacuum to fully evacuate the blanks of air.
- Small oven to cure the blanks once they have soaked up the resin.
- Aluminum foil to wrap the blanks before putting them in the oven.
- Blanks to be stabilized, 10% moisture content or less – the lower the moisture content the better.
- Personal protection equipment including Latex or nitrile gloves and eye protection.

How much resin do I need?

How much resin each blank will absorb depends on the blank and the type of material. An average is 0.2 to 0.3 ounces per cubic inch - a 1" x 1" x 5" blank will take approximately 1-1.5 ounces of Juice.

How to stabilize blanks with Cactus Juice

1. Use dry blanks only. All wood needs to be dried prior to stabilizing, even wood that you purchase kiln-dried. The best way to assure your blanks are as dry as possible is to place them in your oven at 220° F (104° C) for a minimum of 24 hours. Remove them from the oven and let cool to room temperature in a Ziploc bag or other air tight container - a super-dried, hot piece of wood will start picking up moisture from the air as soon as it starts to cool down. If your blanks are hot when you add the resin, it will cause premature polymerization and you will have complete failure. Allow all fresh cut wood to air dry for a few months prior to oven drying. Failure to do so will cause cracks and warping. Avoid oily woods like cocobolo and rosewood – under vacuum, the oils in the wood will be drawn out and could contaminate the Juice to the point it will not cure properly.
2. Place dry blanks in the vacuum chamber and weigh them down so they don’t float. Add the necessary amount of Cactus Juice to the stabilizing chamber so that blanks are completely submerged with 1-2" (25-50 mm) of Juice covering the blanks. Make sure your stabilizing chamber is in a secure, stable location. A vacuum chamber under vacuum may implode if exposed to sudden shock like hitting the floor!

3. Cactus Juice can be dyed using Alumilite Dyes or Cactus Juice Stabilizing Dyes if you want to add some color to the wood. The dyes are very concentrated and produce nice, vivid colors that mix and work well with the Juice. Be sure to use more dye than you think you need.
4. After the Cactus Juice has been added to the chamber, place the lid on the chamber. You may need to apply a little pressure on the lid to get the gasket to seal.
5. Apply full vacuum to your chamber and keep your vacuum pump running until bubbles stop. When you initially start the vacuum, you will be pulling great amounts of air out of the blanks, causing the Juice to foam up considerably. To control the foam, open the vacuum control valve completely before starting the pump and slowly close it. After the major foaming has subsided, apply full vacuum. Avoid resin being sucked up into the vacuum pump or you risk damage to the pump.
6. The amount of time it takes to fully evacuate the air from the blanks you are stabilizing will depend on the type of wood and the vacuum pump you are using and can range from a couple to many hours. If your wood contains any moisture at all, you will continue to get tiny bubbles for many hours.
7. Keep the vacuum going until you see very few bubbles coming from the blanks. After all the air has been evacuated, open the ballast on your pump, release the vacuum, and then turn off your pump. It is really important to not shut off your pump while under vacuum if you are using a rotary vane pump as you may cause premature wear on your pump. Allow the blanks to soak in the resin for a minimum of twice as long as you had them under vacuum.
8. Remove the blanks from the vacuum chamber. Wrap them in foil individually to keep them from sticking together when the resin cures. An easy way to do this is to roll out a 2' (60 cm) piece of foil and start at one end, rolling the first blank in the foil until it is covered. Add the second blank next to the first and wrap all of it again. Add the third and repeat until all blanks are wrapped. Fold the ends over and you are ready for the oven.
9. Cure blanks at 190-200° F (87-93° C) until Cactus Juice has solidified. Be sure to check the actual temperature of you oven with an accurate oven thermometer as oven dials are notoriously inaccurate. Too hot will not harm the Juice but will cause more of it to "leak" out of the blank before it cures. The internal temperature of the blank needs to reach 190-200° F (87-93° C) for at least 10 minutes for the Juice to cure. This usually takes around 1-1.5 hours for the typical pen blank but may take longer for thicker material. It does not hurt to leave the blanks in the oven even longer but once you take them out, if you let them cool down and they are not completely cured, placing them back in the oven will NOT cause a complete cure. It is best to err on the side of caution and cure them longer until you get a better feel for the process. One way to be sure of proper polymerization is to put on some good gloves and remove the blanks from the oven when you think they are ready. Peel back some of the foil and if you see any liquid Cactus Juice, immediately wrap them back up and put them back in for another hour without allowing them to cool down.
10. Take blanks out of the oven and allow them to cool to room temperature.
11. Remove aluminum foil. Once the blanks have cooled, you can scrape off the resin that has bled out of the blank or clean it up on a belt sander. This step is not required but will help you see the finished blank better to determine how you want to use them.
12. Drain your excess Juice back into the plastic jug it came in and store for the next use. Do not store in an air-tight glass jar as the Juice will cure on its own over time. Cactus Juice does not evaporate so there is no need for an air-tight lid. **Do not store Cactus Juice in an environment that is warmer than 85F (29C) or you will affect the performance of your Cactus Juice.**
13. Once the excess Juice has been removed, simply wash out the chamber with dish soap, water, and a rag. Be sure to allow it to dry completely before your next use.