Creating Epoxy Tables Using EpoxAcast™ 690 And EpoxAcast™ 692

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As EpoxAcast™ 690 series epoxies can be poured in thick layers, they are an excellent choice for "river table" or "ocean table" type applications. The following document will help you process the material properly for this type of furniture making technique.

Materials and Tools Recommended:

- Melamine board for base and dam walls
- Live edge slab
- Assorted carpentry tools to finish wood (saw, sanders, routers, wire wheels, vacuum cleaner)
- Temperature gun to monitor resin temperature
- Gloves, mixing buckets, NIOSH respirator, protective clothing, modeling clay, caulking
- Fans and climate-controlled workspace
- Epoxy resin for sealing live edge wood and EpoxAcast™ 690 or 692 for casting

Step By Step Process:

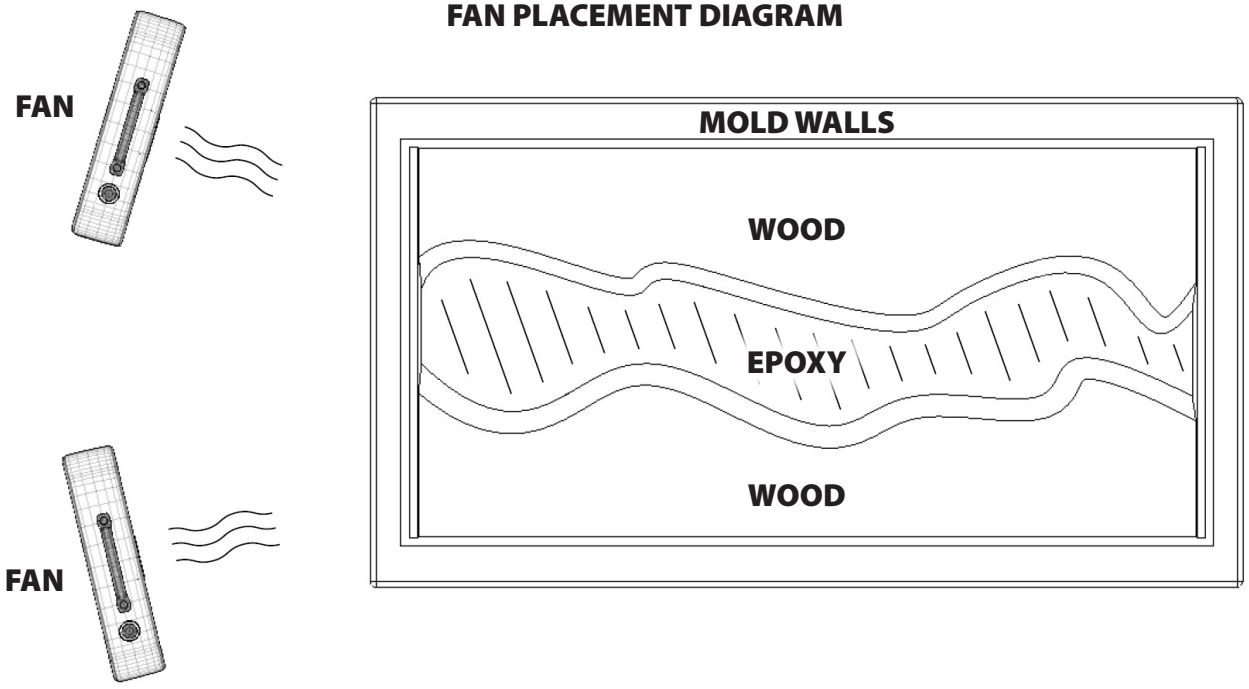
1. Select piece(s) of wood that you would like to make a table with.
2. Determine the layout and resin inlay design.
3. Mill live edge wood to desired length and thickness, ensuring the thickness is slightly oversized.
4. Prepare melamine sheet with end dam walls.
5. Clamp and or adhere live edge wood to melamine board with mechanical clamps and/or silicone caulk. Seal end dams to melamine and ends of live edge boards using silicone caulk.
6. Thoroughly clean pour cavity area to prepare for sealing of the wood
7. Apply a thin-coating of EpoxAcast™ 690 or Tarbender™ to surfaces of the live edge wood that will make up the pour cavity and allow to fully cure. Reapply if needed to seal porous or damaged areas of wood
8. Take several measurements across the pour cavity in multiple locations to find the average width of the pour cavity area.
9. Take the length of your piece and multiple that by the number you found above and also multiply by the desired pour depth.
10. Take your final number and divide by the Specific Volume of the epoxy, 25 for EpoxAcast™ 690, 25.7 for EpoxAcast™ 692. You now know the estimated material you need in pounds.
11. Prepare your area with fans to blow down to and across the length of table. See **FAN PLACEMENT DIAGRAM** on page 2. Adjust your ambient temperature to 70°F/21°C.
12. Pre-mix, measure and mix materials per the technical bulletin.
13. Pour epoxy resin into the river section slowly and allow the material to seek its own level. Follow directions for thickness per technical bulletin. After material finds its own level you may gently use a propane torch or heat gun to remove surface bubbles.
14. Monitor temperature using a contactless thermometer to ensure the material does not overheat. Check for any leaks and seal with Sculptex™ modeling clay or similar.
15. Allow material to set up and return to room temperature before tuning off fans.
16. Allow material to harden so it does not deform when a finger nail is pressed into surface.
17. Remove from the mold box and prepare to finish to desired thickness and sand and polish.
18. Sand and polish EpoxAcast™ 690 or 692 per the instructions on page 2

Sanding and Polishing EpoxAcast™ 690 or 692

1. **Planing wood/epoxy to achieve flat surface – what to take off the top?** We advise a minimal cut of 1/32" (0.08 cm) or less. Be careful; if you cut too thick, the epoxy will grab the planing knives and throw the piece. A thicker cut can also generate excessive heat that will affect the surface finish. For larger surfaces a router sled can be another option.
2. **Surface Imperfections After Machining -** After machining the surface flat, any surface imperfections can be mitigated by doing a skim coat of EpoxAcast™ 690 over the top of the table. Follow Technical Bulletin and allow to cure before sanding and polishing.
3. **Drum Sanding –** Drum sanding can even out the top or both sides of the piece, depending on the machine. Feeds should be quick with grits of less than 120. Finer grit paper of 220 or higher should be used at slower speeds. Sanded depth will vary, but 1/64 - 1/32" (0.04 – 0.08 cm) per pass should be the maximum. Be careful to make sure sandpaper is clean and free of material as the epoxy can leave a residue on the paper and gouge the material on the next pass.
4. **Random Orbit Sanding – a)** Ase a step up dry sanding method beginning at 60 open grit and proceeding in finer open grit paper increments; 80, 100, 120, 180, 240, 320, 400, 600, 800, 1000. **b)** Wet sand using closed face or solid paper at medium speed beginning at 1200 grit and proceeding with finer closed grit paper of 1500 and 2000. Clean all residue between sanding steps. **c)** Wet sand at low rpm using 3000 & 4000 foam backed sanding pads, using plenty of water at all times. Material should be clear and slightly hazed. Do not over work or overheat.
5. **Polishing –** use a variable speed, 2000 rpm polisher. High quality plastic polishes are formulated to be used at specific speeds. We recommend Mirka Polarshine® 10 medium-coarse compound. At each step, taking time to polish and keep pads lubricated with Mirka compound. a) Using a lamb's wool polishing pad, buff at 2000 rpm until surface imperfections disappear, b) using a 3000 grit foam polishing pad, buff at 1800 rpm and c) using a 4000 grit foam polishing pad, buff at 1600 rpm.
6. **Finishing –** apply Mirka Polarshine®-UF3 using a clean, new 3000 grit foam applicator pad at 1500 rpm. Buff surface to a brilliant finish.

When machining, sanding or polishing fully cured epoxy, wear a NIOSH approved respirator, protective eyewear and clothing to minimize skin contact. Results may vary depending on how closely directions are followed, quality of equipment and aptitude/experience of artisan. In all cases, Smooth-On is not responsible for the outcome due to the above variables. If results are in question, we recommend testing on a small test epoxy casting before scaling up to a large project. For more information, watch the videos at **smooth-on.com/epoxytables**

FAN PLACEMENT DIAGRAM



Call Us Anytime With Questions About Your Application.

Toll-free: **(800) 381-1733** Fax: **(610) 252-6200**

The new **www.smooth-on.com** is loaded with information about mold making, casting and more.