



# LIONGRIP CRYSTAL

## GUIDELINES FOR RIVER TABLE FABRICATION

Equipment required for the project	
1	Perfectly leveled work station
2	Measuring/mixing containers (4) and Mixing sticks (mixing has to be done at low speed to prevent air introduction)
3	Paint brushes
4	Plastic notched trowel
5	Clamps (quantity and dimensions will vary from project to project)
6	Belt sander
7	Sandpaper (60 to 400 grit is recommended)
8	Orbital polishing machine and Polishing compound (according to desired finish)
9	Flash release tape
10	Hot glue gun (or silicone sealant with caulking gun)
11	Heat gun or blow torch
12	Measuring tape
13	Wood chisel
14	Circular saw
15	Cloths and cleaning agent (eg. RCCAR)

Important to remember	
1	Part A: the resin part of the mix
2	Part B: the hardener part of the mix
3	Recoating window: period during which the resin is cured but still tacky
4	Mix: combination of Part A and Part B
5	Resin overheating: the mix creates an exothermic reaction, the intensity of which is influenced by the thickness of the mix. The heat produced by the reaction can degrade the resin if too intense.
6	Mixing is crucial for the resin. Insufficient mixing can alter the resin's properties or prevent said resin from curing (it is critical to mix for several minutes making sure to scrape off the edges from time to time)
7	Always read the technical and safety datasheets before using the products

<b>Lumber preparation</b>	
1	Select a dry piece of lumber for your project
2	Make sure the piece is flat on both sides (usually, the retailer can take care of this for you)
3	Cut the piece in half in the longitudinal direction (usually, the retailer can take care of this for you)
4	Remove the bark (as it weakens the piece's integrity) and smooth out the surface with sandpaper
<b>Filling of holes, cracks and knots</b>	
5	Using flash release tape, seal the edges of the pieces (only if edges are cracked)
6	Mix a small quantity of clear resin and pour it in each hole, crack and knot to fill any gap
7	Once all the gaps have been sealed, let the resin cure (refer to Technical Datasheets for cure time)
8	Once the resin is cured, use a belt sander to remove high spots
<b>Construction of the casting mold</b>	
9	Align the 2 pieces of lumber face to face (live edge towards the inside) to match the required design
10	Build a barrier around the lumber and underneath it as well. Melamine panels or reinforced polypropylene sheets will work well. The mold must be sturdy and perfectly sealed (can be sealed with hot glue or silicone)
11	Upon completion of the mold, remove the pieces of lumber and reserve them for later
<b>Calculation of the amount of resin required for the project</b>	
12	<p>The pour is executed in 2 different stages: the main pour and the finishing layer (each stage will require a different quantity of resin). The formula to estimate the volume is:</p> <p>Length x Height x average Width of the gap between the 2 pieces</p> <p>(remember that <math>1 \text{ in}^3 = 1 \text{ cm}^3 = 16 \text{ ml} = 0,55 \text{ oz}</math>)</p>
<b>Main pour</b>	
13	Before pouring, make sure the lumber pieces are clean and free of dust
14	Using the pigment, colour the entire Part A (resin) to ensure uniformity throughout all pours
15	Calculate the volume of resin necessary to allow the resin to be flush with the top edge of the lumber. It is possible that the pour requires multiple stages (make sure to comply to the maximum thickness per layer to prevent overheating) if the piece is very thick.
16	Prepare a resin mix according to the calculated quantity
17	Pour a quantity of resin in the mold to achieve full coverage of the base and reposition the pieces of lumber in their initial position inside the mold.
18	Using a brush, apply a layer of resin on every visible surface of wood
19	Secure the pieces of lumber to the mold using clamps (if you are using shims or blocks to help with the clamping process, those should be wrapped in flash release tape prior to installation)
20	The clamping will cause the resin to squeeze out; this can be redirected towards the center gap.

21	Once the squeeze out is relocated to the center gap, pour the rest of the resin and remove the bubbles (if necessary) with a heat gun or a blow torch
22	Let the resin dry until full cure (refer to technical datasheet for time of cure)
***	In the event that the pour has to be performed in multiple stages, repeat steps 16,21,22
<b>Finishing</b>	
23	Once the resin is cured, proceed to demolding
24	Sand the surface and the edges of the piece in order to achieve a flat and uniform finish
25	Remove any dust or debris
26	Prepare a clear resin mix that will allow for a 1 mm coat
27	Pour the resin and spread it evenly throughout the surface and on the edges
28	If necessary, remove the bubbles using a heat gun or a blow torch
29	Let the resin dry until full cure (refer to technical datasheet for time of cure)
***	If needed, sand and polish to achieve the desired finish once the top coat is cured