Australian Made NORGLASS Specialty Finishes Australian Owned

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Jan 2023

INFORMATION GUIDE

MAKING A RIVER TABLE USING LIQUID GLASS

Preparation:

Read our "Using Liquid Glass Information Guide" on the Norglass website **norglass.com.au** and take a look at our online tutorial which will run you through these steps. Practice with some smaller pieces before doing a major work.

Making a mould tray:

For the base of the mould, we use a melamine coated board or an mdf sheet covered with packaging tape. The frame can be made with either melamine board, builders ply or lengths of timber which again are lined with packaging tape to act as a release agent. The joints between the base and sides can be sealed with hot melt glue or silicone (**silicone must be dry before any resin pouring takes place**). This is to stop the Liquid Glass penetrating into the joint and gluing the tray to the timber of the river table.

Vacuum clean the work area to keep dust out of the resin before mixing the Liquid Glass, and cover the surrounding area with plastic drop sheets to make the clean-up process easier.

Working out the quantity of resin required:

When the timber mould is made, place the timber inside it and calculate the volume of resin needed to fill the voids, this can be done by measuring the length, the average width and the depth of the river. To work out the average width of the pour, Norglass recommend taking measurements roughly every 10 cm along the projected river.

Once you have taken all of your measurements, add them all together and then divide by the number of measurements you made. EG: 439.9 cm total, divided by 19 measurements equals 23.1 cm as your average width.

Once you have the length, average width and depth of your pour, these can be multiplied together and then converted to cubic litres (use an online calculator).
EG: (L) 120cm x (W) 18.7 cm x (D) 4cm = 8.970 litres, which can be rounded up to 9 litres total.

Preparing the timber:

Your timber should be flat and level. All bark and loose timber should be thoroughly removed. The live edge of the timber should be clean and then sanded to a 120-grit finish. The timber should then be wiped clean with fresh paper towel dampened with NORCLEAN-PLUS.

Seal the timber with a brush coat of either LIQUID GLASS or DEEP POUR LIQUID GLASS and allow to cure for a minimum 24 hours (**48-72 hrs for deep pour**). If the timber is porous, a second or third sealer coat may be required. Smaller volume mixes require a longer induction time to ensure the chemical reaction takes place.

The reason we seal the timber is to stabilise the moisture content and stop it from expanding and contracting which causes bowing and cupping, and also serves to seal the air into the timber that would have corrupted the Liquid Glass with bubbles. The sealed timber should then be lightly sanded with 240 grit sand paper and cleaned with NORCLEAN-PLUS. Pay careful mind not to sand back to bare timber. **(When sanding Norglass encourages the use of a P2 safety mask)**

Once sanded and cleaned the timber can now be placed in the tray and secured. The timber can be clamped down to the base to avoid resin seeping underneath the timber. Spacing blocks must also be lined with packaging tape to stop the Liquid glass from gluing the timbers together.

Mixing the resin:

Please note that Norglass recommend using both LIQUID GLASS and DEEP POUR LIQUID GLASS in a well-ventilated temperature-controlled environment where the maximum temperature should be 25 degrees Celsius. Working in warmer environments can shorten the working time of both resin systems.

For LIQUID GLASS and DEEP POUR LIQUID GLASS strictly adhere to the mix ratio of 2 parts base and 1 part hardener, as failing to do so will result in a soft or sticky, unworkable finish. Mix in a clean plastic container thoroughly with a broad flat paddle, scraping the sides and bottom of the mixing container using a gentle scooping motion. Initially the combination will appear cloudy, stir for 5 minutes then transfer into another clean plastic container and stir for another 5 minutes, the mix should now appear clear. Liquid colourants, Epoxy pigment pastes, Metallic powders or Glitter can now be added into the resin mix if you want to. Do not use paints, water based dyes or stains in LIQUID GLASS or DEEP POUR LIQUID GLASS.

Now the base and hardener are thoroughly mixed together they need to chemically combine. The mixed resin needs an induction period where you wait for the chemical reaction to take place. For mixes 150ml or less, wait 30 minutes or more, for 750ml or above allow 10 minutes, the mix will start to warm indicating the reaction is taking place. This will also allow the resin to degas allowing bubbles caused from mixing to rise to the surface which can be popped by a heat gun before pouring begins. **Induction must occur before the mix is used.**

Working Temperature:

The ideal working temperature for both LIQUID GLASS and DEEP POUR LIQUID GLASS is between 15°C -25°C. For very large projects ie: dining room tables temperatures **should not** exceed 20°C.
Both epoxy resin systems work on an exothermic reaction, meaning that the resin will slowly generate its own heat to cure. Working in warmer conditions will accelerate the curing process which can lead to overheating of the resin. Overheating can lead to much faster curing times and in extreme events the resin system failing. Examples of a failure would be badly distorted resin or the resin completely cracking.

Pouring:

LIQUID GLASS can be poured to a maximum depth of 20mm, whereas DEEP POUR LIQUID GLASS can be poured to a maximum depth of 50mm. Large volume resin work should be done by an experienced person. If you are a beginner multiple pours are suggested to avoid mishaps and failed castings. The ideal temperature for resin casting is 15^{o}C - 25^{o}C. Like all epoxies, LIQUID GLASS and DEEP POUR LIQUID GLASS will not cure below 10^{o}C.

Resin pouring should be done in a temperature-controlled room where the room temperature will not exceed 25 degrees Celsius. For larger volume resin work Norglass **STRONLGLY** recommend the use of air conditioning systems and, or fans to help keep the resin cool and avoid overheating.
If you are unsure on how to get the ideal working temperature or cannot achieve the ideal working temperature, please contact **NORGLASS** directly for advice.

Curing time:

The properties for curing are calculated at a constant 20°C. at temperatures above 25 degrees Celsius these times will be shorter.

LIQUID GLASS: 90 percent cured after 24 Hours @ 20°C, full cure 7 days.
If using metallic powders and you wish to create a nice pattern in the resin this can be done approximately 1-2 hours after the resin has been poured. The resin should be a thick honey like consistency.

DEEP POUR LIQUID GLASS: 90 percent cured after 72 Hours @ 20°C, full cure 7 days.
If using metallic powders and you wish to create a nice pattern in the resin this can be done approximately 8-12 hours after the resin has been poured. The resin should be a thick honey like consistency.

Clean Up:

Norglass recommends wearing rubber gloves while using Liquid Glass products, however to remove wet resin from your hand's, **ONLY** use warm soapy water.

To remove resin from tools or spills use Norglass EPOXY THINNERS. If either epoxy system has begun to cure use a heat gun to soften the epoxy, and then a scraper to remove it. Once either resin system has fully cured sanding will be required.

Finishing:

Take the cured job out of the mould, trim away any sharp edges with circular saw, a router or power sander, **ensure to wear a P2 rated safety mask**. Sand any surface imperfections away, starting with 80 grit paper, then onto 120, then 180, and finish at either 240-320 grit sand paper. Clean again with NORCLEAN-PLUS.

When a long lasting, scratch resistant, food grade finish is required, use NORTHANE CLEAR, this is available in Gloss or Satin. This is a food grade chemical and alcohol resistant coating, making it great for use on bar tops, vanity units and coffee tables (hot coffee cups wont damage the surface).

Important Note:
All epoxy resins will eventually yellow when exposed to U/V rays and they are best only used indoors.

Handy Hints:

- A heat gun can be used to remove any air bubbles that form inside your resin casting. Make light passing motions and do not concentrate the heat in one area for too long, this will avoid over heating the resin system.
- Using a paddle pop stick is great to help create fun patterns in resin that has metallic or mica powders. Light drawing patterns should be used to avoid reintroducing air bubbles into your resin pour. Any bubbles can be removed with a heat gun.
- DEEP POUR LIQUID GLASS will very slightly shrink back once cured. To avoid having to refill any gaps from shrinkage you can run a line of hot glue or clear silicone along each side of your river pour. This will act as a dam, so you can slightly overfill the resin. Once cured sand back the overfill to a flat (flush) finish.
- Before casting any resin, it is a good idea to set your project up so it is longer and wider than its final dimensions. This way you can trim and cut you project and have a bit of leeway in case any mistakes are made.

- If your timber slab has any cracks or knot holes that travel right through to the bottom face of your slab, covering the bottom with clear plastic packing tape is a great way to create a seal. This means the resin sits inside the void you're trying to fill, instead of draining away underneath the slab.
- On colder days, a useful way to help prevent air bubbles being trapped in your resin pour is to warm the **BASE** resin up only. Simply put your base container inside a plastic bag and sit inside a bucket of warm water for 5-10 minutes. (Ensure base container is dry and water free before opening and pouring).

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River table made by Mark (Sticks) Croker – Sussex inlet NSW