Australian Made NORGLASS Specialty Finishes Australian Owned

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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 ;-

We use melamine coated board, covered with builders plastic or packaging tape. The timber frame has packaging tape on it to again act as a release agent. The joints between the base and sides can be sealed with hot melt glue 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 area with plastic drop sheets to make the clean-up process easier.

Working out the quantity of required resin required ;-

When the timber mould is made, place the timber inside it and calculate the volume needed to fill the voids, this can be done by pouring dry rice into the area to be filled from a measuring jug. One litre of Liquid Glass will fill 1 square metre, 1mm thick, as it doesn't shrink, for every litre of void to be filled, 1 litre of Liquid Glass will be required. When the volume is known, the rice can be removed from the tray and the tray and timber cleaned with Norclean-Plus before it is completely sealed.

Preparing the timber ;-

Seal the timber with a brush coat of the Liquid Glass and allow to cure for a minimum 24hours. 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 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.

Application: -

Colourants, pigment paste, powders or glitter should be added into the base material before the hardener is added, to allow time to blend without having the mix cure during blending. The intensity of colour will be reduced when the hardener is added.
Do not use paints, dies or stains in Liquid Glass.

Mixing the resin:-

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 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 3 minutes rest for 4 minutes and stir for another 3 minutes, the mix should now appear clear.
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, 30 minutes or more, 750ml mixes allow 10 minutes, the mix will start to warm indicating the reaction is taking place.
Induction must occur before the mix is used.
Do not remove the mixed resin from your stirring paddle as this paddle can now become a testing reference to check touch dry, re-pour and curing times, the thinner coating on the paddle should take a longer time to achieve these reference points.

Working Temperature: -

The ideal working temperature is 25^{o}C - 27^{o}C, this relates to the timber temperature as this is the temperature that the resin is curing. At 25^{o}C the resin mix will be workable for another 1-2 hours. Bubbles introduced to the mix can now be removed using a hot air gun (paint stripping gun) prior to the pouring. The heat softens the resin (it becomes more liquid) and the breeze will break the surface tension allowing the bubbles to disappear.
It is also important to not concentrate the heat over one point as this can accelerate the cure at that point and the job could then cure unevenly.
Hair driers do not supply enough heat and blow too fiercely, blow torches heat well, but do not blow effectively, so don't use these.

Pouring :-

The ideal temperature is 25^{o}C - 27^{o}C, air temperature and timber temperature, the timber temperature is the temperature at which the resin will cure.
Liquid Glass like all epoxies will not cure below 10^{o}C. The room can be heated, but keep the heat source away from the project, otherwise parts of the resin will cure at different times to the other leaving a mottled finish, do not use extra hardener as this will have an opposite effect and leave the resin rubbery.
With the sealed timber fastened into the tray, Liquid Glass can now be poured up to 20mm in depth. Coats can be applied in layers 24 hours apart to achieve the depth required. As Liquid glass generates more heat with greater volumes, limiting the amount poured each time reduces the risk

of the timber expanding and shrinking back, causing cracking in the resin or splintering of the timber.
Temperatures generated can also cause discolouration of embedded organic objects, thin coats of Liquid Glass on these items prior to embedding will reduce the risk of damaging them. If any bubbles appear the heat gun can again be used to remove them.
To protect the pour from dust and insects use MDF board or perspex suspended over the job.

Curing time: -

The properties for curing are calculated at a constant 20^{o}C. At 25^{o}C these times will be shorter.
When mixed, Liquid Glass will generate heat, the bigger the mix the faster and the greater the heat generated.
The pot life of a 750ml mix will be 20-30 minutes when in mass, if that volume is spread into a shallow tray then 40-45 minutes.
Surface touch cure 1-2 hours, the resin is still workable.
90% cured in 24 hours, the product can be handled.
Fully cured after 7 days.

Clean Up: -

To remove wet liquid Glass from your hands use warm soapy water or easier to just wear rubber gloves, to remove Liquid Glass from tools or spills use Norglass Epoxy Thinner. If the Liquid Glass has begun to cure use a heat gun to soften the epoxy and a scraper to remove it. Once the liquid glass has cured sanding will be required.

Finishing: -

Take the cured job out of the mould, trim away any sharp edges with a router or power sander, sand any surface imperfections away starting with 120g then 180g and finishing with 400g non clogging 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).

Note: -

Epoxy resins will yellow when exposed to U/V rays and they are best only used indoors.

River tables made by Mark (Sticks) Croker - Sussex inlet NSW

For more information on our products and “How to” guides visit our website at: www.norglass.com.au