

CLEAR CASTING RESIN GUIDELINES

PERSONAL PROTECTION

Please familiarise yourself with the Material Safety Data Sheets before starting. Personal protection should be worn at all times, safety goggles, gloves, apron and overalls. If you have any queries please contact us on 028 41753738.

MATERIALS

Clear casting resin is supplied with the following materials

1. Resin
2. Catalyst / Hardener

You will need a mould and items you wish to embed, a variety of grits wet/dry sandpaper, water, compounding mod and Farecla compounding pastes, mould release.

WORKING AREA

Casting should be done at warm temperatures ideally around 20°C, as this ensures the resin will cure correctly. Resin will not cure adequately below 15°C, and at temperatures above 30°C, they will cure too quickly. Ensure that the area is well ventilated.

MIXING CATALYST

Clear casting resin has a catalyst demand of 1.5%

All resins require the addition of catalyst (hardener) to initiate the curing process. Use a safety dispenser to add 15ml of catalyst per kilogram of clear casting resin. Stir thoroughly. The hardening process begins immediately, so only add catalyst to a working quantity. It is recommended that no more than 2kg of resin is mixed at a time. When casting using resin, it is recommended that it be done in layers of no more than 20mm.

Once catalysed the resin gradually cures, taking on a jelly-like consistency in about 20-30 minutes before becoming hard in about 40 minutes at room temperature (about 20°C). The curing process generates heat within the resins. Too much catalyst or large volumes of resins increases this heat. Over catalysing the resin can cause the material to overheat and sometimes cause a fire. In the case of clear casting resin, too much catalyst can alter the clarity of the resin so 1.5% is recommended for a water clear finish. 1.5% is considered a relatively slow mix so it will take extra time to cure.

Mix the resin slowly after adding the catalyst to avoid adding air bubbles to the resin. For best results add the correct ratio of resin to catalyst. Dispensers or syringes are advised for accuracy.

INSTRUCTIONS FOR EMBEDDING USING CLEAR CASTING RESIN

One of the main uses for clear casting resin is embedding. This involves casting an item in the resin usually in a mould to create the resin shape. Depending on the mould you are using some form of mould release may be necessary.

When casting or embedding an item, think about the finished product before you start. In most cases if you are using a mould, the first layer will be the top of the product.

With this in mind, measure out enough resin to add a thin layer (approx. 5mm) to the mould. Add catalyst to the resin as directed above and stir slowly to reduce air bubbles. Slowly pour the catalysed resin into the mould. Check for bubbles and remove with stirring stick. Leave resin to gel. This should take approximately 40 minutes in a warm room. Use the stirring stick to check if the resin has cured. (This should never be done with a finger, as this will leave marks on the resin!)

Once the resin has gelled, the items to be encapsulated can be arranged in the mould ensuring that nothing touches the side wall of the mould. Again, ensure the items are facing the correct direction, remembering that the top of the product will be facing the bottom of the mould. Measure out enough resin to fill the mould. For larger moulds the resin should be added in layers of 20mm to avoid the resin over heating as it cures.

When adding the final layer of resin to the mould ensuring that the castings are cleared by about 5mm. Again, use a wooden mixing stick to remove any air bubbles. The resin may shrink away from the sides as it cures. If this happens, more resin can be added but will cure rapidly due to the heat.

After the resin has fully cured (this normally takes about 24 hours), it can be carefully removed from the mould. The encapsulation needs to be sanded and compounded to give the surface a good shine and to remove the ripple effect that is produced as the product is curing.

To finish the product to a shine, sand the mould down starting with a course grade of wet dry sandpaper and working up to fine grit until smooth and the ripple effect has been smoothed out.

After sanding with 1000 grit sandpaper, the encapsulation will need to be compounded. Use a compounding mop and Farecla Paste to compound the encapsulation to a shine. The Farecla paste should be dabbed onto the resin. Wet the mop head and buff the product to a shine. When compounding, start with 200 grade and increase to 500 grade and finish off the pro finish glaze to achieve the perfect finish.