Water Clear Casting Resin

THESE MATERIALS ARE UNSUITABLE FOR USE BY CHILDREN!

Just about anything can be embedded in clear casting resin. Paper weights and other ornaments,pendants, key rings. Flowers, insects etc; it is also widely used in the production of costume jewellery.

This resin is supplied as a two-part system – The catalyst is added to the resin at a ratio of 1:100 enabling the resin to 'cure' to a hard plastic state.

Health & Safety

This material should be used in a well-ventilated garage or workshop area. You should wear appropriate protective clothing such as gloves and safety goggles. Please read all safety information and keep out of reach of children.

Moulds

We supply moulds specifically designed for clear casting, but you can also use polythene cartons, often used as freezer food containers in shops. Polystyrene containers cannot be used. Best idea is to pour a little catalysed Resin into pot and leave it to cure, if it remains stable and does not melt you will be able to use as a mould.

Preparation

Biological specimens-insects and other small animals contain natural oils which must be removed before embedding. This can be done by dipping in acetone solvent.

Method + technique

Pour a little resin into a mixing cup and leave to allow air bubbles to rise. By far the biggest single cause of air bubbles is in the mixing, careful mixing will give good results. If you are using fillers, be aware that powdered materials contain air. Carefully stir the required amount of catalyst into the resin. The normal working proportion of catalyst is 1% by weight (i.e. 10ml catalyst to 1 lt resin) this can be increased to 2% for very small quantities of resin, or in low working temperatures. Do not use too much catalyst, which may result in the casting becoming cracked or discoloured. Pour the resin into the mould to form a base layer, cover the mould to protect from dust, and leave that to harden. Approx' 40 minutes at 20ºC, it will have reached a firm jelly-like consistency. Then place the specimen on the base layer. Very light specimens will tend to float and need to be glued to the base layer with a drop of resin. Mix up a further quantity of resin and pour around the specimen. In a very small casting the specimen can be covered in one pouring, but it is generally better to build up the casting in a series of layers. A large casting done in one pouring may generate too much heat and crack. Metal and solid objects generally, tend to expand or contract at a different rate from the resin, which can result in a crazed effect. When the final layer of resin has gelled (set firm), cover it with a sheet of cellophane or release film to exclude air, otherwise it may set with a tacky surface. When fully hardened, the casting can be removed from the mould.

Finishing

Any surface tack can be removed with neat washing-liquid, followed by a rinse in warm water. This should not be done until the resin is fully cured (about 5 - 7 days). After complete cure the casting can be shaped further with saw, file or sander to cut roughly to shape/ size. Then use wet and dry paper, starting with a rough grade and working through to the finer grades, finally polish with compound polish.

Catalyst Addition Chart	
Resin	**Catalyst**
50ml	0.5ml
100ml	1ml
150ml	1.5ml
200ml	2ml
500ml	5ml
1 Litre	10ml

Basic Guidelines:

Add the required amount of catalyst to the measured amount of resin and pour into the mould (see our reusable moulds section) to form the base layer, when this reaches to a firm consistency you can place the specimen on it and pour a small amount of resin around it, bearing in mind a very light specimen will want to float so you will need to glue

it down with a very small amount of resin.
In very small castings it is quite common to cast in one hit with very good results. Please do not forget that large castings will generate an exothermic reaction (heat build up), which may crack and discolour.
When you have finished casting the final layer wait until it has gelled (starting to set), then cover with a layer of cellophane to exclude the air, otherwise it may set with a tacky surface.
When the casting is hardened, best to leave overnight, you can then remove it from the mould and polished if necessary.

You can design many different effects with Water Clear Casting Resin:
If you are casting in stages the base layer can be pigmented (see our Transparent pigment section) a different colour, and the subsequent layers clear or a variety of colours. You will need only a very tiny amount of pigment for an effective colouring, experimentation is the key to success, never use more than 5% by volume as this will effect the curing process, in many cases 1% is adequate in clear casting.

Preparation before Clear Casting:

Flowers, leaves ect:
These specimens must be thoroughly dried first. This can be achieved by placing in a container and filling with either silica gel crystals or dry fine silver sand, then leaving to dry for several days in a warm area. After the drying out they should be sealed with polyurethane varnish or hair lacquer, bearing in mind each different plant may take longer to dry than others, the water content taken from a flower may cause it to fade also. It is sometimes a good idea to dip the specimen in uncatalysed resin and leave overnight to drain off.

Insects:
You must remove all the natural oils present by dipping into a grease solvent such as Acetone (please be aware the Acetone is highly flammable).
Leave the specimen to dry completely and dip in uncatalysed resin, then leave overnight to drain.

Paper items:
Seal with a thin coat of polyurethane varnish or hair lacquer.

Medals, Coins, Stones and Shells:
Wash thoroughly to remove dirt and grease then also dip in uncatalysed resin, then leave overnight to drain.