

Instructions for use of the Resin Casting System from Hobby Holidays

Precautions

These are all chemicals, and as such should be treated with respect.

Always, ALWAYS wear rubber gloves. We sell packs of 10 pairs, or go to the chemists and buy a box of 100.

Do not allow children to be involved

Cover the table with a plastic sheet. (Cut up a bin liner)

Wear old clothes. Until you get used to what you are doing and get set up it can be a bit messy.

Requirements - Essential

RTV Moulding compound	Available from Hobby Holidays
RTV Catalyst	Available from Hobby Holidays
Resin Compound A	Available from Hobby Holidays
Resin Compound B	Available from Hobby Holidays
Plastic cups to measure and mix in	Available from Hobby Holidays
Wooden coffee stirrers	Available from Hobby Holidays
Thin Rubber Gloves (Surgical)	Available from Hobby Holidays
Paper Towels	
A level working table	

Requirements – Nice to have

Measuring jugs
Small electronic scales
Cheap Furniture polish.
Clear plastic packaging.

The Pattern

The rubber mould will replicate every scratch, file mark, moulding mark etc. So the better the finish you achieve on the pattern, the better the finish on the final casting will be. Small undercuts are acceptable but don't over do it. The following is an example. A PO wagon side and end should be made with all the detail you could possibly want. Glue down to a thick sheet of plasticard. (This needs to be done as when removing the rubber mould a fair amount of force is needed.) Space any parts to be cast about 5mm apart. (To give the mould a reasonable wall thickness) . Cut some plasticard strip 5mm wider than the height of the highest part of your pattern. Use this to make a wall around the wagon sides so there is a 10mm gap all the way round. (Lego blocks will not do. The RTV compound will find the smallest of gaps. Hence why the wall must effectively be glued all the way round- i.e. WATER TIGHT)

The Mould

Mix 5% by weight of the catalyst to the RTV compound. You can only guess the amount of the mix needed but the ratio is quite important. This is where some small weighing scales help. However 5% by volume will do. Mix thoroughly for a few mins, you have plenty of time. Tip the pattern (fixed to the sheet) slightly and pour the RTV mix into the lowest point and allow the mix to push any air out. Level the pattern out as the mix rises up the wall. Fill up to the top and allow to set (Full 24 hours). Do not use heat to speed up the cure. It will damage the mould. When set gradually peel the rubber away from the walls, then the base, then the pattern itself.

The Casting

The 2 parts of the resin are quite tolerant as to the mix ratio. No mould release agent is normally required as the mould is a form of Silicone. At each casting session a little of the silicone is drawn from the mould which slowly hardens the mould. This takes about 20+ castings to happen. You need 50% part A to 50% part B by weight but by volume is perfectly acceptable. Pour a small amount of A into one cup marked A (the amount should be half of what you ultimately need) then pour the same amount of part B into another cup marked B. Put the 2 cups side by side so you can see they contain the same amount. Take a 3rd cup and pour both A & B quickly into this cup, mix with a stick for 30 secs max and pour into the mould, again starting with the mould at a slight angle and pouring in at the lowest point, pushing the air out as you go. Work quickly as you only have another 60 secs before the resin starts to set. Finish with a strip of plastic packaging to level out the resin on the top. This clear plastic strip is the sort used for curtain poles, Shirt boxes etc. Sometimes this plastic starts to stick and should be sprayed with cheap furniture polish. Avoid using the polish on the mould as this can be difficult to clean off the casting and cause problems with painting. Retain the cups marked A & B for the next casting. The mixing cup should either be thrown away or if possible the mixed/set resin broken out.

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