

# Plaster Mould Making Notes

## 1 PLASTER MOULD MAKING BASICS:

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Plaster is a casting material used to make solid forms using moulds. Plaster starts as a dry powder. When the powder is added to water it begins a chemical transformation that results in a solid form. The plaster turns from a liquid into a solid within 15 minutes but can take up to 24 hours to set completely. After setting, the plaster mould still contains water and can take up to a week to dry out.

## 2 SAFETY

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- Mix plaster in a bucket in a well-ventilated area such as the courtyard outside the 3D media studio.
- Always wear a dust mask when mixing to avoid inhalation.

## MIXING RATIO

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- The ratio of water to plaster is always written on the packet in the instruction section.
- Plaster must always be added to water not the other way around.
- Generally, it is 1 kg of plaster to 700 ml of water.
- 1 kg of plaster will fill approximately 1L (1000cm<sup>3</sup>) of volume in a mould.

PLASTER	WATER
1KG	0.7L
2KG	1.4L
3KG	2.1L
3.5KG	2.45L
4KG	2.8L
5KG	3.5L

Ratio Examples

## MOULD RELEASE

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- Mould release can assist with removing your plaster from its formwork by providing a non-stick barrier.
- Check with the technician or tutor if your work requires mould release, generally soft soap is the appropriate product for plaster.
- Polypropylene does not stick to plaster.

## 3 MIXING PLASTER

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1. Calculate and measure out required plaster and water.
2. Add plaster to water slowly and evenly across the entire surface of the water.  
Do not mix or stir until all of the plaster is in the water. Leave it to settle for a minute or two.
3. Stir the mix, checking for lumps. This should be a maximum of five minutes, as the plaster will start to set and thicken.  
*Plaster can be mixed by hand or by using a paint mixing attachment on a drill. (This is only efficient for large quantities such as 8 kg or more, as the clean up time for the mixer can be longer than the entire process.)*
4. Check the mixture by hand making sure all the lumps are out of the plaster.
5. Agitate the plaster gently to bring bubbles to the surface.
  - a. *Optional: Spray with a mist of 50% Methylated spirits and 50% water. This will dissipate the bubbles.*
6. Pour the plaster into your mould.  
The level may drop slightly as the plaster moves into all areas of the model so check it again before finishing to see if you need to top up the mould.
7. Once the liquid plaster is in the mould, gently agitate the mould or the table the mould is sitting on to get any air bubbles to rise to the surface.
  - a. *Optional: Again spray with a mist of 50% Methylated spirits and 50% water. This will dissipate any new bubbles that have risen to the surface.*

## 4 CLEAN UP

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1. Pour any excess plaster into the flat white trays provided.
2. Wash the mixing bucket in the outside sink.
3. Leave the buckets clean and stacked under tables outside.

**Attention:** Never pour plaster into the sinks.

No washing plaster buckets inside.

Never pour plaster into the sinks in homebase or bathrooms – it will block the sink.