

CHROMATIC (COLOUR CHANGE) ALGINATE

PINK FORMULA 20-02-13

IMPRESSION MOULDING MATERIAL

GENERAL DIRECTIONS FOR MIXING AND USE.

1. Chromatic alginate has a pleasant dentist's waiting room smell. It tastes like a mild brand of toothpaste. It is by definition non-allergic as it has to be used safely in patient's mouths of all ages. Alginate is also used in food manufacturing. It is easy to use because it changes colour during the mixing and setting process giving you visible notice of how much time is left to do each stage. It can be used on any part of the body including external private body parts.
2. **PRECAUTIONS:** Always with fast setting materials, this means alginate, casting plaster or plaster bandage, plan what you are going to do before you start otherwise you will get into a big mess! Prepare the area by putting down polythene to catch water and surplus materials.
3. Measure out both your materials and water.
4. If moulding hands or feet, have suitable sized polythene bag(s) or preferably used drinks cartons (top cut off) ready. Use the smallest bag or empty carton which will fit easily around object to minimise on use of powder mix. Drinks cartons are better because they stand up and are easier to handle but use more material
5. **Brief your model thoroughly – do dry runs. Fingers must not be too bent. Either pose with closed up hand or with fingers open and at rest – not curled up. If fingers are curled, you will not get rid of air pockets when casting.**
6. Wear old clothes e.g. gardening or workshop stuff or apron. Cover body parts not being moulded or strip off completely – The materials all wash off easily.
7. Have petroleum jelly available if long body hair is being moulded to and use it liberally. Experiment first: Do a test piece to get a feel for the products. **Do not grease non hairy areas** as the alginate slides off especially areas like breasts.
8. If you are using small amounts, keep bag of Alginate tightly sealed between usage.
9. The recommended water temperature for mixing is 23°C. Colder water slows setting, warmer water accelerates setting (see table below).

Temp Degrees C	Mixing Time (seconds) PINK	Approximate Working Time from start of mixing (seconds) PURPLE	Approximate Setting Time from start of mixing (seconds) WHITE
	REGULAR SET	For SMALL & MEDIUM CASTS	
21	140	130	200
23	120	120	180
25	100	110	160

11. **Mixing ratios.** Add 100g powder to 250ml to 300ml of water for hand and foot casting. This is the same as a 450g (1lb) bag of powder to 1350ml or 1.35 litres of water. Using more water means more runny but sets more slowly than chart and better for pouring into containers. Runny is o.k. when ladling into a bag but for belly bump or bum you don't want it to run off your model's body. It must stick.

Approximate quantities for indicated work

- A. 100g in a suitable small container will do for a new baby hand or foot.
- B. A full bag of 450g will do for a medium size adult hand or breast. Unenclosed areas of the body like a breast or bum also require Modroc Plaster Bandage to encase the mould otherwise it does not hold it's shape.
- C. A large male hand will require about 675g of Alginate (1.5 packets of alginate)
- D. An adult foot will require about 2 x 450g bags. The bigger the foot (container) the more alginate will be required. Remember feet vary hugely in size.
- E. A face mould requires one 450g bag PLUS 3 rolls x 8cm Modroc plaster bandage to hold the mould's shape and about 2kg casting plaster to cast the final reproduction.
- F. A full neck to crotch pregnant belly will require 4 to 5 bags but this should only be attempted after getting experience on smaller models as it is time critical and extremely demanding. 4 people are required to handle the process. It also requires 12 rolls x 15cm Modroc Plaster bandage to hold the mould in shape and about 20kg of casting plaster.

- G.** A bum cast from mid back to upper thighs requires 4 bags of alginate plus 8 rolls of Modroc for encasing the mould plus casting plaster about 10kg. Do experiment before tackling this casting and moulding process.

NOW START MIXING

First measure out the water into your container(s).

12. Get your mixing tool(s) ready: For small models an 8 inch dining knife or piece of wood or dentist's spatula is fine. If using a full bag or more, I use a decorator's mixing paddle attached to an electric drill.
13. Now quickly empty the Alginate into the container of water and beat thoroughly and vigorously until a creamy smooth mix is obtained. Material will be **start bright PINK** during mixing.
14. When the mix goes pale pink load it quickly into your moulding bag/container or start moulding onto open body part like torso. For this process you have about 2 minutes max at 23 deg C
15. In the case of hands or feet plunge limb into the container making sure it is centred so there is material all around the limb (minimum 2cm). Wiggle limb to make sure air bubbles escape.
16. When the mix starts to turn WHITE, it is setting – about 2min 30 secs. Your model must now keep still.
17. Once set (WHITE) – about 3 min 30 secs, hands and feet can be wriggled in order to let air in and break vacuum to release limb.
18. **SECURING A FACE, BUM, BELLY OR TORSO MOULD.** The model must remain in the mould until this further process is completed. Open areas like face or torso must go through a further process. This is essential to encase the shape of the moulding and hold it rigid by encasing the moulding in situ (on the body – don't move it until this is done) with at least 4 layers of Modroc Plaster Bandage. (**a separate help sheet is available for this**). A torso moulding is big and heavy so I would recommend at least 12 rolls of 15 cm Modroc to guarantee the shape will hold.
19. Where possible, Alginate impressions should be cast immediately.
20. Alginate mouldings should be stored only in a moist atmosphere of 100% relative humidity (i.e. in a polythene bag along with a damp tissue or cloth) and cast within 48 hours of taking the impression.
21. Do not store the set impression in water.
22. After each use, remaining alginate powder or plaster must be firmly sealed - watertight.
23. **CASTING:** Casting powder instructions come with the powder – experiment with the water mix. Add powder to water and bring up to thickness required. The firmer the mixture, the quicker it sets so add enough water or powder until you have the right consistency. Mix plaster thoroughly to get rid of lumps. Let it stand and stir gently for a few minutes after main mixing to get rid of bubbles

24. Usage of CASTING POWDER:

- A. Baby hands and feet. 1kg is enough for 450g of Alginate and will do about 5 hands or feet depending on age.
- B. Penis cast: 1kg should do for 2 or 3
- C. Breast cast depends on cup size – up to 2kg might be needed per breast
- D. A face cast might require 2 kg of powder (buy the 3kg bag for cost effectiveness).
- E. Adult foot: Get 3kg of casting powder.
- F. Bum cast needs at least 10kg and use polystyrene bead or block to bulk the centre out.
- G. Full torso needs 20kg of casting powder and bulk out the centre with polystyrene block from your local builder's merchant.

25. Removing Cast From Mould

When the plaster has set, gently cut and break away the alginate. Fingers are particularly vulnerable to breakage. Take great care when breaking away around fingers. Fingers can be stuck back on after drying with PVA glue

26. **STORAGE:** Store in a cool dry place and keep in an air tight container if a bag is only part used.

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