

MAKING PROSTHETICS

LIFE CAST

Latex gloves

Dust mask

Qtips for applying vaseline to eyebrows/mustaches

Spatula for mixing

Small spatula for working around nose

Burlap

Prosthetic Alginate 3 cups, ~ 8 ounces.

Plaster bandage for shell over alginate - 3 pieces, 4"x36".

Vaseline and garbage bags.

Vaseline for model on hair pre-alginate and helps clay (plasticene) stick to casting

Garbage bags for capes and stuffing in bowl to hold casting.

Plastic bowls for dipping plaster bandage in water and cradling mask for casting in Ultra-Cal.

POSITIVE CAST

Clay to plug nostrils of cast

Ultra-Cal plaster (Hydro-cal/portland cement mix) for casting ~ 4 pounds, \$5 Douglas and Sturgess

1" Chip brush

Rasps and small carving knives for shaving off imperfections on the casting

Drill with conical bit to cut keys in casting

CLAY SCULPT

Flexible metal scraper

#7 wax spatula

Sculpting rakes (helps even out surface of clay)

Ball burnisher

Small brush to go over sculpt with baby powder to soften

Naptha to soften and smooth surface

PROSTHETIC

Softer clay for forming flashing

Clay clutter and water-based clay, typical clay like from school

Warmer for clay

Alginate Lifecast Cast

Use prosthetic alginate -- longer working time than dental alginate. Get about 3 minutes working time with 90 degree water. Get little longer working time with cooler water. RT good.

1. Cover person with cape or garbage bag
2. Vaseline if desired. Alginate will easily come out of eyebrows and hair without vaseline unless person has longer hair.
3. If alginate sets up too quickly, wipe bowl out and start over
4. Mix alginate to water. Mix quickly Work quickly to get a heavy sour cream consistency
5. Apply to face, leaving nose till last

Use plaster bandages, tear instead of cutting or will ruin scissors

6. While alginate dries, cut bandages, 36" long
7. Fold bandage in half, 2 times so each bandage is 4 layers thick
8. Dip in bowl of water and wring out so not drippy.
9. Try to get straight edge to keep inside line of alginate. Do not get bandage on skin!
10. Rub bandage down to get NO AIR POCKETS.
11. Nose last
12. Dry 5-8 minutes
13. Clean bowls and tools while plaster cast dries.
14. Have model make faces to pop off alginate
15. Take another piece of bandage to close nose holes
16. Lay alginate in bowl with plastic under for support

Ultra cal positive cast

Use UltraCal for creating molds capable of being baked for foam latex prosthetics, better definition but not as strong as Hydrocal or plaster of paris. UltraCal is $\frac{3}{4}$ Hydrocal, $\frac{1}{4}$ portland cement for longer working time than Hydrocal alone. UltraCal 30 has 30 minutes working time.

1. Add UltraCal to room temp water, colder water would take longer to set up.
2. Mix thickly to a heavy sour cream consistency and apply carefully in all the spaces. Better than mixing thinner to get surfaces covered because resulting stone isn't as strong
3. Mix thoroughly to get strongest stone
4. Use small brush to get surface detail, evenly coat entire cast. STAY INSIDE ALGINATE LAYER
5. Then start at top edges, should be thick enough to stay in place and not run down. The goal is even thickness at every point.
6. Don't worry about down low areas because each layer will sag a bit.
7. While waiting for detail layer to dry, prepare burlap or sisal fiber
8. When detail coat is mud consistency, use small knife to smooth surface and close any holes

9. Coat burlap or fiber with Hydrocal and lay into mold, overlap a little, for a even coat
Stay below the top edge. Try to keep even coat over all surfaces. Can add a burlap 'rope' edge for nicer looking finish and to control thickness of outside edge.
10. Use metal shaper to smooth surface and pull up sagging material from center.
11. Leave for ~1 hour to overnight. Likes moisture. Maybe cover with bag

Clean up positive with a rasp and sharp knives

1. Cut nostril clay flush with nose
2. Shave off eyelashes and eyebrows, and imperfections

Sculpting

1. Use Soft or Medium clay. Medium will give better detail but usually need to heat a bit
2. Wipe thin layer of vaseline on positive, then wipe off. This helps clay stick to surface.
3. Apply clay with small brushes; it will get hard again almost immediately
4. Complete sculpt and brush with baby powder

Molding the prosthetic

1. Drill keys on flat parallel surface
2. Wipe on more vaseline (very slightly)
3. Add clay flashing to positive; make about 1/8" thick, leaving minimal space between flashing and clay sculpture. Bevel edges
4. Cut 'keys' where both sides of positive mold will touch.
5. Use water based clay to create prosthetic. Mount 90 Degree
6. Very little vaseline on inside surface. Could also use furniture polish or a spray release

Make the negative mold with Ultracal 30

1. Start at the bottom, cover base
2. Go up the water clay walls (prevents fiber layer from sticking out)
3. Fill from top of sculpt and allow to slough to bottom of the form
4. Repeat sisal fiber or burlap layer as before
5. Push out trapped air with metal scraper, as before