

Working with Polymer Clay & Polymer Clay Buttons

Supplies

- Clay – each brand of clay has plusses and minuses – there is a lot of personal preference, but for buttons, strength is important
 - Premo is my preference – easy to work, good color, strength is good
 - Fimo Soft, Kato clay, and Cernit are also reportedly quite good. I have used only a little so have less experience.
 - *Not recommended* - Sculpey II® - OK for craft items, but too soft and not durable enough for making buttons - very soft so good for sculptural things, not good for cane work or other techniques requiring good definition.
 - *Not recommended* - Fimo Classic or Fimo Professional (older packages just labeled Fimo) – very hard and difficult to condition – good for cane work, but difficulty makes it not a good choice for the beginner
 - New on the market is Soufflé – which also has good reviews but I haven't tested it.
- Polymer clay cutting blade (recommended) – available in rigid, flexible or wavy for special effects (or Exacto® knife or single edge razor blade)
- Work surface – a piece of paper works fine, but a ceramic tile makes a good work surface that can go right in the oven.
- Something to roll out clay
 - A pasta machine is ideal
 - Other options include an acrylic rod, straight sided glass, marble rolling pin, length of PVC pipe
- If not using a pasta machine, spacers are helpful to get a consistent depth of clay. A deck of playing cards (count out two stacks of cards the depth that you want the clay to be) works well and is adaptable. Also, Popsicle® sticks, strips of cardboard or poster board or a rolling pin with spacer rings if the spacers are not too thick. See last page for playing card equivalents to pasta machine settings

Optional Supplies

- Liquid clay® (Sculpy, Kato Clay and Fimo each have a variety) – this is liquid translucent clay that is helpful to use as a glue when laminating pieces together. Kato also has a Kato paste specifically for this purpose. Recommended when adding unbaked clay to baked clay for a stronger bond. Liquids can also be colored with oil or alcohol based pigments to make marbled patterns and special effects. Kato Clay has colored liquid clay. The liquid clays can also be used as a “top coat” but test to see if you like the results because the transparency can vary,
- Small cookie, canapé or clay cutters
- Texture sheets, rubber stamps or found objects – (piece of window screen, coarse or distinctly woven fabric, an old ornate piece of silver or jewelry, kitchen utensils, sandpaper or anything else) for textures.
- Clay extruder (like a miniature PlayDoh Fun Factory) for special effects
- Needle tool, skewer or large tapestry needle; coffee stirrers or small straws work also to make holes
- Baby wipes to clean work surface, tools & hands
- Wet/dry sandpaper – grit from 220 for shaping & smoothing, 320 for smoothing, 400, 600 or higher grit (from auto supply store) for very smooth buffed finish. I use 800 and 1200 for the best finish
- Finishes - A polymer clay specific varnish or another water-based clear varnish (Flecto Varathane seems to be the varnish of choice) or Future® floor wax (Future® is not as durable if item will be washed, but can be reapplied easily) if a finish is desired.
- Mica powders for metallic highlights on unbaked clay (PearlEx® or Perfect Pearls®), foils, and glitter or crystals for sparkle - (not all glitter or crystals are heat resistant so test)
- Acrylic paints for washes on baked clay
- Soft pastels for coloring clay

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- Alcohol inks
- New materials and techniques keep cropping up, so experiment!

Safety and Handling

- *Keep clay away from all finished wood surfaces.* Work on a Plexiglas or glass sheet, marble, Formica®, or use just a plain piece of paper and discard often. The clay will react with some wood finishes and some plastics (normally the clear kind.) *Don't ask me about the hardwood floor in my old house...*
- Clay will not dry out significantly, but will collect dust and stiffen slightly with age. Store opened clay in plastic bags or foil. Clay will also react with some plastics. If using plastic storage containers, don't let the raw clay have direct contact with the plastic unless you know it won't react. (One source said that if it is labeled recycle type 5 it is OK for clay.)
- Though many "kitchen type" tools are handy to use for clay, don't mix food and clay. Dedicate any kitchen-type tools to clay and don't use again for food.
- Follow package directions for baking temperature and check oven temperature. When baking clay, the oven should not exceed recommended temperature, **ever**. If the clay burns, nasty fumes are released - there is some controversy on if these fumes are hazardous to your health, but regardless, you won't like the smell! If concerned about any residue or fumes in your home oven, bake in a foil roasting pan, tightly sealed with foil, two foil pans clipped together with binder clips or a toaster oven dedicated to polymer clay.

Conditioning & Working with Clay

- Clay (esp. light colors) easily picks up residue from hands such as lint, dust, etc. so wash hands, don't wear a fuzzy sweater, and make sure your work surface is clean and tidy. Baby wipes or a paper towel with some rubbing alcohol are good to clean work surfaces, tools and hands of any clay residue
- *A/ways* condition clay well – knead and twist together very well until soft and very pliable. Or, flatten to ¼ inch or less and run the clay through the widest setting of the pasta machine until the clay is soft and pliable. Conditioning not only makes the clay workable, but well conditioned clay distributes the polymers evenly and makes the clay stronger.
- Try to avoid incorporating air bubbles in the clay. When the clay is baked, the air trapped in the clay will expand and mar the surface you worked so hard to obtain
- Different brands of clay can be intermixed
- Clays are available in metallic, pearlized, "stone look" and translucent varieties for special effects
- Colors can be easily intermixed to get a custom color. Regular and pearl or metallics can also be mixed to make a nearly infinite range of colors. Color is often more interesting or nuanced if mixed and not just "out of package"
- Colors change very little when baked, but most colors darken slightly. If color is critical, mix a color and bake a tiny dab to see if it will end up the color you expect.
- It takes a lot of white to make a pastel, but it takes very little black or the complementary color to darken or dull a bright clay.
- Colors can be thoroughly mixed for a consistent color or partially mixed for a marbled or mottled effect.
- To make a "repeatable" color or for future reference – roll out clays to consistent thicknesses and use a small cutter (any size or shape) to "measure" clay – i.e., 3 circles of green/2 circles of blue/ 2 white/ ½ black for a muted blue green. Mix, cut out a sample, bake, & label and you have a reference of future use.
- Inclusions can be mixed with clay for special effects – grated pieces of baked clay, embossing powders, mica powders, spices, etc.

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Shape

- Molds, texture sheets, rubber stamps or other found objects may be used to create texture. Dust lightly with cornstarch or baby powder or spray surface lightly with water or an automotive protectant (i.e., ArmorAll®) to prevent clay from sticking.
- Baked clay can be carved with any sharp tool. Use any carving tool - the Speedball gouges used to make linoleum blocks for block printing are handy. Paint or another color of clay can be used to fill the carved areas, or if using layers of clay, lower colors can be “unearthed”.
- Plain, even scrap clay can be veneered with thin slices of more complex patterns of clay
- Button “blanks” can be shaped and partially or fully baked, then covered with fresh clay using a bit of liquid clay to adhere to the baked surface.
- Hand sculpt for novelty shapes or “things” – candy corn for a Halloween jacket, bunnies for an Easter outfit for a child, acorns for a fall jacket – the sky is the limit. Think “coloring book like” simplified shapes.
- **ALWAYS** make a few spare buttons to keep on hand – remember if you lose or break one, you can’t buy another!

Using playing cards as a thickness gauge

If directions refer to pasta machine settings and you don’t have one, these are approximate equivalents in playing cards. Simply lay two stacks of cards of the appropriate number and roll clay to that thickness between the two stacks of cards. Note: Some pasta machines may have the numbers reversed, i.e. highest # as thickest setting rather than #1

#1	=	10 cards
#2	=	9 cards
#3	=	8 cards
#4	=	7 cards
#5	=	5 cards
#6	=	3 cards

Surface Designs

Just like a piece of fabric, various surface designs can be used either before or after baking – most surface designs are more durable with a finish of some type

- Before baking – try painting with alcohol inks, dusting with mica powders, soft pastels, silk screen with acrylic paints, apply foils, etc.
- Before baking there are many ways to add image transfers from a Xeroxed image... but that is not “my thing” so have not much experience with that.
- After baking – use acrylic paints, colored pencils, water based antiquing pigments, etc.

Baking

- Check oven temperature with an oven thermometer. Follow directions on the package to bake and watch temperature carefully. Do not exceed temperature on package or let clay burn. If mixing clays, test at the lower temperature.
- Normally 15 min. to 30 min. per ¼” of thickness is recommended. Under baking reduces produces a weak, brittle product since the polymers do not fully melt and fuse. Many polymer artists recommend a *much* longer baking time. As long as temperature is within range, longer baking has little effect, so err on the side of longer rather than shorter so you don’t compromise the strength through under-baking.
- Place clay on a piece of paper or cardboard to bake. Or use a scrap of fiberfill to support “funny” shapes. You can also bake in a bed of baking soda or cornstarch. If the clay is directly on a

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metal sheet, shiny spots will develop. As long as the oven stays in the right temperature range, paper or fiberfill is will not burn.

- You can also work directly on a ceramic tile and bake piece on the tile (good for when you may distort complex shapes by moving.) If baking on a tile, increase baking time since the tile insulates and absorbs heat.
- Clay can be baked numerous times – bake, add more unbaked clay, bake again, etc. For a stronger bond between baked and unbaked clay, use a small amount of liquid clay as glue.
- Use any heat-proof armature to bake buttons on if you want curvature – cut off the bottom of a soda can, use a light bulb, make a cardboard “frame”, a small heat-proof dish, a metal paint palette, etc.

Finishing

- For a very smooth surface, the clay can be sanded and buffed. Sand wet, using wet/dry sandpaper in increasingly finer grades (i.e., 220, 320, 500, 600 & higher if desired). Remove any lumps, bumps or fingerprints carefully with 220 or 320 grit before moving to higher grits, which will develop the “polish.”
- When sanded very smooth, I buff with denim – just rub against your thigh while wearing jeans. Real pros often use a muslin buffing wheel or muslin wheel on a rotary tool, but careful sanding and hand buffing gives a nice natural sheen.
- Clay can be painted or “washed” with acrylic paint to accentuate a pattern or texture.
- Krylon® metallic paint pens can be used for metallic accents
- Metallic powders (like Perfect Pearls® or PearlEx®) can add a lot of glitz or accentuate a texture. If well rubbed into raw, unbaked clay, the powder is relatively permanent. If applied after baking or for more durability, varnish. Same if using pastels.
- Water based varnish (matte, semi-gloss or gloss) can modify the finish. Flecto Varathane® is the recommended choice of many artists. Future® floor wax also gives a nice glossy finish but is not as durable in the laundry (but can be reapplied)
- Use only water based finishes (acrylic paint, water based varnish or Future® floor wax.) Oil based paint or varnish and nail polish reacts with the clay and eventually will make it soft and gummy. Same with most aerosol finishes.
- Buttons can be washed and dried (gently). **Do not dry clean.**

Button backs

- Embed wire in clay before baking. Embed flattened ends for strength. 
- Build a clay shank (which may or may not be strong enough)
- Embed or glue on the “back” of a covered button or a flat button with a shank
- Use glue-on button backs (See Sources)
- Use *gel* type (not the liquid type) cyanoacrylate glue (instant or “crazy” glues) or 5-minute two-part epoxy (my preference) to glue on findings. E6000 is another strong glue,
- Poke holes in button (but not too close together) with a needle tool, skewer, small straw, etc. before baking, or drill holes after baking. I would not use in areas of high stress. Tape toothpicks together for consistent spacing.

Button Care

- Gently wash and hang dry garments (though I have machine dried at low heat, I wouldn't recommend it)
- DO NOT dry clean
- Or make them removable – button pins, stitch an eyelet and use a cotter pin on back, removable placket (see Threads issue 42 and 45)
- If decorative only – glue the “ball” side of a snap on back of button and sew the corresponding snap part on the garment and use snaps as the “real” closure.

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Supply Sources (subject to change)

- Do an Internet search on “button shanks” and or “button backs” to find sources of both metal and plastic button backs. Etsy or jewelry suppliers are common places to find. Here is one: <http://www.buttonshanks.com/>
- **Hobby Lobby, Michael’s and Joann Fabrics** (larger stores) – all carry varying brands of clay and a selection of tools and accessories
- **Internet Resources** - Many sites have a wide selection of clays, tools and accessories (and stuff I have no idea what it is for!). Many sites also have instructions and project ideas as well as links to other sites where you can get ideas. A few I have visited, include

www.polymerclaycentral.com
www.clayfactoryinc.com
www.polymerclayexpress.com
www.prairiecraft.com (Kato Clay)

Inspiration

Think beyond buttons for closures – try making a toggle type closure for a jacket!

And don’t forget the option of making matching earrings, necklace, etc...

There is far more info on jewelry than buttons, but about any jewelry technique can be adapted to make a button.

Internet Sites

- **Pinterest!!!**
- **Flickr**
- Google “polymer clay” or even “polymer clay buttons” for hundreds or thousands of sites – both for project plans or buttons for sale.
- www.kimledesigns.com Check out Patricia Kimle’s web site and see her jewelry wares at the Octagon Shop in Ames. Patty is a nationally recognized polymer clay artist from Ames. (I am in awe of her skill!)
- If you admire a particular artist Google their web site. Louise Cutting often wears jewelry by Loretta Lam <http://lorettalam.com/> another of my favorite artists.

Magazines

- [The Polymer Arts](#) magazine

Books I have liked for one thing or another (many others available)

Though most polymer clay books do not *specifically* address buttons in any detail, keep in mind that most any technique can be adapted to a button.

- *The New Clay*, Nan Roche - The New Clay was at one time the ultimate resource – it still has good basics but now is missing a lot of new techniques & products
- *Creative Clay Jewelry*, Leslie Dierks
- *Polymer Clay – Creating Functional & Decorative Objects*, Jacqueline Gikow
- *Creating with Polymer Clay*, Steven Ford & Leslie Dierks
- *Polymer Clay Inspirations*, Patty Kimle
- Books by Donna Kato
- *Polymer Clay Color Inspirations: Techniques and Jewelry Projects for Creating Successful Palettes*, Lindly Haunani and Maggie Maggio (lots of color studies & a few projects)

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On-line classes – tutorials

- <http://craftartedu.com/> - many basic classes are free – others at cost – kind of like Craftsby for jewelry
- **U- Tube** – hundreds of videos – quality may vary

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Skinner Blends

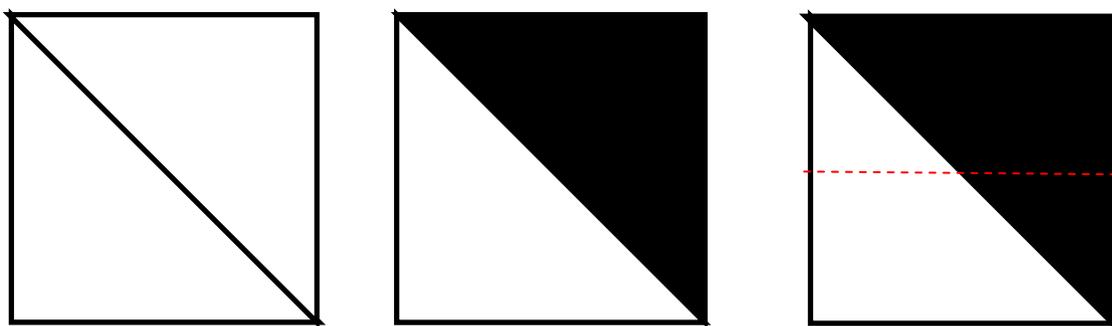
A basic graduated color blend that adds dimension and interest. Used in many different ways to easily add complexity and nuance.

Video tutorials - <https://www.pinterest.com/pin/190558627956913696/> or

<http://craftartedu.com/donna-kato-free-basic-making-a-skinner-blend>

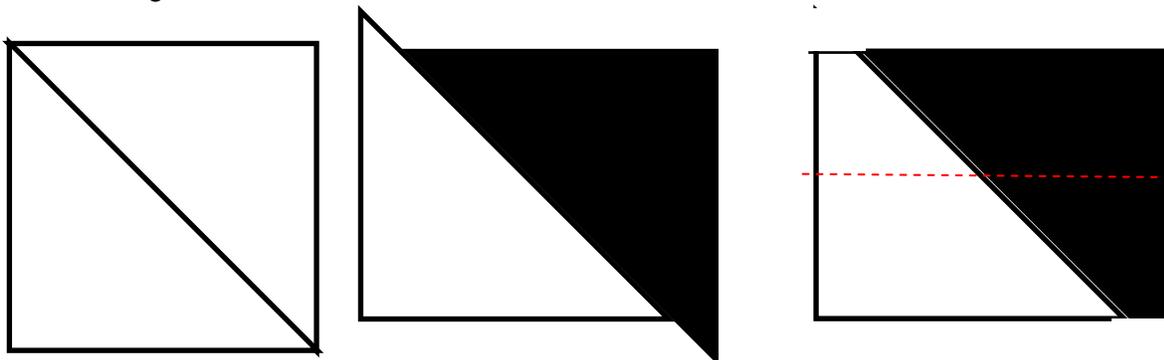
Standard Blend - yields a very light color to very dark color blend

- Stack two colors together – spritz with water if too sticky. Cut on diagonal. B.
- Separate layers and stack color with like color
- Press together & roll to adhere halves.
- Fold in half (red line), ALWAYS keeping same color edges together and run through pasta machine.
- Fold & repeat until a smooth blend. Always running through machine in the same way.
- May take 10-30 times through machine, but you can stop whenever you like what you see.



Offset Skinner Blend – yields a more distinct full intensity color on each end of the blend – usually preferred unless you want very subtle blends

- As above, but offset triangles by $\frac{1}{4}$ " or more. Trim off protruding ears to bring back to a rectangle and continue as above



There are *many* variations of this technique, including rainbow or multicolored blends, alternate ways to portion colors and ways to accomplish without a pasta machine. A Google or Pinterest search will offer alternatives.



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★ = easiest

★★★★ = most challenging

Make a mold of a button –

1. Condition the flexible clay (Sculpy Bake & Bend[®]) or Sculpy Moldmaker[®] clay well.
 1. Select a button *without undercuts* to make a mold from.
2. Make a smooth ball of the flexible clay a little larger than your button.
3. Spray button with water, Armorall[®] or dust heavily with cornstarch.
4. Press straight down into the flexible clay to the bottom edge of the button.
5. Carefully remove the button pulling straight up by shank
6. Examine mold and repeat if not happy with impression
7. Bake

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Molding a button –

8. Select or mix a color of clay for your button and condition well.
9. Make a smooth ball of clay the size or a little larger than the button you will be molding.
10. Slightly form the ball smoothly into a teardrop shape.
11. Spray mold with water, Armorall[®] or dust with cornstarch.
12. Press the conditioned clay into the mold with the point of the teardrop toward the bottom of the mold.
13. Press firmly and trim any excess clay.
14. Flex the mold slightly to release the molded button and remove button. If stubborn, take a ball of scrap clay and press to the flat side of the button to lift out of mold & remove once out of the mold.

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Textured button – Condition clay and roll to a scant 1/8” thick or thickest setting on pasta machine.

Pick an option

- Dust a rubber stamp with cornstarch and press firmly into button
- Dust a texture sheet with cornstarch and press firmly into button
- Use a needle tool, knife, or ball stylus into clay to create a pattern
- Use one of the provided “found objects” to press a pattern into the clay
- Anything else – try a scrap of textured fabric, lace or trim from the free table!

Other Options –

- Make two molded buttons – press the flat backs together, blend the two halves together, pierce a hole and you have a bead to make earrings, necklace, or a bracelet!
- Make molds of found objects to embellish a button or use as buttons – a leaf from your garden (roll leaf and a sheet of clay through pasta machine or roll firmly), hardware store “stuff”, a charm or old jewelry piece, or just about anything!