

Bead Making - I Took the Beginner Class, Now What?

Merewen de Sweynesheie, FOOL, May 2015

melskog@hotmail.com

This is the time to start learning more about your tools, experiment, and have fun! Don't worry about mistakes - we all make them. Just try things, see what happens, and use that knowledge to make your work better the next time.

1. Troubleshooting Bead Shape

Glass pulls towards itself, like a water droplet, forming a rounded shape. Where it touches another thing, like the mandrel, it sticks. When it is stationary and too hot, gravity will pull it down. But you can use these things to your advantage.

- a) When trying to form a round shape, try to avoid getting the bead too hot. Heat the sides that are too high, and while continuing to rotate, keep the hot, thick parts at the top a little longer, allowing gravity to pull the glass down to the thinner areas. Keep your mandrel level so that both ends will look similar. If you notice the glass sliding toward one end or the other, heat and tilt the other way until you are even again, and then correct your mandrel grip to keep the mandrel level. If you are very lopsided, you can try heating the thick side to molten and allowing it to droop and wrap around the bead. This will widen your bead's footprint slightly.
- b) Anywhere the glass touches the hot mandrel, it will stick. If you want to make a long bead, start out by creating a wider footprint on the mandrel, then add enough glass to avoid making pointy ends.
- c) If making a shape other than round, always heat the glass you want to move and heat where you want it to go. You can then use gravity and tools to create the shape you want. The rest of the bead should be kept fairly warm but not molten, so that it stays put.
- d) If your bead ends are pointy, you may have made your footprint too large, accidentally tipped the mandrel too much, or touched a glass rod to the mandrel beside your bead. If the bead end is uneven, start by evening out the end by adding one more clean wrap of glass around the uneven part. You can then add glass to other areas of your bead, away from the mandrel, until the pointiness issue has been solved. Depending on how large the difference is, you may have to add a lot of glass.
- e) If you have let the bead get too cold and then reintroduced it quickly to the flame, it could shatter. If pieces fall off the mandrel, it's usually best to give the bead up as lost. If the pieces stay close together and just the crack shows, it may be possible to fuse the pieces back together in the flame.

2. Fixing Design Mistakes

Mistakes happen. But no one necessarily has to know. If you put a dot or line in the wrong spot, there is hope. Some common fixes are:

- a) Cover it up. Melt the mistake into the bead until it's flat and put layers of the base bead glass over top of the error. Melt them flat, and then start your design over. This works well with colours like opaque blue, red, white, black, and some oranges. It does not work well with colours that form lines when applied over themselves, like some opaque greens, purples, greys, and pinks.
- b) Take it off. I have found this one more universally effective than covering it up, but it requires quick action. Immediately remove the bead from the flame, before allowing the decoration to be melted in at all. Use a pair of needlenosed pliers to break the decoration off of the bead while the small decoration is cool. Do not let the entire bead get cool.

Reheat the bead and smooth out the area where you broke off the decoration, and you're good to go.

- c) Move it. If your line is just a little less straight than you want or the dot is not quite where you want it, get it hot and use tools (outside of the flame) to straighten it out or push it where you want it to be.

Finally, some glass is prone to devitrification. This means that the components of the glass begin to separate through working. Effetre purple (Evil Devitrifying Purple) is well-known for this, though it is also known to happen in some browns and pinks. It appears as a matte white finish on your bead. Devitrification happens when you heat the bead only a little bit and then allow it to cool.

- To prevent devitrification, avoid making raised designs on beads containing devit-prone glass. Stick to melted-flat designs. Also avoid using striking glasses with devit-prone glasses, as effective striking requires the process that causes devitrification.
- To remove devitrification, heat the entire bead until the outside is hot and shiny, and no trace of devitrification remains. Cool the bead as usual, then place it in a kiln or cooling medium and be done with it.

3. Using and Combining Colours

This is where the fun of beadmaking lies. Finding great colour combinations and glass combinations, and figuring out how to work with them. Knowledge will be gained most thoroughly by trial and error, especially since every glass recipe is a little bit different, but there are some basic principles that will help you get started:

- a) Transparent glass - Transparent glass provides the benefit of staying where you put it. Used well, it can provide brilliant colour and depth. Raised designs can shine with reflected light, and light colours can be layered with other colours (*usually* opaque glass) to create new colours. The dark side is that some transparents can be very dilute in colour, or extremely rich in colour. The dilute ones don't provide much colour and the rich ones make very poor base beads because light can't get through. One way to fix this is to first lay down a core of clear, light transparent, or white glass, followed by a thin layer of rich, dark, transparent glass. Transparent glass on top of transparent glass doesn't tend to produce very good designs. One exception is black, which actually only comes as transparent glass. Designs in black on a light transparent work fine.

Notable Transparents:

- Black - There are many different formulations. Some are reactive with silver, some stay dark where you put them, some web and spread, most have bases of dark blue, purple, brown, or green.
 - Effetre topaz and light brown - react with silver to form some interesting effects. Look up "faux boro."
 - Effetre Rubino Oro/Gold Pink - contains gold and lead. Can reduce to a gold sheen. Strikes.
 - Red, orange - many strike. Do not encase well unless layered on a different base.
 - Yellow - can opacify in the flame with working. May not encase well.
- b) Opaque glass - Referred to as "pastel" by glass manufacturers. Opaque glass is interesting. There are so many possible chemistries for producing shades of each colour that even when the colour is almost identical two rods of glass can behave very differently. In general, darker colours tend to be "stiffer" than lighter colours, which can be very soft even when

they aren't glowing. Lighter colours like white, ivory, and yellow tend to spread out over top of darker colours.

- Greens - Tend to spread out over other colours.
- Reds - Lighter reds can bleed into white or yellow. Many opaque reds tend to become "livery" or brownish with working.
- Turquoise/teal greens - many contain copper and will reduce to a rusty colour in a reducing flame.
- Yellows and oranges - many contain sulphur. Turn brown when placed in contact with silver or silver-containing glass. Can be tricky to encase. Stringer can burn easily in flame.
- Blues - many are fairly stable and stay put.
- Browns - difficult to get a stable chocolate/darker brown. Many require special treatment.
- Purples - many separate when layered. Can also turn brownish over time as the Manganese changes ion form.
- Pinks - few and far between. Do not like being placed in contact with silver or lead (will yellow).
- Greys - tend to show lines when layered on themselves.

c) Famous and reactive glass:

- Effetre Dark Ivory - spreads over other glass, reacts with silver.
- Effetre Mosaic Green - spreads out over other glass when used in small quantities.
- Effetre Intense Black - using a hair-thin stringer and alternately heating very hot and cooling will cause it to web out.
- Effetre Copper Green - reactive with some other glass, forms a patina upon cooling which can be removed by soaking bead in toilet bowl cleaner and water.
- Well-known reactive glass (Effetre): Ink Blue Pastel, Purple Pastel, Rubino Oro, Copper Green Pastel, Red Copper Green Pastel, Turquoise Pastel, Sky Blue Pastel, Dark Ivory.

d) Translucent glass: There are not nearly as many translucent glass colours as other types. Most are called "opalino," "opal," or "alabaster/alabastro." These can be much more prone to boiling and burning than other glass, and may require special treatment when annealing. Flame chemistry and kiln firing can affect their colour and translucency (I think moreso for the kiln if they are batch annealed).

4. Pulling and Using Stringer

- a) Melt a large pea-sized blob or so at the end of the rod. If you want a thicker stringer, melt a bit more.
- b) Can pull with tweezers, chopsticks, glass rod, pliers, etc.
- c) Wait shorter time before pulling for thin, longer time for thick. Watch it as you pull.
- d) Allow to fully cool - don't touch it to test! - before using.
- e) Break into useable pieces using needle-nosed pliers or similar
- f) Apply outside of flame using ambient heat. Gently press onto bead. Move bead, not stringer, when drawing designs.

Other Topics for Discussion:

Making good dots
Striking glass
Encasing
Twisties
Murrini