

Beach Glass Vessel Bead with PMC 3

This early article on firing PMC3 onto glass was first published in the January 2006 issue of *Lapidary Journal* and is reprinted here with the editor's kind permission.

Beach Glass Vessel
Firing PMC3[®] onto glass.
BY ANN DAVIS

Skill level
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What you need

- PMC3[®], slip, sheet, clay
- 2-part silicone mold material (I used Belsicone[®])
- Soft Italian glass for the vessel
- Small shells etc. for moiting
- Small detail brushes
- Small rolling pin
- Spatula
- Q-tips[®]
- Kiln
- Fiber blanket
- Polishing compound
- Flex shaft
- Small pencil caps

Like most artists I'm a beachcomber, collecting all the wonderful things that the sea gives up on sandy shores. So it was with relish that I immersed myself in my boxes of shells, driftwood and bric-a-brac for this project. The starfish I found washed up on the sand in the Bahamas, the shells are from the reef off Malindi, a little Kenyan town on the Indian Ocean, and the sand dollar is from Cancun. The ammonites came from Europe but I found them in a mineral shop in Sedona. So this vessel is all about the dreamy remembrances of my travels to warm places.

I love PMC3[®]. With its low firing schedule you can fire it right onto your bead. This enables me to marry the frosted beach glass look with the gleam of fine polished silver, which before PMC3[®] could only be accomplished by casting. This vessel looks like it could have been plucked fresh from a tidal pool. Enjoy!

Photo of finished piece by Ann Davis. All other photos courtesy of the author.

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Skill Level: Advanced

What You Will Need:

- PMC3: Slip, Clay, PMC+ sheet
- 2 Part silicone mold materiel (I used Belicone)
- Soft Italian glass for the vessel
- Small shells etc. For molding
- Small detail brushes
- Spatula
- Q-Tips
- Kiln
- Fiber blanket
- Polishing compound
- Flex shaft
- Small Peridot cabs



Make the Bead

Step 1

Make a bead in the shape of a vessel with a lip. My bead measures 2" at the shoulder and 1/2" for the neck and the lip is about 1/4" for a total of 2 3/4". Whatever size you make your bead, you need to give yourself a long neck in order to have room to add elaborate handles.

Etch

Step 2



I have chosen to etch this bead to achieve a beach glass encrusted look, but the PMC3 will bond with un-etched glass as well. If you choose to etch then dip your bead in the etching solution for only 2 or 3 minutes using fresh solution. Remove but be careful not to spill on yourself! I have a set of plastic tweezers I use for this job. Rinse, dry and check to make sure there is an overall etch. If not, return and check again in a few minutes. When you are pleased with the results, rinse again thoroughly, making sure to rinse out the bead hole too! Set aside to dry thoroughly.

Make the Molds

Step 3



Prepare to make the molds. I use a two part silicone RTV (room temperature vulcanizing) system. It's easy, fast, and the PMC doesn't stick to the surface. It's simple: take two equal size lumps of part 1 and part 2, mix together thoroughly by kneading and folding for a minute in your hand. Once it has become a uniform color you have about 2 minutes working time. It will cure in about 20 minutes at room temperature. You can use your gram scale to be ultra accurate, but I have found the product so forgiving that it works every time if you just eyeball it. If you are new to it, it has the consistency of set pudding, and it's very oily so keep a paper towel handy.

Step 4



Assemble all the little parts, the masters that you want to mold. When you are ready to begin molding, mix the molding compound as described above and make a little patty out of it. It helps to have a small rolling pin of some kind. I use my polymer rolling pin to get the top of the mound even, but you can also just pat it with your fingers. The combined lump has to be big enough to mold the master comfortably, but for most small items a marble sized lump will do. I roll mine out on a sheet of paper so I can set it aside. The rolled patty has to be about $\frac{1}{4}$ " thick to accommodate small objects. Then all you do is press your item into the patty until it is even with the surface. Let cure.

Once you have pressed in your master, don't try to pick it up. If it's on a sheet of paper, you can set it aside and it will come right off in about 20 minutes. Continue molding until all molds are made and cured. You can test for curing by poking your fingernail in the side of the patty. If it doesn't leave an imprint it's done. Remove the masters by picking up the patties and popping them out. The mold material is very flexible. At this point check your molds. If you have used organic masters, there might be bits of dirt or sand that remain in the molds. If so, clean them out with water and a soft toothbrush and dry.

Mold



Step 5

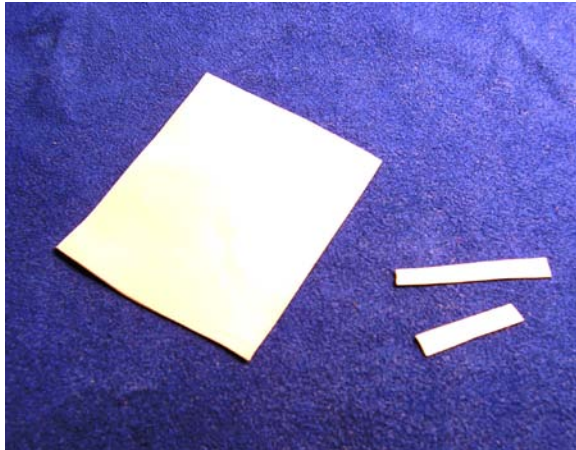
Now that you have your bead made and clean molds you are ready to start molding your clay and adding it to the vessel. I have chosen to do this in two fires because of the

delicacy of the dried clay and the large size of my handles. You can do it either way, one fire or two. Firing the PMC3 several times does not hurt it. With a glass bead you must fire your clay at the lowest manufacturer's temperature, 1110° in order not to melt or deform the bead. Multiple firings at the low temperature will not affect the glass. Just be sure to let your glass bead cool in the kiln, and don't peek! Stress fractures can occur if the glass is exposed to a blast of cold air, because of the difference in the coefficient of expansion between the silver and the glass. It must cool very slowly. I like to think of it as the "you peek, you pop" rule.

Break off a small piece of clay, just big enough to fit into the mold. Press it in and clean off any extra. I use a spatula across the top of the mold with the same motion that you use for measuring flour level into a cup. Now is the time to press any pattern into what will be the back of the handle if it is going to show. I have pressed a piece of ammonite into the moist PMC3 as it lies in the mold so that when I take it out it will have a front and back pattern. Mold the two handles and set them aside to firm up but not dry out.

Step 6

For stability since I have chosen large handles, I take a piece of clay sheet, which is perfect for imitating silver flat wire, and cut a 1/8" strip. Attach the strip to just under the lip of the vase by brushing one side of the strip with slip and placing it on the glass. Go around the neck once and overlap slightly at the side where one of the handles will join. Cut off any extra and press lightly all around to make sure you have contact and there are no air bubbles.



Step 7

Once the handles are dry or at least firm, try them in place on the bead so you will know where they will touch the shoulder and the clay sheet under the lip. You can make a mark with a felt tip on the bead since it will be covered up with silver. In order to have a decorative element to rest the bottom of my handles on, I molded part of a shell. Push a small piece of clay into a shell or other small part mold and while it is still wet, paint the back with slip and attach it to each shoulder side of the bead where it is marked. Press firmly but gently. By doing this wet, any shrinkage while drying will occur on the bead and it produces a better hold. Let dry.



Attaching the Pieces

Step 8

Now for "gluing" on the handles. Put a small amount of slip onto the vessel over the marks, and onto the small pieces that you have just added to the shoulder. Use just enough slip to hold the handles on firmly. Press one handle into the slip at both points, (under the lip and the shoulder) and hold until firm. You can add more slip with a detail brush after it is set if you are worried about the connection. The bead is in its most delicate state now, so be very careful. Glue the other handle on. Let dry completely.

You will need to prop up the bead in the kiln. Make sure the handles are supported or they could fall off in the fire from their weight and the slight movement of the sintering silver. I use kiln fiber blanket for this, especially old blanket that is coming apart (never throw anything away!). You don't have to worry: the glass should not stick to the blanket, and the clay won't either.

First Fire

Fire at 1110° for one hour. Cool slowly. Inspect the places where the silver touches the bead. If you have any doubts as to how well you have attached it, now is the time to add more slip, dry and fire again to insure firm handles!

Step 9

Once the handles are attached you can add the other decorations (now you have cute little handles to hold the bead by). I have made molds of small starfish, sand dollars and the tips of

small welk shells. Break off small pieces of clay and press into the molds. Take out immediately and brush slip on the back. Press the molded clay onto the vessel until you are satisfied with your design. It's important but almost impossible to keep your hands clean during the decorating

phase. Touching the glass with silver clay on your fingers will leave a slight silver impression on the glass, which must be washed away before it's fired! If you have gotten slip where it shouldn't be, and I always do, you can wait till all the decorations are dry and firmly adhered to the vessel, and then clean up using water, Q-Tips and a small detail brush. Clean all the boo-boos off now, because you won't be able to get them off without grinding once they are sintered on.

Second Fire

Fire the bead again, propping up with fiber blanket or an equivalent, to 1110' for one hour. Cool slowly! Check and refire if necessary.



Finish

Step 10

I like my silver to shine but that is a personal choice. At this point you can gently polish your silver with a small buff and flex shaft. Patinate if you wish. I also decided to include a couple of small peridot cabs in the center of my handles. Since they were from an old stash and I didn't think they would withstand the fire, I made sure they would fit when the handles were wet and then secured them with two part jewelers cement after the piece was fired. You could also add small freshwater pearls or bits of coral in this fashion. The sea's the limit!