After seeing some mixed-metal clay pieces in a class listing offered by Art Clay World, and some silver and copper metal clay pieces by Hadar Jacobson, I was inspired to experiment on my own. I collected information from various sources and worked out my own firing schedule, but the first pieces were a fiasco! The kiln was too hot, so the silver alloyed with the copper, ruining the pieces. I kept at it and eventually sorted out a firing schedule. All the extra work was worth it to be able to showcase the sharp contrast of silver in copper.

*Create a Married-Metal Effect in Metal Clay*

Combine fine silver and copper metal clay in one seamless piece with one firing.
Make a wire shape. Use pliers to form a length of 14-gauge (1.6 mm) wire into a meandering coil or pleasing shape of your choice [1]. Use the appropriate pliers for your pattern — roundnose or forming pliers for curves and spirals, flatnose pliers to make corners and sharp angles. If necessary, use a rawhide mallet on a steel bench block to flatten the shape.

NOTE: Instead of making a custom wire shape, you can use a stamp or texture plate for this process. Just be sure your pattern is of uniform depth; any subtle shading will be lost when the recesses are filled with fine-silver metal clay.

Roll out the base clay. Use olive oil or hand balm to lightly lubricate a flexible Teflon sheet and an acrylic roller. Roll out roughly a third of the 50 g package of wet copper clay to 9 cards (2.25 mm) thick [2].

Remove 3 cards (0.75 mm). Press the wire shape into the wet clay using either the roller or your fingers [3]. Do not press too hard; you want to create an indent without going through the clay. Remove the wire shape; if you can’t grasp it with your fingers, carefully use a needle tool to pry it out of the clay.

Add dot patterns with the rounded end of a paint brush, ball burnishers, or other items [4].

NOTE: Since I’m using smooth items to impress the clay, I don’t need to use a lubricant. However, if the items you’re using have a highly textured surface, or you doubt they will release easily, use olive oil or other lubricant.

Cut the base layer. Use a craft knife or a needle tool to cut out the base layer. I use a “fat rectangle” shape template [5].

Dry the clay until it is completely dry (see “Metal Clay Dryness” chart).

Remove blemishes. Use polishing pads or your preferred tool (see “Dust-free Clean Up?”) to sand the sides and surface of the base layer to a smooth finish.

Add the silver metal clay. Moisten the recessed shape in the copper clay base layer with a damp fine-tip paintbrush. Open a 7 g package of fine-silver metal clay. Scrape a craft knife over the lump clay to collect a small amount of clay. Use the blade of the knife to pack the silver clay into the recess in the copper clay base layer [6].

NOTE: A craft knife is a great tool for this step, as it has less give than a rubber shaper and more completely presses the clay into the recesses. I don’t use a separate set of tools for silver and copper.

Materials

- 14-gauge (1.6 mm) scrap wire
- Copper metal clay, 50 g
- Fine-silver metal clay, 7 g

Toolboxes

- Metal Clay
- Bronze/Copper Metal Clay

Additional tools & supplies

- Pliers: roundnose, forming, or flatnose
- Rawhide hammer and bench block
- Shape template: Fat rectangle (optional)
- Tsukineko Fantastix Coloring Tool Brush (optional)
- Cosmetic sponge (optional)
- Radial bristle disks, 30-grit, on a screw mandrel
- Flex shaft
- Baldwin (or other) patina (optional)

Metal Clay Dryness

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
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<tbody>
<tr>
<td>Wet</td>
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</tr>
<tr>
<td>Semi-dry</td>
<td>Some moisture; firm, holds its shape</td>
</tr>
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metal clay, I just clean my tools well before moving to a different clay. The exception is my sanding items — polishing papers, sanding sticks, needle files, etc. — since those items can be trickier to clean. I keep one set for silver clay, one for copper clay, and one for mixed silver/copper metal clay.

Continue to fill the recesses. Pack the silver clay firmly to avoid any air pockets or gaps. Don't worry if you get some silver on the surface of your copper; you'll sand it off after the pendant is dry.

NOTE: To help keep your silver clay uncontaminated by copper clay, wipe off the craft knife before picking up fresh silver clay. If you do contaminate your silver, copper-to-pinkish streaks will appear in the silver. Set the contaminated clay aside. Do not discard this clay, you can use it to make alloyed silver and copper clays. I've had some success creating whole pieces out of the contaminated clay that glow with a pinkish silver color.

Once you have filled the recesses, set the base layer aside to dry completely. I prefer to air dry, but you can use a dehydrator or mug warmer to speed up the drying process.

Refine the base layer. Once the base layer is completely dry, use 220/320-grit sandpaper to sand the excess silver from the piece until the silver pattern is revealed. For this step I find it helpful to use emery boards.

If any areas need more silver clay, remoisten them and repeat the process to add more clay.

Add a bail. With your fingers, roll wet copper clay into a thin snake. As you roll it, lightly moisten the snake with a fine-tip paintbrush. Wrap the snake around a straw or other plastic form 2–3 times.

Let the bail dry completely.

Sand a flat surface on one section of the dry bail, then remove it from the form. Add a bit of moistened wet clay to the top edge of the base, and set the flat surface of the bail against the wet clay. Press the two components together firmly to adhere the bail to the base layer. Let the pendant dry completely.

Finish the back of the pendant. Roll a short copper clay snake and add it to the back of the pendant, mimicking the pattern on the front of the pendant.

Use a variety of sizes of drill bits in a pin vise to make three round recesses in graduated sizes on the back of the pendant.

sintering test

To test that a piece is fully sintered, use a 80-grit radial bristle disk on a screw mandrel in a flex shaft or rotary tool to begin polishing the back of the piece.

If there are spots that remain powdery and black where it is being polished, patch those areas by adding more clay, let the clay dry, and then refire.

If you see a copper layer and then a black powdery layer, refire without the binder burnout phase.

If your piece shows only copper, it is fully sintered. Continue to polish to remove all surface oxidation.
How did you know that you were supposed to be a jewelry maker?

“I have always enjoyed making things. I have always enjoyed wearing jewelry. It seems making jewelry was the natural progression. Before I began working in metal clay I did a little bit of silversmithing and a lot of beading. However, it was discovering and exploring metal clay that truly allowed my imagination to run wild and push the boundaries of what I could create.”

Contact: www.everlastingtreasures.org