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# Necklace or Bracelet from Bronze and Copper Clay

## Part 1

April 3, 2009

*This is a fun and easy project combining bronze and copper clay. If you are a beginner, it will help get you started. If you are a teacher, this is a good project for a 2-day workshop. At the end of Part 2 you will find a description of the workshop. You have my full permission to use this project with your students.*

*The two photos show the same project with two different ways of finishing. The one on the top is textured and involves less finishing work. The one on the bottom is smooth and has a better contrast between the bronze and the copper. Part 1 includes instructions for construction and firing; Part 2 includes finishing instructions.*



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### Creating the pattern

1. Roll a large layer of bronze clay, 4 cards thick.
2. Roll very thin snakes of copper clay and lay them on the bronze layer. If you use an extruder, use the die with the smallest hole available.



#### ***Can I start with a copper clay layer?***

Yes, though I would not recommend it for a beginner's project. Since bronze clay shrinks more than copper clay, the bronze inlay will shrink away from the copper. You will then need to fill the gaps with bronze clay and repeat the firing. See the photo on page 3 of the document "Combining Bronze and Copper Clay" on my blog.

- Place the 4-card stacks of cards on both sides of the layer and roll it down again.



## Texturing

- Pick a texturing sheet with a very subtle texture (so that the texture does not compete with the design). Take one card off each stack of cards. Place the texturing sheet face-down on the layer and roll over it between the two stacks.



### *Do I have to Texture?*

No, but texturing will make it easier for a beginner's project. Non-textured links require a lot of finishing work. See instructions for finishing base metal in my book: *Silver and Bronze Clay: Movement and Mechanisms*, pp. 12-13.

At the end of Part 2 of this project you will find a list of sources for finishing tools.

### *How many circles Should I cut?*

As many as you like. Since the clay is so inexpensive, it's not important if you end up with an extra link or two. Make sure you have enough links for a bracelet.

- If you choose not to texture, check whether the copper inlay is flush with the bronze layer. If not, roll it again until it is flush.

6. Use a circular cutter or any other cutter to cut the links out of the layer.

7. Dry the circles on a candle warmer. (See side bar on warping.)



### *Warping*

Bronze and copper warp while they are drying. Flip them over from time to time. To see photos go to the posting "The Purpose of this Blog" from 2/28/09 on my blog.

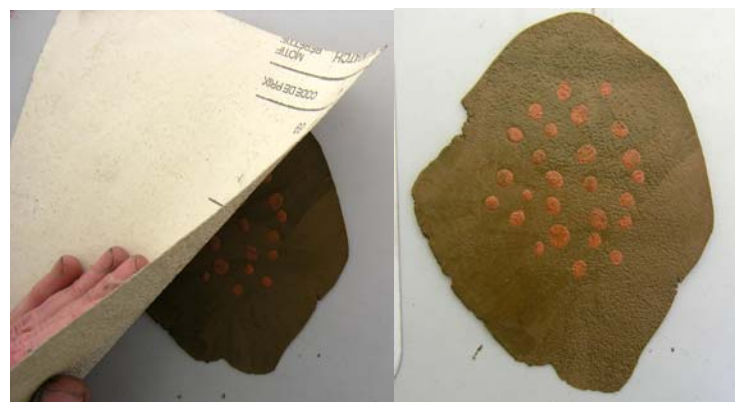
8. Repeat steps 1 and 2, but instead of snakes roll tiny balls of copper clay and lay them on the bronze layer.



9. Repeat step 3.



10. Repeat step 4.



11. Repeat step 5.



***What do I do with the left-over mixed clays?***

Separate the clays as much as you can, and save the rest as mixed clay. Later you can use it in a one-color piece.

12. Drill 2 holes in each link. If you are making a bracelet, drill the holes on each side of the link in the center, as shown on the link at the far right. For a necklace drill the holes on the top of the link as shown on the link at the left of the photo.



13. Using a fine-grit sanding pad sand the sides and backs of the links.



14. Fill the short (2½") firing box halfway with carbon. Arrange the pieces ½" apart on their sides, as shown in the photo. If you have a front loader, avoid the front.



15. Cover each piece with a tablespoonful of carbon. Place the box as high as possible in your kiln.
16. Follow the firing instructions in the documents "Firing base Metal Clays" and "Firing Schedule" on my blog. To program your kiln read the file "How to Talk to Your Kiln". The file "Checklist" may also be helpful.
17. To retrieve the links after firing, pour the carbon back into the storage box through a sieve. Be sure to wear a protecting mask.

These pieces were taken out of the carbon while very hot. The color appeared as soon as the metal hit the air.

If you get this color, forget about the second part of this project. 😊 However, to be sure of that the pieces are fully sintered follow the finishing steps on the back of the links.

