

Art Clay World USA

Carved Band Ring

This ring has its volume on the top.
Make the ring 1.5 times larger than finished size desired.
Make the desired shape as you place the clay around the wooden mandrel.



MATERIALS

650/1200 Low Fire Slow Dry metal clay 10 gm
Non-stick Teflon Surface Ring Strip

ADDITIONAL TOOLS & SUPPLIES REQUIRED

- Non-stick surface, small paintbrush, stainless steel brush (short bristle), small files, 600, 1200 and 2000 grit sandpaper, burnisher, rubber block.
- Wooden ring mandrel, adjustable ring sizer, pencil, small piece of tape
- Firing equipment

Drying Methods – may include hairdryer, oven, or toaster oven set below 250°F, food dehydrator, or warming tray. Piece also may be left to dry naturally.

Firing Methods – include either by electric kiln, hand-held butane torch, or gas stovetop burner.

RING SIZING

Art Clay shrinks 8-10% during firing. The shrinkage rate depends on the shape and volume of the ring. Prepare the foundation for the ring 1.5 – 2.5 American sizes larger. This will allow for the shrinkage of the clay during firing.

Begin by determining your ring size:

1. Using adjustable ring sizer, measure your finger to a comfortable fit.
2. Select ring size that allows for shrinkage as described below. Put the ring sizer on the wooden mandrel and mark with the pencil where the mandrel fits snugly.



When the band is greater in thickness & width than those in A & B, make the ring 2.5 sizes larger than desired.

3. Wrap the non-stick strip around the pencil mark on the mandrel and cut so that the end just overlaps the beginning. Secure the strip with a small piece of tape. Tape only the Teflon sheet to itself, not to the mandrel. You will build your ring over the center of the marks that you can see through the non-stick strip.

PROCESS



Step 1 **Step 2** **Step 3** **Step 4** **Step 5** **Step 6** **Step 7** **Step 8** **Step 9**

1. Roll out clay type on non-stick surface. Make a rope long enough to go around the ring mandrel with enough to overlap. Moisten the surface as necessary.

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- ✚ Lightly moisten the surface of the clay rope. Place it around the non-stick strip taped to the mandrel. Press the ends to the mandrel.
- ✚ Cut off excess clay with a craft knife. Stick both ends of the rope together, using a moistened finger to rub the joint together.
- ✚ Shape the ring with your moistened finger.
- ✚ Use Paste type or Syringe type to help fill seam and make it as smooth as possible.
- ✚ Gently turn the ring on the mandrel so that the seam faces downward. Slide the ring on its nonstick strip 1 inch toward tapered end. The ring will shrink minimally while drying, and this will ensure the seam does not pull apart.
- ✚ Dry the entire piece completely for 10-20 minutes with a hot air dryer or dehydrator, or dry at room air for more than 24 hours.
- ✚ Slowly take the ring and paper off of the mandrel. Remove paper slowly. Sand the surface and inside of the ring with a medium fine file and sandpaper. Take caution when sanding the inside of the ring. If you remove too much clay, you will be changing the ring size. Inspect side seam and fill in completely with paste or syringe type. Repeat drying.
- ✚ Draw your design on the surface of the dried ring with a pencil.
- ✚ File the grooves along the design with the side of a medium fine file.
- ✚ Smooth the entire piece with 600 and 1200 grit sandpaper. This completes the forming process.
- ✚ Fire
- ✚ After ring has been fired, there is a white coating on the surface. Place your ring on the rubber block and brush vigorously with the stainless steel brush to remove this coating. You will now have a matte finish.
- ✚ Use the wet/dry sandpaper to smooth the surface and bring it to a mirror shine. Begin with 600 grit, then 1200 grit, then 2000 grit, rinsing thoroughly between each grit. Also, each time you change the sandpaper grit, you must change your water, otherwise larger grit particles may remain and scratch your ring as you progress into smaller grits.

OPTIONAL Liver of Sulfur Technique

- ✚ Clean your polished ring thoroughly with baking soda and water. Rinse and dry. Take out 1 piece of dry Liver of Sulfur (a patina agent which is available through most Art Clay distributors), about the size of your thumbnail, and place into a clean glass cup. Add steaming, not boiling water. Stir well with either a bamboo stick or skewer. VENTILATE YOUR AREA WELL – Liver of Sulfur has the odor of rotten eggs.
- ✚ Dip into the solution and let it remain until the ring blackens. Remove and then dip into clean water.
- ✚ Using Metal Polish, rub band and all high parts of the ring to remove the patina on the surface of the raised areas. The blackened areas should only be in the recesses. After polishing and buffing with a polishing cloth, wash piece again with baking soda water to remove excess metal polish.
- ✚ The great part about Liver of Sulfur is that if you decide you do not like the color, with about a minute of re-firing, the patina is removed. You will need to re-polish your ring after the re-firing.

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Drying Chart for Art Clay Series

	Drying Time			
	Hot Air Dryer	Cooking Plate	Kiln	Air Dry
ACS 650	More than 10 min.	More than 10 min. at 150°C / 302°F		More than 24 hrs.
ACS 650 Slow Dry	More than 45 min.	More than 20 min. at 150-180C / 302-356°F		Not recommended
Overlay Silver Paste	More than 10 min.	More than 10 min. at 100C /212° F		More than 60 min.
ACS Basic	More than 15 min.	More than 10 min. at 150C / 320°F		More than 24 hrs.
ACS Basic Slow Dry	More than 45 min.	More than 20 min. at 150-180C / 302-356°F		Not recommended
ACS Paper type	No need to dry			
ACS Oil Paste	More than 30 min.	More than 30 min. at 100C /212° F		More than 24 hrs.
AC Gold Clay type	More than 15 min.	More than 10 min. at 150C /320° F		More than 24 hrs.
AC Gold Paste type	(Undiluted) More than 5 min.	Not recommended		(Undiluted) More than 15 min.
	(Diluted) Depending on the medium amount.	Not recommended		(Diluted) NO

- Test pieces used for this chart are in 5g clay volume.
- Hot air dryer used for this chart is 1200W and 3-4 cm from the drying pieces.

Firing Chart for Art Clay Series

	Firing Temperature / Holding time (Kiln firing)								Other Methods		
	650°C 1202°F	700°C 1292°F	750°C 1382°F	780°C 1436°F	800°C 1472°F	850°C 1562°F	870°C 1598°F	990°C 1814°F	Stove top	Gas torch	
ACS 650	30min.	15min.	10min.	5min.					YES		
ACS 650 Slow Dry	30min.	15min.	10min.	5min.					YES		
Overlay Silver Paste	30min.	15min.	10min.	5min.	0min.				WHEN USED WITHOUT GLASS OR CERAMICS		
ACS Basic	(Holding time/ Fire from cold kiln)				30min.						20min.
ACS Basic Slow Dry					30min.	20min.	10min.	YES			
ACS Paper type					30min.	20min.				SMALL PIECES, I.E. APPLIQUE ON GREENWARE	
ACS Oil Paste					30min.	10min.					
ACG Clay type								60min.	ONLY AS PASTE FORM ON ALREADY FIRED SILVER TORCH ONLY		
ACG Paste type	Application on fired ACS 500°C(932°F) → 800°C(1472°F) / hold 5min.								YES	NO	
	Application on porcelain surface Cold kiln → 800°C(1472°F) → switch off → under 100°C(212°F) to take out								NO		
	Application on glass surface Cold kiln → 800°C(1472°F) / hold 5min. → crash cool to 600°C(1112°F) → close kiln door → natural cool to take out										

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