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SPHERICAL STRUCTURE RING

by Konstantinos Karalis

In this project, Konstantinos Karalis guides you through the construction of a bold sculptural ring. Its design combines a lightweight hollow gold sphere with a contrasting black base and a dramatic splash detail on top. Using glass inclusions, you'll learn how to create the rough, grainy surface that you can apply to many different designs. Ready to make something eye-catching?

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TOOLS & SUPPLIES

POLYMER CLAY

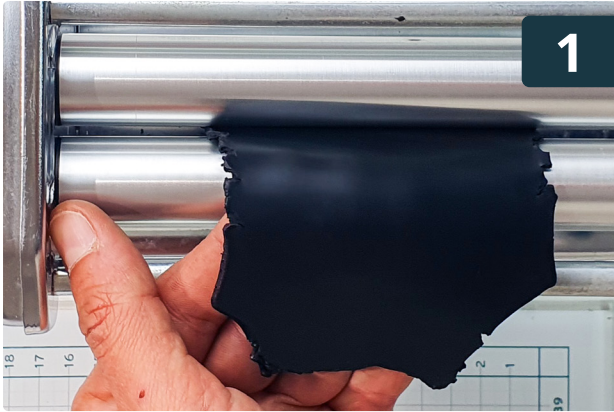
- black polymer clay
- liquid polymer clay

MATERIALS

- black glass inclusions
- gold color pigment
- copy paper
- kitchen paper
- super glue

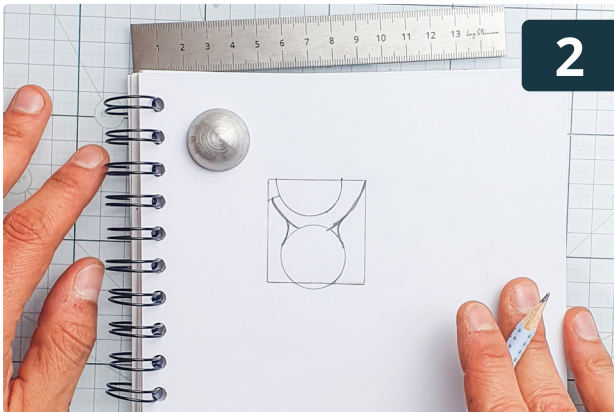
TOOLS

- pasta machine
- scalpel
- round cutters
- 2.5 cm small metal bowl
- tile or glass work surface
- sandpaper
- fine sculpting tools
- small brush
- tiny ball tool
- toothpick



1

If your clay feels too soft or sticky, start by leaching it. Roll the clay into a thin sheet about 1.5 mm and place it between two sheets of copy paper. Add a light weight on top and leave it for about fifteen minutes or more.



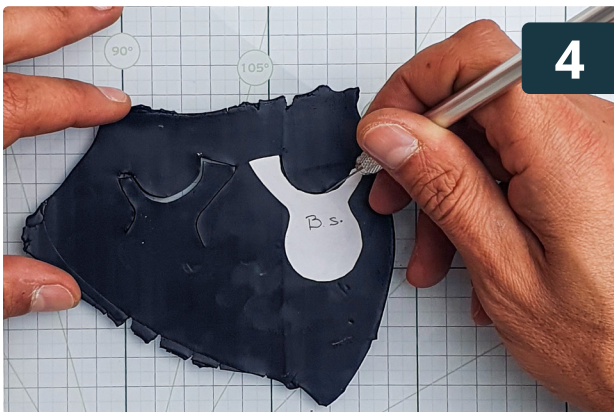
2

While the clay is leaching, prepare your template. Draw a four-by-four-centimeter square on paper. Using a 2.5 cm metal bowl, draw the first curved line in the upper part of the square about one centimeter below the top edge. Add a short slanted line from the top left area towards the curve, then draw a second circle at the bottom of the square. Draw secondary slightly curved lines from your short slanted line on the left and also the top right corner down to your circle in the lower section. Round off the joints where the lines meet. This will create the shape of your ring template. Or you can simply copy the template provided at the end of the tutorial.



3

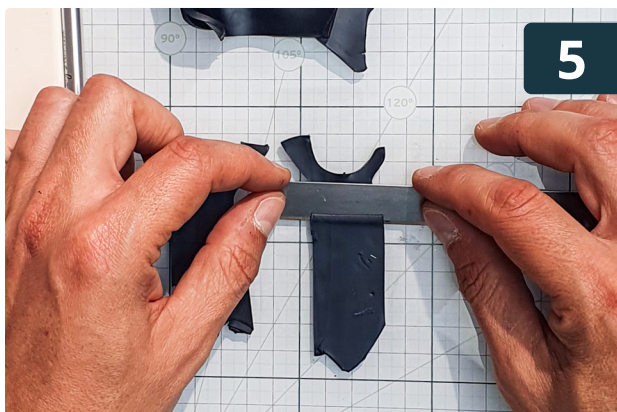
Cut out your paper template and mark the front and back sides, the shape is not symmetrical so this helps keep all pieces aligned. Roll the leached clay at the thickest setting. Place the template on top, cut around it with a scalpel, and remove the excess clay.



4

Roll another sheet of clay one setting thinner. From this sheet cut two more copies of the template, these will form the front and rear faces of the ring.

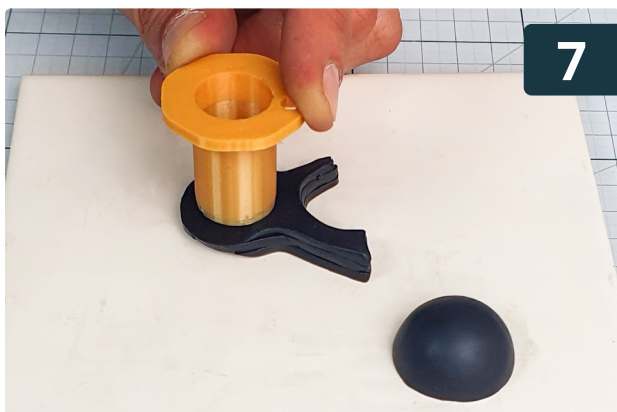
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Trim the lower part of these two thinner pieces towards you with an angled cut just below the middle. Gently place them onto the thick base shape, positioning one piece on the front and the other on the back.



Use your fingers or a modelling tool to curve and blend these pieces into the main shape, forming the rounded lower structure of the ring. It may be necessary to add a thin layer of clay on the lower part of the ring to allow you to sculpt a smoothly shaped transition. It does not have to be perfectly straight, so do not worry about making it flawless at this stage. What matters most is that the upper curved line stays smooth and unbroken. If the curve becomes distorted, press it back into shape using the metal bowl as a guide.



Place your ring shape on a tile or glass surface and use a round cutter to remove the center opening for your finger. Choose a cutter size that fits comfortably, as this will determine the inner diameter of your ring.



Roll out a sheet of clay at a medium thickness. Cut two circles using a round cutter or scalpel and gently smooth each one over the outside of the metal bowl to form two individual domes.

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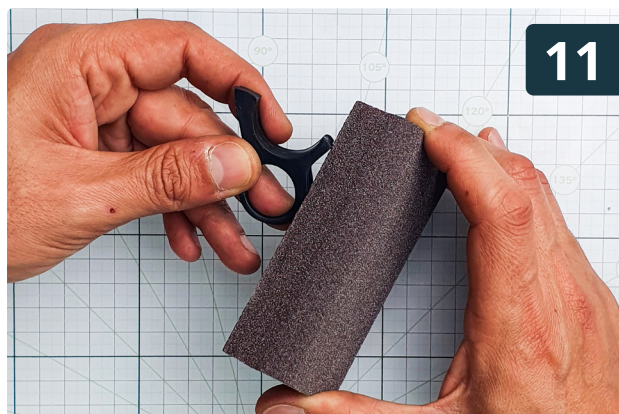
9

Trim the excess clay around the edges of the domes.



10

Bake the domes together with the ring base for thirty minutes. You will need two hemispheres in total. If you have two metal bowls, you can shape and bake both at the same time.



11

Let the baked pieces cool completely. Lightly sand the entire ring surface with sandpaper to even out any raised areas or uneven spots. It does not need to be perfectly smooth. Any small imperfections will be hidden once you add the glass inclusions.



12

Carefully remove the metal bowls and release the baked clay domes. Use super glue to attach the two hemispheres together, forming a complete sphere.

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Roll a very thin sheet of clay and cut two small circles with a cutter. Apply a thin coat of liquid clay along the seam of the sphere.



Place the two thin circles over the sphere in such a way that their seam crosses in a different direction than the seam of the baked hemispheres.



Use a sculpting tool or a small spatula to blend and smooth the edges so the joint becomes invisible.



Place some black glass inclusions in a small bowl. Brush a thin layer of liquid clay over the surface of the sphere, then dip the sphere into the inclusions so they adhere evenly.

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Apply a light coat of liquid clay to the front and back surfaces of your ring base. Avoid the inner curve at the top and the inside of the ring where the finger will sit.



Sprinkle a small amount of glass inclusions onto your tile and place the ring on top. Gently press the ring into the inclusions, then add more on top to fully coat the liquid-clay-covered surfaces. Tap off excess. Make sure the texture matches the sphere. Bake all pieces at this stage.



Now prepare the splash element that will sit on top of the sphere. You can practise first on scrap clay. Draw the splash shape from imagination or use a metal stencil to trace the shape onto a piece of paper.



Place your stencil on a sheet of paper and add a small amount of liquid clay into the opening of the shape.

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Using a micro ball tool, gently push and spread the liquid clay so the entire stencil shape is evenly filled.



Cover the filled shape generously with black glass inclusions. Bake for 20 minutes, let it cool completely, tap off the excess, and return the remaining inclusions to the jar.



Bake the filled shape together with the sphere and ring for forty minutes at the recommended temperature for your brand of clay. Do not worry about baking paper in the oven because polymer clay cures at a much lower temperature than what could ignite paper. It is completely safe.



Let the piece cool completely. Brush or rub away any excess inclusions from the surface, then use a sharp blade to carefully lift the finished splash shape from the paper. If you notice small gaps where the inclusions did not adhere, it simply means there was not enough liquid clay. Add another thin layer, apply inclusions again, and bake once more.

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25 Mix liquid polymer clay with gold pigment until you have a smooth paste.



26 Use a brush to apply this mixture evenly over the entire sphere. Gloves are recommended to avoid fingerprints.



27 For extra shine, lightly dust the surface with gold pigment and dry brush. Place the sphere on a crumpled piece of kitchen paper to keep it stable and bake for twenty minutes.

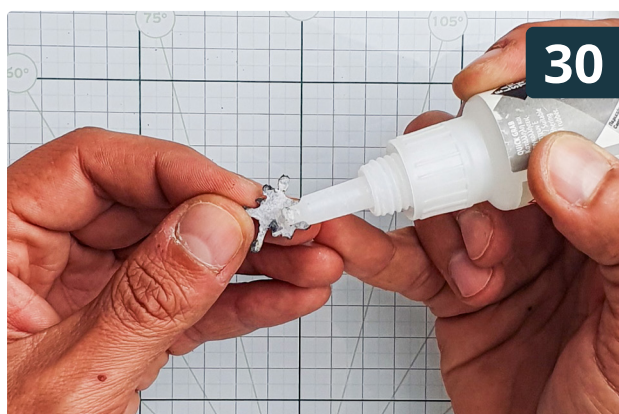


28 All components of the ring are now ready. Add a small amount of super glue into the round indentation on the ring base.



29

Place the sphere onto the glued area and press gently until secure. Allow it to dry completely.



30

Add super glue to the back of your splash. A toothpick can help apply glue precisely.



31

Attach the splash onto the sphere, press and hold for a moment. Your ring is now complete. If you choose different colors than the ones shown here, try selecting a clay color that is similar to your inclusions. This helps the inclusions stand out and creates a stronger shine. If you prefer a smooth sphere without texture, skip the inclusion step and go straight to coating the sphere with liquid clay mixed with pigment.

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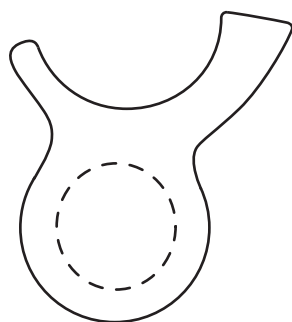
FINAL PROJECT



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TEMPLATE





KONSTANTINOS KARALIS

Konstantinos Karalis is a polymer clay artist from Athens and the founder of Piloforizo. Trained in design and decoration, he discovered polymer clay in 1993 and gradually turned it from a hobby into his full-time work. During the Greek economic crisis, he created Pilofori and later expanded into Piloforizo, offering clay, tools, and materials to artists across Greece. Together with his husband Yiannis, he also opened The House, a creative space that brings Greek designers and makers together.

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