



Contemporary Serpentine Ware

This project sheet details how to make two very different finished pieces embellished with shaped rods. Of course, the reader is welcome to vary glass colors to create their own unique piece.



Even though the results are impressive, this project is really pretty straight-forward. First, “wavy” rods are created using Colour de Verre’s Serpentine Formers. Those are tack fused to a clear, double-thick glass panel which is then slumped – rods down – into a slumping form.

Instructions are included in the Serpentine Former packaging, but we highly recommend visiting the Colour de Verre website,

colourdeverre.com, and downloading, printing, and reviewing “Serpentine Basics.”

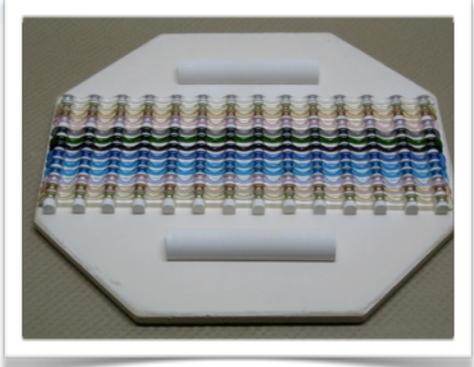
The Sea Form Bowl

Prime the Medium Serpentine with MR-97 or Hotline Hi-Fire Primer. This is one of the few times we don’t recommend Hotline Primo Primer™ be used on our designs. The formers are much denser than other Colour de Verre molds and Primo doesn’t absorb well. Apply the primer according to the manufacturer’s instructions or see our website’s Learn section for information on applying Lubricat.

Place a kiln shelf on your workbench and protect it with a piece of ThinFire™ or shelf primer. (Again, follow the manufacturer’s instructions.)

Place the primed formers parallel to one another on the kiln shelf.

The formers should be spaced 1” (2.5 cm) apart. Balance the glass rods across the formers.



The only way to discover the perfect schedule for your kiln is by observing the results at critical points. This means that you will need to open the hot kiln and look at the rods. This is not as scary as it might sound but certain precautions must be taken. *When opening a hot kiln it is essential to wear eye protection, heat proof gloves, and nonflammable clothing. Only open the kiln’s door or lid one or two inches – only wide enough*

Former Firing Schedule*

Segment	Ramp	Temperature	Check, hold, then check again
1	400°F/220°C	1240°F/670°C	10-15 minutes
2	400°F/220°C	1250°F/675°C	10-15 minutes
3	400°F/220°C	1260°F/680°C	10-15 minutes
4	400°F/220°C	1270°F/685°C	10-15 minutes
5	400°F/220°C	1280°F/690°C	10-15 minutes

*Schedule for COE 96. For COE 90, increase casting temperature by 25°F/15°C. AFAP means “As Fast As Possible”, no venting.

Availability

Colour de Verre molds are available at fine glass retailers and many online merchants including our online store, www.colourdeverre.com.

Tools

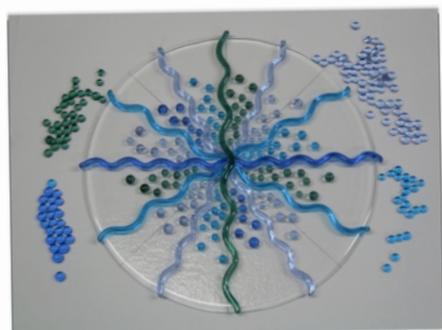
- ✓ Medium Serpentine Formers
- ✓ Mosaic tile nipper
- ✓ Bowl or plate slumping form

Supplies

- ✓ Hotline Hi-Fire™ or MR-97
- ✓ Neon Orchid, Aqua, Sea Green, and Sapphire glass rods
- ✓ Double-thick clear sheet glass
- ✓ Firing paper (ThinFire™)

to see the rods. A flashlight reduces the need to open the door or lid wide.

Program the kiln with the schedule titled “Former Firing Schedule.” After each hold, carefully open the lid or door and observe if the rods have started to bend. If the rods have not started to bend, let the kiln firing program continue. When the right shape is reached, close the door or lid and shut off the kiln. Do not vent.



The next step: Create the glass disk from the double thick, clear glass. This will become the basis for the bowl. The size of this disk will depend your design and the size of your favorite slump mold. (We used a 10” disk because we wanted to use the Colour de Verre 7-10” Bowl Slumper form. We like our slumper because it gives finished pieces a flat base.)

Cut the disk, round the edges with a grinder, and fire it on a kiln shelf protected with either shelf primer or firing paper. Use the Sheet Glass Smoothing Schedule as a guide. In the same firing, create frit balls following the instructions in “Serpentine Basics” by nipping small pieces of rods. Create at

least twice as many as you think you will need so your design won’t be limited by materials. If you don’t have double-thick glass, feel free to fuse two sheets of clear or tinted transparent glass instead.

When the disk has cooled, place it on your workbench. Layout your design and cut the wavy rods to length. (In our design, we choose to extend the rods beyond the rim by 1/4”, however, this isn’t necessary.) Before the rods are glued in place, use a grinder or diamond pad to round the rods’ outer ends.

Again, use the grinder or pad to shape the rods’ central ends to fit together snugly. Lightly glue the

rods in place with small dabs of white glue.



Arrange the frit balls around the wavy rods in a pleasing pattern and glue them in place. Transfer the slumper and disk to your kiln and fire according to the Rod Tacking Schedule.

Sheet Glass Smoothing Schedule*

Segment	Ramp	Temperature	Hold
1	350°F/195°C	1400-1420°F/760-770°C	10-20 minutes
2	AFAP	960°F/515°C	60 minutes
3	100°F/60°C	700°F/370°C	Off. No venting

*Schedule for COE 96. For COE 90, increase casting temperature by 25°F/15°C. AFAP means “As Fast As Possible”, no venting.

Rod Tacking Schedule*

Segment	Ramp	Temperature	Hold
1	350°F/195°C	1350-1375°F/730-745°C	10-20 minutes
2	AFAP	960°F/515°C	60 minutes
3	100°F/60°C	600°F/315°C	Off. No venting

*Schedule for COE 96. For COE 90, increase casting temperature by 25°F/15°C. AFAP means “As Fast As Possible”, no venting.

Slumping Schedule*

Segment	Ramp	Temperature	Hold
1	250°F/135°C	1220-1250°F/660-675°C	10-20 minutes
2	AFAP	960°F/515°C	60 minutes
3	50°F/30°C	800°F/425°C	None
4	100°F/60°C	600°F/315°C	Off. No venting

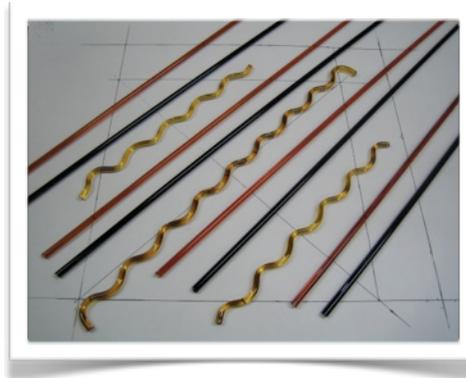
*Schedule for COE 96. For COE 90, increase casting temperature by 25°F/15°C. AFAP means “As Fast As Possible”, no venting.

When the piece has cooled, check to see if all elements are fastened. Place the piece in a primed slumping molds – fused rods down – and fire according to the Slumping Schedule. Don't skip on the annealing and cooling cycles. The finished piece has both very thick and thin sections and needs to cool slowly.



Wavy Amber Plate

The schedules and techniques for the Amber Plate are exactly the same as the Sea Form Bowl. We chose to use the Serpentine Formers to shape the Pale Amber rods but left the Black and Medium Amber rods straight.



Once the rods have been shaped and the panel pre-fired, trace the glass panel onto a sheet of white paper. Connect the corners with lines drawn with a straight edge. Place the glass panel back onto sheet of paper and use the lines to help layout the design.



Again, use small amounts of white glue to hold the piece in place. Fire and slump as before.