



### Creating "Leaded Glass" Window Art

*Left flat, the panels that emerge from Colour de Verre's Pattern Fusers can become beautiful window art.*



Colour de Verre's Pattern Fusers create deeply textured panels that can be slumped into beautiful bowls and plates. However, the Pattern Fusers can be used in a second way. The panels can be one step further to create works for display in windows or mounting as wall art.

### Getting Started

The mold must be primed so the glass doesn't adhere to the mold during the casting process. There is only one primer recommend for Colour de Verre's Pattern Fusers:

ZYP BN Lubriccoat (formerly MR-97). While we also recommend Hotline Primo Primer™ for other Colour de Verre molds, it can be difficult to uniformly cover the sharp edges and deep contours of the Pattern Fuser with a brush-applied primer.

Unless the mold has never been used before, start by removing any ZYP from previous firings. Use a stiff nylon brush like the Libman® Curved Kitchen Brush. These brushes are available from national retailers like Target and Kroger. While boron nitride is considered to be an inert material, it is a fine dust. In our studio, we always clean molds outside while wearing a dusk mask.

Hold both the can and the mold vertically, about 10 to 12" (25 to 30cm) apart, and spray the mold in a sweeping pattern for five to six seconds. It is helpful to rotate the mold halfway through the process to make sure all the surfaces are coated including the inner surfaces of the "dams" that encircle the mold. If this is the first time the mold is being primed wait five minutes and spray the mold again for five to six seconds.

With all aerosols, there is a tendency for less product to be

dispensed as the product is used up. If your ZYP can is less than half full, during each application spray the mold an extra one or two seconds longer.

Wait 15 minutes until mold is dry and it is then ready to fill. Again, the double coat of ZYP only need be applied the first time the mold is used. Thereafter, only one coat is necessary.

For more information about ZYP, visit Colour de Verre website's Learn section. There, download and read "Advanced Priming with Boron Nitride Aerosol" and watch our Pattern Fuser Video.

### Filling and First Firing



This technique requires two firings. In the first firing a panel is made using a combination of frit and double-thick sheet glass. After the casting has cooled, the piece is brought to the workbench, placed texture side up, and a contrasting

### Availability

*Colour de Verre molds are available at fine glass retailers and many online merchants including our online store, [www.colourdeverre.com](http://www.colourdeverre.com).*

### Tools

- ✓ Colour de Verre Pattern Fuser
- ✓ Glass cutter
- ✓ Small measuring spoons for sprinkling frit
- ✓ Digital scale

### Supplies

- ✓ ZYP BN Lubriccoat (formerly MR-97)
- ✓ Assorted fine and powdered frits
- ✓ Sheet glass

fine, opal frit is added between the texture's ridges. Then the panel is re-fired using the Tack Fuse Schedule.

Start by cutting a piece of double thick, clear sheet glass to 9.75 inch (24.5cm) square. *Tip: Grind away the sheets' sharp corners and edges to avoid damaging the primer as the glass is lowered into the mold.*



Panel before "leading" is added

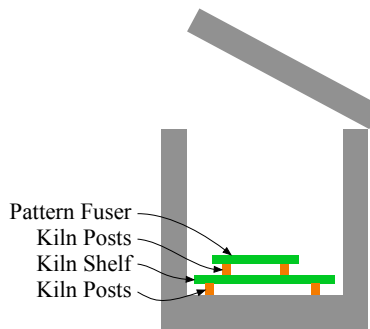
Place a primed Pattern Fuser mold on the workbench. For the images shown, we chose the Botanical Pattern Fuser. We also chose to work with Uroboros' Turns Pink and Light Blue. Select the fine mesh size.

Plan out your design and use a small spoon to fill the depressions in the mold's inner area with the two frit colors. *Tip: A small artist's brush is the perfect tool to sweep stray frit particles into place.* If the two colors are similar intensities, you don't have to worry about every stray granules. The occasional granules blend when the glass melts. Top the center design section with 25 to 50 grams of fine Clear frit.

Next, make a 50/50 mixture of fine Light Blue with fine Clear.



Use this mixture to fill the border region. Continue adding frit until the frit is level with the top of the ridge that separates the frame from the area with the design.



Kiln Cross Section

### Loading the Kiln

To minimize thermal stress to both the Pattern Fuser and the glass, it is very important to make sure there is good heat flow throughout the kiln. For this reason, the Pattern Fuser should be elevated off the kiln shelf with small, 1" kiln posts and the shelf itself should be elevated off the floor of the kiln with kiln posts. See the figure below.

### Firing

Top and side element kilns heat their contents differently. Top element kilns work more like oven broilers. Surfaces in "direct sight" of the electric element's heat much more rapidly. Side element kilns heat their contents indirectly, but the heat is more uniform. These differences become an important factor since the Pattern Fusers' surface area is so broad. We have created two different firing schedules to compensate for these differences. If you have top

### Side Element Schedule\*

Segment	Ramp	Temperature	Hold
1	150°F/85°C	300°F/150°C	30 minutes
2	200°F/110°C	1250°F/675°C	30 minutes
3	200°F/110°C	1400-1420°F/760-770°C	10-20 minutes
4	AFAP	960°F/515°C	60 minutes
5	100°F/60°C	600°F/315°C	Off. No venting

### Top Element Schedule (with or without Side Elements)\*

Segment	Ramp	Temperature	Hold
1	100°F/55°C	300°F/150°C	30 minutes
2	150°F/85°C	1250°F/675°C	30 minutes
3	150°F/85°C	1350-1400°F/730-760°C	5 minutes
4	AFAP	960°F/515°C	60 minutes
5	100°F/60°C	600°F/315°C	Off. No venting



elements in your kiln that cannot be turned off, fire according to the Top Element Schedule. If you have a side element only kiln (or can turn off the top elements) fire according to the Side Element Schedule.



### Second Firing

Once the kiln has cooled, remove the mold from the kiln and the panel from the Pattern Fuser. Wash the panel thoroughly using a small amount of a nonabrasive cleanser like Bon Ami and a little

dish washing soap along with a nylon kitchen brush.

Rinse and dry the panel and place it on the workbench with the textured side up.

Distribute an even layer of contrasting, fine, opal frit between the ridges of the raised, textured surface. For our piece, we chose Black, but you are welcome to experiment with other colors.

Carefully move the panel to a kiln shelf that has been protected with either a coating of Kiln Wash or a piece of firing paper (either ThinFire or Papyrus) and fire according to Tack Fuse Schedule. As the name implies, this firing is only intended to tack fuse the contrasting frit into place. It is not intended to flatten the piece.



Once cooled, the piece can be displayed casually by just setting on the window's ledge and leaning

against the window, or by purchasing a small stand.



While the leading technique looks great with window art, the fired panels can also be slumped into plates and bowls. See the images below.

### Tack Fuse Schedule\*

Segment	Ramp	Temperature	Hold
1	200°F/110°C	300°F/150°C	15 minutes
2	250°F/140°C	1260°F/680°C	5 minutes
3	AFAP	960°F/515°C	60 minutes
4	100°F/60°C	600°F/315°C	Off. No venting