# Art Glass Supplies Create Inspire Fuse

# **REUSABLE MOLDS FOR GLASS CASTING**



Monstera Leaf Visit anyplace tropical and you will see monstera plants climbing up trees so their huge leaves can drink in the sunlight.

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Our Monstera design is one of the largest molds we produce. We chose a mid-size specimen from which to model our design. This gives the artist the opportunity to create simple, **fi** nished а piece using at single casting, or to truly impressive create а piece by collaging three or four leaves together.

Colour de Verre makes other "Big Leaf" designs including the Aralia Leaf, Kiwi Leaf, Rain Forest Leaf, and Northwoods Maple. Visit our website as the techniques described for those molds can be used with the Monstera Leaf design.

# **Priming the Mold**

Always start by priming your molds. There are only two priming products that should be used: Hotline Primo Primer and ZYP BN Lubricoat Aerosol (formerly MR-97).

With either product, clean the mold with a stiff nylon brush and/ or toothbrush to remove any old kiln wash or boron nitride. (This step can be skipped if the mold is brand new.)

If you are using Hotline Primo Primer, mix the product according to directions. Apply the Primo Primer with a soft artist's brush (not a hake brush) and use a hair dryer to completely dry the coat. Give the mold four to **fi** ve thin, even coats drying each coat with a hair dryer before applying the next. Make sure to keep the Primo well stirred as it settles quickly. The mold should be totally dry before **fi** lling. There is no reason to pre-**fi** re the mold.

Since the Monstera Leaf is a very large mold, we suggest a different technique than we traditionally recommend for applying ZYP. However, we always suggest

- Colour de Verre Monstera Leaf
- 🗸 mold
- Medium primer brush
- Digital scale
- Sifter
- ✓ Assorted measuring spoons

wearing a dust mask and applying ZYP outside.

Start by completely removing any primer from previous **fi** rings from the mold using a simple kitchen brush with stiff, nylon bristles. This step, of course, can be skipped, if the mold is brand new.

Place the mold on a chair, vertically, with the mold leaning against the chair's back. Note: You may want to protect the chair with an old towel or a piece of butcher paper. Shake the ZYP can until you hear the marble inside rattle and then continue shaking for a full 60 seconds. Hold the can upright, 12 inches (30 cm) from mold and, in a sweeping motion, spray the mold for three to four seconds. Rotate the mold by 180 degrees, and, again spray the mold with the same sweeping motion for three to four seconds. If it is the **fi**rst time the mold has been treated with ZYP, wait **fi**ve minutes, and repeat the above process.

#### Filling

The suggested **fi**ll weight for the Monstera Leaf is 500 grams.

To accentuate the mold's veining details, create a mixture of two parts Dark Green powder and one part Black powder. *It always a best* 

# Supplies

 ✓ Hotline Primo Primer or ZYP BN Lubricoat Aerosol (formerly MR-97)
✓ Assorted frits and powders

Tools



practice to wear a dust mask when working with glass powders or other fine particles. Use a fine sifter to distribute two or three grams of the mixture across the mold. Gently tapping the sides of the mold will cause the mixture to drop into the details. Use a soft artists brush to brush away any of the powder that remains on the mold' s edges or the ridges that create the leaf's segments.



The mold can be **fi**lled with any combination of colors. Fine frit produces best results. We have found the most realistic results by combining two frit mixtures: A lighter green for the leaf's body and a darker green for the leaf' s tips.

The total amount of frit that needs to be put in the mold (fill weight) is 500 grams. For the leaf body, combine in a small, lidded container the following frits. All are transparent frits and all are **fi** ne mesh:

42 grams	Moss Green
21	Light Green
7	Dark Green
130	Clear

Cover the container and shake until well combined.

For the leaf tips and the body, create a mixture from:

21 grams	Moss Green
21	Light Green
63	Dark Green
195	Clear



Distribute the **fi**rst mixture (the lighter of the two) into the leaf

the e of the mold and the ridges. We will **fi** ll these areas with that the two frit mixtures later. Note: Please visit our website for videos showing how this leaf design is **fi**lled.

When all the lighter mixture has been distributed, continue to fill now using the darker of the two mixtures.

After all the frit is in the mold, use a soft artist' s brush to make sure all the ridges are exposed and that there are no frit "bridges" crossing the ridges. Make sure pay special attention to the to ridge ends. This will lead to a cleaner casting with smoother edges. Before firing, use your fingers to make sure all the frit is relatively level. The frit will be slightly higher in the center of the body and tips.

Elevate the mold off the kiln shelf with three one inch kiln posts. This wil a ldw lthe mold and its

contents to be heated evenly. the mold according to the body leaving an empty one-half to Schedule The **fi**r ng i one inch "trough" around Casting kowedangets temperature and long hold will prevent the frit from becoming too liquid and balling up due to surface tension. This will

keep the leaf thin and delicate.

#### Casting Schedule\*

Segment	Ramp	Temperature	Hold
1	300°F/165°C	1300-1320°F/705-715°C	45-60 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 15°F/8°C. AFAP means "As Fast As Possible", no venting.

# Individual Leaf Slumping Schedule\*

Segment	Ramp	Temperature	Hold
1	300°F/165°C	1200°F/650°C	10-15 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 15°F/8°C. AFAP means "As Fast As Possible", no venting.

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# **Slumping Individual Leaves**

Monstera Leaf castings can be slumped into beautiful bowls. One of our favorite slumping surfaces for the Monstera Leaf is the Bullseye Ball Surface Mold (#8734).



Wash the Monstera Leaf to remove any residual primer. Prime the slumping surface according to the manufacturer's instructions. Place the leaf on the slumping surface with the texture side up. Fire the piece. After the piece is slumped, three bump-ons (small, rubber feet) can be added to the leaf's bottom so it is stable when sitting on a table.



# **Creating Larger Pieces**

Multiple leaves can be tack fused to one another and then shaped.

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Multiple	Leaf Tack Fus	ing Schedule*
Segment	Ramn	Temperature

Segment	Ramp	Temperature	Hold
1	200°F/110°C †	300°F/150°C	10 minutes
2	200°F/110°C †	1000°F/535°C	30 minutes
3	200°F/110°C †	1200°F/650°C	45-60 minutes
4	100°F/60°C †	1250-1260°F/675-680°C	10 minutes
5	AFAP	960°F/515°C	90 minutes (180 minutes for 4 or more leaves)
6	50°F/30°C	800°F/425°C	0 minutes
7	100°F/60°C	600°F/315°C	0 minutes
8	200°F/110°C	100°F/40°C	Off. No venting

# Combined Multiple Leaf Slumping Schedule\*

Segment	Ramp	Temperature	Hold
1	80°F/45°C ††	300°F/150°C	30 minutes
2	80°F/45°C ††	1000°F/535°C	85 minutes
3	50°F/30°C	1200°F/650°C	5 minutes
4	AFAP	960°F/515°C	90 minutes (180 minutes for 4 or more leaves)
5	50°F/30°C	800°F/425°C	0 minutes
6	100°F/60°C	600°F/315°C	0 minutes
7	200°F/110°C	100°F/40°C	Off. No venting

\* Schedule for COE 96. For COE 90, increase casting temperature by 15°F/8°C. AFAP means "As Fast As Possible", no venting.

\* Schedules were developed for side element kilns. Slow ramps by50°F/30°C for top element kilns.

 $\dagger$  Slow ramps by 30°F/15°C for top element kilns and more than three leaves.

To tack fuse multiple pieces together, start by protecting the kiln shelf with a good shelf primer or shelf paper (e.g. ThinFire<sup>TM</sup> or Papyros<sup>TM</sup>). Overlap the pieces in a pleasing manner and **fi** re according to the Multiple Leaf Tack Fusing Schedule.

Once the combined leaves have cooled, place them in a large, kilnwashed slumping form and **fi**re according to the Combined Multiple Leaf Slumping Schedule.

When tack fusing or slumping combined leaves, it is important to

follow the slow ramps. The larger pieces will have a wide range of thicknesses and can crack if ramp speeds are too rapid.



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#### Variations

Our suggested colors result in realistic leaves. However, there is no reason not to let your imagination go wild with unconventional color combinations to create fanciful leaves.

