



Autumn Candle Holder

Two of these on the mantle or three running down a dining table is a great way to welcome autumn.



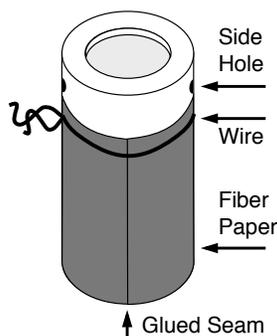
This project can be broken down into a few steps that can be done over a few days or evenings. In this project, we use ZYP BN Lubriccoat (formerly MR-97). If you prefer to use Hotline Primo Primer, visit our website Learn section and read “Candle Holder Basics.” If you are unfamiliar with ZYP, we strongly recommend that you review “Advance Priming with Boron Nitride Aerosol.”

Step #1: The Candle Holder

Use a stiff nylon brush to remove any old primer from the mold. Apply a three to four-second

blast of ZYP to the mold’s interior. If the mold has never been treated with ZYP before, wait five minutes and apply a second three-to four second blast. Let the mold dry for 15 minutes before filling. The plug will be primed later.

It is important to create a cushion around the plug so it can be removed from the cast glass. For the cushion, we use $\frac{1}{16}$ ” fiber paper. ThinFire™ firing paper is not suitable. It is a wonderful product, but isn’t thick enough to provide cushioning.



Plug ready to be used.

Cut a $5\frac{1}{4}$ by $1\frac{7}{8}$ ” (134 by 48mm) piece of $\frac{1}{16}$ ” fiber paper. (A template can be found below.) Apply a $\frac{1}{4}$ ” band of white glue (e.g. Elmers or Aleene’s Tacky) to the short ends of the fiber paper rectangle. (If the fiber paper has a rougher side, apply glue to that

side.) Wrap the rectangle around the plug making sure the fiber paper’s edge is even with the plug’s bottom. Smooth the glued edges against the plug. Let dry. Position the high-temperature wire $\frac{1}{4}$ ” from the top of the fiber paper with the ends below one of the holes. Twist the ends with needle-nose pliers to secure the paper.

Spray the fiber paper and the plug’s bottom with ZYP. As before, apply a second coat to the bottom of the plug if the plug has never been treated with ZYP before. Let dry.

Place the stainless steel rod through the holes in the plug’s side. Hang the plug into the mold by positioning the rod into the two notches on the mold’s top edge.

In a large, lidded container, pour 250 grams of medium mesh Pale Amber and 250 grams of medium Clear frit. Secure the lid and shake the container. Mixing frit produces fine, glass dust. It is wise to don a dust mask before opening the container.

Temporarily remove the rod and plug from the mold. Add just enough frit to the mold so that, when the plug and rod are replaced, the plug’s bottom is just above the frit. Hold the plug in

Availability

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

Tools

- ✓ Colour de Verre Round Candle Holder mold
- ✓ Oak Leaf and Acorn mold(s)
- ✓ Large, lidded container
- ✓ Digital scale

Supplies

- ✓ ZYP BN Lubriccoat (formerly MR-97)
- ✓ Assorted frits
- ✓ $\frac{1}{16}$ ” Fiber paper
- ✓ White Glue

place and loop the twisted wire ends over the rod.

Use a small ruler to center the plug along the rod and continue adding frit evenly around the plug, making sure the plug remains centered, straight up-and-down, and hangs freely. Mound the glass away from both the plug and the mold's sides to reduce spurs.



Fire according to the Casting Schedule attached. The finished piece's thickness and variations in thickness accounts for the long annealing cycles.

Due to using medium frit the inside edges of the casting may have a few casting spurs. If there are spurs on the inner surface, use a diamond, half-round hand file or a sickle stone to remove them. If there are spurs on the casting's outer edge, remove them with a diamond pad or power grinder. These blemishes will "heal over" when the leaves and acorns are tack fused to the surface.

Step #2: Leaves and Acorns

Use a stiff, nylon brush to remove any old primer from the mold. Apply a two- to three-second blast of ZYP to the Oak Leaves and

Acorns mold. (For complete instructions on using ZYP, please review "Advanced Priming with Boron Nitride Aerosol." If the mold has never been treated with ZYP, let the mold dry, and apply a second two- to three-second blast.

Select an empty, lidded container. (Empty frit jars are perfect.) Create a two-to-one mixture of fine Pale Amber to fine Medium Amber, by combining four tablespoons of Pale Amber with two tablespoons of fine Medium Amber. Cap the container and shake until the mixture is uniform.

Since we wish to create very thin and delicate castings we will use less than the recommended fill weights. For the oak leaves, we will use 7 and 12 grams. For the acorns, 5 grams each.

Before filling the mold, highlight the design's details by "dusting" the mold surfaces with a little Black powder using a fine-screen sifter. The powder collects in the crevasses and highlights the detail. (It is always best to wear a dusk mask when working with frits and aerosols.)

Using the fill weights mentioned above, fill the leaves and acorns with the two-to-one amber frit mixture. If needed, use a soft brush to level the frit in all four cavities. Transfer the mold to the kiln. Fire the mold(s) according the Extra-Thin Component Casting Schedule.



Step #3: Shaping Leaves

This is an optional step, but makes the oak leaves look much more lifelike.

On the oak leaves mold's reverse side is a built in shaping (slumping) surface. Using the same priming technique described above, clean and prime the slumping surface.

Arrange the leaves on the shaping surface, returned to the kiln, and

Casting Schedule*

| Segment | Ramp | Temperature | Hold |
|---------|-------------|-----------------------|-----------------|
| 1 | 300°F/165°C | 1250°F/675°C | 30 minutes |
| 2 | 300°F/165°C | 1410-1430°F/765-775°C | 30-60 minutes |
| 3 | AFAP | 960°F/515°C | 60 minutes |
| 4 | 50°F/30°C | 800°F/425°C | None |
| 5 | 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.

fire according to the Component Shaping Schedule.



Step #4: Tack Fusing

Arrange the oak leaves and acorns on the top surface of the tea light holder. It might be necessary to grind or shape the pieces so they fit together in a natural way. Hold the pieces in place with small dabs of white glue. Let dry.



So the oak leaves don't flatten during the tack fuse, insert small pieces of thick fiber paper (not ThinFire™) under the leaves' folds to support them.

Return the tea light to a cleaned and freshly primed mold. (There is no need to replace the center plug and rod.) Fire the piece according to the Tack Fuse Schedule.

Variations

This same technique and format will work with any of Colour de Verre's Candle Holder designs and smaller embellishment designs. For example, to the right is a candle holder embellished with small leaves and blossoms.



Extra-Thin Component Casting Schedule*

| Segment | Ramp | Temperature | Hold |
|---------|-------------|-----------------------|-----------------|
| 1 | 300°F/166°C | 1310-1320°F/710-715°C | 30-50 minutes |
| 2 | AFAP | 960°F/515°C | 30 minutes. Off |

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

Component Shaping Schedule*

| Segment | Ramp | Temperature | Hold |
|---------|-------------|-----------------------|------------------------------|
| 1 | 300°F/165°C | 1220-1240°F/660-670°C | 5-10 minutes |
| 2 | AFAP | 960°F/515°C | 30 minutes. 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.

Tack Fuse Schedule*

| Segment | Ramp | Temperature | Hold |
|---------|-------------|-----------------------|-----------------|
| 1 | 200°F/110°C | 1250-1260°F/675-680°C | 5-10 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.

Fiber Paper Template