

LF107 Frit Cast Butterfly Tutorial



This guide demonstrates how to use various grains of translucent and opaque frit in a mold to create the green butterflies pictured. The artist can also choose to use any assortment of frit colors and combinations.

The following materials were used to create the butterflies as photographed:

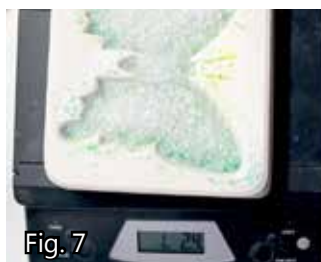
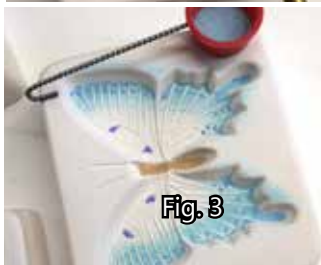
- CPI molds: LF107 Frit Cast Butterfly
- MR-97 Boron Nitride Spray
- 18 gauge bare copper wire, powder sifter, powder vibrate
- digital kiln with chamber 8" dia. or bigger
- System 96 frits: F1 (powder) Deep Aqua, Yellow Opal, Cobalt, F2 (fine) Yellow Trans, Med. Amber, Dark Amber, Moss Green, Chestnut Opal F3 (Medium) Pastel Green, Clear.



General Instructions:

Begin by treating the mold with the Boron Nitride spray in a ventilated area. Several light coats with a short waiting period between coats is preferable to one heavy coat. Shake the can well before use and hold the can upright while using to assure proper distribution of product. It is important to make sure to turn the mold at various angles to make sure to coat the mold wall. (For more information on the use of this product <http://mr-97.com/info/>).

Before adding frit to the mold, place the mold on a scale and weigh it. (Fig. 1) (Tip: you can use an underglaze pencil to write the weight of the empty mold on the outside of the mold and the number will be there after firing for future projects.) The green butterfly featured in this tutorial was made using a total of 3 oz of frit. This frit was taken to a full fuse using the firing schedule provided. It is possible to make lighter butterflies by using less frit and a lower working temp in the firing schedule. Weights and working temps in segment 4 are given for the various weight options. Fine and powder frit should be used exclusively for the 1.5 oz butterflies as medium grain frit will remain textured at low working temps. To create precise frit placement, a Powder Vibe (or other similar tool) can be used with powdered frit. The precise frit placement should be done first.



The Green Butterfly Colors and Process

Use a Powder Vibe to place powdered transparent Cobalt in the dots on the perimeter of the wings, the edges of the wings and in the low area of the body. (Fig. 2) Fill the body with fine Chestnut Opal frit and use a frit sifter to sift powdered Deep Aqua frit along the wing edges (Fig. 3). Use a powder sifter to cover the entire butterfly with a light coat of powdered yellow opal (Fig. 4). Add fine transparent Yellow to the area just outside of the body on the wings and fine transparent Moss to the outside edge of the wings. Place fine transparent Dark Amber frit over the moss frit in the lower section of the wings, top tip of the wings and onto the body allowing some of the Dark Amber to spill into the transparent Yellow next to the body. (Fig. 5) Place the mold onto the scale and add 1.5 oz of medium grain Pastel Green all over the mold cavity. (Fig. 6) Add medium Clear until the mold weighs 3 oz more than it did before it held any frit. Sweep the clear frit back from the mold wall to help prevent burrs. (Fig. 7) Cut two 5" pieces of 18 gauge bare copper wire and bend 1/4" of the end of each wire at a right angle. Place the tip of the bent ends into the frit at the top of the butterfly's head. (Fig. 8) Fire the project using the firing schedule provided choosing the 3 oz working temp in segment 4.

The fired butterflies can be used in a variety of delightful ways. An alligator clip can be glued to the back of the butterfly and the butterfly can be clipped into arrangements and onto copper tubes/wires. Additionally the thinner butterflies can be lightly tack fired (1300 degrees) to other glass projects.



Additional designs and suggestions!

Table 2 - Fuse firing schedule for Butterflies

Seg	Rate	Temp	Hold
1	275	1000	10
2	275	1225	30
3	275	1300	10
4	275	1470 - 3 oz 1440 - 2 oz 1400 -1.5 oz	5
5	9999	960	60



These butterflies were made using pieces of clear dichroic glass with the glass side down in the mold and various frit colors placed in front and behind the dichroic glass.



Uroboros Metallic Irid on Clear Mosaic sized frit was placed iridized side down and then backed with various jewel toned opaque frit to create this butterfly



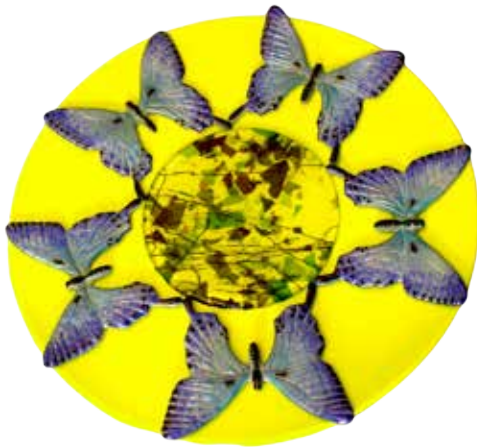
f1 Deep Aqua, f2 Plum and Black used with f3 White



f2 Black Opal, f2 Dark Amber, F2 Medium Amber, f3 Yellow Opal



f1 Orange & Black, f3 Yellow Opal, pieces of dichro on black



Very thin butterflies made using fine and powdered frit were made using the mold and subsequently tack fired to a pre-fused 13" dia. blank.



The butterflies can be placed on a spring on a copper tube to make fluttering butterfly stake for the garden or flower pot. They can also be added to floral arrangements.

