

FUSED AND DRAPED BUTTER DISH LID AND BASE

D&L ART GLASS SUPPLY

Functional art appeals to people on many levels. A fused glass butter dish that can be used every day will make a great gift. It would also be a great finished ware item because the consumer can more readily justify purchase that serves a function. In part one of this two part tutorial, the reader will learn to fuse and drape the lid and then to use frit to frit cast the base.

General Instructions:

This tutorial can be used as a guide to make a Butter Dish using Creative Paradise mold LF118 and Gm148. The artist can also choose to use any assortment of frit and sheet glass colors and combinations. As long as the glass fused together is compatible and fusible.

Begin by treating the molds 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 frit casting mold, place the mold on a scale and weigh it. The weight of frit required to fill the mold is given in the base section of this tutorial.

Fusing and Draping the Lid

The following materials were used to create the butter dish lid found in Fig. 1
Mold # :GM148 Butter Dish Hump
MR97 Boron Nitride, 1" x 2" fiber paper (1/8" thick), Thin Fire
Glass Used: COE 96 Pale Purple (6" x 6"), Pale Blue (6" x 2") and Sea Green (6" x 2")

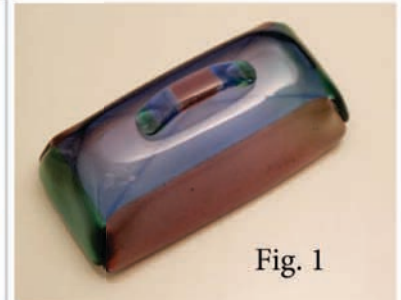


Fig. 1

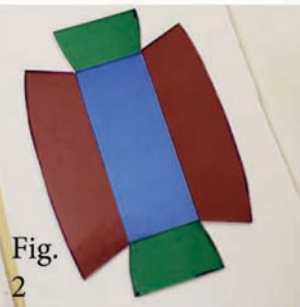


Fig. 2

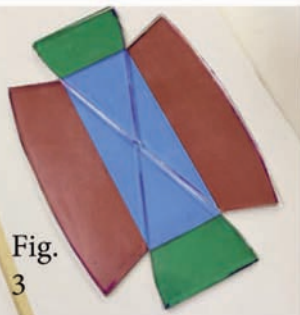


Fig. 3



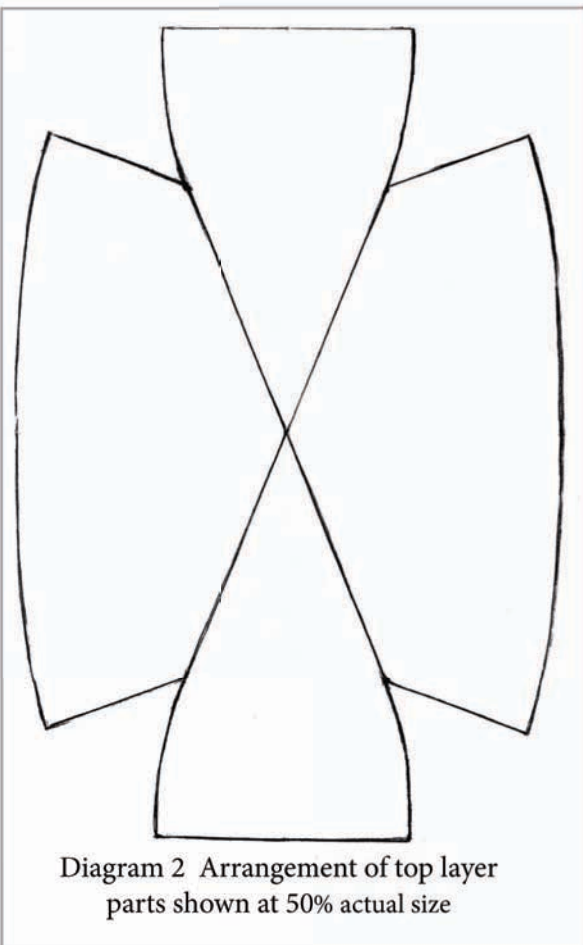
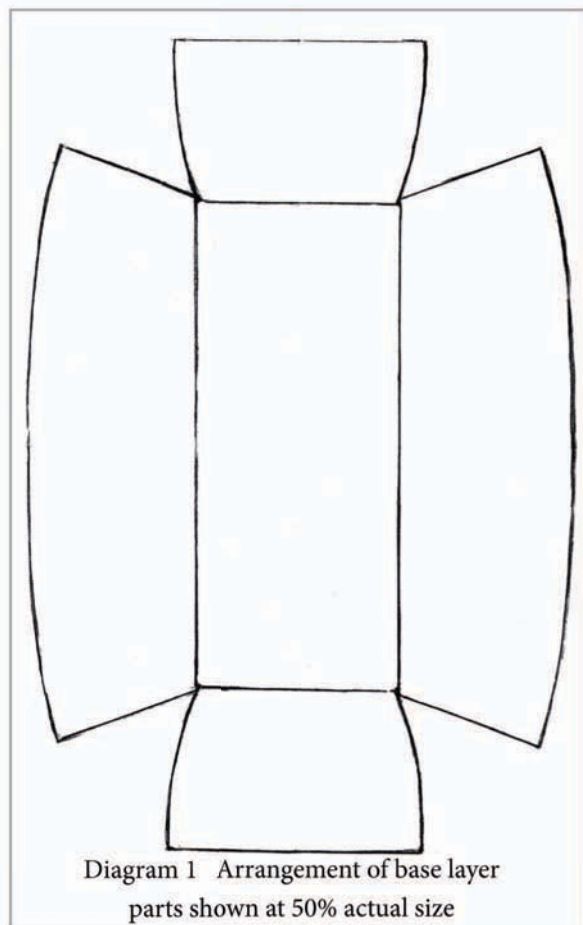
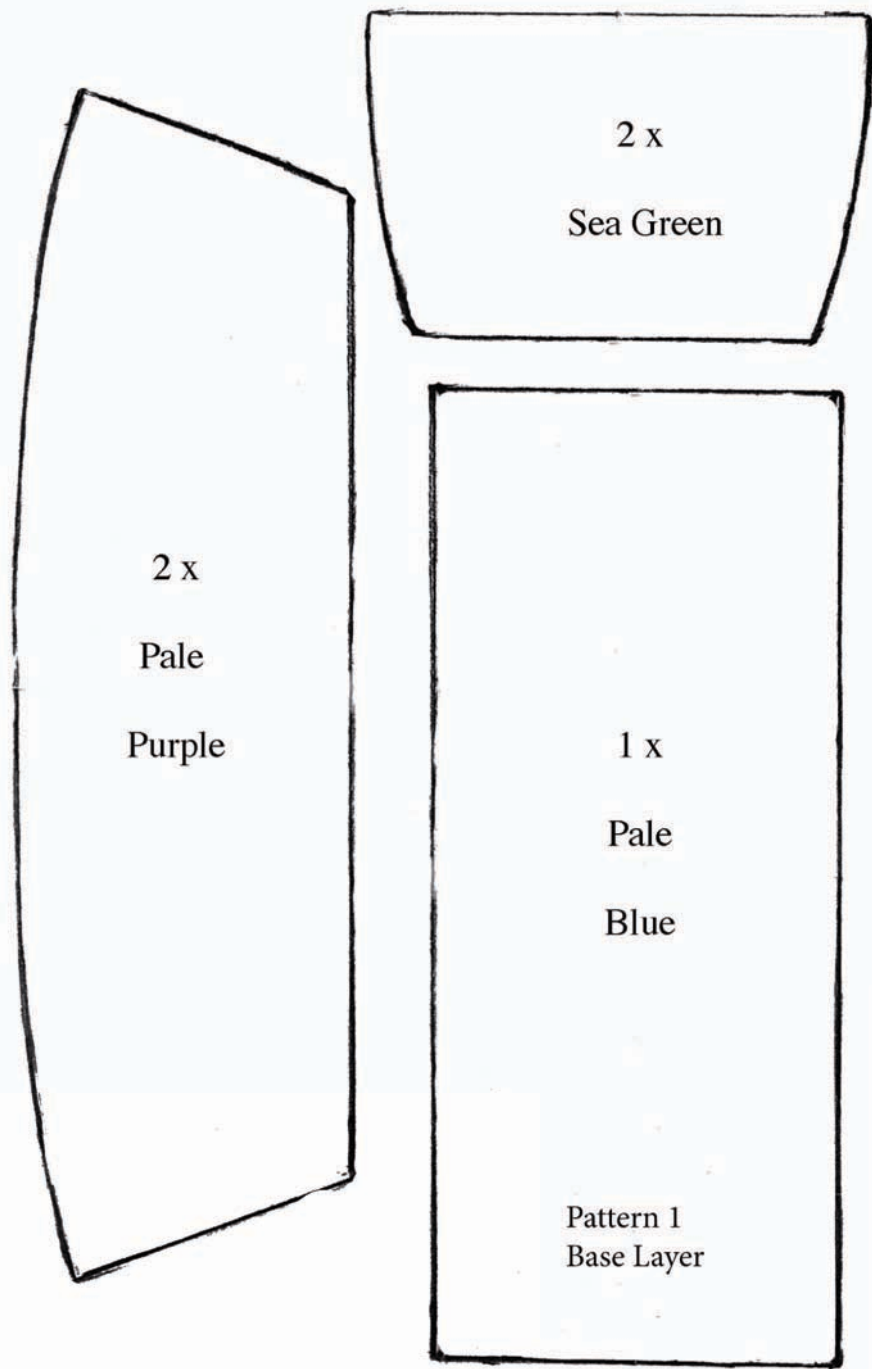
Fig. 4

The patterns to use to cut the sheet glass for the lid can be found in the pages to follow. Pattern 1 provides the shapes and quantities of the pieces to cut to form the base layer of glass. You will find the specific colors listed that were used to create the piece found in Fig. 1, however any colors can be used. We highly recommend the use of a transparent glass to form the center of the butter dish drape. The transparency of the center is VERY helpful when lining the fused glass up on the drape mold. It is also important that the pieces found in pattern 1 be used as the base layer and the pieces found in pattern 2 be used as the top layer. The seam lines formed by the pieces in pattern 2 need to be on top, away from the mold as they can cause stress cracks if they are facing the mold.

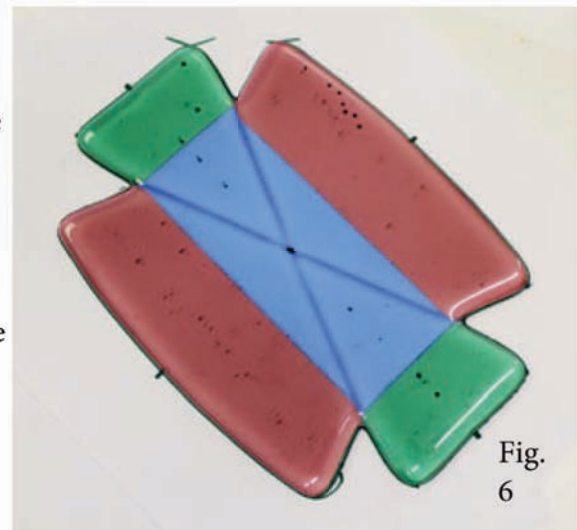
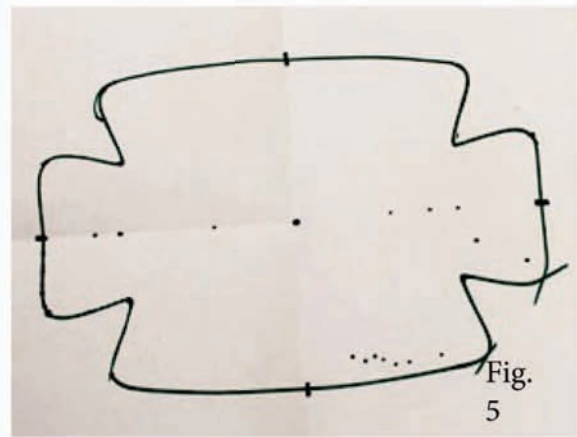
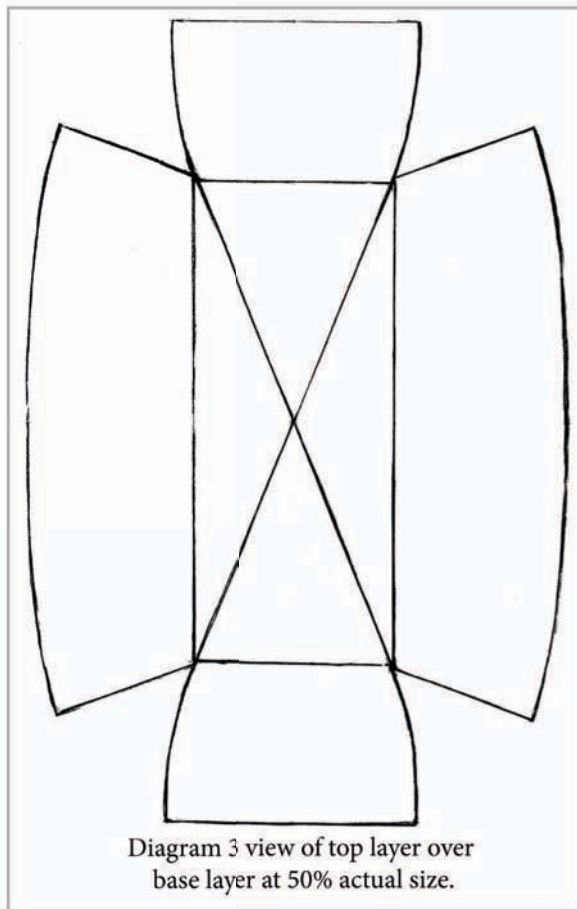
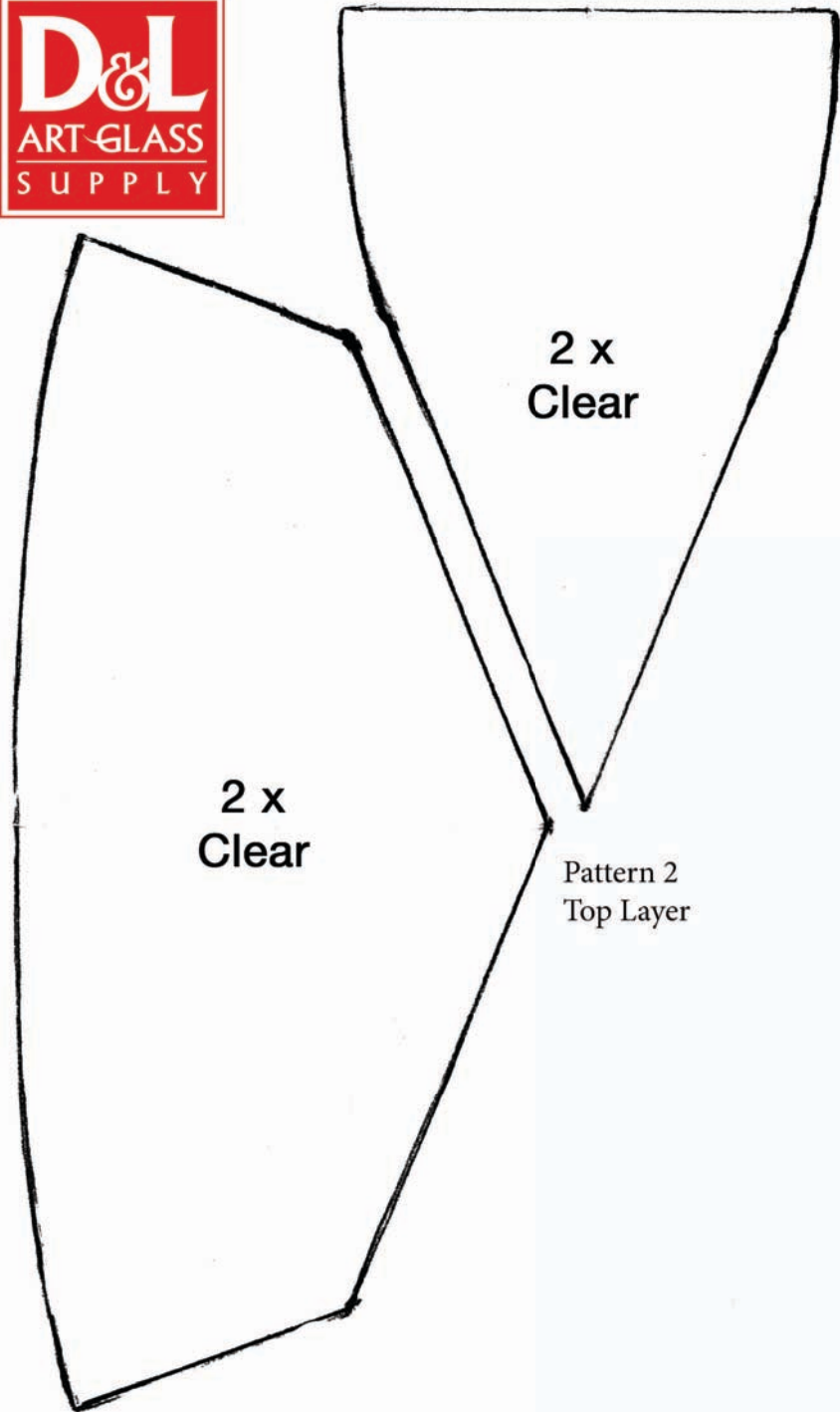
Cut glass into the pieces found in pattern 1 and arrange them on a piece of kiln shelf paper as indicated in the diagram 1 and fig. 2.

Cut glass into the pieces found in pattern 2 and arrange them as indicated in diagram 2 and image 3 on top of the base layer. Diagram 3 shows what the glass should look like when the top layer is arranged onto the base layer.

If you would like to add a handle to the top (completely optional), Cut a 1/2" x 2.75" strip of clear glass and top the clear glass with 1/2" wide pieces of glass colors from the base layer (fig. 4).



Segment	rate	temp	hold
1	275	1000	10
2	275	1225	30
3	275	1300	10
4	275	1470	5
5	9999	960	60
6	100	800	1



Fire the glass using the firing schedule found in Table 1. Cutting the pieces of glass absolutely perfectly each time can be very difficult. Therefore, the fused glass may not be exactly symmetrical. To find the center of the glass after fusing, place the fused glass onto a piece of paper and trace around the edge of the glass. Draw any distinguishing marks, bubbles or other features found in the glass where they would be on the tracing. This will help you to replace the glass onto the tracing correctly. Fold the paper in half vertically and horizontally so that the long and short edges of the tracing line match up. Make a mark on the paper where the center is indicated (fig. 5). Place the glass onto the tracing and use a Sharpie to make a mark on the glass indicating the center of the glass and also along the long center line to help line the glass up on the drape mold (fig. 6).

After MR97 has been applied to the drape mold, use a Sharpie to make a mark on the center mark of the mold, and on the center indicators at both ends of the top of the mold (fig. 7).

Place the fused glass, smooth side up on the drape mold in a kiln. Line the center mark previously made on the glass directly over the center mark of the mold. Line up the center marks near the ends of the mold as well (fig. 8).

To add a handle to the top of the glass, cut three pieces of 1/8" fiber paper 1/2" x 1", 1/2" x 3/4", 1/2" x 1/2". Stack the fiber paper onto the center of the glass with the smallest piece first, followed by the middle sized piece and lastly centering the largest piece on top (fig. 9). Fiber paper will leave a mark on glass when fired. It is for this reason that the smallest piece is on the bottom. Balance the 1/2" x 2.75" fused strip of glass on top of the stack of fiber paper (fig. 10).

Fire the glass on the mold using the firing schedule provided in Table 2.

Allow the kiln to cool naturally. Premature cooling will cause the glass to crack.

Table 2 - Drape Firing Schedule			
Segment	rate	temp	hold
1	250	1000	20
2	200	1150	15
3	200	1250	15
4	9999	960	90
5	100	825	5
6	100	500	5

It is crucial that the temperature in segment 3 does not exceed 1250 degrees. Some kilns run hot. If your kiln fires to a full fuse at temperatures near 1450 or below, you will have to adjust the firing schedules down 20 degrees in each segment. It is better to under fire this project than to over fire it.

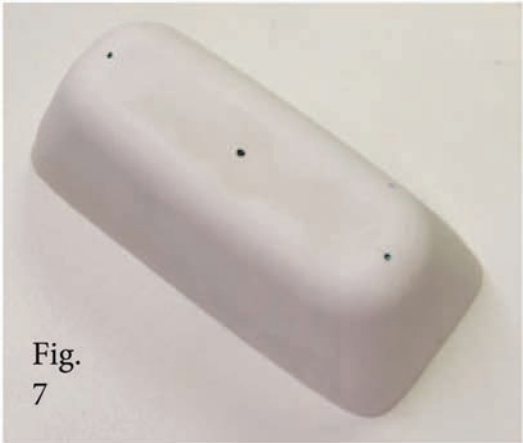


Fig.
7

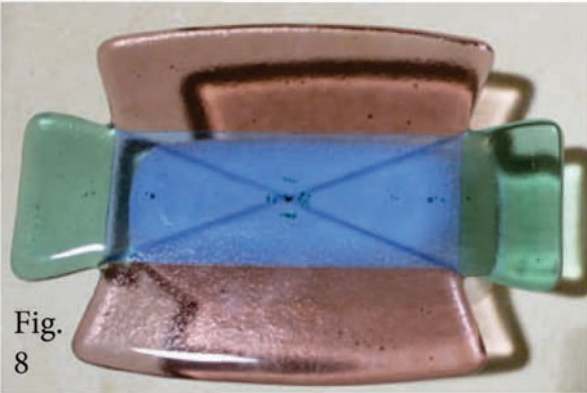


Fig.
8

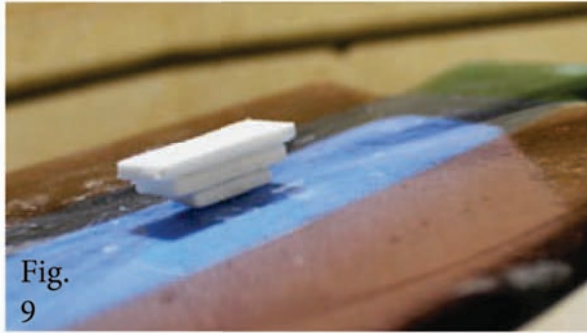


Fig.
9



Fig.
10



Frit Casting the Base

The following materials were used to create the Butter Dish photographed

Mold # : LF118 Butter Dish Base

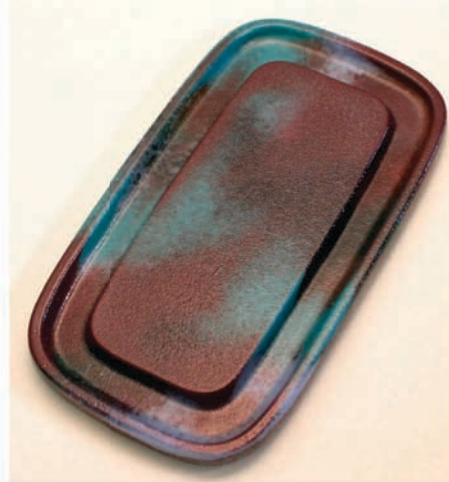
Glass Weight: 18 oz

System 96 Frit Used:

F2 Lilac Opal, Cobalt Trans

F3 Pastel Green Opal, Pale Purple Trans, Hydrandea Opal
Clear

After preparing the mold with MR97 Boron Nitride glass separator (other glass separators can be used, but the best results will be had with MR97) place the mold on a scale and notate the weight of the mold (fig 11).



A great variety of frit and even pieces of sheet glass, dichroic, noodles, rods and stringers can be used in this project. A great tip to use when trying to coordinate the butter dish base with the butter dish lid is to use the opaque colors that relate to the transparent colors of the lid. If the base is made entirely of transparent colors, the resulting base will be dark and it will not accent transparency of the lid. Transparent colors can be used but they should be backed by opaque colors for the best aesthetic results.



Fig.
11

The butter dish base photographed was made to accent the butter dish lid made in the first part of this tutorial. About 1 oz each of fine Lilac Opal and Cobalt Transparent frit was placed randomly in the bottom of the mold. About 2 oz each of medium grain Pale Purple Transparent and Hydrandea Opal were scattered randomly in the bottom of the mold over the fine frit. 8 ounces of medium grain Pastel Green was distributed over the entire bottom of the mold covering the frit previously placed in the mold. The mold was placed on a scale and filled with medium grain clear frit until the mold weighed 18 oz more than it did empty (fig. 12).



Fig.
12

After filling the mold with 18 oz of glass, place the mold on short kiln posts on the kiln shelf (fig. 13) and fire using the firing schedule provided in table 1. The base and lid can be fused in the same kiln load.



Fig.
13

Allow the kiln to cool naturally and demold the glass. Sometimes, MR97 residue can be found coating the glass that was against the mold. Rinse the mold with warm water and scrub with a stiff scrub brush to remove the residue. If the residue resists removal, apply LimeAway or other comparable product and scrub again.

