

Framed Annular Pot Melt

By Dale Keating, 2014



Glass (S96) added to the melt:

- 10"x10" clear thin.
- 300 grams of white.
- 300 grams of clear.
- 200 grams of green; Amazon green with a few bits of transparent dark green.
- 200 grams of orange and yellow: Marigold, transparent orange and Sunflower.

Glass (S96) used in the Border:

- Clear thick
- Marigold
- Sunflower
- Amazon Green

The Set Up



Place a 12" square piece of shelf paper on a newly washed kiln shelf and place a 10" square of clear thin glass on top of the shelf paper. Add barriers or glass dams around the perimeter lined with 1/8" fiber paper. Cut each fiber paper strip 10-1/2" long and 5/8" wide. It can measure anywhere between 5/8" and 1" wide but must be at least 1/2" longer than the glass so the dams can be pushed up against the fiber paper.



Position 4 kiln posts on the outside of the barrier and balance two horizontal supports on top. The Annular ring pot will sit on these. If necessary place additional kiln posts or equivalent against the glass dams to prevent the barriers from moving. Place a tall kiln post or something equivalent in the exact center of the glass. This is to help center the pot and will be removed.

Adding The Glass & Firing



1/ Add the glass to the pot in layers as outlined below and distribute the colors evenly. Keep the green close to the center and the darker orange towards the outside.

- Layer 1: White.
- Layer 2: Clear.
- Layer 3: Dark Green Transparent.
- Layer 4: All remaining colors.
- Layer 5: Clear.



2/ Position the pot on the two support bars using the tall kiln post to help center it. Then remove the kiln post when it is centered correctly.

3/ Fire...

Segment 1: 450°F/hr to 1680°F and hold for 50 minutes.

Segment 2: 9999 to 950°F and hold for 2 hours.

Segment 3: 100°F/hr to 700°F and no hold.

Please note; this program may need to be adjusted to suite your kiln.

Safety Note: Not all kilns are built to fire to such a high temperature which can damage the coils. If you are not certain check with the manufacturer of your kiln.

Building The Strip Cut Border



1/ Once the melt has been removed from the kiln, with either diamond hand pads or a grinder smooth the outer edge making sure all the fiber paper is removed. A 120 grit or higher will do.

2/ Measure the thickness of the melt. All the strips will be cut to match this measurement. My melt is 5/16" thick so all the strips will be cut so they are 5/16" wide.

3/ Place a piece of scrap standing on end along one side and measure the total length across the top including the piece of scrap. Cut your first strip using that measurement for your length and the previous measurement from step 2 for your width. My strip is 10-1/8" x 5/16". Stand it on end against the melt and secure in place so it does not move.



4/ Repeat step 3 measuring the next side and continue all the way around until all four pieces are in place. They must fit snugly and must not protrude beyond the edge otherwise the line will be distorted after firing.

5/ Repeat the procedure for any additional strip cut borders making sure all the pieces are exactly the same height as the melt.



Building The Mitered Border

For wide borders I prefer to stack the layers and miter the corners. You can cut them straight across and butt them up against each other but with some opaque glass a faint line may remain because the color on the surface of the sheet of glass is slightly different from the color in the core. I find a mitered seam makes the line less distracting and visually more pleasing. Similarly with transparent colors a faint line on the underside may be visible after fusing so I miter those as well.



When you have a relatively thin border, to keep the lines straight, add as many layers as necessary to match the height of the strip cut border. I added a standard layer of light opaque orange on the bottom and double thick clear glass on top of that to match the height.

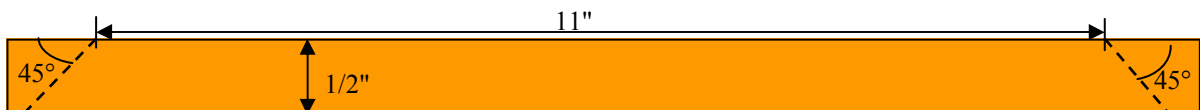
1/ Determine the desired size of your finished plate. My plate will measure 12"x12".

2/ Measure the actual dimension of the melt including the strip cut border then subtract that amount from the finished size and divide by two. This is the width of the border. Mine measures 11"x11". So the width of my last border will be 1/2".



3/ Cut four strips of glass 1/2" longer than the finished size using the measurement calculated in step 2 as your width.

4/ Measure the length of one side and transfer this measurement to one strip centering the cut marks. Using a protractor draw a line at a 45° angle at each mark and trim.



5/ Repeat for the remaining three sides and cut as many layers as necessary to equal the height of the strip cut border. All the pieces must fit snugly without any spaces between them.

6/ Wash all the pieces.

Fusing & Finishing

1/ Check the melt for any bubbles that are just below the surface. If they break when you poke them fill those and any that are already burst. Use either fine or medium clear frit.

2/ Assemble on the kiln shelf.

If your plate is thicker than 1/4" place a barrier around the perimeter. This will prevent it from spreading and will help keep the lines straight.

3/ Full fuse...

Segment 1: 150°F/hr to 1150°F and hold 20 minutes.
Segment 2: 100°F/hr to 1250°F and hold for 30 minutes.
Segment 3: 450°F/hr to 1500°F and hold for 10 minutes.
Segment 4: 9999°F/hr to 950°F and hold for 2 hours.
Segment 5: 100°F/hr to 700°F and no hold.

**Please note; this schedule is more of a guideline and may need adjusting for your kiln.



Please note; some glass is very inconsistent in thickness which will cause the lines to curve or wiggle ever so slightly. If you used this type of glass in your strip cut border I recommend firing face down then flip and fire polish.

4/ If barriers were not used and polishing the edge is not required skip this step and slump.

If required; grind the edge with either a diamond hand pad or grinder using a 220 grit or higher then fire polish in the kiln. You can fire polish and slump at the same time if your mold is shallow and the edge has been smoothed with a fine grit, 400 or higher. Otherwise slump in the next firing.

To fire polish...

Segment 1: 150°F/hr to 1000°F and no hold.
Segment 2: 9999 to 1385°F and hold for 5 minutes.
Segment 3: 9999°F/hr to 950°F and hold for 2 hours.
Segment 4: 100°F/hr to 700°F and no hold.

**Please note; this schedule may need adjusting for your kiln.



5/ Slump...

Segment 1: 100°F/hr to 1000°F and no hold.
Segment 2: 9999 to 1150°F and hold for 30 minutes or until fully slumped.
Segment 3: 9999 to 950°F and hold for 2 hours.
Segment 4: 100°F/hr to 700°F and no hold.

**Please note; this schedule may need adjusting for your kiln.

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