Make It: Inline Plate

Glass

1/2 tube each:
- Burnt Orange Stringer, 2 mm (000329-0072)
- Butterscotch Stringer, 2 mm (000337-0072)
- Petal Pink Stringer, 2 mm (000421-0072)
- Opaque White Stringer, 2 mm (000013-0072)
- Clear Stringer, 2 mm (001101-0072)

4 sheets:
- Clear Tekta, 3 mm, 10" x 10" (001100-0380)

Produces one 9" x 9" and one 8" x 8" plate.

Tools
- Basic glass cutting tools
- Neo GC Cutter
- Square Slumper Mold A (8634)

Non-Glass Items
- GlasTac
- Bullseye Shelf Primer (not ThinFire or shelf paper)
- Butcher or kraft paper to use as a clean workspace

Other Handy Items
- Ultra fine point Sharpie® pen
- Small cups or blocks to elevate the piece during the design phase
- 120 grit diamond pad

Optional Coldworking Equipment
- Wet belt sander

Recommended Reading
- Improve Your Glass Cutting
- Glass Cleaning Basics
- TipSheet 7: Platemaking
- Tips for Using Bullseye Slumping Molds

Recommended Viewing
- Slumping Basics
- Working with Stringer
- Inline Plate Project (Release Dec. 2013)
- Coldworking with the Wet Belt Sander

Articles and videos can be found at www.bullseyeglass.com/education

PREPARE THE SHEET GLASS

1. Cut two pieces of 3 mm Clear Tekta to 9" x 9".

2. Clean one of them and trace its border with a pencil on a piece of butcher paper to serve as a template and clean workspace. Set the sheet glass aside.

PREPARE THE STRINGER

3. Set out enough stringers to cover the 9" x 9" template you have drawn. It takes approximately 116 2 mm stringers to cover a 9" x 9" square end to end (an average of 23 stringers or about a half-tube of each color). Don't worry about color placement just yet.

4. Measure, mark, and cut all of the stringers in the same step to make sure they are uniform in length and have "clean" ends. Start by aligning the stringers so that 1/4" or less hangs over one edge of the template. (Full-length stringers will overlap the opposite side of the template by about 8 1/4".) Using the template as a guide, place the 9" x 9" piece of clean Tekta on top of the stringers. Next, run an ultra fine point Sharpie® pen along the edge of the sheet glass, leaving a cutting mark on each stringer. Before marking the stringers on the other side of the Tekta, move the Tekta over ever so slightly to cover the first row of marks. This will produce a more accurate measurement. Remove the Tekta sheet. Now your stringers are ready to cut.

Set materials on your paper template from Step 1

Tekta

Trace the sheet glass edge to mark your stringers
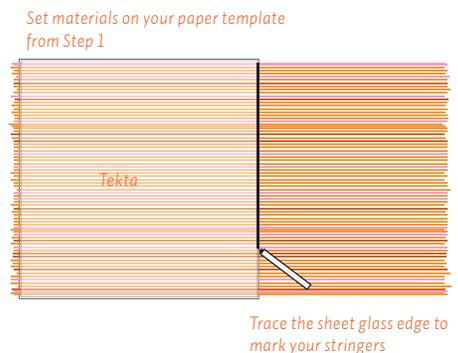
Note: If using stringers that already have one nicely cut end, set the "clean" ends flush with one side of the template instead of cutting them.

5. Cut the stringers, using the marks as a guide. A disc nipper like the Neo GC will work well.

CREATE THE DESIGN (SET THE STRIPES)

6. Set a single piece of clean Tekta (rough side up) on small inverted cups or blocks—to elevate it from the work surface. The slight elevation will make handling and moving the piece much easier.

7. Place a drop of GlasTac at each corner and set down a few stringers to determine the ends.

8. Fill in with the remainder of the stringers, arranging them to your liking. You'll know the surface is covered when you can't add a stringer without another one falling off. Keep an eye out for stringers that might need to be re-cut. Adjust stringers to make them flush with the edge of the sheet glass.

9. Once your design is complete and all of the stringers are in place, draw at least three beads of GlasTac across the stringers, making contact with each one. While the GlasTac is still wet, gently press down on the stringer layer to make sure it is only a single stringer deep and that all of the stringers are touching the sheet glass underneath. It is important for Glastac to flow between the stringers to the sheet glass.

10. Allow the GlasTac to dry completely. Minimally, it should be left to dry overnight. This is very important, as you will see when you get to the next step.
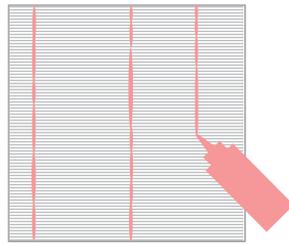
ASSEMBLE THE LAYERS & FUSE

11. Once the piece is dry, turn it over and transfer it to a primed kiln shelf—a very delicate maneuver. Holding the edges that run parallel to the stringers, gently pick the piece up, turn it over, and place it with the stringer layer touching the shelf. This is best done in close proximity to the firing surface, spending minimal time holding the inverted piece. If the GlasTac is not set and dry, the stringers will slide off, taking you back to step 7. Be gentle in both handling and placing the piece, leaving the primed shelf surface even and free of scratches. (Keep in mind that with this design, the shelf side becomes the front of the piece.)

Flip so stringer side faces the shelf

Grasp the piece on the edges that run parallel to the stringers
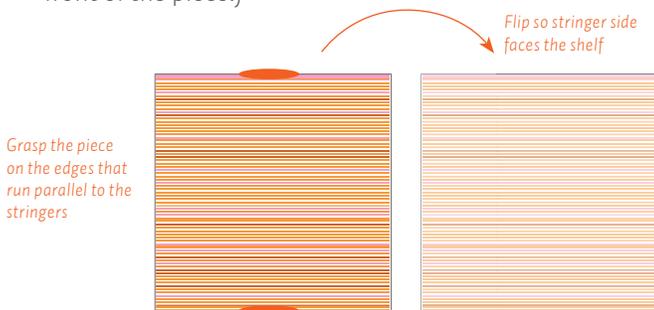
12. Cap the piece with the other 9" x 9" sheet of Tekta. The Tekta should be clean and placed with the smoother side facing up (to create a smooth-to-rough interface with the base sheet).

Tekta cap

Stringer layer faces the shelf

Shelf
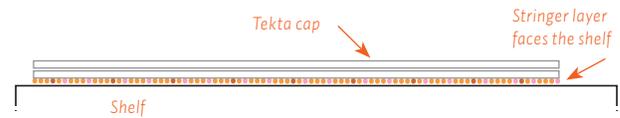
13. Now you are ready to program the kiln, double-check everything, and fire the piece. (See Fuse Firing schedule below.)

SLUMP FIRING

14. Prior to slumping, address any sharp points or edges with a wet diamond pad or wet belt sander to remove material from the edges for a cleaner-looking edge.

15. Clean the piece thoroughly and load it onto Mold 8634 with the shelf-side texture facing up. Elevate the mold to promote even heating and cooling.

16. Now you are ready to program the kiln, double-check everything, and slump the piece. (See Slump Firing schedule below.)

NOTES FOR FUTURE PROJECTS

Consider using a single piece of 6 mm Clear (001100-0680-F) instead of 2 layers of 3 mm sheet glass for fewer bubbles and greater clarity.

SUGGESTED FIRING SCHEDULES

Fuse Firing

	RATE*	TEMPERATURE	HOLD
1	400°F (222°C)	1225°F (663°C)	:45
2	600°F (333°C)	1490°F (810°C)	:10
3	AFAP**	900°F (482°C)	1:00
4	100°F (56°C)	700°F (371°C)	:01
5	AFAP**	70°F (21°C)	:00

Slump Firing (with mold # 8634)

	RATE*	TEMPERATURE	HOLD
1	300°F (167°C)	1225°F (663°C)	:05
2	AFAP**	900°F (482°C)	1:00
3	100°F (56°C)	700°F (371°C)	:01
4	AFAP**	70°F (21°C)	:00

* Degrees per hour
** As fast as possible. Allow kiln to cool at its natural rate with the door closed.