

# Make It: Linear Reaction

## Glass

Partial tube each:

- Turquoise Blue Stringer, 2mm (001116-0272)
- Turquoise Blue Stringer, 1mm (001116-0107)
- Clear Stringer, 2mm (001101-0272)
- Clear Stringer, 1mm (001101-0107)

2 sheets:

- Tekta, 3mm, 10" x 10" (001100-0380-F)

1 sheet:

- Reactive Cloud Opal, 3mm, 10" x 10" (000009-0030-F)
- Reactive Ice Clear, 3mm, 10" x 10" (001009-0030-F)

Produces two 9" x 9" finished pieces, with stringers left over for future projects.

## Tools

- Basic glass cutting tools
- Neo GC Cutter (7162)
- Slumping Mold (8634)

## Non-glass Consumables

- GlasTac (8232, 8234)
- Shelf primer, ThinFire, or shelf paper

## Other Handy Items

- Small cups or blocks to elevate the piece during the design phase
- Tweezers
- 120 grit diamond pad (7220)

## Professional-style Options

- Coldworking equipment/grinder/belt sander

[www.bullseyeglass.com](http://www.bullseyeglass.com)

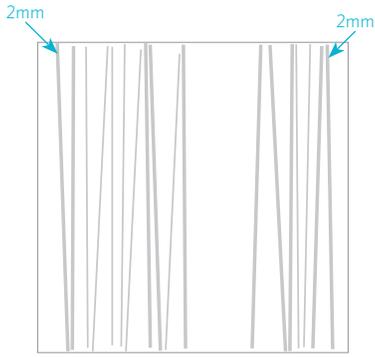


## WHY THIS PROJECT WORKS

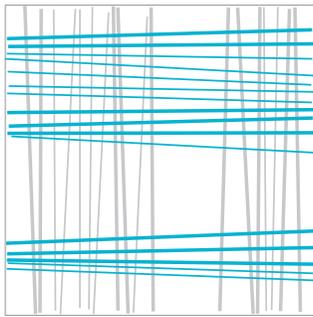
Clear stringers act as a barrier (or resist) between the reactive sheet glass and copper-bearing Turquoise. Wherever the Turquoise stringers overlap Clear, a Turquoise spot remains. Through the firings, the remainder of the Turquoise stringers react and develop to values of deep red. (For the latest information on reactive glasses, [www.bullseyeglass.com/education](http://www.bullseyeglass.com/education).)

## PREPARE THE SHEET GLASS & ASSEMBLE THE LAYERS

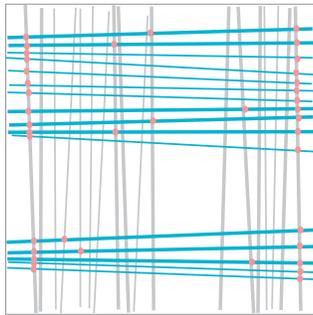
1. Cut one of the reactive sheet glass styles to 9" x 9". Note that the color of Reactive Ice Clear, viewed on edge, often has a blue to green tint. This tint will help you differentiate Reactive Ice Clear from non-reactive Clear, knowledge that is crucial in the lay-up of this piece.
2. Cut Tekta clear to match, 9" x 9".
3. Clean both sheets and place them on inverted cups or blocks (for easier handling). Place Tekta first (smooth side facing up), then cap with reactive glass (also smooth side up).



Step 4: Span the square with a single layer of Clear 1 and 2mm stringers, starting and ending with 2mm pieces.



Step 5: Span the square again with a single layer of Turquoise 1 and 2mm stringers in the opposite direction, forming a grid.



Step 7: Apply beads of GlasTac to key intersections of 2mm Clear and Turquoise.

### Recommended Reading

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

Pages and articles can be found at [www.bullseyeglass.com/education](http://www.bullseyeglass.com/education)

## CREATE THE DESIGN & FUSE

4. Cut several lengths of Clear 1 and 2mm stringers to span the square and arrange them in a single layer. In the samples, stringers were placed in a loose zigzag design with a random arrangement of 1 and 2mm thicknesses. Placement and balance of the Turquoise stringers (step #6) will be easier if there are 2mm Clear stringers towards the edges.
5. Use a small amount of GlasTac to hold the stringers in place. Tip: Handle stringer lengths from the middle (tweezers may be useful) and dip the ends in a small amount of GlasTac. Then set in place.
6. Cut several lengths of Turquoise 1 and 2mm stringers to span the project. Gently place them across the the Clear stringers in a perpendicular configuration to make an asymmetric grid—leaving bands of solid clear or white.
7. Using a short piece of 2mm stringer as a tool, apply beads of GlasTac to key intersections of 2mm Clear and Turquoise. Just dip the tool-stringer into a cup of GlasTac and touch it to each Turquoise stringer where the GlasTac will flow and connect it to the Clear stringer underneath. Do not move the project until the GlasTac is set.
8. Once the GlasTac is set, transfer the piece to a prepared firing surface.
9. Now you are ready to program the kiln, double-check everything and fire the piece. (See fuse firing schedule.)

## SLUMP FIRING

10. Prior to slumping, address any sharp points or edges with a wet diamond pad. Professional-style option: remove material from the edges/coldwork for a cleaner-looking edge.
11. Clean the piece and load it onto (primed) Mold 8634. Elevate the mold to promote even heating and cooling.
12. Now you are ready to program the kiln, double-check everything and fire the piece. (See slump firing schedule.)

## NOTES FOR FUTURE PROJECTS

Experience other types of reactions with Reactive Cloud Opal and Reactive Ice Clear by working with silver foil and copper leaf. Get the latest information on Bullseye's reactive glasses at [www.bullseyeglass.com/education](http://www.bullseyeglass.com/education).

## SUGGESTED FIRING SCHEDULES

### Fuse Firing

	RATE*	TEMPERATURE	HOLD
1	400°F (222°C)	1225°F (663°C)	:30
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

\* Degrees per hour

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

### 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