Instructions

Creating Fused Glass Buttons

Glass buttons have many uses. Larger buttons make great post earrings while smaller buttons add interest and texture to larger projects when tack fused or glued to surfaces. Have fun and discover different ways to use your glass buttons.

Step 1 – Preparation

1. Cut a square of kiln paper to fit the base of the Fuseworks™ Microwave Kiln. Place paper on the kiln base. Kiln paper is only good for one firing.
2. Cut two pieces of glass the same size. Clean your glass with water and a lint free cloth. Use the chart below as a reference for button size.

GLASS SIZE (CUT TWO)	*FINISHED BUTTON SIZE
⅛" Square	⅛"
¼" Square	¼"
½" Square	½"

*Finished button sizes may vary 1/16"

3. Stack 2 squares of glass on the base, place as many squares as will fit, leaving at least a 5/8" space between squares and the edge of the kiln paper (FIG. 1). Do not allow the glass squares to touch the sides of the kiln wallor the base of the kiln. Glass that touches the kiln base or walls will stick and can cause irreparable damage to the kiln during the fusing process.

FIG. 1

4. The above procedure works well for buttons ranging in size ⅛" to ½". For larger buttons, 1 ¼" and 1 ¾" we recommended a cut and stack technique. To do so, cut four equal squares of glass. Stack each piece of glass on top of one another rotating corners (approximately 10 degrees) as shown in Fig. 2. For a finished button of 1 ¼" cut and stack ½" pieces of glass. For a finished button size of 1 ¾" cut and stack 1" pieces of glass. This technique is not recommended for glass pieces larger than 1".

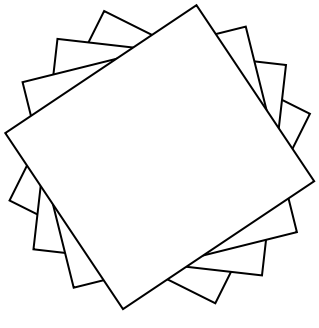

Fig. 2

Step 2 – Embellishing

1. Embellish with glass frit, stringer, milliefiori, confetti or dichroic bits and pieces, if desired.

Step 3 – Firing Glass

FIG. 3

1. Carefully place kiln base with glass in the center of microwave oven. Place lid on top of the base (FIG. 3). **WARNING:** Never leave microwave or kiln unattended during the firing process.
2. Set power level for the microwave on high. Choose times for firing from the chart below. **PLEASE NOTE:** Every microwave oven and kiln will vary. The ranges found in the chart below are average ranges. Actual times will vary depending upon your microwave oven, the thickness of the glass, as well as your desired results.

WATTS	MINUTES	POWER
800	2 ½ to 3 ½	100%
1100	2 to 3	100%
1200	2 to 2 ½	100%

HOT TIP! *Take good notes! Recording heating times and temperatures for projects are important to keep. This information will help repeat good projects and prevent bad ones.*

FIG. 4

3. When microwave time has expired, use heat resistant gloves or Hot Mitts to carefully open the lid (FIG. 4). If your piece is not fused to your liking, return kiln lid and microwave at 30 second intervals until piece is fused. Do not leave the lid off the kiln for extended periods of time during this stage. Never touch the glass. Do not heat for more than 6 minutes.

HOT TIP! *HOT glass looks like COLD glass, BE CAREFUL!*

4. A good fuse indicator is to watch for a red glow to appear in the opening at the top of the kiln. When it changes to a yellow/orange, this will indicate the glass have entered a full fuse stage. At this stage glass edges will become rounded and form a button shape. When you see more of a yellow glow, the piece should be fully fused.

HOT TIP! *To see the glow more readily, cover the microwave light by cutting a small piece of cardboard to cover the light source and tape into place.*

Step 4 – After Firing

FIG. 5

1. When desired results are achieved, using heat resistant gloves, remove the kiln from the microwave oven (FIG. 5). Set on a heat resistant surface. The area around the Fuseworks™ Microwave Kiln should be free of clutter and in a safe location. Do NOT allow to cool under an overhead cabinet. Never block the opening at the top of the Fuseworks™ Microwave Kiln.
2. Do not remove lid at this time. Removing lid will cause thermal shock, resulting in breakage.
3. Allow your fused piece to cool for a minimum of 30 minutes without removing kiln lid; time could be longer depending on the thickness of the project. You will be tempted to open the lid and look at your piece but do not, as this can be dangerous and will result in cracked projects.
4. Do not reuse the kiln until it has completely cooled for at least 30 minutes. Continuous use without cooling can cause damage to the kiln.

5. Your fused project must cool completely before removing from the kiln. This may take up to 40-50 minutes. Once cooled, you can remove the fiber paper from the back of the fused project by rubbing the surface with a wet paper towel or cleaning the project under warm water (FIG. 6).

FIG. 6

DO NOT FUSE GLASS WITH VARYING COE (COEFFICIENT OF EXPANSION).

WARNING: Glass inside the microwave kiln can reach temperatures of 1400°F – 1600° F. Glass at this temperature is capable of causing serious bodily harm and property damage. Handle with extreme caution and care. Not recommended for children. **CAUTION:** Fusible glass edges can be sharp, handle with care. Wear safety eye protection when using glass crafting tools and accessories.