

# Instructions Fusing Inclusions

*The following instructions were formulated using Fuseworks™ sheet glass and Microwave Kiln. Should you use these instructions with any other kiln or glass your results may vary.*

Encasing an object between or under layers of glass then fusing is an Inclusion. Fusing materials between glass layers can give very beautiful and unusual affects. The expansion and contraction of these items vary, depending upon the COE of glass being used. Glass needs to be able to expand and contract as it normally would; therefore, the item being fused between the layers of glass should be very thin to allow this process to occur.

READ AND FOLLOW ALL FUSEWORKS™ WARNINGS AND INSTRUCTIONS BEFORE YOU BEGIN.

NOTE: IN THESE SCHEDULES, A 1200-WATT MICROWAVE WAS USED.

## METAL INCLUSIONS

Metals such as brass and copper with a thin profile will work best in the Fuseworks™ Microwave Kiln. Aluminum does not fire well. Cut shapes from the metal using scissors or punches. Try using an embosser to add texture and patterns on the surface of the metal. Place metal between the layers of your clean glass and fuse at the following temperatures: 600 watt microwave (50%) for 2 minutes, 960 watt microwave (80%) for 2 minutes, 1200 watt microwave (100%) for 30 seconds. Remove from kiln and allow cooling with the lid on for 45 minutes.



FIG. 1

## ORGANIC INCLUSIONS

Organic materials such as leaves, tiny twigs, and feathers will burn away, leaving their impression behind in the glass the result, a fossil-like effect. Use contrasting colors to make the image stand out.

1. Spray inexpensive hairspray on a small piece of fern or leaf.
2. Dip leaf into glass powder and place it on a sheet of kiln paper on the base of the kiln.
3. Cover it with one layer of glass.
4. Put the kiln in a microwave and cover base with the lid. Fuse at the following temperatures: 600 watt microwave (50%) for 2 minutes, 960 watt microwave (80%) for 2 minutes, 1200 watt microwave (100%) for 30 seconds.
5. Remove from microwave and allow cooling with the lid on for 45 minutes.



FIG. 2

## BUBBLE INCLUSIONS

During the firing process, baking soda forms air bubbles of multiple sizes between the layers of glass. To create these bubbles, use a spray bottle and a 20/80 mixture of baking soda to water. Spray this mixture on the base glass and allow it to dry completely. Cover the base with a second piece of glass. Clean off any soda/water mixture on top of the glass. Failing to do so, will leave an unsightly white residue or cause crusting/pitting on the surface of the glass.

Fused at 80% for 2 ½ minutes. If using a microwave with a lower wattage increase power to 100% leaving the time constant. This will produced small bubbles that do not rise to the surface but remain trapped between the layers.



FIG. 3

STUDIO NOTES:

Try other items such as mica, enamels, and fiber paper.

**WARNING:** Do not fuse items such as plastic, paper, wood, food, hair, fabric, or string. A multitude of items are open to experimentation, but be careful with regard to non-organic materials, they can emit toxic fumes.



FIG. 4