Slumpy's Microkiln Instructions

Item you will need:

MicroKiln
Microwave Oven
Shelf (or fiber paper)
Heat Protective Gloves
Tweezers
Scissors
Heat resisting tile, Duraboard, or surface that can hold hot MicroKiln
Glass cutter
Hair dryer (optional)
Paint brush or Toothbrush
Water

MICROKILN SAFETY WARNINGS:

1. KILN & CONTENTS BECOME EXTREMELY HOT. HANDLE WITH CARE.

2. ALWAYS USE GLOVES, SUCH AS OVEN MITTS OR LEATHER WORK GLOVES WHEN HANDLING A HOT MICROKILN.

5. ALWAYS PICK UP AND HOLD THE MICROKILN BY BOTH THE BASE AND TOP USING TWO HANDS.

6. REMOVE MICROKILN IMMEDIATELY FROM THE MICROWAVE OVEN AFTER IT IS FINISHED HEATING.

7. AFTER REMOVING THE MICROKILN FROM MICROWAVE DO NOT SET THE MICROKILN DOWN ON TOP OF OR IN PROXIMITY TO ANY SURFACE THAT IS FLAMMABLE OR THAT COULD MELT, SUCH AS A KITCHEN COUNTER OR THE TOP OF A MICROWAVE OVEN.

8. ALWAYS WAIT AT LEAST 20 MINUTES AFTER REMOVING THE MICROKILN FROM THE MICROWAVE BEFORE ATTEMPTING TO OPEN THE MICROKILN.

9. ALWAYS FOLLOW THE INSTRUCTIONS THAT CAME WITH THE MICROWAVE FOR SAFE OPERATION OF THE MICROWAVE.

10. VENT THE MICROWAVE PROPERLY IF FIRING ANY TOXIC MATERIALS IN THE MICROKILN.

11. KEEP OUT OF THE REACH OF CHILDREN.

GENERAL INFORMATION

The wattage of the microwave oven has a direct bearing on the firing time.The firing time is also directly related to the size, or weight, of the article to be fired and the size of the MicroKiln being used.

It is better, and safer, to under fire than to over fire. If the article is under fired, the firing cycle can be increased for a better result, but if it is over fired, a puddle may be created on the MicroKiln base, damaging the MicroKiln base and spoiling the work.

The MicroKiln maximum temperature is approximately 1650 ° F (900 ° C). Most glasses will melt at 1400-1500 ° F (760 – 820 ° C). A good guideline for judging when glass fusion is starting is the appearance of an orange glow at the hole at the top of the MicroKiln, which indicates that the inside of the MicroKiln is approaching 1450 ° F (800 ° C). The optimum firing time will have to be determined (based on microwave wattage, size of the MicroKiln, size of article(s), and amount of added decoration) by firing test pieces. Guide lines are provided under " Operating Instructions". Over firing (setting the microwave oven running time well beyond the recommended firing times in the "Table of Recommended Firing Times") with resultant high temperatures, can damage the MicroKiln.

Always prefire a new MicroKiln. Place it on the microwave turntable and prefire it empty for 3 minutes. Let it cool for 20 minutes before further use.

If firing a single article, place it in the center of the kiln base.

If firing more than one piece, place them as evenly balanced as possible.

Do not allow any of the articles to touch the side wall of the kiln.

Use fiber paper under each article, cut to the same size as the article.

Use a fresh fiber paper for each firing.

After cooling rinse the base of the fired article with warm water, to remove traces of fiber paper. Always wear respirator or dust mask when handling fiber paper; fiber paper is harmful if inhaled. Please read MSDS for proper handling, protection, and disposal.

If firing any materials in the MicroKiln that the material suppliers specify are harmful or toxic be sure that the microwave oven is properly vented to prevent exposure to toxic fumes. Having a separate microwave for the use of the Microkiln alone is not necessary, but recommended.

Test fire sample pieces before regular production.

It is good to keep a detailed log of firing times of specific articles and results in order to be able to repeat your results.

OPERATING INSTRUCTIONS – GLASS FUSION

1. Cut flat glass to desired shape and size. Remember glass will expand when heated, cut appropriately to avoid glass touching kiln walls. Clean glass and dry it.

    Only use glass that is of a uniform thickness. The use of beveled glass or glass of varying thickness can be dangerous as the glass may shatter as it is cooling.

    If decorating with Multipen colors or glue let dry thoroughly. Use of a hair drier or placing the article on a warm surface will speed up drying.

2. Cut fiber paper to size of project. Place fiber paper on inside Base of kiln.

3. Place the article on the fiber paper away from the kiln walls and other articles, if firing more than one.

4. Place base of MicroKiln with article in the center of the microwave turntable. (Turnable is not necessary and can be removed, if desired.)

5. Place the MicroKiln top (Hood) on the MicroKiln base being careful not to shift the article. It is important that you not let the article or fiber paper touch the side wall of the MicroKiln while it is firing, as this may damage the MicroKiln and impair its proper functioning.

6. Turn on microwave. See suggested times in the "Table of Suggested Firing Times", page 3.

    Observe firing – hole at top of MicroKiln should glow orange for at least the last 30 seconds of the firing time. Never leave the room while the MicroKiln is firing.

7. When cycle is finished, remove kiln immediately from the microwave oven and place on heat resisting surface. Allow to cool unopened for 20 minutes to anneal the glass.

8. Remove top (hood), examine result. If not completely fused, replace in microwave and refire for 20 to 30 seconds longer than original firing time.

9. Again allow to cool unopened for 20 minutes.

When the article has cooled completely remove it from the base with tweezers and clean off all particles of fiber paper with a damp cloth.

OPERATING INSTRUCTIONS – PORCELAIN

Decorate porcelain bisque with Multipen. **Be certain that pieces are completely dry before firing.**Damp ceramic is quite likely to explode if fired in a Micorkiln due to extreme rapid conversion of water into vapor. This could damage the inside of your Microkiln Same instructions as for glass fusion

CLEANING KILN

To clean fiber paper debris from kiln walls. Wear respirator or dust mask and use a vacuum (with filter) to vacuum any debris. Then use a paint brush or tooth brush wetted with water to brush sides clean. DO NOT USE KILN UNTIL IT IS COMPLETELY DRIED.

Table of Recommended Firing Time (in minutes) for MK-SM Small MicroKiln

Microwave Oven Rating		700 Watts		800 Watts		900 Watts	
Level of Melting (Fuse)		Tack Fuse	Full Fuse	Tack Fuse	Full Fuse	Tack Fuse	Full Fuse
Size of Article*	1.75" x 1.75" x 1/8" 45 x 45 x 3 mm	4.5	4.8	2.5	3.0		
	1.75" x 1.75" x 3/16" 45 x 45 x 5 mm	6.0	7.5	3.0	4.0		
	1.75" x 1.75"x 1/4" 45 x 45 x 6mm						

Table of Recommended Firing Time (in minutes) for MK-MED Medium MicroKiln

Microwave Oven Rating		700 Watts		800 Watts		900 Watts	
Level of Melting (Fuse)		Tack Fuse	Full Fuse	Tack Fuse	Full Fuse	Tack Fuse	Full Fuse
Size of Article*	1.75" x 1.75" x 1/8" 45 x 45 x 3 mm	8.0	8.5	6.5	7.0		
	1.75" x 1.75" x 3/16" 45 x 45 x 5 mm	10	10.5	7.2	7.7		
	1.75" x 1.75"x 1/4" 45 x 45 x 6mm						

*1/8" is the thickness of one regular sheet of glass, 3/16" is the thickness of one regular sheet of glass and a layer of thin glass, multipen enamel, or thin layer of frit (crushed glass). 1/8" thickness is the thickness of two regular sheets of glass.