



Glass Color Manipulation

By Michael Harbridge

Materials List

Designer Liner by Mayco

Available at www.claypuzzling.com

715-281-6450

Glass Enamels by Colors for Earth

www.colorsforearth.com

817-677-5020

Glass by Spectrum System 96

www.spectrumglass.com

Brushes by Royal & Langnickel

www.royalbrush.com

219-660-4170

Contact the artist

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Designer Liner Clay Stringer Techniques

Designer Liner is a decorating product originally manufactured for the ceramic pottery market, but it was quickly realized how well it worked with glass fusing methods. It's a highly pigmented clay product that does not flow in firing and allows fine line work and unique design methods. Here are some basic facts and tips about the product to keep in mind when creating your items.

- Designer liner must be capped with clear glass. If you fire this product on glass without capping, it will be rough, not food safe, and will likely fall off or chip away.
- If this product is applied thick, it will get a crackle pattern, which can be cool.
- Designer Liner stays put. What you see, is what you will get. Don't expect it to flatten or bleed out. Two colors placed next to one another will not flow together, unless you intentionally blend them while wet.
- You can manipulate the colors with a brush or tools for unique looks.
- Designer Liner will not stretch well. If used in a bowl that will drop or fired over a drape mold to extreme temperatures, the color can pull apart or separate. This can be an interesting effect.
- The colors can be layered on top of each other.
- Colors are intermixable.
- Designer Liner will work with any COE of glass.

- Use a brush or tools with colors while wet to get combed looks. Make lines or rings or colors, and pull the brush from the ends, or center, or both.
- Designer Liner requires a clean edge of glass along the outer edge where no color is applied so top layer can bond properly. Never cover glass completely with color. Always leave an 1/8 inch along outer edge so glass can fuse. Top layer of glass will pull back if it can't bond.
- Apply Mica powders to the top of wet Designer Liner and dust away unwanted powder once dry.
- Fire according to a full fuse schedule you normally use for the COE of glass you've selected.
- It's best to place small pieces of clear, compatible frit, in a few spots along the outer edge between the layers of glass. This allows gasses and air to escape, while the center of the glass drops first.

Recommended firing schedule for System 96 Glass used in class. (This is full fuse.)

Ramp 1: 300 degrees F per hour to 1150. Hold for 30 minutes.

Ramp 2: 200 degrees F per hour to 1370. Hold for 20 minutes.

Ramp 3: 400 degrees F per hour to 1450 to 1480. (Every kiln fires differently, so your final temperature may vary slightly.) Hold for 20 minutes.

Ramp 4: 9999 degrees F per hour to 950 degrees. Hold for 60 minutes.

Ramp 5: 150 degrees F per hour to 800 degrees. Hold for 10 minutes.

Ramp 6: 300 degrees F per hour to 100 degrees. No hold and allow to cool to touch before removing.

Color Techniques with Colors for Earth Enamels

These colors come as a powder and need to be mixed with medium for liquid application. Just mixing with medium will work fine but adding a little water will make them more fluid to achieve the marble effects and more flowing methods. If you add too much water, the colors will just blend together and turn to mud. Experiment with different amounts of water. Water will also make them more transparent. Powder form can also be used by sifting or sprinkling on glass. Here are some basic facts and tips about the product to keep in mind when creating your items.

- Colors are intermixable.
- Colors do not require capping but should be fired with the color side facing up. Be sure all color is removed from back of glass and edges before firing.
- Colors can be capped.
- Most colors are food safe but see website for specifics. www.colorsforearth.com.
- Colors can bleed into one another when placed next to each other.
- Puddle colors on for best coverage. Light application can cause colors to "burn out" or be streaky.
- Colors are compatible with any COE glass.

Techniques in workshop

Marble – dab fluid colors (with small amount of water added) to glass surface almost like a camouflage look. Use a liner brush to manipulate colors with figure 8 patterns or swirls. The glass can also be picked up and tipped to move colors.

Combed look – Dab colors (with a small amount of water added) in lines or rings and use the liner brush to manipulate by pulling line through in various directions. Try straight lines and wavy line.

Follow the same firing schedule listed above for Designer Liner.