

# Kiln Crafting

## Hot Tips for Fusing and Slumping

by Gil Reynolds

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### “Frits, Enamels, Powders and Paints - Part 3”

For those of you who are not regular *Stained Glass News* readers (tssk tssk tssk), I spent the last two articles in this series discussing frit (crushed up sheet glass) and enamels (densely colored glass powders). Those of you who are hard-core-died-in-the-wool-never-miss-an-issue-SGN-readers already know all of this. But, you may not know that this article will show you one of the easiest and just darn fun ways to find fame and fortune by using glass powders.

Powders (also known as “Sifting Colors”) are kind of like very fine frit with the intensity of color found in glass enamels. Think of them as a cross between frits and enamels. Ranging in size from .13 mil. to .25 mil., glass powders are designed primarily for sifting. This size is at the finest end of the frit sizes. Most frit is larger, like rock salt, and most enamels are finer than sifting colors—more like talc, around 300 mesh.

This is not to say that you can’t sift frit. You can get some wonderful results by sifting fine frit, but it takes an average of three to four times as much raw material to get the same lush, brilliant colors that you get with sifting powders. You can also sift enamels, but they are harder to control and they tend to clump up in the sifting screen. (One trick is to put the enamels in a film canister and rubber band a nylon stocking over the top so it creates a very fine salt shaker type of applicator.)

Powders give you the best of both worlds because they are specifically designed for sifting dry color onto glass using stencils. If you have never tried this technique, you will want to. It is easy to do and the results can be quite stunning. If you want to make multiple pieces with the same image, this is a great production technique to explore, because once the stencils are made it is easy to make copies of the pattern over and over again. Or, if some big department store picks up your line of designer plates—over and over and over and over again.

### Supplies List

Here is a supply list of the goodies you will need to do a sifting project:

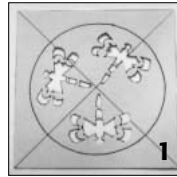
- a glass or ceramic kiln and prepared kiln shelf
- a good dust and particle mask—always use a dust mask when you are working with fine glass of any kind
- a fine mesh tea strainer or glass paint sifter
- a variety of glass powders or sifting colors
- a liquid binding medium such as flat 7UP™ or watered down honey—I use a product called Water Friendly Medium by Fuse Master
- graph paper or plain paper for making a pattern
- card stock or heavy paper for making a stencil (a file folder works great)
- a craft knife (X-acto™ type) for cutting the stencil
- newspaper to cover your work surface
- window glass or tested compatible sheet glass
- a fine paint brush
- a spray bottle to apply the medium
- masking tape to hold your pattern in place
- 1/2" supports to hold the stencil off of the glass—I use 1/2" kiln posts
- 1/4" supports to elevate the piece of glass being

decorated—this makes it easier to pick up the glass without disturbing the sifted powders. I use some squares of cork, but cardboard would work just fine.

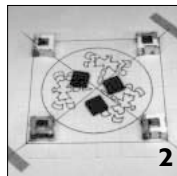
- plate molds if you want to slump or bend the piece into a plate or bowl

### Step-by-step

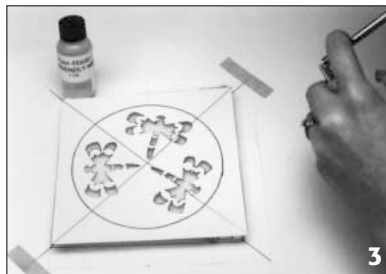
1) The design is drawn on a piece of paper, transferred to card stock and cut out with a craft knife.



2) The original design is taped down and three 1/4" tall cork squares are positioned to support the glass being decorated. Four 1/2" tall kiln posts at the corners will hold up the stencil.



3) After the glass is positioned on the cork and the stencil is placed over the glass, a diluted solution of Water Friendly Medium (one part medium and two parts H<sub>2</sub>O) is sprayed onto the glass. This will help keep the powders in the correct position by lightly adhering them to the glass.



4) The sifter is held over a separate piece of paper to fill it 1/3 full of the glass sifting colors. It is best to start at the edge of the design and gently tap on the top or side of the sifter. Try not to concentrate in one area. Instead, move slowly around the design, working your way into the center. Continue sifting over the piece until an even coat is achieved.

HOT TIP: For a crisp edge on the design, be sure the corners and edges of the stencil are completely covered.



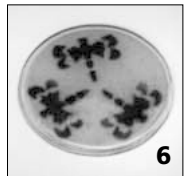
5) The design is completed and the stencil is carefully lifted away from the glass. Be careful not to shift the stencil as you lift it, as this will disturb the enamel, possibly causing a heavy line at the edge. (This line becomes even more noticeable

after firing.) A soft, fine bristle paint brush is used to lightly sweep any overspills off of the edge of the glass.

HOT TIP: Try to brush slowly and in one motion. Shake any particles off your brush before gathering the next overspill.



6) A layer of compatible clear glass is placed on top of the design. The piece is fired in a kiln heating at a rate of 400 degrees per hour to 1475°F. It is held at 1475° for eight minutes. The kiln is then turned off and allowed to cool to room temperature overnight.



Now, isn’t that easy? This is just a simple project to get you started. Imagine what you can design on your own. There are a lot of options to explore with this process: single layer of glass bent over a bowl mold; multiple stencils—each with a different color; cover a piece of glass completely with powders, then remove your design by scratching with a blunt object. The list goes on and on.

I hope you give sifting a try and when you are at your local stained glass supplier getting supplies for the sifting project, don’t forget to pick up the next exciting issue of *Stained Glass News*.

Until next time,  
**Keep a warm kiln...**

P.S.—Many thanks to my apprentice, Penny Holmes, for all of her assistance with this article.

During the 20+ years he has worked in art glass, Gil Reynolds has gained worldwide recognition as a leading innovator of fusing and kiln forming techniques. He is the author of *The Fused Glass Handbook*, a step-by-step guide to learning the art of fusing. He teaches seminars and has artwork in many locations in the U.S. and abroad.



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