



Frit tinting allows the creation of extremely specific color blends for kilncasting and pâte de verre by combining powdered frit (-0008) with larger-grained frits (-0001, -0002, -0003). Careful testing allows the artist to pinpoint exactly how to achieve the desired color saturation and translucence.

A surprisingly small amount of Bullseye powder will add substantial color to clear frit. The picture above shows the saturation resulting from various ratios of powder to frit. The samples were cast as triangular wedges, a shape that allows the color to be viewed at different thicknesses.

These samples are made of 001101-0002 Clear medium frit. One series is mixed with 001426-0008 Spring Green powder and the other with 001116-0008 Turquoise Blue. The percentage of colored powder to clear frit is indicated.

CHOOSING THE GLASS

Decide on the percentage of color in powder (-0008) and select the grain size of clear base frit to mix with it to accomplish the desired result:

-0001 (fine frit) will tend to trap many small bubbles during the firing process and make the finished casting look opalescent, even when using 001401-0001 Crystal Clear.

-0002 (medium frit) will also trap bubbles, but these will be slightly larger and fewer than those created using -0001. Using -0002 as a base glass will create a very homogenous blend with good transmission of light.

-0003 (coarse frit) will create fewer but larger bubbles than the mixes made with -0001 and -0002 and will appear less blended as each grain of -0003 becomes “outlined” in color.

WEIGHING THE FRITS AND POWDERS

Once the weight of the glass needed to fill the mold has been determined*, the proportionate weights of the frit and powder must be calculated based on the percentage of color desired. For example, if the mold requires a total of 500 grams of glass, and the color is to be a 3% tint of 000126-0008 Spring Green powder with 001101-0002 Clear frit:

3% of 500 grams is 15 grams (500 x 0.03)

So, filling the mold will take:

- 15 grams of 000126-0008 Spring Green powder
- 485 grams of 001101-0002 Clear frit
- (500 total grams minus the 15 grams of powder)

Weigh the two different amounts of glass in separate containers using a lidded one for the Clear.

MIXING THE FRITS

With a spray bottle, lightly mist the Clear glass with water, close the lid, and shake vigorously to coat every particle of glass with water. Once the Clear has been humidified, add the weighed powder. Shake vigorously so that each particle of Clear is covered with the powder. Even small percentages of powders can achieve a well-blended mix.

Pack the mold with the damp frit mixture and fire promptly. Left to sit, the glass is likely to dry out, causing the powdered coating to separate from the base frit and fall to the bottom of the container.

HEAT TREATMENT AND SURFACE

Frit casting can produce a variety of finishes through the choice of the mold material, the heat treatment in the kiln, and coldworking methods.



Susan Longini, *Pieced Quilt Triptych*, 2005. Pâte de verre, 36 x 11 x 2 in (91 x 28 x 5 cm) installed. Photo: Keay Edwards.

Longini fired her tinted components to a low temperature, retaining a delicate, granular appearance.



Steven Easton, *Snow Queen's Realm II* (detail), 2005. Pâte de verre, 5 x 36 x 84 in (13 x 91 x 213 cm) installed. Photo: Mark Johnston.

Easton fired his tinted components to a higher temperature, then coldworked them, giving them translucency and a lustrous surface.

*See page 5 of “TipSheet 5: Bullseye Box Casting” for calculating how much glass will fill a mold: www.bullseyeglass.com/connection/education.