



GLASSTIPS: OPALESCENTS

What to expect from selected Bullseye sheet glass.
revised November 5, 2007

This handy reference guide explains what you can expect from your 2007 Bullseye sheet glass colors before and after heatwork in the kiln. Click on the small style swatches to the left to get info on individual colors. Check back to explore additional styles as they are added.

OPALESCENTS TRANSPARENTS



OPALESCENT NOTES

For each style, the top row shows the double-rolled, unfired cold glass color. For stained glass, refer to the top row.

The same glass after firing to a full fuse is shown directly below the cold glass.

For kilnformed glass, refer to the bottom row.

Swatches shown are about two inches wide.

GlassTips describe ONLY the results of standard full fuse + slumping firings, i.e.: glass 6mm thick, 10" (25cm) square, fired to 1480°F (804°C), held for 10 minutes, then fired a second time to 1250°F (677°C) for 30 minutes.

To best ensure success, test glasses before use under your specific firing conditions. Use GlassTips information as a starting point only.

Glass reactivity: Not all reactions are visible. Some are too weak to be seen and others are masked by dark color.

"Striking glasses" change dramatically to reach target color during firing. Colors may vary, depending on firing schedule, rate, atmosphere, and heatwork. For color-sensitive projects, test before use.

Thin opal glasses (-0050) may appear more transparent in the cold sheet than their 3mm (-0030) opal counterparts.

Some opal glasses may appear inconsistent in color and/or opalescence in the cold sheet. Upon firing, color and density will appear more even.

Key to icons



Copper



Lead



Selenium



Silver

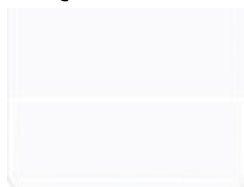


Sulfur



Striker

OPAQUE WHITE 000013



Cold characteristics

Consistent color.

Working notes

Stable. No color shift.

TOMATO RED 000024



Contains:



May react with:



Cold characteristics

Partly transparent. May contain thin threads of color variation.

Working notes

Color opalizes upon firing, becoming more consistent. Color may dapple with excessive heatwork.

TANGERINE ORANGE 000025



Contains: **Se** **S**

May react with: **Cu** **Pb** **Ag**

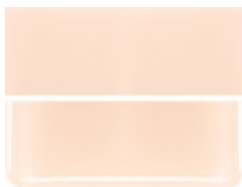
Cold characteristics

May contain variation in color density.

Working notes

Opalizes upon firing, becoming darker and much more consistent in color.

LIGHT PEACH CREAM 000034



Contains: **Se**

May react with: **Cu** **Pb**

Cold characteristics

Consistent color.

Working notes

Stable. No color shift.

BLACK 000100



Cold characteristics

Although termed an opal due to its almost total lack of light transmission, this is (in terms of its composition) actually a transparent glass.

Working notes

Low viscosity. Will flow sooner and more than other glasses. In very thin sections the color may vary from reddish/gray to bluish/gray.

STIFF BLACK 000101



Cold characteristics

Consistent color.

Working notes

Stable. No color shift.

POWDER BLUE 000108



Cold characteristics

Consistent color.

Working notes

Stable. No color shift.

MINT GREEN 000112

**Cold characteristics**

Consistent color.

Working notes

Stable. No color shift.

WHITE 000113**Cold characteristics**

Partly transparent. Slight dappling of color.

Working notes

Opalizes upon firing. Slight dappling apparent in transmitted light.

COBALT BLUE 000114**Cold characteristics**

Consistent color.

Working notes

Stable. No color shift.

TURQUOISE BLUE 000116

Contains:



May react with:

**Cold characteristics**

Consistent color.

Working notesA copper glass. May have dark color reaction at interface with cadmium/selenium or sulfur glasses ([000125](#), [000120](#), [000124](#), [001120](#), [001125](#), [001122](#), [001137](#), [001437](#), [000137](#)).

MINERAL GREEN 000117**Cold characteristics**

Consistent color.

Working notes

Stable. No color shift.

CANARY YELLOW 000120



Contains: **S**

May react with: **Cu Pb Ag**

Cold characteristics

Consistent color.

Working notes

A cadmium glass. See notes on reactions with [000116](#), etc.

RED 000124



Contains: **Se S**

May react with: **Cu Pb Ag**

Cold characteristics

Color variations common from red-orange to terra-cotta. Frequently lightly streaked and with yellow mottling on back of single-rolled sheet.

Working notes

A cadmium/selenium glass. Can react with lead-bearing glasses or overglazes. Possible reactions with [001311](#), [001215](#). Much color variation typical upon firing. If specific color is important, always test before beginning project. Use glasses from same dates. Do not assume that sheets of the same color when cold will fire identically.

ORANGE 000125



Contains: **Se S**

May react with: **Cu Pb Ag**

Cold characteristics

Color variations common from yellow-orange to red-orange. Some slight streaking common.

Working notes

Cadmium/selenium glass. Can fuse darker (more red) or lighter (more yellow) than cold sheet.

SPRING GREEN 000126



Contains: **S**

May react with: **Cu Pb Ag**

Cold characteristics

Consistent color.

Working notes

Stable. No color shift.

DRIFTWOOD GRAY 000132



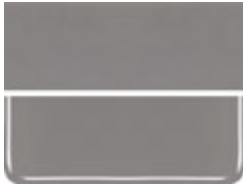
Cold characteristics

Consistent color.

Working notes

Stable. No color shift.

DECO GRAY 000136

**Cold characteristics**

Consistent color.

Working notes

Stable. No color shift.

FRENCH VANILLA 000137

Contains:

S

May react with:

Cu Pb Ag

Cold characteristics

Consistent color.

Working notes

A sulfur glass. May react with gold-bearing lead ([001311](#), [001411](#), [000301](#), [000305](#)) and copper ([001116](#), [001408](#), [001417](#), [000144](#), [000145](#), [000146](#)) glasses to create dark interface (lead sulfide, copper sulfide). Very viscous; will flow later and less than other glasses. Generally more sensitive to heat-history and more likely to show variation in color after fusing than many opals. When fired on edge, a clear distinction between outside and interior surfaces is commonly seen (a variation used by designers). This glass may become increasingly white with repeated firings. Consider using glass from the same batch for a given project.

MARZIPAN STRIKER 000138

S

Cold characteristics

May appear mostly transparent with variation in color density.

Working notes

Opalizes to a consistent, marzipan/off-white upon firing.

ALMOND STRIKER 000139

S

Cold characteristics

May appear mostly transparent with lacy patches of color.

Working notes

Opalizes to a consistent almond/off-white color upon firing.

DARK FOREST GREEN 000141**Cold characteristics**

Partly transparent. Dappled backside.

Working notes

Opalizes upon firing. Dappling may occur, especially if exposed to excessive heatwork.

NEO-LAVENDER 000142**Cold characteristics**

Will appear more pink in incandescent light; more blue in fluorescent.

Working notes

Stable. No color shift.

LACY WHITE 000143**Cold characteristics**

White translucent glass with clear dapples suggesting lace.

Working notes

Clear dapples will strike to white, disappearing. Translucence of this now entirely white sheet will vary.

TEAL GREEN 000144

Contains:

Cu

May react with:

Se S

Cold characteristics

Some light/dark variations common on surface.

Working notes

Light/dark variations generally disappear on firing. Dark interface reaction likely with sulfur glasses ([001137](#), [001437](#), [000137](#)).

JADE GREEN 000145

Contains:

Cu

May react with:

Se S

Cold characteristics

Some light/dark variations common on surface.

Working notes

Light/dark variations generally disappear on firing. Dark interface reaction likely with sulfur glasses ([001137](#), [001437](#), [000137](#)).

STEEL BLUE 000146

Contains:

Cu

May react with:

Se S

Cold characteristics

Consistent color.

Working notes

At tack fusing temperatures, the surface frequently develops a metallic gray film. This usually disappears at full fusing temperatures. To avoid metallic filming, use an overglaze or cover with thin clear glass. To maintain the metallic effect,

fire as quickly and low as possible. Consider stencil spraying of an overglaze to create patterns of metallic and non-metallic blue. Dark interface reaction likely with sulfur glasses ([001137](#), [001437](#), [000137](#)). Learn more by downloading [Special Effects: 0146 Steel Blue](#).

DEEP COBALT BLUE 000147



Cold characteristics

Consistent color.

Working notes

Stable. No color shift.

EGYPTIAN BLUE 000164



Contains: 

May react with:  

Cold characteristics

Partly transparent.

Working notes

Opalizes upon firing. May contain thin threads of color variation.

WOODLAND BROWN 000203



Contains:  

May react with:   

Cold characteristics

Partly transparent.

Working notes

Opalizes upon firing. Color becomes slightly lighter with slight dappling.

OLIVE GREEN 000212



Cold characteristics

Consistent color. Partly transparent. Slightly dappled.

Working notes

Opalizes upon firing. Consistent color, slightly lighter than the cold sheet.

LIGHT CYAN 000216



Contains: 

May react with:  

Cold characteristics

Very slight orange-peel mottling.

Working notes

At full fuse, capped or uncapped, the mottling disappears and the color is consistent, even and pure. At slumping temperatures and low-tack fusing temperatures (1150-1250°F/621-677°C), gray clouding may occur (similar to Steel Blue [000146](#)), especially where contamination from oils and/or cleaner is left behind during the cleaning process.

Solution: cap this color with clear or test for each specific application. The clouding can be erased from an uncapped piece by capping with clear glass and firing to a full fuse.

SUNFLOWER YELLOW 000220


Contains: Se S

May react with: Cu Pb Ag

Cold characteristics

Consistent color.

Working notes

Matures to a consistent deeper yellow. Color will shift toward [000120](#) with excessive heatwork.

DEEP RED 000224


Contains: Se S

May react with: Cu Pb Ag

Cold characteristics

Color may appear partly transparent and contain variation in color density.

Working notes

Color may contain streaky variation.

PIMENTO RED 000225


Contains: Se S

May react with: Cu Pb Ag

Cold characteristics

Variation in color density.

Working notes

Color matures to red and becomes more consistent upon firing.

GOLDEN GREEN 000227


Contains: Se S

May react with: Cu Pb Ag


Cold characteristics

Browner than in the struck sheet, the color matures to golden green during the firing process.

Working notes

May reveal subtle light/dark green wisps in a full-fuse firing. When uncapped, the mottling is less noticeable and the color more even. When capped with clear, the mottling is more noticeable.

Slate Gray 000236

Cold characteristics

Opalescent. Slight small mottle and orange-peel texture.

Working notes

Overall consistent, with some slight dappling. Dappling intensity may increase with prolonged heatwork.

TRANSLUCENT WHITE 000243**Contains:** **Pb****May react with:** **Se S****Cold characteristics**

May appear mostly clear with patches of thin milky white.

Working notes

Opalizes upon firing. Consistent color, thin milky white. Color may become slightly streaky and transparent with excessive heatwork.

PINK 000301**Contains:** **Pb****May react with:** **Se S****Cold characteristics**

Surface color variations common; some light dappling. Color range from light pink to deeper shades of lavender pink. Slight mottling on back of sheet.

Working notesTypically deepens in coloration on firing. Dark interface reaction possible with sulfur glasses ([001137](#), [001437](#), [000137](#)). Mottling disappears on firing.**DUSTY LILAC** 000303**Contains:** **Pb****May react with:** **Se S****Cold characteristics**

Consistent color.

Working notes

Stable. No color shift.

SALMON PINK 000305**Contains:** **Pb****May react with:** **Se S****Cold characteristics**

Color range from paler to deep shades. Some variations from pink to brown tones. Slight mottling on back of sheet.

Working notesGenerally deepens in hue on firing. Dark interface reaction possible with sulfur glasses ([001137](#), [001437](#), [000137](#)). Mottling disappears on firing.**CINNABAR** 000309**Contains:** **Se S****May react with:** **Cu Pb Ag****Cold characteristics**

May appear very muted gray/brown with streaks or variation in color density.

Working notes

Matures to a red/cinnabar color. May appear slightly dappled.

UMBER 000310

Contains:



May react with:

**Cold characteristics**

Variation in color density. May be partly transparent.

Working notes

Opalizes to a more consistent color. May dapple slightly.

PEA POD GREEN 000312**Cold characteristics**

Consistent color.

Working notes

Stable. No color shift.

DENSE WHITE 000313

Contains:



May react with:

**Cold characteristics**

Consistent color.

Working notes

Stable. No color shift.

MARIGOLD YELLOW 000320

Contains:



May react with:

**Cold characteristics**

May appear partly transparent with wide variations in color density. Overall look of a lighter, brighter yellow such as [000120](#).

Working notes

Matures to an opaque marigold yellow. May appear slightly dappled.

PUMPKIN ORANGE 000321

Contains:



May react with:

**Cold characteristics**

May contain variations in color density.

Working notes

Matures to pumpkin orange, which may contain slight color variations.

BURNT ORANGE 000329



Contains: Se S

May react with: Cu Pb Ag

Cold characteristics

Opalescent. Slight small mottle and orange-peel texture.

Working notes

At full fuse and capped with clear glass, the mottling may remain but become faint in transmitted light. Lighter wisps may appear in reflected light. When uncapped, the mottling tends to even out and the color becomes more consistent and even.

GOLD PURPLE 000334



Contains: Pb

May react with: Se S

Cold characteristics

Appears a deep royal blue hue with areas of transparency and variations in color density.

Working notes

Matures to a consistent gold/purple. May become much darker with excessive heatwork.

DEEP GRAY 000336



Cold characteristics

Opalescent. Slight small mottle and orange-peel texture.

Working notes

Overall consistent, with some slight dappling. Dappling intensity may increase with prolonged heatwork.

BUTTERSCOTCH 000337



Contains: Se S

May react with: Cu Pb Ag

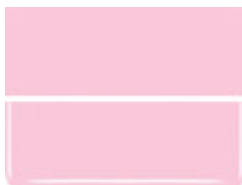
Cold characteristics

Opalescent. Slight small mottle and orange-peel texture.

Working notes

At full fuse and capped with clear glass, the mottling usually remains. When fired uncapped, the mottling is less obvious and the color evens out to become more consistent.

PETAL PINK 000421



Cold characteristics

Consistent color.

Working notes

Stable. No color shift.