



GLASS CO.

GLASSTIPS: OPALESCENTS

What to expect from selected Bullseye sheet glass.

revised June 28, 2011

This handy reference guide explains what you can expect from your 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



REACTIVE CLOUD OPAL 000009



May react with:  

Cold characteristics

Looks similar to [000113](#) with a slight blue tint.

Working notes

Easily confused with [000113](#). Reactive combinations have the potential to create an interface color, which may continue to develop through multiple firings. Copper-based reactions tend to be variations of deep red to black, while silver-based reactions are more likely to develop as earth-tones. Reactions are generally related to the amount of copper and silver content, heatwork and surface area contact. Learn more about this style by downloading our [Get a Reaction](#) PDF.

OPAQUE WHITE 000013

**Cold characteristics**

Consistent color.

Working notes

Stable. No color shift. Opaque White Powder (000013-0008F) is recommended for surface use only. It may crackle when used between sheet glass layers.

TOMATO RED 000024

Contains: **Se S**

May react with: **Cu Pb Ag**

**Cold characteristics**

Partly transparent. May contain thin threads of color variation.

Working notes

Color opalizes upon firing, becoming more consistent. Color may dapple when held at high temperatures for a long time.

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 000116Contains: 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.

PERIWINKLE 000118**Cold characteristics**

Solid opal with slightly dappled surface.

Working notes

Color is stable over extended range.

CANARY YELLOW 000120Contains: May react with:   **Cold characteristics**

Color variations common from pastel to vibrant yellow.

Working notes

Lighter coloration matures and becomes consistent to target upon firing. A sulfur glass. May react with with lead and copper glasses to create dark interface (lead sulfide, copper sulfide).

RED 000124Contains:  



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 overlazes. 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

Color variations common from minty-pastel to vibrant yellow-green.

Working notes

Lighter coloration matures and becomes consistent to target upon firing. A sulfur glass. May react with with lead and copper glasses to create dark interface (lead sulfide, copper sulfide).

DRIFTWOOD GRAY 000132



Cold characteristics

Consistent color.

Working notes

Stable. No color shift.

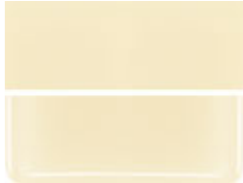
DECO GRAY 000136

**Cold characteristics**

Consistent color.

Working notes

Stable. No color shift.

FRENCH VANILLA 000137

Contains: 

May react with:   

Cold characteristics

Consistent color.

Working notes

A sulfur glass. May react with gold-bearing lead ([001311](#), [001215](#), [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**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**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

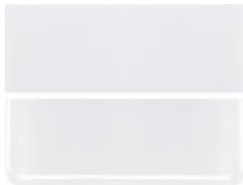
Opalizes upon firing. Dappling may occur, especially when held at high temperatures for a long time.

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: 

May react with:  

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: 

May react with:  

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: 

May react with:  

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: **Cu**

May react with: **Se S**

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**

Color variations common from pastel to warm, vibrant yellow.

Working notes

Lighter coloration matures and becomes consistent to target upon firing.

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 when held at high temperatures for a long time.

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 notes

Typically 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 notes

Generally 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: **Se S**



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



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: **Pb**

May react with: **Se** **S**

Cold characteristics

Consistent color.

Working notes

Stable. No color shift.

MARIGOLD YELLOW 000320



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

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



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: **Se** **S**

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



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.

PLUM STRIKER 000332**Cold characteristics**

Translucent purple with light plum wisps.

Working notes

Strikes to a consistent opal. Color darkens with extended heat work.

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 when held at high temperatures for a long time.

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.

OPALINE STRIKER 000403



Cold characteristics

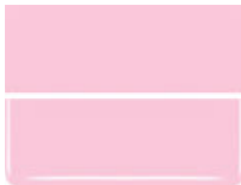
Looks like clear sheet with few wisps of white.

Working notes

Matures at full fuse temperatures. Turns more opaque with extended heat work. Works well over bright opal colors to create pastels.

Learn more by downloading [What to Expect from Opaline Striker Frit](#).

PETAL PINK 000421



Cold characteristics

Consistent color.

Working notes

Stable. No color shift.

©2007 Bullseye Glass Co.