



TORCHTIPS

What to expect from selected Bullseye torchworking rods.

revised December 02, 2005

Bullseye rods are drawn from compatible Bullseye glass and are available in 94 stock styles. While we find that torchworkers are cheerful and tireless testers of new styles, here is a reference index to shorten the learning curve. Click on one of the styles to the left and see what to expect from your Bullseye rods, before and after time in the torch. Check back soon to find more information about additional rod styles.

Key to icons.



OPALESCENTS



0013-76 **Opaque White Opal**



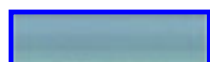
0034-76 **Light Peach Cream**



0100-76 **Black**



0101-76 **Stiff Black**



0108-76 **Powder Blue**



0112-76 **Mint Green**



0114-76 **Cobalt Blue**



0013-76 **Opaque White Opal**

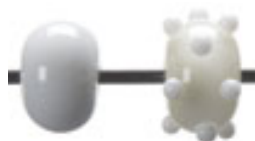
Contains: **Pb**

May react with: **Se S**

Cold characteristics

Opaque white.

Working notes



Remains opaque even in small amounts. To avoid reduction, work with 0013-76 in a neutral to oxidizing flame atmosphere.

Other

Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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0116-76 **Turquoise Blue**



0120-76 **Canary Yellow**



0124-76 **Red**



0125-76 **Orange**



0126-76 **Spring Green**



0132-76 **Driftwood Gray**



0136-76 **Deco Gray**



0137-76 **French Vanilla**



0141-76 **Dark Forest Green**



0142-76 **Neo-Lavender**



0144-76 **Teal Green**



0145-76 **Jade Green**



0146-76 **Steel Blue**



0147-76 **Deep Cobalt Blue**



0164-76 **Egyptian Blue**



0203-76 **Woodland Brown**



0034-76 **Light Peach Cream**

Contains: **Se**

May react with: **Cu Pb**

Cold characteristics

Translucent, milky peach.

Working notes



Relatively translucent opalescent glass that is more opaque when used in thicker applications, such as a core bead. Sometimes small bubbles are evident while the glass is molten but these typically are not visible in the cold rod or the finished work.

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0100-76 **Black**

Cold characteristics

True black.

Working notes



0100-76 remains black except in extremely thin applications, when it may become dark gray. It is a soft glass. Beware of heating the glass so much that it bleeds and webs out over other glasses--or use this quality as a design element. Consider using 0101-76, Stiff Black for a crisper appearance.

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0101-76 **Stiff Black**

Cold characteristics

True black, looks identical to 0100.

Working notes



Holds a crisp edge in the flame longer & hotter than 0100-76.

0212-76 Olive Green



0220-76 Sunflower Yellow



0243-76 Translucent White



0301-76 Pink



0303-76 Dusty Lilac



0305-76 Salmon Pink



0312-76 Pea Pod



0313-76 Dense White



0321-76 Pumpkin Orange



0334-76 Gold Purple



0421-76 Petal Pink



0459-76 Rhubarb Pastel

TRANSPARENTS



1022-76 Red-orange



1101-76 Clear



1105-76 Deep Plum



1107-76 Light Green

Other

Stiff Black was originally developed for glass blowing purposes such as the Roll-up technique. Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods. Labeling is encouraged because it looks identical to 0100-76.

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0108-76 Powder Blue

Cold characteristics

Translucent, milky blue.

Working notes



A relatively translucent opalescent style that is more opaque when used in thicker applications, such as a core bead.

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0112-76 Mint Green

Cold characteristics

Translucent, milky green.

Working notes



A relatively translucent opalescent style that is more opaque when used in thicker applications, such as a core bead. Sometimes small bubbles are evident while the glass is molten but these typically are not visible in the cold rod or the finished work.

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0114-76 Cobalt Blue

Cold characteristics

Slightly translucent opalescent blue. Light cobalt color.



Other



1108-76 **Aquamarine Blue**



1109-76 **Dark Rose Brown**



1112-76 **Aventurine Green**



1114-76 **Deep Royal Blue**



1116-76 **Turquoise Blue**



1118-76 **Midnight Blue**



1119-76 **Sienna**



1120-76 **Yellow**



1122-76 **Red**



1125-76 **Orange**



1126-76 **Chartreuse**



1128-76 **Deep Royal Purple**



1129-76 **Charcoal Gray**



1137-76 **Medium Amber**



1141-76 **Olive Green**



1145-76 **Kelly Green**



1164-76 **Caribbean Blue**

For a deeper cobalt blue consider using 0147-76, Deep Cobalt Blue.

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0116-76 **Turquoise Blue**

Contains:



May react with:



Cold characteristics

Slightly translucent opalescent turquoise.

Working notes



In general, 0116 becomes more opaque once it is flameworked, although it is translucent in smaller amounts.

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0120-76 **Canary Yellow**

Contains:



May react with:



Cold characteristics

Opaque.

Working notes



Keep it a bright yellow by working with a neutral to oxidizing flame atmosphere. Can turn gray in reduction.

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0124-76 **Red**

Contains:



May react with:



Cold characteristics



1215-76 Light Pink Striker



1234-76 Violet Striker



1305-76 Sunset Coral



1311-76 Cranberry Pink



1322-76 Garnet



1334-76 Gold Purple



1342-76 Cranberry Sapphire



1401-76 Crystal Clear



1405-76 Light Plum



1406-76 Steel Blue



1408-76 Lt. Aquamarine Blue



1409-76 Light Bronze



1412-76 Lt. Aventurine Green



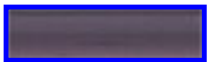
1414-76 Light Sky Blue



1417-76 Emerald Green



1426-76 Spring Green



Slight variations in cold color from one production run to another.

Working notes



Keep it bright red by working with a neutral to oxidizing flame atmosphere. Can turn gray in reduction. A range of color can be achieved by variations in heatwork in a single piece.

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0125-76 Orange

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

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

Cold characteristics

Opaque.

Working notes



Keep it bright orange by working with a neutral to oxidizing flame atmosphere. Can turn gray in reduction.

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0126-76 Spring Green

Contains: **S**

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

Cold characteristics

Slight variations from one production run to another.

Working notes



Keep it a bright chartreuse by working with a neutral to oxidizing flame atmosphere. Can turn gray in reduction.

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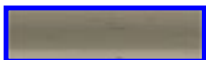
1428-76 **Light Violet**



1429-76 **Light Silver Gray**



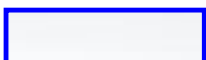
1437-76 **Light Amber**



1439-76 **Khaki**



1442-76 **Neo-Lavender Shift**



1701-76 **Amber Lustre**



1707-76 **Green Lustre**



1714-76 **Blue Lustre**



1717-76 **Copper Green Lustre**



1806-76 **Juniper Blue**



1807-76 **Grass Green**



1808-76 **Aqua Blue**



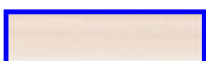
1812-76 **Seaweed Green**



1820-76 **Pale Yellow**



1821-76 **Erbium Pink**



1834-76 **Coral Orange**



1841-76 **Spruce Green**



0132-76 **Driftwood Gray**



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0136-76 **Deco Gray**

Working notes



Avoid thermal shock by warming this style gradually.

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0137-76 **French Vanilla**

Contains:



May react with:



Cold characteristics

Opaque, very white. >

Working notes



Avoid thermal shock by warming this style gradually. This is high viscosity style of glass that can remain opaque even in small amounts.

Other

0137 has a lighter color in rod (-76) and stringer (-07, -72) forms than in sheet (-30).

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0141-76 **Dark Forest Green**



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1842-76 **Lt. Neo-Lavender**
Shift



1859-76 **Rhubarb Pk/Grn**
Shift



2010-76 **Clear and Pink Opal**



2020-76 **Clear and Sunflower**
Yellow Opal



2050-76 **Clear and Salmon**
Opal



0142-76 **Neo-Lavender**

Cold characteristics

Slightly translucent opalescent. Color shift described below.

Working notes



A relatively translucent opalescent style that is more opaque when used in thicker applications, such as a core bead.

Other

0142-76 is a rare earth glass that shifts from icy blue to bright pastel lavender depending on the light source. It is not a striking glass.

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0144-76 **Teal Green**

Contains:

May react with:

Cold characteristics

Opaque.



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0145-76 **Jade Green**

Contains:


May react with:

Cold characteristics


Opaque.



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 0146-76 **Steel Blue**

Contains: 

May react with:  

Cold characteristics


Opaque. Can have a dry surface.

Working notes




Keep the glass blue by working it in a neutral flame throughout the process and keep it uniformly heated. Develop a matte metallic surface on this glass by forming the glass in a neutral flame; next change the flame to a reducing atmosphere by turning down the oxygen. At this point the surface should begin developing a metallic quality. Then turn off the oxygen completely, and build up a layer of carbon on the glass. Put the piece away in the annealing kiln with this carbon layer on it. Once removed from the kiln, the carbon is easily removed to expose a matte metallic surface. If you return the carbonized piece to a neutral flame, the metallic surface will disappear.

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 0147-76 **Deep Cobalt Blue**



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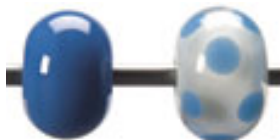
 0164-76 **Egyptian Blue**

Contains: 

May react with:  

Cold characteristics

Opaque.



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0203-76 **Woodland Brown**

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

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

Cold characteristics

Medium, mousey brown, opaque.

Working notes



0203 matures to rich, dark brown in the flame.

Other

The brown color of this style results from reactions between several of the elements that are listed as reactive with one another elsewhere on this chart. As such, it may react with many of the other glasses that contain these elements. However it is likely that the reaction will be subtle or unnoticeable due to similarities in the color of the reaction and the color of the glass. Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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0212-76 **Olive Green**

Cold characteristics

Opaque, muted green.

Working notes



A stable green that is not prone to reduce in a neutral flame.

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0220-76 **Sunflower Yellow**

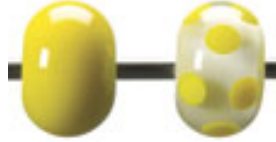
Contains: **Se** **S**

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

Cold characteristics

A warmer version of 0120, Canary Yellow. Opaque.

Working notes



This dense opalescent stays true to color except when used in the smallest amounts. Keep it bright yellow by working with a neutral to oxidizing flame atmosphere. Can turn gray in reduction.

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0243-76 **Translucent White**

Contains:

Pb

May react with:

Se S



Cold characteristics

(Deceptively) clear or clear with a white struck streak running lengthwise down the middle of the rod.

Working notes



0243 can strike to a transparent white with stone like qualities similar to quartz.

Generally speaking, the heat required to form a bead leaves the glass unstruck and clear. This glass strikes as it cools, rather than when it is heated. Here is a series of steps that can make the striking process more efficient:

Make a bead as usual in a neutral flame. Once the bead is formed, cool it (still in the flame, but farther away from the nozzle & flash it in an out of the flame). As the glass cools to a point where it is no longer moving or slumping on the mandrel, turn off the oxygen and hold the bead (while still rotating the mandrel) in the propane (fuel) flame. Do this until carbon collects on the glass (not just the mandrel). The purpose is not to actually carbonize or reduce the glass but simply to keep it at a cool, consistent temperature throughout the piece. Turn the oxygen back on and ease the bead into the neutral flame from the tip of the flame (farthest from the nozzle). Reheat the glass and bring it to a slightly molten state while keeping it cool enough to retain

its shape. The carbon will burn away. At this point, briefly remove the bead from the flame. Looking closely at the bead, it should start to take on a hazy appearance with a yellow tint which is the glass beginning to strike. The bead may need a little more heat, just to equalize the temperature of the glass and to keep it warm as it gets put into a kiln for annealing. This process holds the glass in the appropriate striking zone, and is slightly unusual for many torchworking styles.

This approach may not be necessary if the style of torchwork being done involves holding the glass at cooler temperatures over a longer period of time (like some sculptural work).

Other

In making components for kilnforming, it is not necessary to strike the glass in the flame because it will strike in the subsequent kilnforming processes. On a similar note, 0243-76 that has been struck to a translucent white in a kiln may change back to clear if worked in the flame.

It is possible to strike portions of the 0243-76 to translucent white and leave some portions clear within the same piece. Continued work in the flame on a piece that is already opalized can "chase the translucent white color from the molten area and concentrate it in the cooler area within a single piece.

Labeling is advised because 0243-76 can look like clear.

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0301-76 **Pink**

Contains: **Pb**

May react with: **Se S**



Cold characteristics

Palest pink with a slight blue cast.

Working notes



Strike this glass to pink by working it in the flame, then cooling it just outside of the flame and then gradually reheating it. Once struck it should be medium to dark pink while it is still hot. If the glass looks white, continue to cool and gradually reheat the glass

until it strikes. The pink is easier to strike if it has been worked in a cooler flame to begin with; try to work with it farther out in the flame, away from the nozzle. When molten, this glass has a low viscosity and can be quite soft, which may result in a blurred edge where it meets other glasses.

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0303-76 **Dusty Lilac**

Contains: **Pb**

May react with: **Se S**

Cold characteristics

Opaque, muted lilac. Can have a semi matte surface.

Working notes



0303 becomes shiny once it is worked in the flame, and remains so in the finished work. When molten, this glass has a low viscosity and can be quite soft, which may result in a blurred edge where it meets other glasses.

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0305-76 **Salmon Pink**

Contains: **Pb**

May react with: **Se S**



Cold characteristics

Palest peach pink. Slightly translucent.

Working notes



Similar to 0301 in nature and color, with slightly orange hues. Strike this glass to salmon pink by working it in the flame, then cooling it just outside of the flame and then gradually reheating it. Once struck it should be medium to dark orange-pink while it

is still hot. If the glass looks white, continue to cool and gradually reheat the glass until it strikes. The pink is easier to strike if it has been worked in a cooler flame to begin with; try to work with it farther out in the flame, away from the nozzle. When molten, this glass has a low viscosity and can be quite soft, which may result in a blurred edge where it meets other glasses.

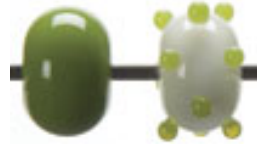
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0312-76 **Pea Pod**

Cold characteristics

Opaque.



Other

Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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0313-76 **Dense White**

Contains:

Pb

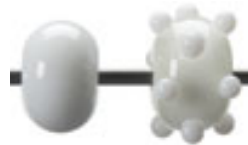
May react with:

Se S

Cold characteristics

Translucent, milky white.

Working notes



0313-76 opacifies when used in the flame. Is whitest when used as a core bead. 0313-76 is more prone to reduction than other Bullseye styles. Keep it white by working with it in a slightly oxidizing atmosphere. Sometimes small bubbles are evident while the glass is molten, but these typically are not visible in the cold rod or the finished work.

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0321-76 **Pumpkin Orange**

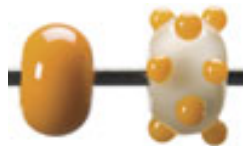
Contains: **Se S**

May react with: **Cu Pb Ag**

Cold characteristics

In cold rod form, the color of 0321-76 can vary even within the same production run.

Working notes



This style may start off as light orange, consistently developing a bright, squashy color upon use in the flame. Depending on the color of the bead when it is put away, a range of colors may be achieved. If this glass is put into an annealing kiln with a red hue, then a true pumpkin orange color will result in the finished piece. If it is very light orange as opposed to red and the desired result is a true pumpkin orange color, gradually cool and reheat the glass without bringing it to a soft state, look for it to turn red and then put it into the annealing kiln.

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0334-76 **Gold Purple**

Contains: **Pb**

May react with: **Se S**

Cold characteristics

Opaque, dark purple.

Working notes



Gold Purple in rod form becomes lighter in color once flameworked. When molten, this glass has a low viscosity and can be quite soft, which may result in a blurred edge where it meets other glasses.

Other

The name Gold Purple comes from the gold that is used as an ingredient in the manufacturing process.

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0421-76 **Petal Pink**

Cold characteristics

Slightly translucent opalescent.



Other

Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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0459-76 **Rhubarb Pastel**

Cold characteristics

Slightly translucent opalescent. Color shift described below.



Other

An opalescent version of 1859, 0459 is a rare earth glass that shifts from a pale blue to a pale green to a neutral pink depending on the light source. Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods. Not a striking glass.

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1022-76 **Red-orange**

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

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



Cold characteristics

Light transparent amber.

Working notes



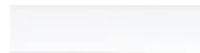
Strikes to a red-orange in the flame. Keep 1022-76 transparent

by using it in small amounts with minimal heatwork, or adding it near the end of the time in the flame. Before it is put into an annealing kiln, check that 1022-76 has truly struck; it should appear very dark, almost black. If it is still light in color, gently cool and reheat the glass without bringing it to a molten state and watch for the glass to darken as it strikes.

Other

Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods. We advise labeling all striking glasses.

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1101-76 **Clear**

Cold characteristics

Clear. May have a green cast when viewed from the end.

Working notes



This clear has very few internal bubbles and is very suitable for encasing. To avoid reduction, work with 1101-76 in a neutral to oxidizing flame atmosphere.

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1105-76 **Deep Plum**

Cold characteristics

Very dark transparent, could be mistaken for black. View in strong backlight to verify color.

Working notes



Dense color that remains strong even in thin applications. Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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1107-76 **Light Green**

Cold characteristics

Light transparent bottle green.



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1108-76 **Aquamarine Blue**

Cold characteristics

Very dark transparent, could be mistaken for black. View in strong backlight to verify color.

Working notes



Dense color that remains strong even in thin applications.

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1109-76 **Dark Rose Brown**

Cold characteristics

Very dark transparent, could be mistaken for black. View in strong backlight to verify color.

Working notes



Dense color that appears to be light plum in thin applications.

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1112-76 **Aventurine Green**

Cold characteristics

Opaque with a semi-matte, gritty, sparkled surface that is smoother than 1412-76, Light Aventurine Green.

Working notes



In the flame, the gritty texture of the cold rod translates to light sparkles suspended in a smooth transparent green glass. When molten, this glass has an extremely low viscosity and can be quite soft, which may result in a blurred edge where it meets

other glasses.

Other

1112-76 is more of a blue-green with smaller sparkles than 1412-76. This difference is most evident in thin applications.

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1114-76 Deep Royal Blue

Cold characteristics

Dark transparent blue. 1114-76 is extremely consistent from one production run to another.

Working notes



Dense color that remains strong even in thin applications.

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1116-76 Turquoise Blue

Contains:

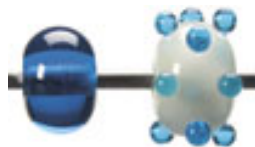


May react with:



Cold characteristics

Bright transparent turquoise.



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1118-76 Midnight Blue

Cold characteristics

Very dark transparent, could be mistaken for black. View in strong backlight to verify color.

Working notes



Dense color that remains strong even in thin applications.

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1119-76 **Sienna**

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

May react with: **Pb** **Se** **Ag** **S**

Cold characteristics

Very dark brown.

Working notes



Color develops in the flame. Keep this style transparent by using it in small amounts with minimal heatwork. Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

Other

The brown color of this style results from reactions between several of the elements that are listed as reactive with one another elsewhere on this chart. As such, it may react with many of the other glasses that contain these elements. However it is likely that the reaction will be subtle or unnoticeable due to similarities in the color of the reaction and the color of the glass.

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1120-76 **Yellow**

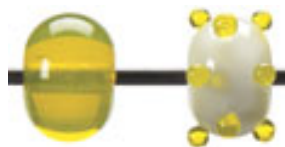
Contains: **S**

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

Cold characteristics

Pale transparent amber, similar to 1125-76 and 1437-76. May have a struck streak of yellow running lengthwise down the rod.

Working notes



Yellow color develops in the flame. Keep 1120-76 transparent by using it in small amounts with minimal heatwork, or consider adding it towards the end of the time in the flame. Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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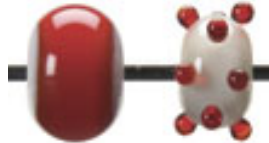
Contains: **Se** **S**

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

Cold characteristics

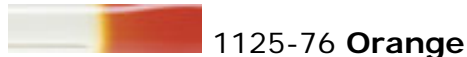
Candy apple red with slight variance in transparency.

Working notes



Consistent color. Keep 1122-76 transparent by using it in small amounts with minimal heatwork, or adding it towards the end of the time in the flame. Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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

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



Cold characteristics

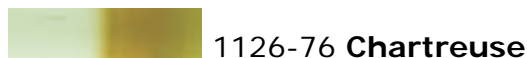
Pale transparent amber, similar to 1120-76 and 1437-76. May have a struck streak of orange running lengthwise down the rod.

Working notes



Strikes to saturated, transparent orange. Keep 1125-76 transparent by using it in small amounts with minimal heatwork, or adding it towards the end of the time in the flame. Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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Contains: **S**

May react with: **Cu Pb Ag**



Cold characteristics

Extremely light coloration.

Working notes



Strikes to a variety of greens ranging from dark yellow-green to lighter pale green. Keep 1126-76 transparent by using it in small amounts with minimal heatwork, or adding it towards the end of the time in the flame Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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1128-76 **Deep Royal Purple**

Cold characteristics

Very dark transparent, could be mistaken for black. View in strong backlight to verify color.

Working notes



Dense color that remains strong even in thin applications.

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1129-76 **Charcoal Gray**

Cold characteristics

Very dark transparent, could be mistaken for black. View in strong backlight to verify color.

Working notes



Dense color that remains strong even in thin applications.

Other

1129-76 is also an option for a dark core bead that looks black but behaves with higher viscosity than Black (0100-76). See Stiff Black (0101-76) for similar qualities.

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1137-76 **Medium Amber**

Contains:



May react with:



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1141-76 **Olive Green**

Cold characteristics

Dark transparent green.



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1145-76 **Kelly Green**

Contains:



May react with:



Cold characteristics

Very dark transparent, could be mistaken for black. View in strong backlight to verify color.

Working notes



Dense color that remains strong even in thin applications.

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1164-76 **Caribbean Blue**

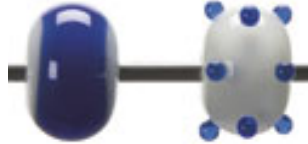
Contains: 

May react with:  

Cold characteristics

Deep transparent; slightly more transparent than 1114-76.

Working notes



Dense color that remains strong even in thin applications.

Other

Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods. Labeling is encouraged because of similarities with 1114.

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1215-76 **Light Pink Striker**

Contains: 

May react with:  



Cold characteristics

Pale transparent blue to lavender. In some lighting may look similar to 1442-76, 1311-76, and 1342-76.

Working notes



1215-76 strikes to a transparent pink in the flame. Work in a cooler, oxidizing atmosphere. May develop a light brown color on the surface of the glass if worked in the presence of too much propane (or fuel). Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

Other

The resulting light pink is more transparent than torchworked sheet glass of the same style (1215-50, 1215-30). Consider encasing with clear to protect the surface from developing a light brown color in the hotter, neutral flame chemistry that you would use for most other styles.

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1234-76 **Violet Striker**

Contains: **Pb**

May react with: **Se S**



Cold characteristics

Transparent light to medium blue, similar to 1414-76. There will be variance in the cold rods as some have streaks of darker blue.

Working notes



1234-76 strikes to a transparent blue-purple in the flame, but may develop light streaks of purple and/or pink. Work in a cooler, oxidizing atmosphere. May develop a light brown color on the surface of the glass if worked in the presence of too much propane (or fuel).

Other

The color of struck 1234-76 has more transparency and the hue has more blue undertones than torchworked sheet glass of the same style. Consider encasing with clear to protect the surface from developing a light brown color in the hotter, neutral flame chemistry that you would use for most other styles.

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1305-76 **Sunset Coral**

Contains: **Pb Ag**

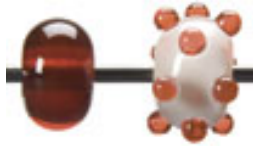
May react with: **Se S**



Cold characteristics

Transparent peach with a hazy sheen.

Working notes



Work in a cooler, oxidizing atmosphere. May develop a light brown color on the surface of the glass if worked in the presence of too much propane (or fuel).

Other

Consider encasing with clear to protect the surface from developing a light brown color in the hotter, neutral flame chemistry that you would use for most other styles.

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1311-76 **Cranberry Pink**

Contains: **Pb**

May react with: **Se S**



Cold characteristics

Light transparent blue to lavender.

Working notes



1311-76 strikes to a deep transparent pink in the flame. Work in a cooler, oxidizing atmosphere. May develop a light brown color on the surface of the glass if worked in the presence of too much propane (or fuel).

Other

Consider encasing with clear to protect the surface from developing a light brown color in the hotter, neutral flame chemistry that you would use for most other styles.

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1322-76 **Garnet**

Contains: **Se S**

May react with: **Cu Pb Ag**



Cold characteristics

Pale transparent amber.

Working notes



Strikes to a deep red in the flame and is rust colored in small amounts. Keep 1322-76 transparent by using it in small amounts with minimal heatwork, or adding it near the end of the time in the flame. Before it is put into an annealing kiln, check that 1322-76 has truly struck; it should appear very dark, almost black. If it is still light in color, gently cool and reheat the glass without bringing it to a molten state and watch for the glass to darken as it strikes.

Other

Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods. Labeling is advised because 1322-76 looks very similar to 1137-76.

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1334-76 **Gold Purple**

Contains:

May react with:



Cold characteristics

Dark transparent blue, similar to 1114.

Working notes



Work in a cooler, oxidizing atmosphere. May develop a light brown color on the surface of the glass if worked in the presence of too much propane (or fuel). Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

Other

Consider encasing with clear to protect the surface from developing the light brown color in the hotter, neutral flame

chemistry that you would use for most other styles.

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1342-76 Cranberry Sapphirine

Contains: **Pb**

May react with: **Se S**



Cold characteristics

Pale blue to lavender with a hazy sheen.

Working notes

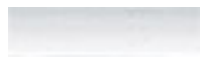


1342-76 develops a range of streaky pinks in the flame. Work in a cooler, oxidizing atmosphere. May develop a light brown color on the surface of the glass if worked in the presence of too much propane (or fuel). Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

Other

Sapphirine is designed to appear light blue in transmission and slightly brown in reflection in its cold state. It is designed to be streaky pink in transmission with slightly brown undertones in reflection after it has been flameworked.

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1401-76 Crystal Clear

Cold characteristics


Bright, colorless crystal clear when viewed from the end.

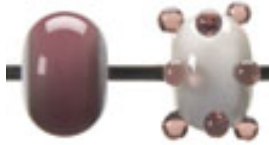
Working notes



This clear has very few internal bubbles and is very suitable for encasing. To avoid reduction, work with 1401-76 in a neutral to oxidizing flame atmosphere. Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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 1405-76 **Light Plum**

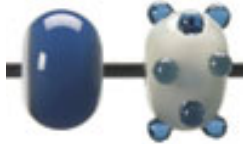


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 1406-76 **Steel Blue**

Cold characteristics


Medium to dark transparent blue. Muted.



Other

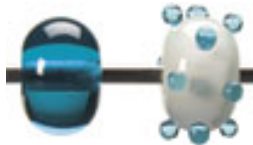
1406-76 is consistent in color and more predictable than it's opalescent partner, 0146-76.

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 1408-76 **Lt. Aquamarine Blue**

Contains: 

May react with:  



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 1409-76 **Light Bronze**



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 1412-76 **Lt. Aventurine Green**

Contains: 

May react with:  

Cold characteristics

Gritty, sparkled surface that is rougher and slightly more transparent than 1112-76, Aventurine Green.

Working notes



In the flame, the gritty texture of the cold rod translates to light sparkles suspended in a smooth transparent green glass. When molten, this glass has an extremely low viscosity and can be quite soft, which may result in a blurred edge where it meets other glasses.

Other

1412-76 is more of a yellow-green with larger sparkles than 1112-76. This difference is most evident in thin applications.

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1414-76 **Light Sky Blue**



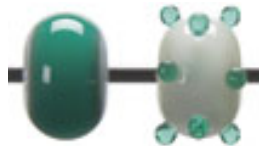
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1417-76 **Emerald Green**

Contains: **Cu**

May react with: **Se S**



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1426-76 **Spring Green**

Cold characteristics

Medium transparent green with yellow hue.



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1428-76 **Light Violet**

Working notes



Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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1429-76 **Light Silver Gray**






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1437-76 **Light Amber**

Contains: 

May react with:   

Cold characteristics

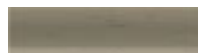
Light transparent amber. Could be mistaken for 1120-76, 1125-76 or 1820-76.

Working notes



Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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1439-76 **Khaki**

Cold characteristics

Medium transparent brown, with more gray tones than 1409-76.

Working notes



Not yet available as stringer (-07, -72). Consider pulling your own stringers from rods.

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1442-76 **Neo-Lavender Shift**

Cold characteristics

Color shifts between transparent icy blue and lavender depending on the light source. Beware, this style looks clear when viewed through didymium lenses.

Working notes

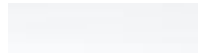


Use over oranges and reds to intensify brightness.

Other

Finished work will have the same color shift properties as the glass in its un-worked, cold state. Not a striking glass.

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1701-76 **Amber Lustre**

Contains: **Pb** **Ag**

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

Cold characteristics

Clear.

Working notes



A reducing glass that can develop a metallic sheen with an amber cast. Begin by working 1701-76 in a neutral flame. When ready to develop a metallic sheen, the glass should be relatively cool (no visible heat) and stable on the mandrel. Create a reduction atmosphere by turning the propane (fuel) up and watch for the surface of the glass to become metallic. Once this has happened, the piece should be put into an annealing kiln (in other words,

this is a finishing step). If the metallic surface is reintroduced to a neutral flame, it will dissipate. It can be brought out again by returning it to a reduction atmosphere. When molten, this glass has a low viscosity, and can be quite soft, which may result in a blurred edge where it meets other glasses. In addition, the process of reducing the glass can cause a metallic sheen over areas of glass immediately adjacent to this style.

Other

1701-76 is a relatively heavy glass, and there are 14 rods per pound (compared with 18-20 rods per pound for most other styles). Labeling is encouraged, because 1701-76 stays deceptively clear until reduced.

Lustre rods are not part of the Bullseye Compatible line for kilnforming and are formulated solely for flameworking with Bullseye Hot Rodz. Not recommended for kilnforming.

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1707-76 **Green Lustre**

Contains:  

May react with:  

Cold characteristics

Pale transparent green.

Working notes



A reducing glass that can develop a metallic sheen. In some cases, this metallic sheen is transparent enough to see through it to the green glass. Start by working 1707-76 in a neutral flame. When you are ready to develop a metallic sheen, the glass should be relatively cool (no visible heat) and stable on the mandrel. Create a reduction atmosphere by turning the propane (fuel) up and while passing the bead through the flame, watch for the surface of the glass to become metallic. Once this has happened, the piece should be put into an annealing kiln (in other words, this is a finishing step). If the metallic surface is reintroduced to a neutral flame, it will dissipate. It can be brought out again by returning it to a reduction atmosphere. When molten, this glass has a low viscosity, and can be quite soft, which may result in a blurred edge where it meets other glasses. In addition, the

process of reducing the glass can cause a metallic sheen over areas of glass immediately adjacent to this style.

Other

1707-76 is a relatively heavy glass, and there are 14 rods per pound (compared with 18-20 rods per pound for most other styles). Labeling is encouraged, because 1707-76 stays deceptively green until reduced.

Lustre rods are not part of the Bullseye Compatible line for kilnforming and are formulated solely for flameworking with Bullseye Hot Rodz. Not recommended for kilnforming.

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1714-76 **Blue Lustre**

Contains: **Pb** **Ag**

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

Cold characteristics

Dark transparent blue.

Working notes



A reducing glass that can develop a metallic sheen similar to polished hematite. Begin by working 1714-76 in a neutral flame. When ready to develop a metallic sheen, the glass should be relatively cool (no visible heat) and stable on the mandrel. Create a reduction atmosphere by turning the propane (fuel) up and watch for the surface of the glass to become metallic. Once this has happened, the piece should be put into an annealing kiln (in other words, this is a finishing step). If the metallic surface is reintroduced to a neutral flame, it will dissipate. It can be brought out again by returning it to a reduction atmosphere. When molten, this glass has a low viscosity, and can be quite soft, which may result in a blurred edge where it meets other glasses. In addition, the process of reducing the glass can cause a metallic sheen over areas of glass immediately adjacent to this style.

Other

1714-76 is a relatively heavy glass, and there are 14 rods per pound (compared with 18-20 rods per pound for most other styles). Labeling is encouraged, because 1714-76 stays deceptively blue until reduced.

Lustre rods are not part of the Bullseye Compatible line for kilnforming and are formulated solely for flameworking with Bullseye Hot Rodz. Not recommended for kilnforming.

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1717-76 Copper Green Lustre

Contains: Cu Pb Ag

Cold characteristics

Pale transparent aqua-green.

Working notes



A versatile reducing glass that can develop a metallic sheen and/or opalize to a variagated, putty-like green. These various effects can be achieved by working with 1717-76 with specific flame chemistry and heat history. Results will depend greatly upon the type of heat and forming methods required.

As 1717-76 is heated into a gather and wound onto a mandrel, it will opalize on the rod between the gather and the cold glass. If formed hot enough, the bead will remain transparent. When you are ready to develop a metallic sheen, the glass should be relatively cool (no visible heat) and stable on the mandrel. Create a reduction atmosphere by turning the propane (fuel) up and while passing the bead through the flame, watch for the surface of the glass to become metallic. The lustre surface develops readily on cooler glass and can vary greatly depending on the length of time spent in the reduction atmosphere. Once this has happened, the piece should be put into an annealing kiln (in other words, this is a finishing step). If the metallic surface is reintroduced to a neutral flame, it will dissipate. It can be brought out again by returning it to a reduction atmosphere.

Often a design will necessitate holding the glass at a warm, stable state (cooler than molten, fluid glass). Under these conditions, 1717-76 is likely to opalize. Once opalized, 1717-76 may still be reduced as described above to bring out a metallic sheen, though it takes a little longer to develop. The finished appearance is different because it is backed by the opalized glass. Consider using 1717-76 for its unique opalized color and work with it in a neutral to oxidizing atmosphere without reduction treatment.

When molten, this glass has a low viscosity, and can be quite soft, which may result in a blurred edge where it meets other glasses. In addition, the process of reducing the glass can cause a metallic sheen over areas of glass immediately adjacent to this style.

Other

1717-76 is a relatively heavy glass, and there are 14 rods per pound (compared with 18-20 rods per pound for most other styles). Labeling is encouraged.

Lustre rods are not part of the Bullseye Compatible line for kilnforming and are formulated solely for flameworking with Bullseye Hot Rodz. Not recommended for kilnforming.

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1806-76 Juniper Blue

Cold characteristics

Light coloration, barely blue. View on a white background to verify color. May be mistaken for clear.



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1807-76 Grass Green

Cold characteristics

Light coloration, transparent green.



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1808-76 Aqua Blue

Contains: 

May react with:  

Cold characteristics

Light coloration, transparent aqua blue.



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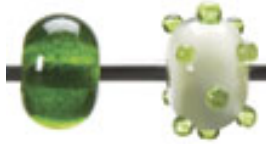


1812-76 **Seaweed Green**

Cold characteristics

In cold rod form, the color of 1812-76 can vary even within the same production run, but is generally a light transparent streaky green, with a gritty, sparkled texture. 1812-76 is more transparent than 1112-76 and 1412-76.

Working notes



In the flame, the gritty texture of the cold rod translates to light sparkles suspended in a smooth transparent green glass. The streaks from the cold rod may be evident in finished work.

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1820-76 **Pale Yellow**

Cold characteristics

Light coloration, transparent yellow. Differentiate from 1437-76, 1120-76, and 1125-76 by looking for a bright yellow color in transmission when viewed from the end.



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1821-76 **Erbium Pink**

Cold characteristics

Light coloration, transparent pink.



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1834-76 **Coral Orange**

Contains: **Se**

May react with: **Cu Pb**

Cold characteristics

Light coloration, transparent orange.



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1841-76 **Spruce Green**

Cold characteristics

Light coloration, transparent muted blue-green.



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1842-76 **Lt. Neo-Lavender Shift**

Cold characteristics

Color shifts between transparent icy blue and lavender depending on the light source. 1842-76 is more transparent than 1442-76 (Neo-Lavender). Beware, this style looks clear when viewed through didymium lenses.

Working notes



Use over oranges and reds to intensify brightness.

Other

Finished work will have the same color shift properties found in the cold glass. Not a striking glass.

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1859-76 **Rhubarb Pk/Grn Shift**

Cold characteristics

Though it depends on somewhat on the light source, this glass is typically green where thin and pink where thick.



Other

Finished work will have the same color shift properties found in the cold glass. When used in small amounts, the shift between green and pink in this rare earth glass is subtle. The color shift becomes more dramatic in thicker applications and depends on the light source. In mixed types of light it appears to be brown. Not a striking glass.

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2010-76 **Clear and Pink Opal**

Contains: **Pb**

May react with: **Se S**

Cold characteristics

Streaky translucent. Pink opal and clear blend with variations in opacity even within the same production run.



Other

This range of mixed-color rods was developed to facilitate making beads and other flameworked components with deep, marbled qualities.

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2020-76 **Clear and Sunflower Yellow Opal**

Contains: **Se S**

May react with: **Cu Pb Ag**

Cold characteristics

Streaky translucent. Sunflower opal and clear blend with variations in opacity even within the same production run.



Other

This range of mixed-color rods was developed to facilitate making beads and other flameworked components with deep, marbled qualities.

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2050-76 **Clear and Salmon Opal**

Contains:

Pb

May react with:

Se

S

Cold characteristics

Streaky translucent. Salmon Opal and clear blend with variations in opacity even within the same production run.



Other

This range of mixed-color rods was developed to facilitate making beads and other flameworked components with deep, marbled qualities.

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