



# Northstar Glassworks, Inc.

## Boro News Newsletter

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## The Intense Opaque Family

### Introduction

Welcome to the Boro News Newsletter! We hope you have been enjoying the new colors! Our most recent additions to the palette are NS-76 Onyx and NS-77 Deep Sea Blue.

In this issue we are going to explore the intense opaque family. This group includes NS-63 Canary, NS-64 Lava, NS-65 Cherry, NS-68 Parrot Green, and NS-71 Avocado. We will cover the working properties of this color family as well as some tips to fully utilize their vast potential.

### Working Properties

We have formulated these colors to minimize boiling issues, but due to the chemical nature of this color family, care must be taken when working with them. The intense opaque colors must be heated slowly and evenly to prevent boiling. Work in a cool soft flame that is not overly reducing. Though these colors are atmospherically sensitive, reduction can cause them to dull. If, in a cool flame, the color is still being overheated, try heating further away from the torch head where the flame is cooler. For surface mix torches such as the Bethlehem PM2D, the GTT's, and those manufactured by Nortel, a small soft center fire works well. For the larger torches, open up the outer ring and adjust the center fire to a smaller more pin point flame. For pre-mix torches such as those manufactured by Carlisle, the outer fire works well, but the inner fire can be a bit too aggressive and reducing. Arnold burners handle the intense opaque colors extremely well. By adding compressed air to the flame it decreases the temperature and provides an ideal working atmosphere. Because of the compressed air, the flame can be of large volume but cool in temperature allowing the heat to gently soak into the color.

### Application

The formulation of these colors allows them to be worked un-encased with relative ease in a gentle flame. A technique that Suellen Fowler uses to maximize the workability of these colors is to re-mix them. This is performed by taking a section of the color rod and puntying up between two 10 to 16mm clear rods, collapsing the entire section of colored rod into a ball, gently twisting and mixing the color in a figure eight pattern, then re-pulling the ball of color into a rod of 3 to 4mm in diameter. This technique drives any remaining air out of the rod and further homogenizes the color. Thinner diameter rod makes the color easier to apply without overheating. This re-mix technique is helpful for surface application, but for encased work, it has little benefit. Encasement is not necessary but is recommended if the color is to be exposed to a large amount of heat. There are many methods to encase color rod. One that is particularly effective and easy is to drop a rod down a thin walled tube of slightly larger diameter than the rod, attach a punty to the sealed end of the tube, heat it up, and pull, fusing a layer of clear over the color rod.

### Color Tips

There are many wonderful effects that can be created with this family. A particularly unique color interaction that was noted by Suellen Fowler in her latest article in *Glass Line* occurs between the intense opaque family and NS-44 Caramel. If an intense opaque is layered next to a line of NS-44 Caramel, you will notice a faint pencil thin black line between the two colors, as in Figure 1. Other interesting color effects can be yielded by layering NS-13 Amber Purple over NS-63 Canary or NS-65 Cherry. Ruby goes well over NS-64 Lava and NS-65 Cherry. For bright lime greens try layering NS-03 Multi over NS-

68 Parrot Green or NS-71 Avocado. There are many wonderful effects that can be created through experimentation. Let your imagination run wild!

### Closing

We hope that these tips and techniques have helped out and that inspiration has been drawn from them. There are many avenues left unexplored, so go out and try something new! Stay tuned, there are many more exciting tips and colors to come!

### Improved NS-53 Forest Green

In response to your concerns about the workability of some of the colors, we are working to improve the glass. The NS-53 Forest Green is the first glass to go through this transformation. The reformulated glass is easier to work, less boily than before, and has fewer cracking issues. The NS-53 Forest Green melts in quicker and smoother allowing for more versatility. This is an improvement on the NS-53 Forest Green, but it should *still be used with caution*. Test it out before trying anything important. But the feedback so far has been that this reformulation is a step in the right direction. Keep your eyes peeled for further developments!



**Figure 1-** The vessel pictured left was created by Suellen Fowler. This combed bottle utilizes members of the intense opaque family and is completely un-encased. This is a wonderful example of what these colors can do and how they can be worked. Thank you Suellen! *This bottle is just under three inches tall, and about one and a quarter inches wide.*

## Color Schemes of Mixed Frit



Mixed Frit is a great all inclusive frit, but there are times when a specific color scheme is more beneficial to a given piece. Featured above are three combinations that fall in the red, green, and blue color schemes. They feature the following frits:

- RED** – NS-62 Bubblegum, NS-43 Rust, and NS-41 Butterscotch
- GREEN** – NS-68 Parrot Green, NS-27 Green Exotic, NS-45 Blue Moon, and NS-53 Forest Green
- BLUE** – NS-33 Turbo Cobalt, NS-55 Periwinkle, and NS-45 Blue Moon

Each color scheme is made up of a group of complimentary colors. These are not the only possible color combinations; in fact, there is no end to the possibilities. Experimentation is the key! As with many frits they will show their most brilliant color when encased with clear, as seen above. These frit combos will be available in both large and small sizes, so call today for your Color Scheme frit (specify red, green, or blue).

## ? What Up ?

Commentary by Josh Dunlap

In last month's newsletter, I opened up all topics of discussion with you, our valued artists and patrons. I wanted to thank you all for your interest. Your feedback is greatly appreciated here at Northstar. So far we've had a couple of responses which I would like to share with you. Keep an eye out for next month's questions and comments!

Josh,

*Just a quick note to thank Northstar for their active interest in educating artists in general and me in particular. I'm relatively new to glassworking so the newsletters are an invaluable source of information on the use & application of color. I have also benefited tremendously from Jesse's segments on Glass Talk Radio. On-line access to the old newsletters is the icing on the cake for me. In short, keep up the good work, both in discussing the character of various colors as well as describing methods to apply them. I certainly appreciate the effort and expense.*

-Michael Gann

Josh Whats Up . . .

*We have been working with the Millennium Moss a lot lately. It has a limey finish that has been appropriate for us lately. I have found that it prefers not to come in to contact with clear . . . Overall we love this color . . . . . As far as cobalts go, I have found Northstar's to be the most stable (non-hazing or scumming) in surface and inside applications. Cobalt is obviously not a new color; however the constant demand for it will last the test of time and it is important to find varieties that work hassle free . . .*

-Shane C., Eugene Glass Alliance

*Well first I would like to say that many colors have working properties that make them only suitable for certain applications. I think people forget that and wonder why some of the colors don't work for their projects. I think some of the new improvements made to the colors at Northstar Glass have changed the ability to use these color in a wider variety of applications. My constructive criticism for the letter is that I think some of the colors should be tested a little more in depth before being released. This is most important for some of the colors that have cracking problems when used in internal artwork. By all means I am not complaining but it would be nice to know that I was safe when buying new colors. All in all I think Northstar is doing a great job keep up the good work.*

-Freeman Corbin



### NS-54 Star White

By Sanjaya Silga

I made this skeleton solely out of un-encased NS-54 Star White, and with the exception of the number of ribs and the clavicles (which I burned off), I believe that it is fairly accurate. The trick to using NS-54 Star White is to heat it up very slowly in a soft flame. Once it starts to glow orange you can turn the heat up. If the piece with which you are working seems airy, try mixing it in the flame for a while and then pulling it out to the size you need. Once NS-54 Star White is hot it tends to hold its heat a little longer than most colors. This characteristic has both positive and negative effects for sculpting. If you work slowly you can move and shape areas just how you want them (i.e. legs and hands), but it can also make small detailed work (like facial features) melt in a little smoother than desired. So for the skeleton, all it took was a little patience, two days, and a roasted thumb nail for me to create a bone man out of pure white.

Wondering if there are any deals to be had? Visit [www.northstarglass.com](http://www.northstarglass.com) to check out our specials. They change often so check back to see if your favorite color has made the specials page!

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