

Soft Glass 'silver bearing' glass

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By Margaret Sutherland

Kit:

- Double Helix Terranova (striking)
- Double Helix Nyx (reducing)
- Precision 104 Monet Silver Amethyst (reducing)
- Precision 104 VanGogh Caramel (striking)
- GT Glassworks Black Nebula (reducing)

History

- Desire for 'boro' like affects
- New manufacturers, brand names
- Names change and different kinds go in and out of production

The Glasses:

P104 Precision 104

Manufactured by Northstar Glassworks (web page sells only boro)

Silver glass by Rocio and Ron Bearer

Often confused with Precision 104 because they were involved with the early formulations. They sell various silver glasses that are very well known, some manufactured by Northstar Glassworks. Can order from web site but very little technical information.

<http://www.fineartbyrocio.com/index.html>

DH Double Helix Glassworks

Company started by Jeb Hanay (formerly with Frantz). Manufactures and sells striking and reactive COE glass rods.

<https://www.doublehelixglassworks.com/index.asp>

Can order from web site, great technical information and gallery

GT GT Glassworks

Small line of silver bearing glass, easy to strike. No web site. See suppliers for technical information.

TAG Trautman Art Glass

TAG Glass is Trautman Art Glass. This is a new line of COE 104 Art Glass that is fully compatible with the other 104 glass that we sell. Paul Trautman was the original color developer and founder of Northstar Art Glass and now also manufactures the Elvis Boro colors. The glass is loaded with metals for color reactions. The company was formerly named Glasshawk.

<http://www.taglass.com/index.html>

Good working tips on web site

K Kugler

Kugler has a line of 104 COE colors. See suppliers for technical information. ABR Imagery shows same colors for both Kugler and ASK.

ASK ASK (Arrow Springs Kugler?)

See suppliers for technical information. Arrow Springs web page states all ASK colors are being closed out.

Suppliers

	DH	P104	GT	TAG	K	ASK
ABR: http://www.abrimagery.com	X	X	X	X	X	
Delphi http://www.delphiglass.com	X					
Frantz Art Glass http://www.frantzartglass.com	X	X			X	X
Glasscraft: http://www.glasscraftinc.com		X				X
Howaco Glass Supply Co http://www.howacoglasssupplycompany.com			X			
Lampwork Bead Supplys http://www.lbsupplys.com	X	X	X	X		
Moretti and More http://www.morettiandmore.com	X				X	
Mountain Glass Arts: http://www.mountainglassarts.com	X					X
Paula D, Flame Dame (online only): www.flamedame.com	X	X	X	X		
Rocio Studios: http://www.fineartbyrocio.com/index.html		X				
Sundance Art Glass www.sundanceglass.com	X					
Wale: http://www.waleapparatus.com				X	X	X

Sources of Information

Manufacturers and suppliers (some are better than others)
 Lampwork Etc. www.lampworketc.com
 Wet Canvas
 Borosilicate glass manufacturers (Glass Alchemy, Northstar etc.)

Important Issues

Safety and Ventilation
 Flame Chemistry – know your torch
 Neutral Flame
 Reducing Flame
 Oxydizing Flame
 Each glass has unique characteristics
 Techniques
 Striking
 Reducing
 Annealing
 Experiment and Keep Records
 Flame type
 Techniques
 Work with just rod (don't make bead)
 Thin stringers
 Encasing
 Shards
 Mixing
 Clear Stringer
 Different base colors

Lots of Miscellaneous Information:

Excerpts from Lampworketc.com Silver glass thread

<http://www.lampworketc.com/forums/showthread.php?t=27555>

Dates 07/06 through 02/08 Very LONG thread

Monet and Chagall:

- 1) Base bead - black and cobalt blue transparent seem to work the best
- 2) Make your stringer design with the Monet or Chagall
- 3) Melt in the design completely and then shape/press the bead, remove chill marks
- 4) Turn down your oxy slightly until you get a small reduction flame.
- 5) Flash the bead in and out of the flame about 1/2" above the cones. You should see the colors pop almost instantly!
- 6) After seeing some color, hold the bead just below the flame to see how much color you have. If you like what you have, then you're finished. If not, you can flash the bead in the higher part of the reduction flame - just at the very tip and you'll get more color to appear.
- 7) Equipment for the above technique: Minor with 1 oxycon

Nyx

This set is nyx on morrocan swirl. If you blast the nyx in a propane rich flame, last thing, it should strike the peacock colors. Good luck!



DaVinci II

'I made this set of leaves from R4 Da Vinci II and the two on the very ends are psyche (reduced). I love Da Vinci II. It is so easy for me to use compared to some of the others'.p58



Kronos II with clear dots.



Misc Info:

Striking:

DH - Terra

R4 - VanGogh, Super Davinci 2, Michaelangelo, Dali

Reducing:

DH - Aion, Gaia, Elektra, Nyx, Psyche

R4 - Chagall, Monet, Picasso, Rocio Silver Mist, Kandinsky, Matisse, Super daVinci II Double Amber Purple, Davinci I, Miro, Zeus

Tips From the Net:

Although different silver glasses will have different working characteristics depending on their composition, virtually all silver striking glasses start striking just above annealing temperature. One problem with getting good color can be the time that the glass spends in the striking temperature range. The longer it is in that range the more it strikes. For fast striking glasses this can cause trouble if one is using a torch like a Hothead that doesn't heat the glass as quickly as a gas/oxy torch. If the glass is in the striking range too long it can overstrike, which usually results in a mousy tan or greenish color.

The clear DaVinci works a lot like Aion from DH. It gives really pretty iridescent rainbow colors when you don't get it too hot when melting it in, then hit it with a small to medium reduction flame at the end.

R4 Silver Glass:

Kandinsky

- An opaque blue that creates swirls & metallic
- Needs to be melted farther out in a reducing flame to prevent boiling
- Use a reducing flame for effects

Silver Mist

- Build/shape base bead in a neutral flame
- As you add glass for the base bead, swirl/twist the gather for more effects
- Strike bead by switching to a 'soft' neutral flame & flash bead in & out in flame
- Keep bead away from the face of the torch, the candles

Chagall

- Use a neutral flame while melting/shaping
- A reducing flame will create a mirror effect; spot heating w/ a neutral flame will remove mirror effect

Monet w/ Silver Mist

- Create base bead w/ Monet & decoration w/ SM
- Melt & shape in a neutral flame
- Strike Monet in a reducing flame far away from the torch face/candles
- If bead is too close to the torch the effects will be burned away or turn brown

Super Davinci 2 / Double Amber Purple

- Likes a LOT of oxy
- Reducing this color will create caramel looking earth tones
- To produce blues & purples use extra oxy when forming the bead
- Best results are when the glass starts to turn transparent
- When glass looks clear on the surface remove from flame & cool till glow fades
 - As it cools the bead will look brown
- Strike it in an oxy flame for blues & purples
- FYI, Davinci enhances Ivory's effects

Van Gogh

- Work just like Davinci 2 w/ lots of oxy to get the rainbow of colors
- Cool for a few seconds then flash heat in a 'loud' oxy flame to bring out the colors

Picasso

- Adding clear to Picasso adds to its effects
- Heat/melt/shape in a neutral flame
- Strike in a reducing flame by waving in & out for a few seconds

R4 Silver Glass Annealing Schedule/Info

- Standard/recommended annealing temp for R4 silver glass: 910 deg, average time 30 min
- Some colors will continue to strike if left in the kiln & annealed for longer periods of time
 - When working w/ R4 silver glass because of it's unique/different annealing schedule/temp you might want to work w/ this separately from other glasses
 - You may want to try batch annealing
 - If your beads have lost some of their colors after annealing, reduce the annealing time and/or temp
 - Annealing temp can be as low as 900 deg & as high as 1200 deg when using silver clay

Double Helix

Luna and Terranova Striking Tips

To activate these colors, work them very hot at first, then allow to cool, and then reheat until they glow orange. The ideal striking temperature is right before the glass moves, so to test, I like to make a blob and pull out a long "nose" with tweezers. 🤪 Then when I reheat, I can see when the "nose" starts to move a little bit, and know that I am at about the right temperature. I think it's easier to get a feel for striking a color by *not* making a bead right away. Spending just a few minutes and one inch of rod just playing saves time, glass, and frustration later. If the Luna stays Opal White, it has not been activated by strong heating, if it stays amber, it was not struck enough, and if it goes pastel cream, it has been overstruck...I know it sounds tricky but it becomes intuitive once you get the hang of it.

Terranova is very similar, but much stronger. It likes to be worked in a strong, hot flame, then cooled a bit. You may get good colors at this point without reheating. If not, then reheat by rotating it in the flame for a few long seconds. Because the Terranova is so saturated, when *overstruck* it will look almost black. This can often be corrected by treating the surface with a strong oxidizing flame to "reset" the glass.

Both colors like to be manipulated, folded, and twisted as they are worked. Mixing the two together creates a blend that is very similar to the original Terra.

I am so excited to see what you all come up with! Enjoy!

Jed at Double Helix

Reduction Guide

for Aion, Elektra, Gaia, Kronos, Nyx, Psyche

1. Use adequate ventilation for silver rich colors.
2. Shape you piece in a neutral flame. (*shortest yellow candle*)
3. To begin the reduction process; remove your piece from the flame and allow to cool until no longer glowing hot.
4. Set a slightly reducing flame by turning your propane up. (*longer yellow candles*)
5. Pass your piece through the reduction flame for a few seconds. (*time to reduce varies by color*)
6. Remove your piece from the flame and check the reduction progress.
7. To further reduce the piece repeat steps 5-6.

*Clean off undesired results in an oxygen rich flame.

*Hot head users can produce a reduction flame by temporarily covering the air inlet holes with an aluminum foil collar or hot pad



Nortel Minor Burner set to a slight reduction flame

Striking Guide

for Khaos, Luna, Terra and Terranova

1. Use adequate ventilation for silver rich colors.
2. Work in a hot neutral flame.*
(shortest yellow candles and no streaks)
3. To begin striking; allow the piece to cool until no longer glowing hot.
4. Gently reheat.**
5. Anneal at 940F.

*Working too cool can result in milky colors.

**Multiple heating/cooking cycles can further develop the color, though a single cycle of the right durations yields the brightest colors.

Tips for specific colors:

Aion- Works best over dark colors.

Gaia- Compared to Aion and Kronos, Gaia has a much shorter striking time. In just a few passes in the reduction flame she'll strike fully.

Elektra- She's nearly impossible to overstrike. Almost the opposite from Gaia, you can have her in a reduction flame for longer periods of time and she'll just get redder.

Nyx- Can also be struck in the kiln. Depending on placement, time and temperature, Nyx will fade through a series of blues.

Luna- Work very hot. The hotter she's worked the brighter the results.

Terranova- Try reheating in an oxidizing flame to get brighter colors.