Magless – 2009 How Tos

From Celyn:
First humungous thanks to my husband, John, for counting and cataloging and keeping track of all the magless entries as they came in. He also came up with the brilliant way of sorting them. Genius!

Secondly, big thanks you to Brad Walker for this experience and the support you provided. I learned a lot from it!

Thanks to Molten Gecko for all your hard work organizing and compiling the "How To". I've done this task and know it's not an easy job! You rock!

Thank you to everyone that volunteered to help in one way or another.

Thanks to everyone that sent fabulous goodies! They were not sought or expected but the sorters and I loved and appreciated every one of them.

Last but not least, thanks to all of you. Thank you for making wonderful creations, sharing them and how you did them with all of us.

Your warm glass friend,

Celyn
Celyn L. Collins
Glass Artist/Soaper
248-709-4801
Rochester Hills, Michigan 48309

From Molten Gecko:
Thanx and please forgive any errors, they are not the individual magneteers, they are mine.

The Gecko

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Zane Rozkalns #1

Using Spectrum96 glass, I put a horse's head cut out of thinfire between one base layer of dark green and cover of clear. I used chads to help reduce the incidents of bubbles.

Unfired:


Fired:


What I learned:

All thinfire is not the same. I had bought thinfire from several different sources and did not realize this difference. I thought I was firing too fast or too long or too hot when some of the horse's heads came out smaller and grayer. Some even curled up on themselves and began looking like weird broken trees. By the time I discovered that there was a difference, I had quite a stack of rejects as well as a smaller group that were acceptable.



I also tried out mica, plaster of Paris (just the powder), and, even, kilnwash dusted onto the thinfire horse's head cutout.

Mica made the horse look wrinkled like a Sharpei puppy.

Plaster powder made many bubbles.

Kilnwash (the dust -- scraped off of a fired kiln shelf just before applying a new coat of kilnwash) made everything look bumpy.

I was not too happy with results I was getting for the horse heads. So, for fun, I started making ladybugs. The bottom layer was a small rectangle of the leftover scraps of dark green glass I was using for the horses. Using tile nippers I rounded the corners of the rectangles of orange/red glass. The head was a tiny half circle of iridescent black with two bits of black stringer for the eyes. Using nippers I roughly formed two half circles for wings from red glass rectangles. The black dots on the wings were stringers nipped into tiny pieces and placed on top of the red glass using tweezers. When the ladybugs were placed in the kiln both wings of each ladybug had the same odd number of dots. The ladybugs were full fused. They all survived the firing but some lost a few of their dots. Hmmm. Older ladybugs do acquire some fading of their dots in real life. Interesting…..

Unfired:

Fired:

I figured the horse's head and the ladybug together equaled the 2x2 inch size mentioned as the upper limit for the size of an individual magless.

I hope you enjoy them.

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Rosanna Gusler #3

Hi there. First I cut out and painted 160 pieces of 3mm float with ferro enamel and CMC gum and assembled into 'Band-Aids' with glue. Fired to 1459 and a 20 min hold. Nice shape but the CMC medium acted weird, so on to the next idea.

Moral: don't get cocky and refuse to test. ....

Each one of the mags I sent was laid up as follows. First anneal the metal mesh over a turkey fryer flame so it will be soft. Gently flatten it on some wax paper and paint the mesh with a thick layer of Elmer's glue. Let dry and cut into roughly 2x2" squares, 9 wires to a side. Clip out center X from each square, whack them flat between 2 pieces of wood. ....

Make a Sharpie pattern on the table and put a 2x2 piece of wax paper over. Lay out the bottom layer, gluing in place let dry................. Put glue on the mesh squares and glue to the bottom layer of glass. Let dry. .... Put glue on the top glass pieces and glue to the mesh. Let dry. .... Spray with borax for devit.......... fire at 300dph to 1535f hold 20. Cool to 1000f hold for 20. Off. (Envirovent running throughout.) .... Take out and brush off spalling copper. Spray with phosphoric acid to clean up some. Rinse. Dry. Done. Glass is 3mm float, sky vodka bottle and red wine bottle. The Elmer's glue on the metal keeps the squares from unraveling while you work them. The glue and wax paper burn away nicely.

Rosanna Gusler

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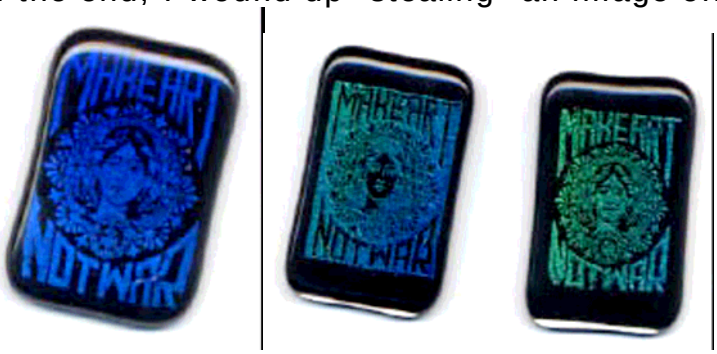
Guy Kass #4 Make Art Not War Magnets
Etched and Capped Dichro

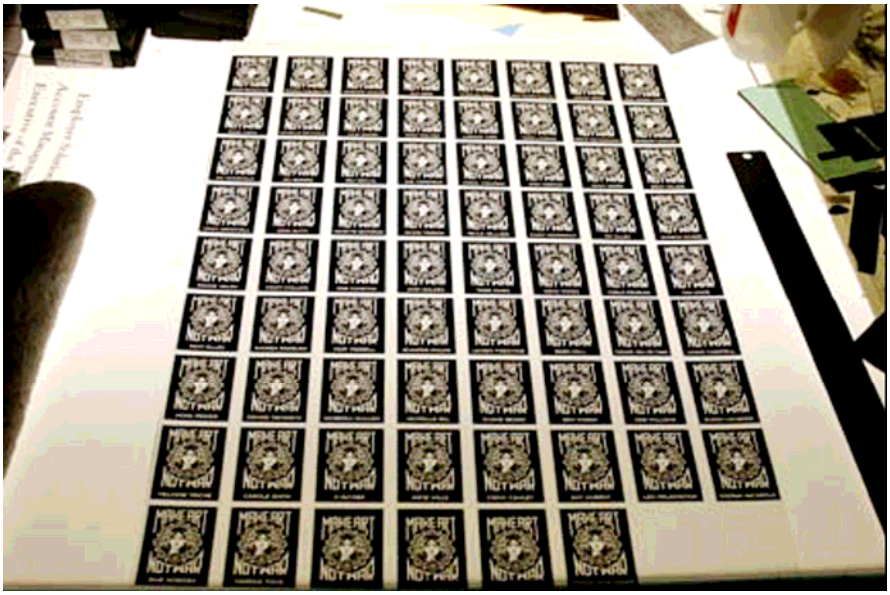
I have to start by saying, please be kind. I've only been doing kiln work for about 3, maybe 4 months. So while these pieces aren't perfect, I learned a fair amount in the process.
Originally I was going to do a piece that would hopefully have the

NYC subway look to it

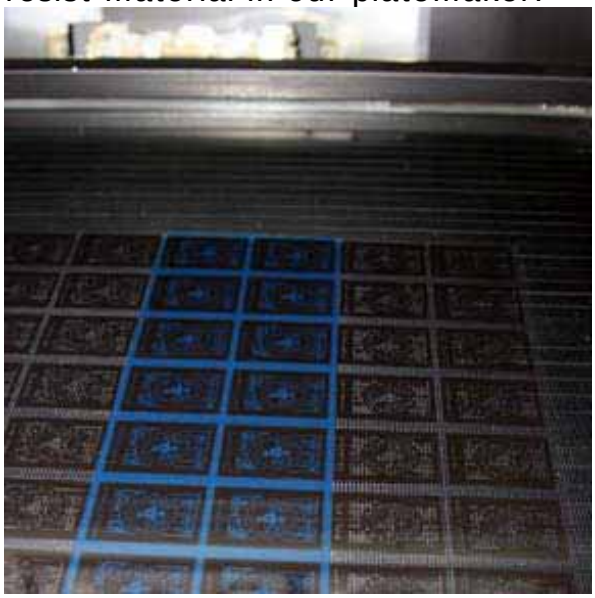
The initial test firing was a compete failure, so I decided to go onto a different design. The main thing I did learn is that I would have to fire polish the etched dichro before it could be capped. I also found out that you have to clean, and clean and clean them. I wound up scrubbing them with dishwashing soap and a
toothbrush followed by a mix of glass cleaner and alcohol.
In the end, I wound up "stealing" an image off of a greeting card.



I contacted the designer/artist 3 times and never heard back. I ultimately decided to use the scan because I wasn't going to be selling his images.
Just borrowing them for this project. I was going to offer to make him a bunch, but again, never heard back. I then started testing colors of Dichro along with firing times. The blue (actually rainbow) was way to dark. The next two crackled too badly, I finally ended up with the pieces shown in the last individual magnet photo.



After scanning the image in Photshop and converting it to black and white high contrast, I stepped it so that all of the pieces were on 1 14” x20” sheet. Then I copied and pasted all of the names off of the WarmGlass website. Normally we make our positives on an inket printer on plastic sheets. Because of the heavy coverage and fine detail we decided to have a film positive made on an imagesetter service bureau. The next step was to expose the resist material in our platemaker.



It is done under a 5000 watt light source and help in contact with a vacuum frame. We exposed it in smaller strips for two reasons. The first was for handling, second we probably couldn’t maintain the fine details in such a large sheet. After exposing the sheets of material. It was time to process them. The technology is based on screen printing technology. Think of the exposed areas as hardened while the unexposed areas are soft, and can be washed away. There is a bit of a

balancing act. Over wash and your details get washed away. Under wash and you can't blast cleanly.

Once the pieces are dry, we squeegee them to wax paper because they have an adhesive on the back that holds them to the material being etched. We then cut them apart and applied them to the pieces of dicro that we had cut to 1.5" x 2'. They were then trimmed. The only issue here is that there is a carrier sheet that needs to be removed and if there is no "outer" resist to hold it in place (such as a border) when you try to take the carrier away, it lifts the entire piece of resist.

When the masking was done, it was time to etch. The coating comes off in an instant. I had also read that if you use Silicon Carbide (which we do) you had a good chance for devitrification, so again clean and scrub, and clean again.

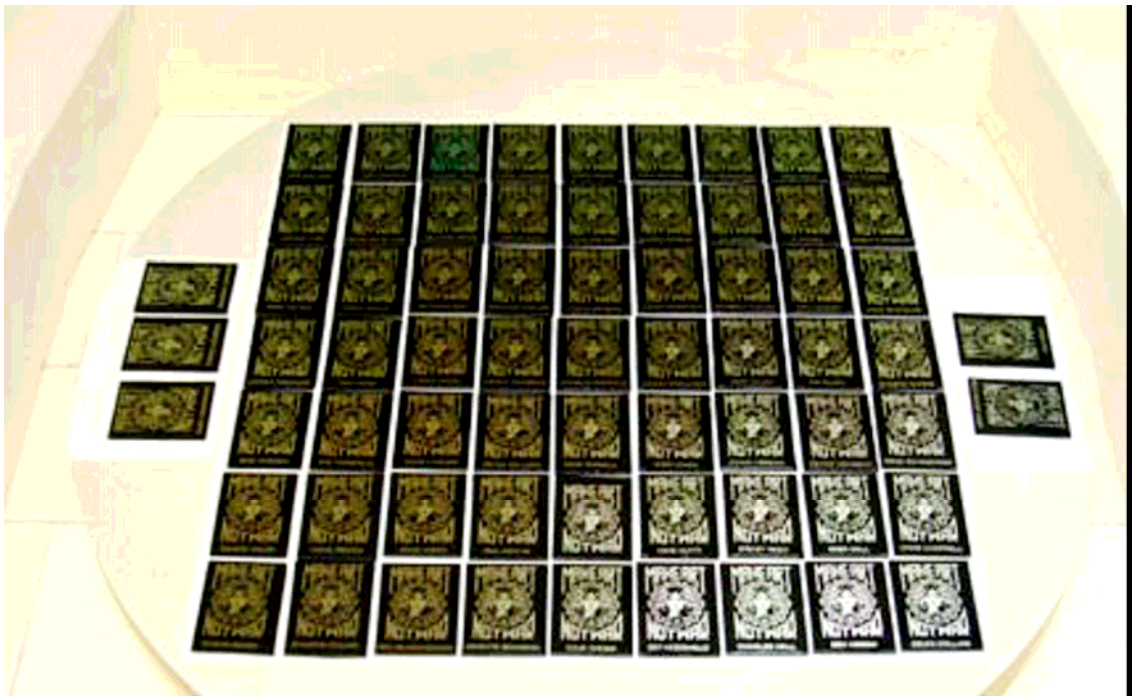
After the etching and cleaning we fire polished the pieces. We then capped with clear (which I didn't photograph) that we tried to cut a

tiny drop larger than the dichro.

The main thing I learned about this, is that a couple of millimeters either way makes a giant difference. I was pretty proud of our cutting, but when it came time to apply the resists and clear on top. You could see we were “all over the place.” In turn a fair number of pieces were not perfectly centered.
The last issue is that we are still getting a tiny bit of tiny bubbles. Something to still work on!


MAKE ART
NOT WAR


MAKE ART
NOT WAR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LYNNE CHAPPELL
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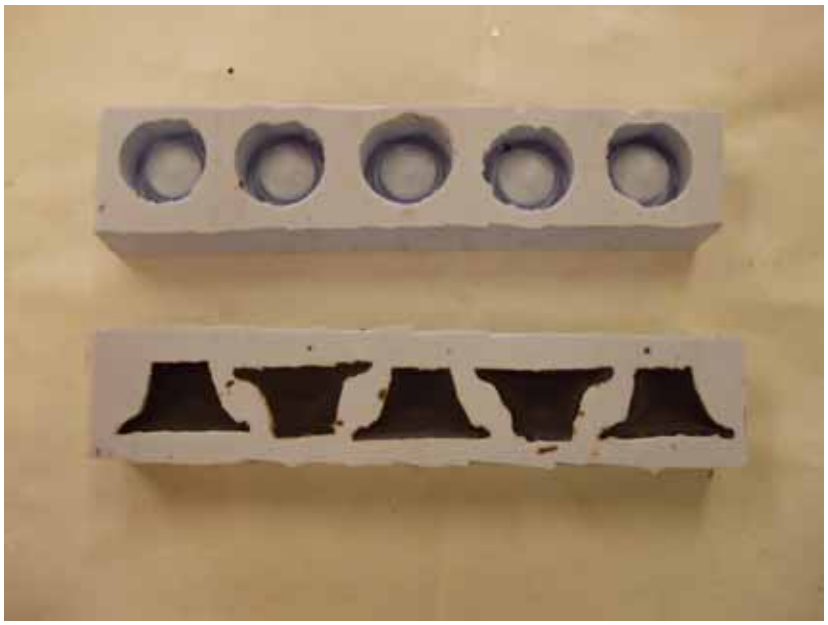
Charles Hall
#6 - gumball machine
I got the idea for this year's magless when I found some tiny glass beads on
a surplus site. I like the idea of a magless that has moving parts in it.
This one took a lot of hours laying in bed and running it through my mind to come
up with a method to get the gumballs into the globe, and then cover them.

I knew I couldn't fuse the globe cover on or the gumballs would melt together.
After rejecting numerous ideas to cast a one piece structure, I decided on two
castings, and gluing on the cover after filling with gumballs. The hardest
part was to build the globe. It had to have an internal rim with a 1/8" depth
so that I could drop in the cover, and still have room to put in a glue ring.

This project went pretty quickly. I had about a 15% failure rate in the castings, and I was very happy that we had a low number this year to submit. My
procedure was as follows:

1. Made initial models. Base out of basswood. I used polymer clay to make the coin handle and flap where the gumball would drop out so I could press in a 1c mark. Globe was made with p.v.c. pipe.

2. Made single silicon mold out of each piece. Using this mold, I cast 5 waxes, cleaned them up, then made a 5 cavity gang mold.



3. Cast waxes. I was having trouble with air bubbles, and ended up using a metal rod stuck into the molten wax to scour the areas that weren't casting well (like the little coin handle)

4. Stuck waxes to an acrylic plastic sheet, covered with a ring, and cast the investment. Investment was 50/50 potter's plaster/silica. Each casting was about 25-30 waxes.
5. Steamed out wax. Globe used 25 grams clear Bullseye, cut into 3/4"

squares. After some problems, I started pouring clear frit into the lower rings of the casting, as I was not getting a full cast on the rim. For the base, I dropped stringer into the top and bottom bars, filled the gumball chute and handle with fine black frit, then added a small piece of black glass to these areas before finishing with 25 grams colored glass.
6. Into a small kiln on this schedule
100 to 200, hold one hour (vented kiln)
250 to 1200, hold one hour.
500 to 1650, hold four hours
afap to 960, hold two hours
125 to 850, kiln off.
7. Cleaned and sandblasted castings. Assembled tops and bottoms, pushed together firmly, back into kiln, and fired to a med. tack fuse. I brushed glue into the 1c. part, added powdered white frit to define the price of a gumball.
350 to 500, no hold
500 to 1250, no hold
afap to 960
125 to 850, kiln off
8. Poured in gumballs, used epoxy to glue in cover, attached magnets, mailed off.

9. If you are younger, you may not believe that there was once a time when you could actually buy a gumball for a penny. At that time, you could buy a Chevy Impala for $1250. Now gumballs are 25c, and an Impala is $20,000.
Obviously, gumballs have seen a much higher cost ratio than automobiles.

What I learned:

I stuck the waxes to the acrylic sheet before pouring the investment. The plastic turned out to be very useful, as I could bend it after the investment was set up, and pop it off. I ruined a whole casting by using glass as a base, and couldn't easily get the finished investment off. By filling the silicone with liquid wax, pouring off the excess, then letting it dry to a skin coat, I could refill the mold later with wax for better results. When tack fusing the top and bottom together, I initially used kiln posts to hold the parts in place. This resulted in malformed globe areas. I finally just pushed the parts together to tack fuse them as a single part.
Disclaimer: About 15% of the fused parts broke after being tacked fused together. If you received your magless in two parts, glue them back together.
That's what I had to do.

Artist's statement: I like to make things.

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Faye Walker- Malench #6
There was a plan in place at time of magless sign up but Fate intervened when I met Tonya Davidson at Milon Townsend's casting class in Denver. She brought with her some prepared silicone molds, which she sells on *www.wholelottawhimsy.com*. I fell in love with one with five exquisite masks. Tonya said the masks were hand-carved in Australia and then set to silicone. During class I incorporated these into solid castings and reverse-relief boxes. By the end of the week I knew I needed these masks on my maggies, and Tonya graciously gave me the mold to use for this project.

WAX:
Preparing the silicone mold would normally be the first step in lost wax casting but was able to begin pouring brown Victory wax right away. Set up in garage with plastic sheeting to protect area. Stole husband's slow cooker and slowly heated wax to 350 until liquid. Using SS soup ladle (also stolen) filled each cavity of the mold, making five different masks designs.

Poured 75-80 masks. Wax was allowed to set up
10 minutes or so to start to harden. Process sped up
by placing in freezer for 15

minutes.
Repeated 15 times over many hours.

INVESTMENT:
Investment molds poured using R&R910. The volume of the first batch was carefully determined mathematically and weighed on a postal scale. Some plastic clamshell packaging and cigar boxes (stolen from husband) worked great to use repeatedly as flasks to contain the R&R. Hot glue gun was used to hold the waxes in place while investment was poured. Only one floater out of 80 is not bad.
Originally planned to make one mold and do a test run. After seeing the mess it was best to do all at once. Next five investments were stirred to pancake batter mixture, not measured. All seem fine in initial state.
Investments left for about an hour to harden.
Because the investment crept under some of the waxes, the periphery of each cavity was cleaned with a wire brush and knife edge. This broke through the gypsum face coat of the R&R, exposing the rougher part of the plaster but does not affect the interior of mold.

Waxes hot-glued into plastic container
Differing colors
of wax likely due to whether setup at RT or frig.

Investment removed from plastic container flask.

WAX RECOVERY:
Wax is reusable and the simplest method for these small molds is to simply melt it and pour it off. The investment molds with waxes were placed in oven at 175 for an hour and then at 350 to melt wax and start the drying of molds. When the wax was liquid, the molds were tilted over a pan of water. When it the wax cooled and hardened, was fished out and set aside to allow any water to dry off. The wax was nice and clean so will return to the main wax pot when dry.
Used the wallpaper steamer just to have access to super hot water - not for wax melting. Each cavity of the mold was sloshed with boiling

water to clean up any films of wax left behind. This was mostly effective but some masks retained a bit of wax. They will either burn out or not.

FILLING:
The wax figures were weighed prior to investment and multiplied by 3 to determine the glass amount needed. This is loosely based on the instructions given for Uroboros glass. Since I'm using BE I'm hoping the densities are similar enough. Plan to pile the glass to overflow if the weight per scale looks short. Some will be frit and/or powder, coarse frit and some pre-fired pattern bars. Each mask needs 0.625 oz.

Some leftover wildly colored pattern bars were coincidentally the exact weight needed and became the test run. (Fired in Evenheat Hotshot) Because the pieces are very small, I picked a firing schedule out of the air. Slow at first to dry the molds and with a long hold at 1200 to soften the glass.

200 dph to 300 and held 1 hour
200 dph to 1200 and held an hour
200 dph to 1460 and held 20 minutes
9999 to 1000 to start anneal
50 dph to 950 and held 1 ½ hours
150 dph to 650 and off to cool to RT

DIVESTING:

Divested first mold. Investment easily breaks away by hand and the surface scrubs clean with a toothbrush. Perfectly shiny surface and good detail. I really like these guys!

When all were divested and cleaned, those prepared with frits are not as nice in texture. The transparent yellow looks like a yummy lemon candy but is going to the reject pile - too rough in surface texture.
All of the back sides have a slight meniscus – edges seemed to pull in and middle bowing up. Think this is just a surface tension effect due to the small size of each mold cavity. Used lap grinder to flatten the back of each mask and clean up prickles.

FINAL FIRINGS:
Cut varied colors of background – ground off corners and roughness – scrub. Firing schedule was 350 dph to 1440 with 3 minute hold, which gave nice edges. Thinfire was used and the backgrounds left undisturbed on the kiln shelf for next step.

Ground, flattened backs of masks are coated with FuseMaster 975 Back Magic. Hopefully this low temp flux will secure the face masks to the background at a lower temperature, sparing the details of the masks themselves. Each was carefully placed on a background already waiting in the kiln on Thinfire.
Firing schedule:
175 dph to 1050 – hold
250 dph to 1305 – hold 5 (5 more minutes added at end of firing when it appeared the details were not adversely affected)
9999 to 1000 – hold 20
50 dph to 950 – hold 1 hour
150 dph to 600 – then off to RT

What I did right...
Weights and measures of wax, investment and glass
Good firing schedules – able to fire a thick casting to a single layer with good anneal and no thermal shock
Use of low-fire fire flux as adhesive
Started early enough
Took photos at each step
Worked in increments of free time around other projects
Cleaned up between each task
Mostly used scrap and other pre-fired design elements on hand
Didn’t freak out when something went wrong
Added to “how-to” as I progressed

What I did wrong...
Half the masks are colorful and opaque which looks good but, the transparent frit ones are gritty and coarse. Working with chunks or billets would be better.
I should have tested opaque coarse frit because color transition (layering) within one mask using transparent color doesn’t work.

Double firings to get the two color layers made the mask surface hazy. Can’t count - came up 5 short as I was packing. Substituted 5 frit/powder/vitrigraph quilt squares.
Oh, and made an absurdly long how-to of 9 pages. Abbreviated here but leaving out lots of photos.

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Stacy Reed - #7

The Dudes

I’ve been working on my sculpting skills, which need a lot of work. I had sculpted these tikis awhile ago, thinking I would make them into paperweights. But, I also need time to work on my casting. So, Freeze and Fuse comes to the rescue again.

I used brown and gray colors of Bullseye frit powder. I tried to create a marble, or aged stone, look. Some worked, some didn’t.

My schedule:

600F ramp to 1000F. Hold 30 min.
400F ramp to 1350F. Hold 20 min.
AFAP to 970F. Hold 60 min.
150F to 700F. No hold.
AFAP to 500F. Off.

If you’re going to attach magnets, I have found the Rare Earth ¼” or smaller magnets work best. The smaller ceramic magnets aren’t strong enough, and the larger ones (3/8th or bigger) are too large.

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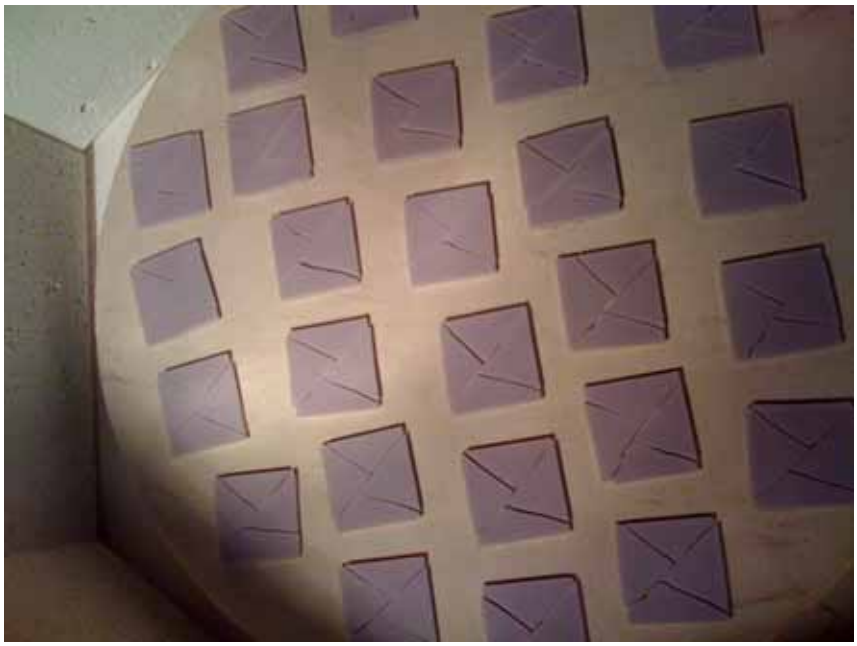
Ross Wirth #9

The magless base is 1.5” x 1.5” mauve broken into pieces and assembled back together prior to adding pieces of dichro-clear (dichrodown) and clear capping. The intent of the broken base was to have the glass move a bit during the fusing process, effectively creating some design in the base as glass above moves down into the cracks in the mauve base. I tried this a few years ago with good glass migration, but the mauve I was using this year seemed to have a different melting point than before and the migration was less than desired. Therefore, on later kiln firings, I purposefully placed the pieces of the mauve base in a way that there was a more noticeable space between pieces (maybe 1/32”). This gave me the impact I was wanting.



I started with a bubble squeeze to reduce the occurrence of bubbles between the pieces of dichro. However, the pieces were small enough that I really did not see that much difference between running a bubble squeeze schedule and my normal schedule below. Therefore, I reverted to my main full fuse schedule to reduce the total kiln run time. (Others also seemed to like the effect when bubbles were trapped.)

As part of the learning process, I experimented with different types of clear cap. Plain clear glass worked well, but was not anything special other than the obvious dichro showing. The best effect came from capping with clear iridized glass, irid side down. (With the dichro and irid sides both down, I was able to prevent a metal to metal interface.) This placement also sandwiched the clear glass from the dichro pieces between the dichro and irid surfaces. This creates a great effect as colors spread across the entire surface bouncing between the two metal surfaces of the sandwiched clear glass. (Sorry to those who only got the clear cap because the irid capped maglesses are much better.)

I also experimented with a couple different pieces of irid and found that the textured glass had a slightly higher melting point and failed to fully spread over the pieces of dichro and mauve base. These required a second firing with additional clear glass placed on top to encourage full coverage of the cap.

Full fuse – 2+ layers, no bubble squeeze

This System 96 schedule has ramp and hold times between double and triple layers of glass due to the large pieces of clear dichro between the base and cap.

Segment	Rate °F/hr	Temp °F	Hold min	comment
1	350	1000	10	
2	1000	1460	5	Fusing at my normal 1465 with a 10 min. hold was a bit too much for the desired effect.
3	AFAP	1100	0	Not flash cooled – this segment is a hold over from my normal program
4	AFAP	1000	9	
5	250	960	30	
6	125	800	0	
7	350	120	0	400 is AFAP for my kiln below 800

Learning:

- Spacing between the broken pieces of the base was required to get the desired migration of clear glass down into the space between the broken base.
- Some iridized glass appears to be treated on both sides. On some sheets I couldn't tell the difference by feel nor by reflective surface. This appears to have been confirmed by some pieces having an obvious irid side out after the full fuse, requiring a second fusing with thin clear as a cap on the irid surface.
- The textured iridized glass had too high a melting point to effectively full fuse at the same temperature required for the rest of the design.

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Michelle Gotthold #10,

Celtic Knots 

I used the freeze & fuse technique with a bought candy mold for this magless. I used a really wet mixture of water & powder frit to fill in the knot design, tapping the mold lots to get the frit to settle into the design areas. I used a toothpick to poke out the many small air bubbles that got trapped in the frit. I then filled in the background color, tapping & blotting gently so as not to disturb the knot design. I then froze the molds, demolded onto a room temperature shelf, and fired at 600 dph to 1300, no hold. I tried out lots of different color combinations of background & design colors. My favorite maglesses are the pale knots on a darker background, but these were tricky to get to come out with the design a uniform color since it takes so little powder to fill the depression in the mold. Some of the maglesses also have mica mixed in with the frit.

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Julia Smoak #11

Cat design was drawn onto base black irid layer with photo resist glue. A square of resist was adhered to the top clear irid layer. Both pieces were sandblasted to remove the uncovered portion of irid.

After cleaning the pieces were fired with the bottom black irid facing up and the top irid layer facing down.

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Emily Holmes #12

My magless was very simple to do, but I love this process because the results are a bit unpredictable. As the glass heats in the kiln, it shifts in different ways and it's always a pleasure taking the pieces out and seeing the designs that have formed.

To create these, I cut individual tiles out of single layers of glass (system 96.) On each square, I applied a few drops of two or three colors of Glassline paint. While the paint was still wet, I sprinkled on some fine frit and then added a few larger pieces of mosaic frit - any color will work as long as it's transparent. It seems to work best if the mosaic frit is placed on edge and "squished" down into the paint a bit.

The tiles are then taken to a full fuse, which encases most of the paint between the transparent mosaic frit and the base glass. I love seeing the colors of paint beneath the glass; to me these have a nice sense of depth and movement.

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Maria Livrone #14

This being my first year, not too accomplished yet with techniques, and feeling intimidated by those with far more experience, I opted to do a simple project with much enthusiasm.

I, as everyone else, have TONS of scraps. I took those scraps and assembled them into little angels....which one of us doesn't need an extra angel looking out for us? heehee

I simply contour fused the pieces and added a tiny bit of glitz (because angels are fashion conscious too) in the form of dichro. They, of

course, needed faces so I chose to do those with polymer clay. Being still too plain for me, I made sure to put holes on the top of the heads before baking, and through those holes, I added copper "hair/hats". Glued on the faces with E6000 and presto! An angel is born.

Through the process I learned a good schedule for contouring (at least for me), not to use copper for hands because it becomes too brittle in the firing, and E6000 does not adhere polymer to glass unless you scruff up the glass.
The hardest part for me, because I do not like making small things, was to stay within the size parameters.

Hope everyone enjoys them, as simple as they may be.

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Barbara J Cashman #17

I just love working with GNA (German New Antique) glass. Its clarity cannot be matched. My magless is a miniature of my Crystal Visions line which just won the 2008 Crystal Achievement Award from Glass Magazine. This is a mirrored tile, hand-applied and UV-cured. They are labor-intensive in that they are done one at a time; and if anything is not right, you don't know until it is mirrored. But I love what mirrors do. They make the darker colors richer and give the lighter colors "bling". I like bling.

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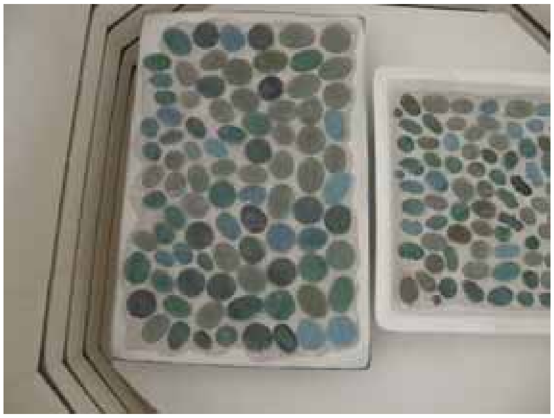
Joy McDonald #18

I have been collecting grinder grunge for over 2 years now with the thought of one day making a large piece from all the collected powders. I decided to make my maglesses from it instead. I ended up using about 6 small frit jars for the project. Each rinsed, sifted and then freeze n fused into a face mold. The colors are various going from a dark green to a light blue. I found that a white residue appeared on the back of some mags. It wasn't a kiln wash residue nor devitrification. After some thought I decided the white was created from a silver luster I had ground with some glass. The luster must

have risen to the top when I was filling the molds. Some powders I thought looked washed out got a few tablespoons of Egyptian blue.

Freeze n fuse has been done over and over here. The only difference being the shape created. I chose faces because I enjoy making them. The mags were fired, then flipped and fire polished on a bed of kaolin.



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2009 Magless #20
Jan Barker, Gilbert AZ

I experimented this year with powder wafers. I learned that translucents work better than opals, and that not all colors are created equal ☺ I also should have taken pictures of the maglesses before they left the building, but since you have one in front of you, that might work out okay after all!

This pic shows various states of the powder wafers – I did a layer of color and then a layer of clear on top. Pulling the stencils

up without disturbing the fine lines of the stencil is not an easy task – definitely best done decaffeinated!

Here they right after first firing – the two rows closest to you are opals, and I was definitely surprised to see how much they shrank!

I fused triangles of BE French Vanilla and Tekta clear separately, the put the powder wafers on top, with one more thin layer of clear powder. And that was all there was to it! Above is a pic of the prototypes –many

of the colors got lost on the clear so I opted for the vanilla background.
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Zoe Topsfield #22

No. 22: Most of these pieces are done by painting with black glassline through an airpen onto BE iridized white, fired face down, airpen image onto thinfire. A few at the end were done on UB iridized clear, but the image was then fired on the inside, between iridized clear and white because the frit “ink” didn’t adhere so well to the UB glass.
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StanHarmon #24

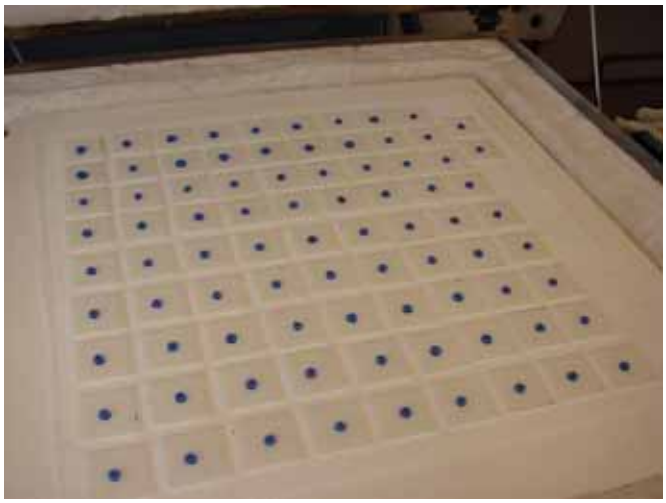
My 2009 magless was inspired by discussions on the Warmglass board concerning the artistic merit of many individuals work and the art vs. craft debate. So for all of you who may have any doubts, I'm providing you with your very own " Eye For Art". Use it wisely.

I try to always employee the "KISS" (keep it simple….stupid) principle of design. Because I try to work smart? More likely…. lazy.

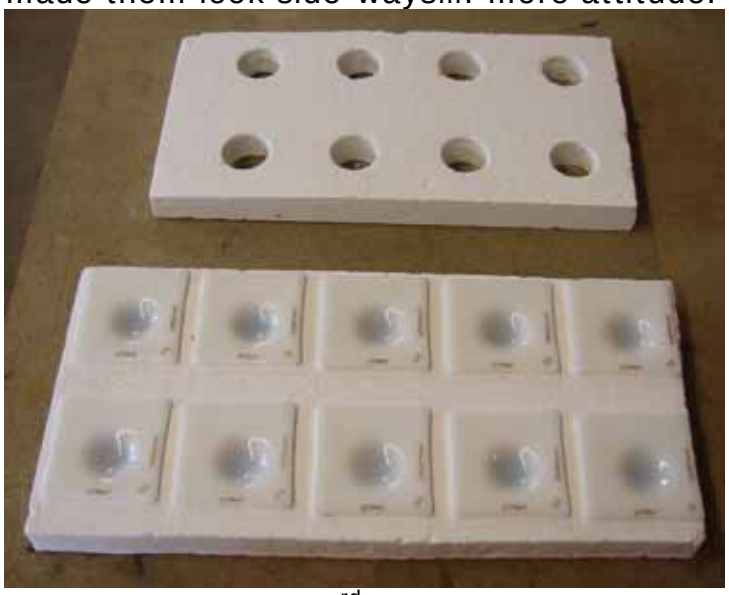
There were several ways to accomplish what I made, such as casting it in a mold, etc., but I wanted the eyeball to be shiny like the real deal .

It took three firings.

First I fired the white 2x2 blanks with the stacked blue and black glass at 500/hr to 1400 F with a 5 minute hold then off. No I didn't cut all those little blue circles. Cut 3/8 in. squares and nip the 4 corners and medium black frit. KISS



The second firing involved first writing my name and number with Hanovia gold on the backsides of the blanks. Why label bags?? Then placing the backside up, over a one inch hole cut into a piece of fiberboard to achieve the slumped eyeball shape. 500/hr to 1375, no hold, then off. I like the eyes that were off center over the holes, it made them look side-ways…. more attitude.



Preparation for the 3rd firing required mixing CMC with Marzipan powder and "squirting" the eyelid in place. Then touching up the lids with clay shaping tools and applying the graphics with black enamel. This is a conservative schedule for this firing….did I mention the first firing was started on Feb 13!!! and mailed on the….. What the $*%^@ELL….. a… FEDERAL HOLIDAY!?!?!?!?! and mailed on the 17th!!!! 300/hr to 1050 F, no hold, 500/hr to 1375 F, hold 3 min., then 9999 to 960 F, hold 30 min., then 180/hr. to 700 F, then off. Yeh …stuff your eye with fiber before this firing or you'll end up with a not so "artistic" eye.

Whewwww……no cracked eyes. But one weird experience……opening the kiln with all those eyes looking up at you….they kind of follow you around the room!

Disclaimer-use these firing schedules at own risk,
Don't roll the dice with the whole batch!!!!   Who me?

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Nancy Barry #25

This process works with both COE 90 and 96 glass and should work with float and appropriate powders.

1 layer of any clear irid glass
1 layer of any clear or lightly tinted glass for the top layer
Assorted glass powders
Aloe gel
Small tip bottles for mixing

I had 2 oz bottles: I mixed about 1 TBS of powder and about 1 ½ TBS of Aloe gel in each bottle. Shake well and test that the powder mixture comes out of the tip when squeezed. LABEL each bottle with color number. Mixture should be syrupy consistency.

Clean the irid glass and place it irid down on a clean work surface.
Squirt lines of the powder/aloe mixture on the non=irid side of this layer.
Cover the entire surface with a minimum of 2 colors and 3 is better.
Use a plastic fork and a skewer or other objects to mix the powder in swirls and zig-zags...
Clean the other piece of glass and place it on top of the powder-aloe layer.
Place irid side down on clean KW shelf or on shelf paper or other texture.
Fire to full fuse using schedule for specific COE and your kiln

I made tiles about 6 ½" square. Each tile was a different color combination.
I used my Titan Saw to cut the 6 ½" tiles down into smaller pieces. I checked for sharp edges and used the grinder as necessary. Fire polish if desired.

I masked each tile and used my laser to cut the symbol and words on each tile.
I sandblasted to make a deeper line so that I could paint.
I used a black enamel paint to darken the etched area.
I cured the magless at 325* for 45 minutes.
I polished the cooled tiles.

I like stronger and darker powders in combination. This technique reminds me of paper marbling in terms of making patterns. It has many possibilities.
Pt 4 text size is too small for the technique. I tried this with only 1 layer and was pleased with the results. I tried this with non-irid glass. I did not like this result as much as with the irid which peaks through the powder layer. It is almost as KEWL as dichro.

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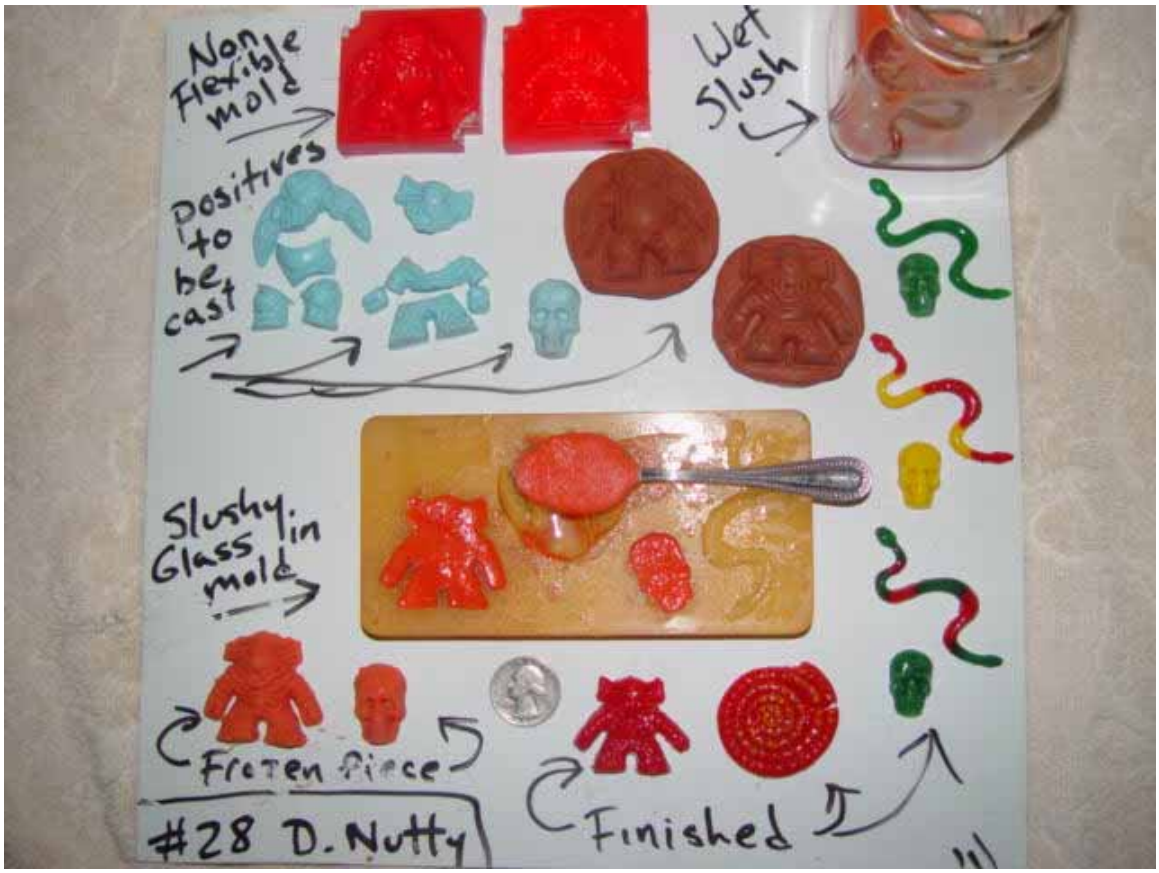
David Nutty #28 Basic Theme: Game Pieces (Poker Chip or Chess Piece)
All glass is BE 90coe powdered frit (fine works OK too).

Once again, I went with a Freeze and Fuse method to create the pieces. It is simple and I can freeze several pieces during the day and then fire a large batch later. The downfall is the piece shrinks during fire so if you need exact size you have to have a larger than final piece mold size.

Last year I used premade ice cube and candy trays (love that silicone from IKEA) but this year I cast all my molds from objects I made or had found using a urethane 2 part rubber mix. I think I will post the actual mold making process on the WG site since I am soon to be casting some more stuff and that is a topic to itself.

The POKER CHIP was simple Sculpy clay rolled out into a thin snake and then recoiled into the spiral. Various texture markings were put into the clay before casting. I use different colors to denote diff values of the chip. (I made a set for a buddy of mine that have endured many a card game).
The CHESS PAWN (Alien or Troll) or KING (Alien on a pedestal) was from a child's clay press that I found at the beach. I made a positive using an RTV silicone system but I have also made positives with Sculpy and they do okay. I wanted to make the rubber positives so I could cut up into parts in order to cast just parts of the piece in one color and them add the diff pieces to a total mold in order to fuse whole.
Each positive was placed in bottom of small flexible tray (and heavy enough not to move when rubber poured) .... sprayed with mold release (very important) ... rubber mixed up and blended well .... carefully poured beside positive and allowed to flow over and around with minimal air trapping. This cures for a day and the rubber negative is popped out of the tray. Remove any sculpy or positive parts and rinse out the negative. Allow to cure a few days before use. Once used, rinse & store in Ziplocs for later use (I dust mine with baby powder)
(ps: I had SNAKES & SKULLS to send out but they got sidelined into another project.)



The process is to mix clean water into some frit to make a slushy wet paste. Spoon the slush into a flexible mold, blot off the moisture, spoon some more glass, blot more water till the mold is full. Try to shake, jiggle, or vibrate the mold to dislodge any air bubbles in the glass. Blot off more moisture so you can see the grains of glass (You want the least amount of water to bind so you have little to burn off in the kiln).

Place the mold into the freezer and wait till ice cube hard. Then carefully release the piece from the mold (hence the need for a flexible mold) and place on piece of carboard or recycled food item tray and put back into freezer to solidify outside mold (Dont put onto something it will easily freeze to like a wet metal tray or it will be hard to get off the tray). If you crack it while taking out ... just rewet the pieces and refreeze and try again. Now you can refill and refreeze pieces in the mold and accumulate during the day or week. Try not to store too long in freezer or 'freezer burn' may dry out the piece and it becomes dusty during handling.

Once you have enough to fire ... take the frozen pieces to the prepared and dry, cool kiln shelf and set out. Try not to move after placement. You can fire right after or delay a bit (I wait an hour) but don’t let all your water melt out and bond with the shelf primer or it will stick more to your piece.

I fire in 3 steps:
Ramp 1 is 400 deg/hr up to 1150 with a :15 hold
Ramp 2 is AFAP up to 1275 with a :30 hold
Ramp 3 is AFAP down to 980 with a :45 hold

They come out clean & shiny & ready to go ... you can retack/refuse them to bases, etc as long as you don't get too hot and lose detail.

Thank you to all involved in this ... I enjoy this every year and look forward to seeing the goodies.
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Nanette Bowring #29 'Eyes'Cubes by Magnateer #29

* Several eyeglass wafers.
* LOTS of clear scrap smashed with a hammer in two paper grocery bags.
Wear a shield over your face. Wear a mask when pouring contents into a
plastic container for easy scooping!
* Cube mold

Directions:

* Fill mold ½ full with frit, lay in eyeglass wafer, add more frit stacked as high as it will go (shrinkage is about 50% it seems). The bigger the frit the fewer bubbles. Sometimes I would add some smaller frit to fill in any gaps around the bigger pieces of frit.
* Full fuse
* Anneal
* Grind off sharpies. It seemed the fuller the mold the fewer sharpies; but I had sharpies on all of them. Never did find a way to not have any! If you know the secret please let me know!!
* Wash

* Firepolish; it took a couple of tests to find the right temperature where the cube would polish up nicely and hold its shape!
* Sign
* Bag
* Ship!

Notes: It takes a LOT of glass to cast. I thought I had lots of scrap clear but I had to go buy more scrap! Amazing! I had hoped I would find the secret to firing them with no sharpies but not so. The mold had to be cleaned and fresh kiln wash applied almost every other firing sometimes after every firing. That got old really fast but if that was the worst thing that day I was doing well! As usual this was new and fun! I hope you enjoy my ‘eyes’cubes!

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Paula Zellner #31
Deco Valentine Magless

Ingredients: Assortment of Red and Black Bullseye Glass
Black BE Frit
Elmer's School gel glue
Thinfire paper

Prep: Use Morton Glassworks cutting system to cut
1 1/2" strips, cut strips into 1 1/2" squares.
Cut squares in to large triangles
Cut 1/2 of the large triangles into medium and small triangles.
Cut 1" strips and cut angled ends.
Attach with glue.
Sprinkle with frit.

Cook: In a 24" top firing Paragon kiln in batches of 15
At: 400 deg F/hr to 1250 deg F hold 30 min.
600 deg F/hr to 1350 deg F hold 10 min.
ASAP to 960 deg F hold 30 min.
150 deg F/hr to 700 deg F hold 1 min.
Off, kiln cools on its own to room temp.

Finish: Engrave, bag and mail.

Lessons: This was my first magless exchange I kept it simple. It was also my first experience with making multiples and consistent geometrics. My new Morton Glassworks really came in handy. Great practice in using my new engraver, as well.
My last batch of magless was significantly better than the first.
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#32 Cindy Hoonhout
My maglesses incorporate copper as inclusion and Dichro Slide ™. My goal was to get some depth so that it appeared that 2 horses were running together under a moonlit sky.
Glass Used: BE 000147-0030 Deep Cobalt Blue capped with Uroboros machine rolled clear
Dichro Slide™:Burgundy/Deep Red, High Cyan/Copper Red, Blue/Gold

	I used a horse shaped punch to make for the horses and a small moon shaped punch for the ¼ moon. The horses were Dichro Slide™ and copper mesh and the moon was copper foil
	• Soak the decal in water for approximately 2 minutes.
	• Apply Dichro slide™ horse to blue background
	• Place copper mesh horse on top of decal horse and offset a little bit • Place copper moon

	• Cover with clear cap • Add dichro frit “star”

Fire to full fuse:

800 degree/hour to 250 hold 5 min
800 degree/hour to 500 hold 5 min
800 degree/hour to 750 hold 5 min
600 degree/hour to 1250 hold 20 min
600 degree/hour to 1480 hold 15 min
FULL to 1000 hold 10 min
200 degree/hour to 975 hold 20 min
200 degree/hour to 750 hold 1 min

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Sandie Walsh #35


I used Spectrum 96 glass and their suggested firing schedule.
The bottom layer is opaque glass. I went to Michaels and bought a bag of metallic paper scraps....I wanted to see how they would fire. I placed a small pile of the paper on the opaque and clear capped them. I
had some opaque cabochons from a previous project so I put one of those
on top of the clear.
It was fun to see how the paper colored up.

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Celyn Collins # 36

#36 Celyn L. Collins Walnut How To

First off I want to thank my husband who helped in making my maglesses. He helped make the molds, filled molds, and kept our children occupied while I grinded and assembled them. Thank you honey!

Okay, I have a horrible habit of reading only part of the directions because I feel like if I wing it I'll learn more but it just usually ends up costing me time and/or money.

I decided to try a freeze and fuse and chose a walnut because it reminds me of my grandma and I've been missing her a lot lately.

For my first attempt at a mold I went and bought clay. I kneaded and kneaded the clay then carefully made an impression with a walnut. After I was done baking it in the oven I stared at the mold wondering how I was going to get frozen hunk of glass out of this rock hard mold. I went to the computer and did a quick search again. Oh, I was supposed to use a flexible silicone mold. Bah! Hmmm. I thought to myself, I have silicone caulk in the garage! I filled a small square container with silicone caulk and placed a walnut shell in silicone. Four days later is was still a wet nasty mess. back to the computer.... wrong kind of silicone.*sigh*

I searched the internet for a flexible material to make a mold. I found a material that is used to make impressions to make molded chocolate. Sounded perfect! I ordered it up!

A week later my goop arrives, way less than I was expecting for the amount of money I paid. I set up my area to make molds. I decided to use small disposable containers that I would cut the mold out of once it was set. I also decided to use half a perfect walnut shell and pour the material over it in the container to get the most amount of detail.

I placed the walnuts at the bottom of the containers, mixed my goop and started to pour. Looked good until. the walnuts started to float! Panic!!! I had to think of something fast! This was expensive fast drying goop! I ran to the bathroom and grabbed the babies' jar of Vaseline and filled the cavities of the walnuts to weigh them down. Now I'm pretty sure that wasn't the right thing to do but it worked! Well on 5 of them it did.

The next day I cleaned and trimmed the molds. I made sort of a milkshake of clear and brown glass powder. I filled the molds that I had placed on a cookie sheet and then tapped on the cookie sheet for the glass to settle. Blotted with paper towel, topped off the molds with more slurry, tapped, blotted, tapped, blotted, tap, tap, tapped, blotted. Put into the freezer to freeze.

I had 5 molds so I repeated this process 26 or more times over many days. When I had at least 20 or more done I'd fuse that evening. Some turned out perfect. Others I found got a white hazy finish if I didn't let them rest in the kiln long enough before firing. I also learned if the slurry was too thick bubbles would get trapped and make little craters in the surface of the glass.

After firing I attacked the ones with too much middle with the grinder trying to make them more uniform. I then etched them all to take away the shininess. They just didn't look very realistic shiny.

They were then paired up with a matching half and glued together. The final step was to hit them once more with the grinder to take off any rough or sharp edges.

I'm pretty pleased. There are a couple walnuts that are a little funky but I think it just makes them that much more unique.

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Deb Compton #37

"Greetings from Idaho"

As you've probably guessed, I used the freeze and fuse technique for this years magless. While many of you have used this technique previously, this was my first time.
To get started I checked out a few online tutorials such as this one: http://jsglassart.com/blog/?p=12
My Idaho mold is a simple candy mold.

1. I mixed the powder frit with distilled water until it made a paste.
2. I spooned the paste into the mold.
3. The next step was to blot the mold with a paper towel and even out the paste distribution.
4. Once it was even and for the most part dry, the mold went into the freezer for about 20-30 minutes.
5. When the mold was completely frozen they popped right out when I turned the mold over and pushed ever so slightly.

6. I fired the molds at 1300f degrees for 20 minutes and slowly took the temperature down. I was able to fire a kiln every couple of hours! (I used my little Aim kiln and I must say it worked out pretty nice! I also have a GL24 Paragon and while I could have put a larger quantity in the Paragon, I would have taken much longer. This is the first time I've used the little kiln but it won't be the last!)

Lessons learned: The finished product will be much smaller that the pre-fused piece.


Don't procrastinate!

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Lynn Golden #38

TRILLIUMS

Trillium grandiflorum, or great white trillium inhabits upland woods of maple, red oak, basswood and beech. It is called a trillium because the flower parts are in threes: 3 white petals with 3 green sepals beneath, standing above 3 broad green leaves. They make a showy display in the woods in May, about the same time robins return, and thus are also known as "wake robin". As they age, they turn a dull pinkish purple, becoming slightly transparent. Did you receive a young trillium, or an older one?

I was originally disappointed that the full complement of 120 participants did not sign up this year, but when I thought about how

many pieces I would have to cut, I decided this was a good year for trillium! When I came to do my first test flower, I realized that the petals would sag down over the sepals, even at a tack fuse, which would not look right. I finally hit on the idea of using a 1/8" fiber paper mold with 3 spaces cut out for the sepals, and the petals resting on the fiber paper above. I also realized I needed a more efficient way than a mosaic cutter to make yellow frit, so I summoned up my courage and finally tried the "quench" method of making frit. Of course, I couldn't locate my stainless steel bowl, so had to use a plant saucer.

I was able to get the hot glass to the pan of water even though the saucer broke! A little crushing with the bottom of a jar and I had plenty of frit for the centers.

I thought I was ready to go, so I popped the first batch in the kiln. Alas, the mold idea didn't quite work. Apparently either the glass was a little thinner than 1/8" or the fiber paper was a little thicker, but only 5 out of the batch of 32 actually stuck together (and those were over-fired to boot!) I put the thinking cap back on, and decided I needed to add a base and put all the flower parts on the same level. So I cut a bunch of 2" squares, re-cut about half the trilliums, and tried again. These worked a lot better. The fiber paper resulted in a little roughness on the back edges of the petals and sepals, but my 120 grit diamond hand pad took care of that in short order.

One last thing…I realized after I had done the first few samples that they were larger than 2". Since I already had everything cut, I decided to just hope you will forgive the size.

If you want to see the real thing, head for Ellison Bluff County Park in Door County, Wisconsin about mid-May. Maybe you'll see me there!

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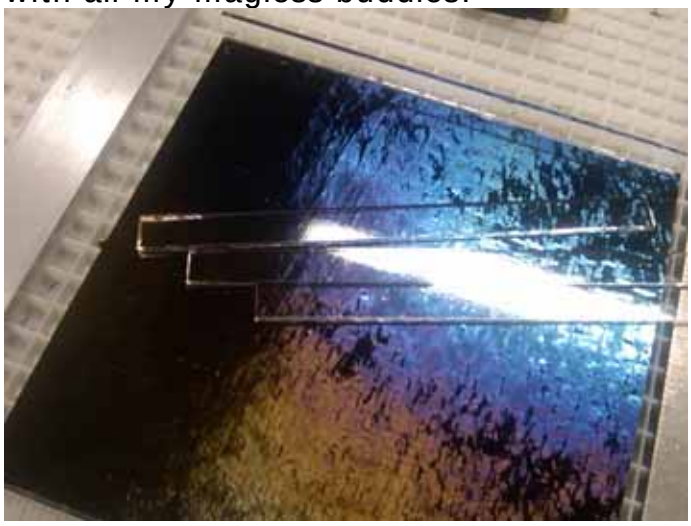
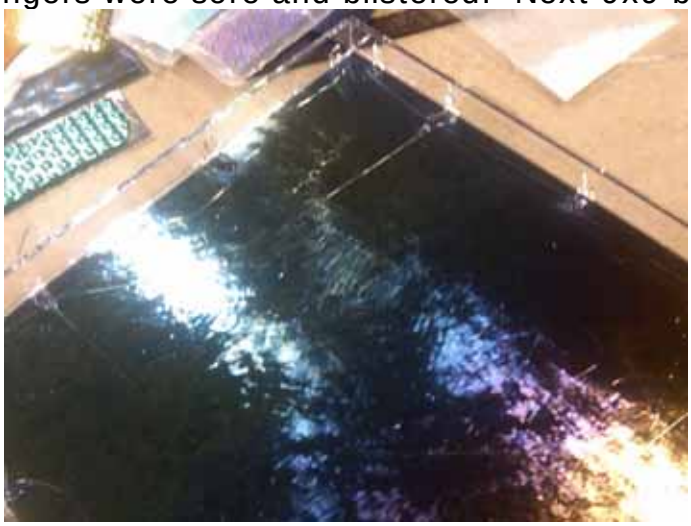
Terri Jones #39

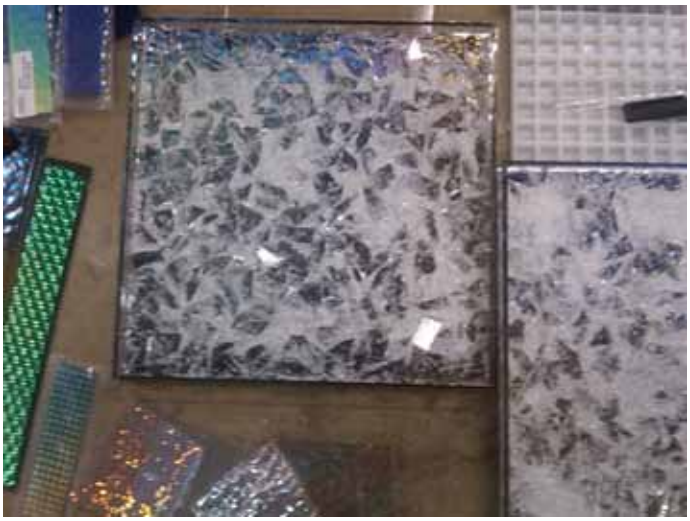
My whole fascination with glass is the depth and the striking color. That is what draws me to the wonder of glass. I wanted to share this with all my magless buddies!



I started off my using my glass nippers and nipping boxes of clear 90. The fingers were sore and blistered. Next 9x9 boxes were



built. Using black irid on the bottom and clear on the sides. Next came a thick layer of clear and clear frit followed by gobs of dicro.


I hate to even think how much it came to. Then another layer of clear and dicro. The last layer is clear and overfilled. 
My whole idea was to share a sparkly beautiful piece with everyone.

 After the first firing they were cut with a tile saw 1 1/2 x 1 1/2.

 Next I ground them all on a grinder and scrubbed. Then they were fire polished. I hope everyone enjoys them.

I want to send a special thanks to Stacey King for all of her help.

Here is the firing schedule. Thanks and I hope you really enjoy!!!

200 dph to 500 hold for 5 minutes
300 dph to 800 hold for 5 minutes
AFAP to 1100 hold for 15 minutes
100 dph to 1350 hold for 5 minutes
AFAP to 1460 hold for 1 minute
AFAP 1000 hold for 1 minute
AFAP dph to 960 hold for 3 hours
100 dph to 600
Turn off

Fire polishing
200 dph 500
hold for 15min

AFAP to 1395 Hold 5 min
AFAP to 960 and hold for an hour

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David Wingo #41 Experimenting with Float Glass

I decided to use float glass for the first time and experiment with C&R-loo frit (compatible with float glass).
1. I purchased scrap glass from the local glass store and cut the sheet into 2 pieces ensuring compatibility.
2. I took several colors of c&r-loo powder and spread them over the glass.
3. I took a pen and did a zig-zag pattern in the frit to mix and give some texture to the glass
4. Fused the entire panel (instead of trying to do each piece individually) lesson learned from previous exchanges (duh!)
5. Cut the panel into mag size pieces and refired.

Lessons Learned this time:
1. I developed devit on the second firing due to holding to long at a low temperature
2. Did not set fusing temp high enough (1350 F) but should have gone higher.

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Carla Peebles #42

Unfortunately, I took no pictures, so I'll start with a brief description *(we took the pictures, but I like her description – ed.)*: My maglesses are the striped ones with a brown layer on top. There'll be some sort of image cut into the brown to reveal the stripes beneath. I'd say "mine are the cowboy hat maglesses" except, in the spirit of making myself crazy, I tried to come up with different images for each magless. There are very few repeats, and I think none of the ones sent were repeats.

The first thing I did was select my five colors. I cut a 5 x 20 inch piece of each color into ¼ inch wide strips. Right after I did this I remembered that when I do strip pieces I like to remove the rolled edges—they keep the glass from fitting together as well as I'd like—and as usual I forgot to do so BEFORE cutting the strips. So I had to do it afterwards with the mosaic tile nippers. In the spirit of making myself crazy, of course.

I laid the strips out in a random color pattern on a shelf, dammed the two ends to keep the last strips from flopping over while firing, then took the strips to a full fuse.

Then I sifted brown powder over the strip piece. I used a ladder to stand above it and sift it from about 6 feet high (which would have been a pain without the ladder, since I am not tall). I tried to sift the powder very lightly—my goal being a thin, even layer.

I then fired the piece again to a tack (1400 degrees held for one minute, in this case). Once fired, I removed the piece and realized my strips were still very visible through the brown powder layer. So I repeated the powder sifting process and tack-fired the piece again. When I removed this from the kiln I was still not happy with the coverage—it was almost right in the center of the piece, but the edges were still showing too much stripe. So I repeated the process one last time, this time bordering on panic because of the deadline, and as a

result WAY overdid the amount of powder needed. I did learn to be a better judge of powder coverage in this process.

After that third and final tack fuse of the powder, I covered my pieces with sandblast resist. A note on resists: if you suspect, when planning for a project, that you might need the better resists, as opposed to the contact paper available in the supply cabinet, ORDER IT! Do not, unless you enjoy stress, wait until it is too close to the deadline and you must beg borrow and steal it from someone (who has my undying gratitude and a magless of her own, now). Also, I found that Elmer's glue, of all the resists I tried, was my favorite—a thick layer of it, dried overnight, held up to blasting very very well—but it was also the most tedious to apply.

After applying my assorted resists, I sandblasted through the powder layer to reveal the strips of color beneath, making my final design. This was not nearly as simple as that statement might make it appear. Due to hitting the panic button with the third powder layer, I had a thick layer of powder to go through. The sandblaster was set to a pressure of 80-90 PSI and each magless still took a fair amount of time. Further, due to previously mentioned resist fun, a number of maglesses had an assortment of resists tried before I got a successful image blasted into them. In short, I made myself crazy and stressed. Next time I have an idea I want to do maglesses with I am starting, oh, at least three months sooner than I did this time!

After all my maglesses were blasted and cut apart on a tile saw, they were washed in water with Dawn dishwashing soap, thoroughly and individually scrubbed (thanks mom!) and then laid out on a shelf to fire once more. They were taken to 1400 for a minute and emerged as you see them. For a final touch I used an engraver to sign and name each.

Voila! Done! I was happy with the results and I hope you enjoy your magless.

Finally, my thanks to Flo, my Mom, Marian, and Robin and the Art Glass Fusing Center.

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Tom White # 43 Tom in Texas

My magless for 2009 consists of a freeze n fuse pansy tack fused to a clear capped square of rainbow iridized black Uroburos glass.

Iridized black glass was cut 1 1/16" square on Morton Portable Glass Shop.
Clear System 96 glass was cut 1 1/2" square on same setup.
Small drop of thin super glue was placed near corner of clear square smooth side up on table and iridized side of black square was placed on top of clear one. Assembly was allowed to dry then 9 then 9 were

loaded on 6” square shelf with black side down, clear up. Firing schedule was:

ramp	target (F)	hold
500	1100	30
300	1445	20
AFAP	960	30
100	700	0

Flowers were made by mixing powder grade and finer S-96 frit with 2% CMC gum in water to a consistency slightly thinner than pancake batter. These fluid frits were stored in labeled plastic stack jars until needed. The chosen detail color(s) were placed into the mold cavity on the two center petals of the pansy, additional detail colors were placed on the two small petals at at the top of the flower and (if used) on part of the large lower petal. The balance of the mold cavity was filled with the chosen base color placed between and around the accent colors to fill the mold cavity level or slightly mounded. The surface of the mold was struck sharply several near the filled cavity using the same small, pointed palette knife used to fill the mold cavity with frit. A single strip of pick a size paper towel was folded in half and laid over the damp frit to remove as much liquid from it as possible. The paper towel was press firmly against the mold to absorb as much liquid as possible. The mold was again struck sharply several times with the palette knife near the filled cavity to settle the glass down into the mold and raise the liquid to the surface. If needed the glass outside the mold cavity was pushed into the cavity and toward the center of the flower until the edges of the mold cavity were clearly visible. If excess frit stood up too high above the mold surface it was scraped off with the palette knife and placed in the stack jar reserved for it. A fresh portion of the folded paper towel was placed over the frit and pressed hard to remove as much liquid as possible. The mold was again struck several times with the palette knife to raise a slight sheen of liquid on the back of the flower. The mold with the damp frit was placed into a cold freezer for 10 minutes. The mold was removed from the freezer and inverted over a folded paper towel on top of a 6” square kiln shelf then flexed slightly to pop the flower out of the mold onto the paper towel. The new flower was quickly moved to its position on the paper towel before it thawed and the mold was ready to fill for the next flower. When all flowers for that session were on the paper towel the kiln shelf below them was placed on top of the hot kiln to dry the flowers completely. After drying the edges of the flowers were scraped with a sharp knife to remove and flash outside the molded shape. An 18/0 script liner brush was used to place a tiny drop of yellow Hobby Colorbbia brand third firing overglaze color directly from the bottle onto the center of each dried flower. The brush

was rinsed and used to dilute black paint from the same manufacturer on a 1” square glazed tile used as a palette to dilute and contain the black paint. The loaded brush was stroked lightly across a paper towel to remove excess paint and the thin black detail lines were painted on the flower following the petal shapes. The painted flowers were placed on a 6” square kiln washed shelf with 1/4” between flowers. Firing schedule was:

ramp	target (F)	hold
500	1000	45
AFAP	1320	20
Off, cool naturally.		

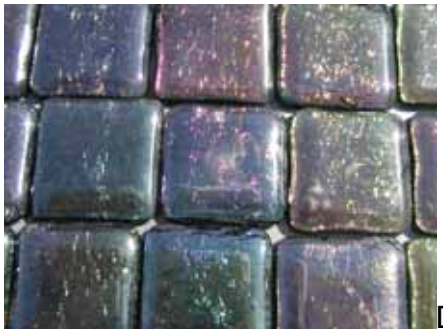
The magless were assembled by taking a fired square base and applying a drop of Spray-A to the center of it then placing a fused pansy on top of that then placing 9 assembled magless onto a 6: square kiln washed shelf. The Spray-A acted as a glue to hold the flower in place while outside the kiln then aided in bonding the flower to the base when they were fired. When the kiln shelf was filled it was placed on top of the hot kiln to dry the Spray-A. Final assembly firing schedule was:

ramp	target (F)	hold
500	1000	20
AFAP	1325	20
AFAP	960	30
100	700	0

I learned that for the flower to show well on the black background it had to be either bright or light around the edges. Dark blue and dark purple edges on the flowers just blended into the black background but those colors could be used for the interior of the flower. Ten minutes in the freezer was long enough to harden this particular flower enough to pop it out of the mold. There is a stage after the item thaws and before it dries hard where you cannot handle the freeze n fuse item even though it has gum added to it. A loaded kiln shelf placed on top of a hot kiln dries things nicely for the next load going into the kiln.

Photos

Fired bases


Detail of fired base glass


flowers

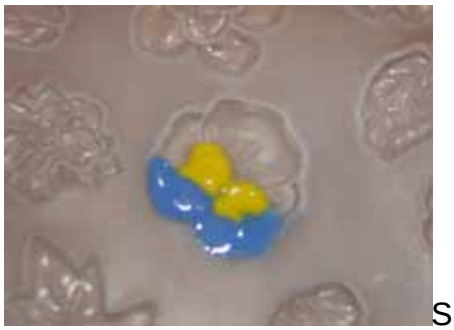

Detail of flowers


Spray-A on base


flower stuck to base with Spray-A


Mold, tools and frit ready to use


First color in mold

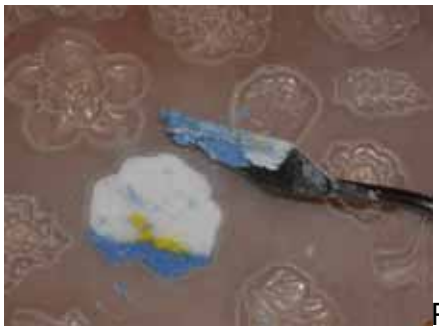

Second color in mold


Background color in mold


Striking mold to raise liquid


First blotting


Second blotting


Removing excess frit


Mold in freezer


Flower on paper towel


Drying on top of hot kiln


Paint applied with black palette and brush used in background


Flower on kiln washed shelf ready to load in kiln


Clear cap with crazy glue applied next to irid base


Base ready for fuse firing


Shelf full of fused bases

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Kent Allen #44 Pretzels - Magless 2009

This year I wanted to focus on mold making and using the Pyros Glass Studio Freeze 'N' Fuse™ method. 1st I'd need a mold. I made a pretzel out of creative paper clay for the positive. Knowing that the final pretzel would shrink when the glass pretzel was fired, I oversized it and let it dry out. Now for the negative mold; I first tried a latex mold product. I bushed 10 coats of latex on the clay pretzel, allowing it to dry between coats. I let the latex dry per instructions that came with the latex, pulled my pretzel out of the mold and let the mold cure. I liked the way it turned out but soon realized that making multiple magless and molds would become too much of a hassle; I really needed a method to make multiple molds quickly.

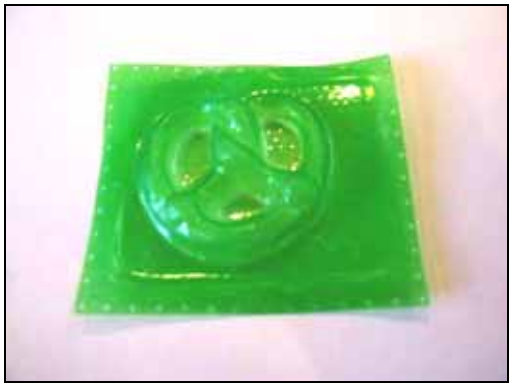
So now time is quickly passing and it's close to the holidays. I have a bad habit of getting too much into reminiscing of Christmas past and toys in my younger days, when it hit me. I wish I had a Mattel Vac-U-Form™ toy that I received as a present from "Santa" in the late 60's, yes I'm showing my age. I googled Vac-U-Form™ and was surprised that they still are available on E-bay, along with plastic sheets.

Mattel Vac-U-Form

The Vac-U-Form™ toy heats a 3" x 3 ½" thin plastic sheet; you then flip the sheet over your object and draw 'vacuum' the sheet down around your object, making a prefect negative mold of the object. I remember making boat, car and a glider plane that actually worked. I was like a kid waiting for Santa, couldn't get it out of my mind. It finally arrived, and worked as well as I remember it. You would be surprised at the amount of definition you can get from vacuum forming. I made a mold of a quarter dollar; you could see the wording around the quarter and the head of Washington perfectly, it didn't pick up much of the date. During my Google search, I came upon plans that utilize your home vacuum cleaner as the vacuum and sources of plastic that will allow me to build much bigger vacuum forming tools.

This could be dangerous, as I plan to go on to bigger objects; my wife just shakes her head. One word of advice, if you buy a Vac-U-Form™ toy and extra plastic sheets, be sure the plastic sheets have the retaining holes around the outside of the sheet; I found that the plastic sheets without holes do not work as well. Now I could quickly make multiple re-usable molds.

Pictures of the one of my molds:

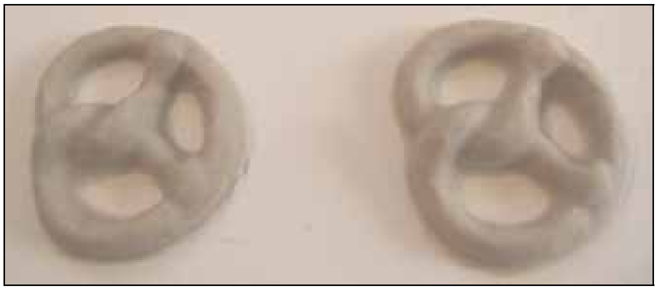


Back and Front sides view of one mold

I tested multiple colors of brown BE powders, mixing with clear, finally found that 30% Woodland Brown powdered frit to 70% Clear powdered frit was the approximate color I wanted for the finished pretzel. I kept the color constant using a digital scale to weigh out the powdered frit. Next, filled my molds, in the freezer, on the self, allow drying and then “baking”.

My firing schedule:

1. 500 dph to 1000 deg F Hold 30 minutes
2. 500 dph to 1320 deg F Hold 20 minutes
3. 300 dph to 965 deg F Hold 60 minutes
4. Afap to 750 deg F Hold 1 minute
5. Off



Two Pretzels ready to “Bake”

After the 1st fire, I ground each edge using a Dremel™ with a silicon carbide grinding stone; yes, I did use my respirator. Then I brushed BE Glastak™ glue on top of the pretzel and dipped it into BE’s Medium Dense White frit for the salt, sort of like salting the rim when you are making margaritas. A quick tack fuse, pull them out, clean them up some, glue on the magnet, bag, label and done.

After 1st Firing, no salt yet

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Andrea Raeburn #45

The magnet exchange for me is all about learning a new technique. This year I wanted to learn how to us my Badger Air brush and work with enamels painted on glass.


So what I learned:

a. Breaking out 6mm float you need to use a small round dowel and put even pressure on either side and it will break perfectly
b. When you are using an airbrush with enamel it is all about consistency; the right consistency and you only need to spray once, not the right consistency and you need to spray twice and fire twice
c. I did a little chickadee with low fire black enamel all hand painted with a small paintbrush and for the fine work like the legs and the beck I used a quill pen.
Worked great fired to 1165.

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Mary Farrell # 46
Fun with Frit!
I had really been wanting to explore different techniques with powdered frit, so I decided that I'd use the Magless exchange as an opportunity to do so. I first wanted to see what could be done with Liquid Stringer Medium and frit, then I tried a few using the "wafer" technique. Depending on what type you received, my technique is below:

LSM: I mixed up a bunch of different colors of frit with LSM. Using a small squeeze bottle, I drew stripes, circles and other designs on a base of either BE French Vanilla or BE White. For some of them, I used a dental pick or popsicle stick as a rake to create effects. For others I used a combing tool. In a few cases I just drew a design to see how it would turn out.

Wafer: For the wafer technique, I used either an embossing stencil or some light cardstock with shapes cut into it (I have a Pazzles machine, which has a software interface for you to place shapes/artwork on a page, then it cuts the design instead of printing it.) I sifted colored powder directly onto a prepared kiln shelf. Then I removed the stencil and sifted white powder over the top. I used my trusty popsicle stick to draw lines into the white powder to create a divider between designs. I fired at 1400° for 15 minutes (the instructions I found on the bulletin board said to fire lower, but I have a very small kiln and I tend to have to fire higher). Once cooled, I placed the separated wafer on a piece of white glass with a clear cap and fired as normal.

What I learned:
It's a lot easer to make 67 maglesses than 125 - a lot less stress!
When doing the wafer technique you need a rigid stencil. I tried with some floppy ones and it just didn't work.
The wafer technique does not work quite as well with shelf paper. The whole thing tends to shrink up and get wrinkly.

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Jennifer Polver #47

Under the Magnifying Glass

Supplies: Bullseye French Vanilla
Bullseye Steel Blue
Jungle Gems Wildfire Glaze

Cut 2 squares of French Vanilla
Coat the top square with Glaze
Load 2 layers in kiln and place a sliver of steel blue on top

Firing Schedule:
- 600 to 1050
- 50 to 1250
- 250 to 1650 hold 10 minutes
- 800 to 960 hold 1 hour
- 100 to 700 off

I have tried other Jungle Gem Glazes and this is one of the only ones that comes out well. Also, in my opinion it looks the best on French Vanilla

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Dianne Van de Carr # 50

I took Rosanna's challenge to make my magless design using my air pen. I made a paste of BE 0313 powder and CMC with a few drops of Darvan 7 and put this in the air pen. The first 5 minutes of using it were very frustrating but since I had to do so many it forced me to keep trying different things and I got the hang of it and now love it. The only tip that gave me success was the largest. Two pieces of glass were cut, one some form of clear and the other irid, mostly BE1128-31. They were tack fused. The air pen has definitely found a place in my studio.

www.confusionglass.com

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Lynne Chappell #51

I was doing some experimenting with reduction in the kiln. Since I have been warned not to expose the elements to an oxygen reduced atmosphere, I tried several ways to achieve the reduction.
First, I brought the glass up to fusing temperature, slipped in a dish of sawdust and dropped an inverted steel bowl over the glass and sawdust. Not much happened. I then purchased some bisque casserole dishes, put the glass and some briquets in the casserole. I didn't want them to burn up too early, so I soaked them in water. Kind of a mistake – the water caused some major uneven heating and cracked the casserole and the kiln shelf. I ended up with some interesting shiny carbon patches between the glass layers but no reduction. On to Plan C – the one I had always wanted to do, but was afraid to try. Brought the glass up to temperature, opened up the kiln and shovelled sawdust on top of the glass. Glass Raku!!! Had lovely flames – I kept the kiln open until the flames went out to save the elements, but the sawdust should still have been smoldering against the glass. Not much happened except for the texture of the sawdust. I got a little bit of iridescence (Raku like) on a couple of things, a slight greying of the turquoise opal, but no shiny metallic surfaces. So, back to my original method of torching the glass while hot. Borrowed a flame-thrower from a friend (my torches don't have a big enough flame to get large surfaces hot). I definitely got something happening, but after the glass cooled, I was disappointed. Some of the really easy to reduce glasses were all shiny, but not all of the reduction glasses. And the turquoises didn't strike – I got more action with them with the sawdust on top.

So the reduction is on hold for more experiments. In the process of using all this reduction frit, however, I discovered some really lovely reactions. They were more interesting than the reduction so that is

what I did with the magnets. It is System 96 glass to match the frits, which are blowers colour. I did compatibility tests and some of them weren’t usable, but most didn’t show any stress. Time will be the ultimate test.

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Denise deMarco #53

Two pieces of bullseye glass; cut same. Cut out thinfire with words printed on it with HP printer and peace sign colored with potters chalks. Sandwhiched and full fused following Bullseye glass full fuse schedule.

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Michelle Rial #55

After creating 3 designs I chose to go back to my obsession of movement in water and fish using Bullseye fusing sheet glass, powders, and chips.

The fish are based in white and glued on clear 2â€ x 2â€ square. Additions of black glassline, dichroic eye, and various powders were added for scales.

Frits and powders were added to the top of clear base to form ripples and flow.

On the primed shelf I added 1/8â€ fiber rings and pieces for bubbles.

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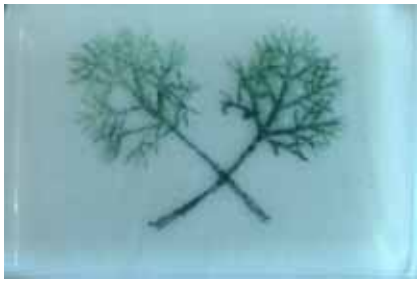
Kimberly Mullen #54 Botanical on French Vanilla

I wasn't sure what to do – but I was sure I would use my all time favorite glass color (French Vanilla). The truth is I was hoping I would get sick of it (didn't work)☹. Anyway – after deciding on a copper inlay tree – and making a batch – I thought that real life botanical things would be more interesting than copper.

So, after trying to get the paint to stick on new leaves, ironed leaves, and dead leaves – I tried tiny leaves. These very thin leaves worked best (regardless of whether they were newly picked or dried out). I don't know the name of the plant – but it is in my front yard. These particular leaves were naturally flatter than anything I ironed and the paint stuck to them just fine when I started using my cosmetic sponge instead of a brush. The sponge made it easier to blend greens as well.



The other benefit was that there was no “cracking” of paint (like in the larger leaves). So, for the most boring “how to” of 2009...place a painted leaf on top of French Vanilla – top with Tekta – full fuse – clean them up - sign and send.

Editors note: I asked Kim what paints she was using to get this effect – here is the reply

I used Glassline Paint (http://www.glass-fusing-made-easy.com/glassline.html.) You can buy individual bottles on-line at Slumpys - Delphi - or even e-bay. I think you buy the tip set separately - and you really need the tip set - you can get very fine lines with the different tips. It is great to work with - if you mess up - just wipe the paint off the glass and do it over.

My main concern was that the colors generally are not as deep (in fact sometimes they are very very light) if you don't pre-fire the painted piece - then cap it and full fuse it. I tried to pre-fire and the leaf just curled up (it was not at all recognizable) but the color was better ☺. It did leave a much smaller but interesting raised texture where the leaf burned off...I may experiment with that and get a head start on 2010 Magless Exchange!

I hope she does!

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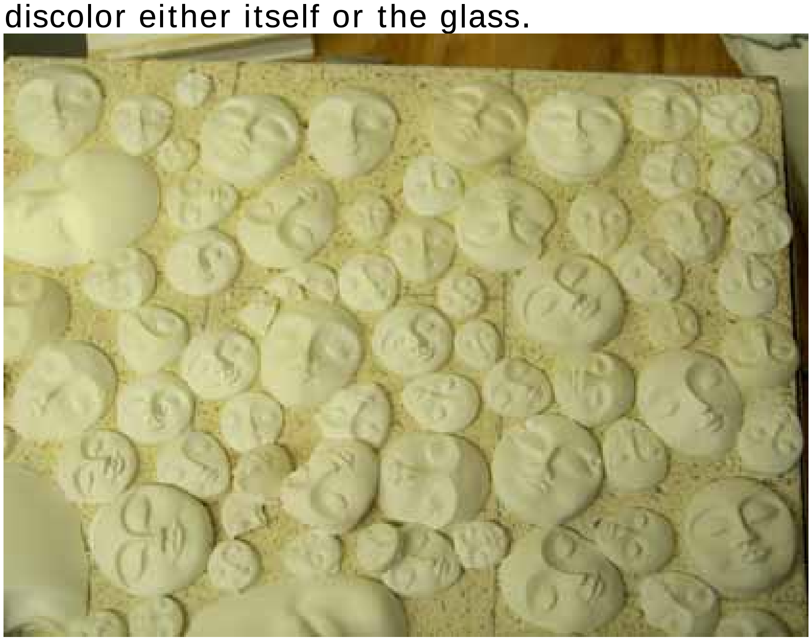
Duane and Ben – Molten Gecko #56

We've been working on a series of pieces since the New Year called SPIRITS. Most of these pieces have involved the creation of some kind of base in a vaguely human face shape to form different glasses. While experimenting with many base materials one of the ones which worked in certain circumstances was potter;s Plaster of Paris. This material was easy to form, held up to the heat of the kiln and didn't discolor either itself or the glass.



Our SPIRIT Maglessess were first cast in a standard mold, allowed to set, de-molded and then dried on the lid of a fully firing kiln. Excess plaster was either broken off, sliced off with a razor knife or worn off

by rubbing the plaster against a standard house brick. Since our SPIRITS are meant to bring an organic element to a classically inorganic display material we were not overly concerned with precision. In fact, wobbles, bubbles, and general all around foibles were embraced if not actually planned.

All the glass is Bullseye, base layer is a transparent and then a clear cap of the double rolled clear.

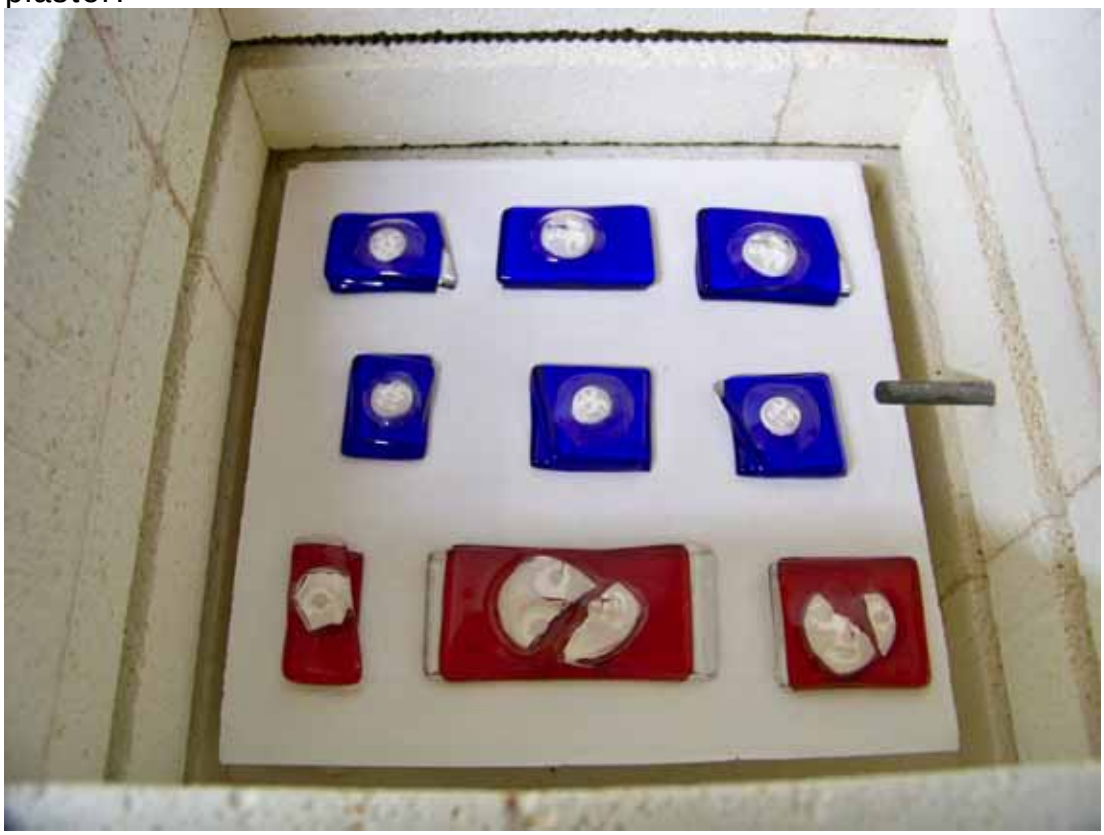
We were able to use our small Paragon Caldera for this project, making 15 maglessess at a time. Each firing also dried the plaster faces for the subsequent firing.

Our schedule was
600 ph to 1295 hold 30,
full to 1000, hold 10,
175 to 960, hold 30,
100 to 800, hold 1,
then off.
We open the kiln at approximately 120 (remember our daytime ambient temperature is in the 80s at this time of year.)

We learned that the scrap pile can have some interesting surprises, if you get a red magless, we thought it was going to be amber – must have been a piece of BE 1321 . Also, watch your clear scrap closely, we have a few that ended up with striking white on top – pretty neat,

but totally unacceptable as a magless. (We have determined that you can see a tiny bit of inscrutability in the natural divots in the striking white while it is clear, so if you have a large enough piece (1/2 inch or so) you can pretty well tell when you have it.)

Wet plaster will blow more bubbles than totally dry plaster. Using the kiln lid to dry the faces through one firing pretty well eliminated eruption bubbles. We actually tried for large eruption bubbles in another of the SPIRIT series and got some impressive results with wet plaster.



68 is not as many as 125, but still a lot of something to do. We must not be too good at production because by the fourth kiln load I was really wondering why we had signed up for this again. Having a few culls in each firing left us with 7 firings and definitely ready for something else. Of course I was back to some other SPIRITS in the next few days and then decided I needed some more magless SPIRITS to give away because even the culls were pretty cool looking.

K&J Magnetics is your friend if you really want to make your maglessess mags. The neodymium ZD2, currently listed in their surplus section at $17.00 per hundred, is a perfect fit for almost every magless we have received and many more that we have made.
http://www.kjmagnetics.com/products.asp?cat=17

Next year plan ahead EVEN MORE and use the big kiln ONCE!
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Deb Williams #57 Recycling At Its Best

I went to an auction last summer and bought 300 tempered glass pieces, the kind they use for store shelving. They were $3. Not each…….for all. How could I pass it up? Its been fun to shatter them and make things out of the pieces.

When I first started working on the maglesses I stacked some to look like conji, Japanese symbols. They were nice looking but very time consuming and literally a pain in the neck. I was setting each little individual piece of glass with the tweezers. Ug. A few of you will get those. Maybe 5! Then I started making little piles of glass and calling it good. The other 62 of you will get those! It aint rocket science!

I took them up 400*h to 1365*. Hold for 10. Down to 950* for 45 minutes. I have no clue if this is even close to what it should be so you may want to look up your own schedule if you try something like this.
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Melodie Triche #59

My piece has a layered base of thin white, regular clear and topped with thin black. I chose this layout due to a design element I wanted to incorporate. Unfortunately, when I created the test piece I decided that this element did not compliment the overall piece so it was eliminated. The original base was to have a design sandcarved through the thin black top layer exposing the clear and white glass below it. The trimmed and polished edges would allow light to shine through the base and almost illuminate the sandcarved area. Good idea just not for this particular piece, maybe something in the future. It was too late to change the bases to solid black since I had fused them all before testing the design element. This really made the piece too busy so … sorry … my bases are extremely plain this year. On the other hand, it works well for the overall piece.

I decided to try a new flower this year. I torched over 600 petals to create the flowers. Each base received two flowers, four leaves and a branch. The assembly was fired to 1250F to tack the lampwork in place.

I hope my piece will inspire someone to consider combining lampwork with their fused work.

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Katie Wills # 62

Original Plan -
- cut fusible paper into small squares with fancy-edged scissors.
- paint each square with Glassline paints
- mix mica powder with water friendly medium and stamp onto paper (these are mostly hearts - one is a flower)
- glue paper onto stiff black glass
- put 2mm stringer in the corners
- stamp design on crystal clear glass (Love is patient...)
- fire: 250/hr - 1000 hold 4 hrs, 250/hr to 1475 hold 15 mins, fast as possible to 960 hold 1hr, 250/hr to 200

Insane Moment #1: these would look cool with crystals in them
- drill a hole in each mag.
- glue a swarovski crystal into the mag.
- add a little bit of glitter

Insane moment #2: mod podge
- mags were a bit dull looking due to firing schedule and lack of time to re-fire due to procrastination
- spread mod podge on mags.
- made texture in some, liked the smooth ones better
- cut off excess mod podge

Insane moment #3: could i emboss these?
- stamp image on back of mag.
- turn mag. sideways and sprinkle embossing powder down the back
- heat

What I Learned -
- stamping works best if pressing the glass onto the stamp instead of the other way around.
- when using mod podge, just use a little or it will take 2 days to dry
- mod podge can be removed contrary to what the container indicates

- emboss first before applying mod podge
- melted mod podge cannot be removed from your couch
- use spray 'a' next time

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Amy Murphy #64

I cut a 1 ¼ in square of Spectrum teal then a square of thin clear a "bit" bigger than the teal. Full fuse. I used my little hot head torch and pulled stringers in aventurine green for long leaves, dark green pulled thin for stem, blue, purple, red for the flowers. I broke up the aventurine green and the stems and used clean nail polish to fasten them to the little squares. I took the "flower" colors and with my hot head, rolled them up like little cinnamon rolls, or at least tried to, you may have little wadded up flowers that I am calling daisy's or tulips, depending on their shape. Then they were attached to the little squares. Fused just beyond tack fuse.

What I learned? I love the look of the aventurine when it is pulled into stingers or anything in aventurine. I pulled a darn lot of stingers to get the little flower, stems and leaves and have a ton of little pieces left which I may make a little dish with. Clear nail polish works well to hold, but sometimes the piece may move a little bit and you need to fuse in a well ventilated area. I had a lot of fun making these little maglesses but am glad we didn't have to make 120.

=*=

Jane Morgan #67

Pre-design and fusing notes: Learn from last year and start early! Don't trust that your samples will be anything like the production model. Play with it!

Due to the size of my kiln I decided that I needed to do something (unlike last year) that took only one firing. I also decided that I wanted to play with powders as I have little experience doing so. I cut a variety of glass (translucent and opaque) into 1.5 inch squares. I

then used a stencil and sifted glass powder (using a tea strainer) onto half of the glass squares. I placed these onto another square piece and fully fused. I really played with a variety of colours - amber on vanilla, dark blue on turquoise blue opal, light blue on green opal, etc., and with a variety of frit colours (white, brown, black, red, etc.). I also played with the placement of the stencil; capturing different bits of it for different design effects.

Post-design and fusing notes: Elevate the glass base to make it easier to pick up; do not spray hair spray close to the powder (it will fly!); wear a respirator; have fun!

Jane

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