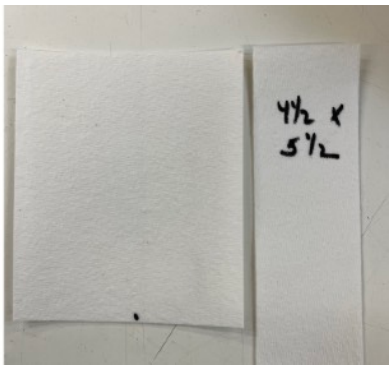
Bonny Doon Fused Glass
45 Degree Pattern Bar Tutorial

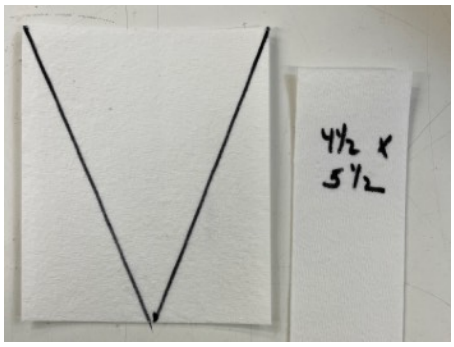
Thanks for purchasing our new 45 Degree Pattern Bar Former. Here is a tutorial of how I am using it!!

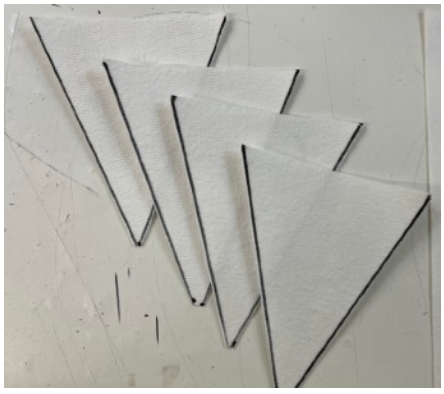
1. First you need to line you pattern bar former. I do not spray it with anything but I do line carefully. I use our 1mm fiber paper. You can use 1/8” sheet but at this sharp angle 1mm is easier.

2. When cutting the fiber paper, I make it a bit larger on the sides. I use 1 layer folded in half so it slips right into the pattern bar. This piece should be cut 11” by 13”. After cutting, fold and see if it slips right in. If not, trim it just a tiny bit until it does.

3. Next Cut 4- 4 1/2” by 5 1/2” out of the 1 mm fiber…..Place a dot at the center point of one of the 4” sides and draw a 45% angle to both corners and cut it out. Cut outside the marker line.These should be slightly larger than the end of the pattern bar former so that when you push them into place they overlap the other fiber. I trim the tip off as in the picture.







4. Place the cut fiber in a bit from the end of the former pressing it into place. The result should be with it over lapping the side walls and tip of paper. Do this with 2 layers on both ends. No open seams!

5. You now need to determine how much clearance you have on your wet saw. **Very important!!!** If you have a small saw I would start with loading your glass into the former half full for your 1st firing. After you successfully slice your 1st bar, you will know height limits with your saw.

I have a large saw, so I want the bar to be as big as possible. A full bar will equal 9 lbs. 2 oz. (146 oz.) of glass including the former. The former itself weighs 2 lbs. 9 oz. or 41 oz. empty. You want to weigh your glass as you fill the former.

I like to always carry each color from one end to another of the bar so that the slices have uniform color distribution after being sliced……so if using scraps or frit be sure to spread each color the length of the bar. On the bar below I did fill in with the yellow but wanted to show the red under for the picture.

Here is a bar almost filled. This one was all frits and a couple of cane mixed in. I started loading with stilts around it but I did remove them before firing as the were not necessary.

To weigh……I used a piece of clear and took the scale to 0……that way I would be able to balance the bar. I filled it until it was 9 lbs 6 oz. (including the former).

Here is the resulting fired bar in my sink. There will always be spikes on the top of the bar so watch out! Dump it out of the former and take it to a sink and scrub it with a green scrubby or brush until all of the fiber is removed. If you have a sandblaster, when most of the fiber is off, you can finish it up by blasting. If you have a grinder grind off the sharp spikes. The cleaner you get before slicing, the better.

Here is one of the rounds from this bar. After cleaning it well, I put it on 1 layer of almond 96 to flow it out. I was hoping for an ivory rim which I was pleased to see after the firing. Before firing, I sifted a good layer of clear powder as insurance.

I fired it slow….
100/800/0
450/1520/60
9999/950/2 hrs
100/700/off

In this next bar I used a rectangle of blue on one wall so that I would have that blue strip on each side. Same with the red. I then added frits in layers.

There is no reason to have a shelf in the kiln…..but be sure the floor has kiln wash. I take my shelf out because I fire these pretty fast and just do not want to worry about my shelf. If you have a fiber shelf no worries.

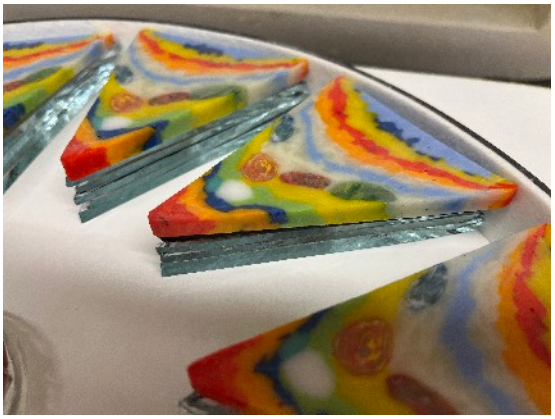
Both of these bars I fired in former:
500/1480/20 min
9999/950/2 hrs. (900 for coe 90)
100/700/0

We are slicing around 1/4”
We are getting 32 slices out of the bar losing around 1/8” to the blade each slice. Left over around 1”.

On the bar above we got 4 complete rounds and an 1” left over. This is why I decided on a 13” bar…..more bang for you firing cost!!
After slicing, immediately before they are dry, give them a good scrub. If they are totally clean all I do when I fire them is to cover them with clear powder. Keep in mind that my full bar is sandblasted before slicing. If you were unable to clean the 2 outside edges on the full bar completely, then you must grind or scrub those 2 edges that were facing the fiber paper on each slice. Also, when ready to fire, be sure to cover with clear powder.

On this piece I wanted to test and see how these pattern bar slices at 1/4” would flow out. I used our 14 1/2” stainless steel rim lined with our 1/8” 1” fiber paper and set it up as in the picture.

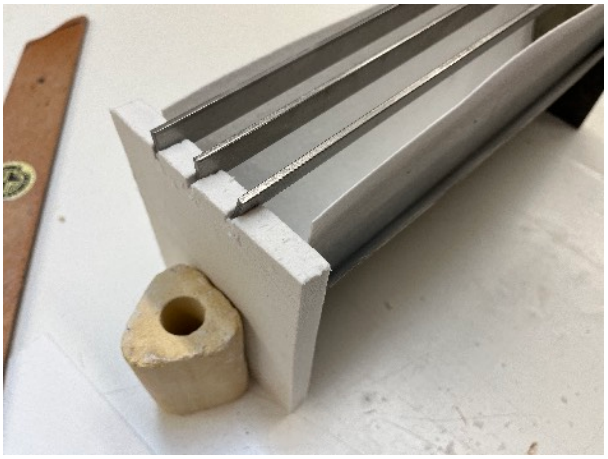
It worked perfectly although I was unhappy with the red center so in the final firing I covered it. These slices have 5- 3 mm clear under each bar. I fired these fast!
500/1520 hold 2 hrs
9999 to 950 for 2 hrs
100/600/off

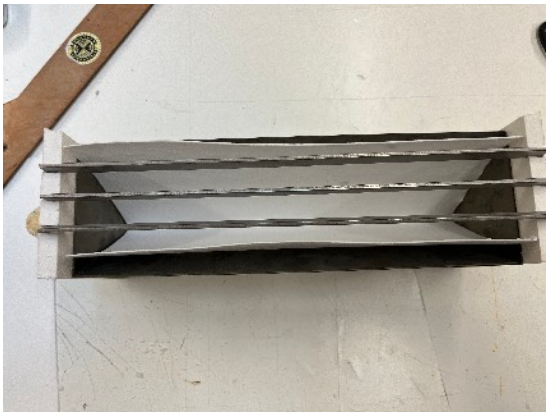


Using the Flow Strips with the Pattern Bar Former

The next section will be on using our 14” flow strips. Here is a picture of how to set them up. I am using 3 flow strips pressed into the 1/2” fiber board. Press them in at least 3/4 of the way in so they cannot tip.The fiber board is held in place with a couple of kiln stilts.
(Nothing on the bars(
I always put some base colors in the pattern bar maybe around half full. Then the bars (nothing on them) and then scrap or sheet glass. I always load the glass on top of the bars after it is set up in the kiln. Weigh your bar before putting it in the kiln so you can figure the weight of the glass you can put in the bars. Weight is important! You do not want them to overflow!
You want the glass on top of the bars to be level and not in risk of sliding.

Push the 3 flow strips into the fiber board as shown. After pushing them in, dust off any loose fiber.



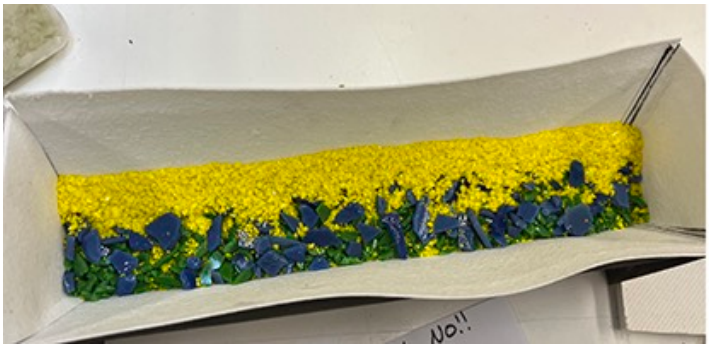


Trim the top edge of the triangle fiber liners where the flow bars will be.

Filling the base former.

Just as in the regular Triangular Bar Former, you need to determine how tall a bar you can fit thru your saw.

When the former is properly lined, the first thing I do is to put a few layers of glass into the former. These are the layers of glass in this flow bar set up.



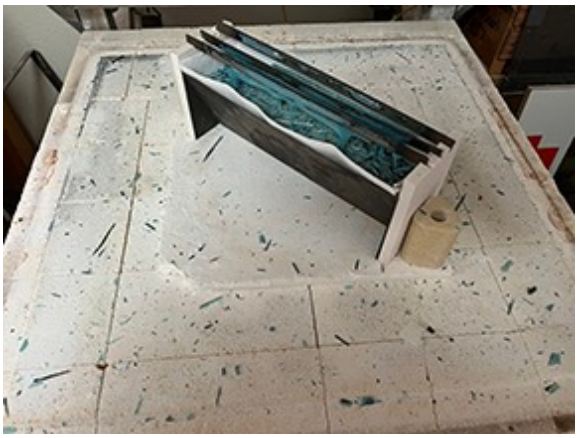
Now you get to do some math…….ugh!
The total former, frits and any glass that is going to sit on top of the flow strips should not be more that 9 lbs. 6 oz. including the former. 150 ounces…….(not including the flow strips) so…..the best way to go about it is to weigh the glass you want to put on the bars and then any left over weight put into the base of the former.

Your glass for on top of the bars should not be any wider that 2 1/2” and 11” long. You can have odd shapes but they must sit flat and not exceed those sizes.
When you think you have it right put the former with your fill glass on the scale and then the glass that is going to go across the bars on the scale and check your math. See image below!
If your weights are good go ahead and get the bar into your kiln.

In my kiln on this firing, I put some 1/2” old fiber board on the brick with no shelf and loaded it. If you put it right on brick be sure it is kiln washed or put thinfire under it as a precaution, (especially on your first couple of bars) Notice the kiln stilts holding the fiber board in place.

My set up with these flows on top are around 7 1/4” tall

After firing, the skim glass left on the stainless bars will “spit” off the stainless so you will need to vacuum after each firing. It does not damage the glass bar or the kiln as it happens at about 500 on the cool down. To reuse the flow strip, I just bang them on concrete and use them over and over. There will always be a bit of glass on them.



You can see on this bar the top (blue) flowed off the bars onto the base of scrap glass.

So many ways to do these. I hope you will show me your bars after slicing!!

Happy glassing,
Laurie