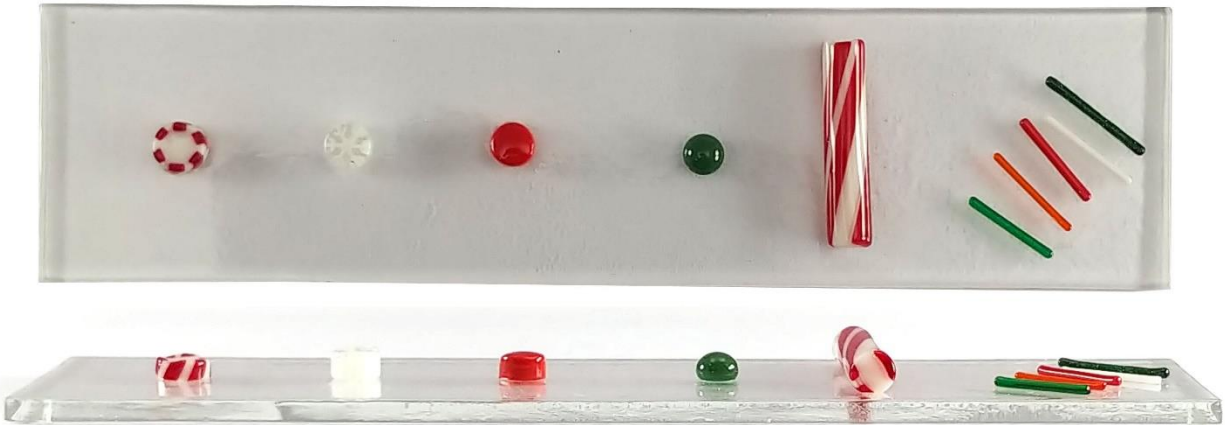


Get more out of your Glacial Art Glass products by understanding the basics of tack fusing! Sometimes known as contour fusing, tack fusing is the process of fusing at lower temperatures to retain the height of the fused elements. Tack fusing is a great way to add variety and texture to your next project!

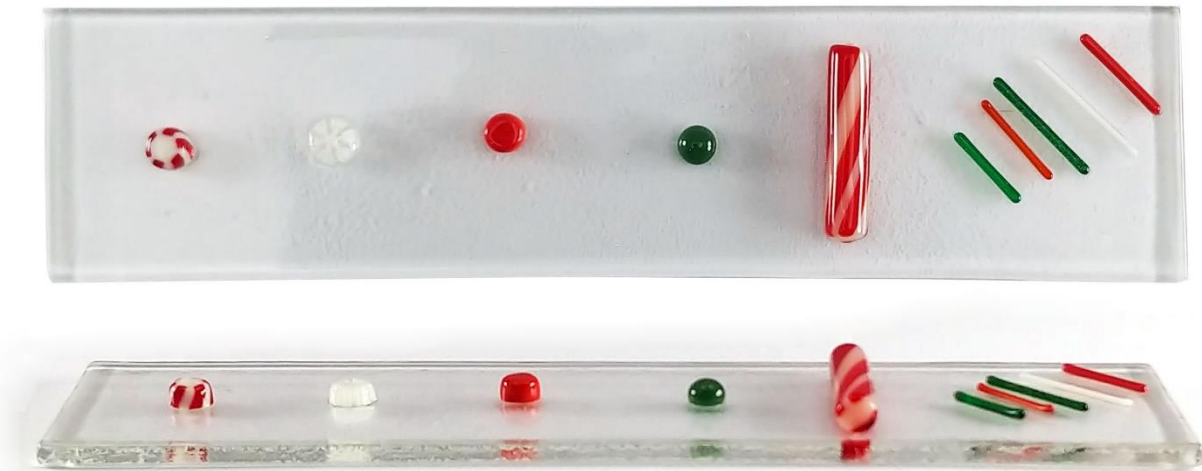
All tests were done at the following kiln schedule in a small Olympic 126GFE kiln on clear 3mm sheet glass:

Rate: Degrees per hour	Process Temperature	Hold –Soak
500°F/260°C	1225°F/665°C	10 minutes
300°F/150°C	Test Temperature	10 minutes





At 1375°F/745°C, everything is almost entirely unchanged. All the decorations are fused firmly to the glass, but the footprint has not spread and the height has been retained. Any uneven edge, such as the top of a murrine/dot or the ends of the rod has kept its shape with only a small amount of rounding. Though firmly fused to the base glass, the decorations appear to rest on top, with almost no visible fusing. Nothing is sharp or rough, but you can still feel any dips or rises.

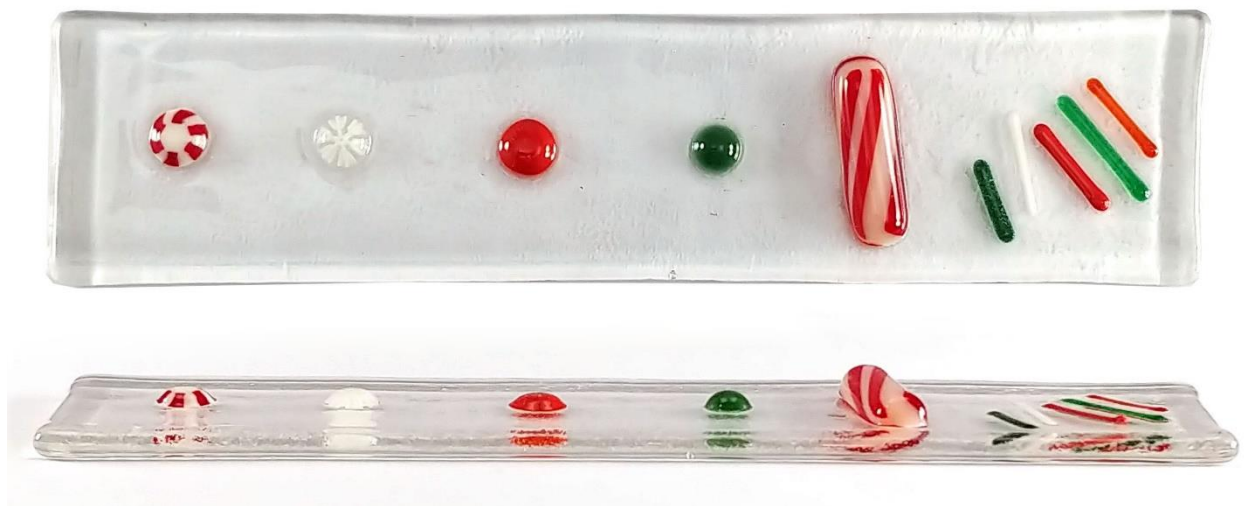


At 1400°F/760°C, things are starting to soften at the edges, but still keep their shape with little spreading or loss of height. Edges and corners have rounded and levelled out, and the murrine are more visibly fused to the sheet glass. The stringfetti has started to ball up just a bit at each end. The top of the dot is still flat with a distinct border as opposed to the spherical frit ball.

(Fusing at temperatures around 1400°F to 1450°F/760°C to 790°C is sometimes called a “contour fuse”)



At 1425°F/775°C, the decorations have begun to lose some height and there is a small but noticeable amount of spread. All edges are rounded and everything is visibly fused to the sheet glass. The murrine still have a distinct top and edge, and they are just starting to blend into the base glass. The bottom of the rod has flattened where it rests on the sheet glass, but still hasn't spread or lost much height. The stringfetti has lost half its height and has spread slightly. The frit ball and dot are almost identical. The sheet glass has also started to round at the corners and shrink inwards slightly.



At 1450°F/790°C, the height loss is noticeable and the spread is more significant. The edges of the murrine have started to spread and become visible around the center design. The dot has spread more and is fully circular, and the frit ball has retained more of its height. The rod has sunk about half way into the sheet glass, and has begun to spread, but it still has distinguishable cut ends at the top and bottom. The stringfetti still have a visible amount of dimensionality, and have noticeably spread and gotten wider.

(Fusing at temperatures above 1450°F/790°C is sometimes called a deep fuse)



At 1475°F/800°C, the murrine, dot, and frit ball are all still visibly raised. Everything besides the rod has lost almost all its height, with only a millimeter or so left above the sheet glass. The rod has lost about 2/3rds of its height and is noticeably wider, and the cut ends have almost entirely rounded out. The stringfetti are as wide as they will get, and appear flat, but there is still a small amount of texture when you run your finger over them, or look at them from the right angle. The sheet glass is noticeably rounded at the corners and sunk in at the sides.



At 1500°F/815°C, everything is completely fused into the sheet glass, with less than a millimeter of height for everything besides the rod. The murrine have fully spread, revealing the center design surrounded by the pattern on the sides. The dots and frit balls are identical in height and spread. The cane is still the most raised, but only by a millimeter or so, and the ends have completely flattened. The stringfetti is completely flat, with no dimensionality at all. The single layer of clear 3mm sheet glass has dramatically shrunk and bulges out slightly where the rod is. This is the result of surface tension in the glass trying to gather to 6mm height. Fusing with two sheets, or 6mm thickness total, instead would result in very little dimensional change by comparison.