

Introduction

I filmed artist Michelle P. creating an acrylic pour art piece in order to observe the physics of variable viscosity fluids in an art application. Due to scheduling constraints, my team was unable to work together, and so we all did individual projects. I was interested in the physics of an acrylic pour, and knew someone who did them, so I created a video of the process. I also wanted to create this as an instructional-style video to show how accessible pouring is as an artistic endeavor.

Materials Used and Apparatus:

- Frame: stretched 5" by 7" Dick Blick cotton canvas primed with gesso
- pour Cup: Chinet 9 OZ Cut Crystal Plastic Cold Cup 3 ¾" rim diameter
- Roughly 1 tablespoon each Golden Fluid Acrylics:
 - Quinacridone Magenta
 - Titanium White
 - Primary Yellow
 - Cobalt Turquoise
- roughly 2.5 oz. GAC 800 Pouring Medium
- roughly 2.5 oz. Floetrol Latex Paint Additive
- 1 full squeeze B'laster Industrial Strength Silicone lubricant formulated with Teflon™ fluoropolymer

Setup

The basic flow is a surface flow of a viscous fluid over a 7" ledge from a 5x7" platform (the canvas) elevated an inch above a flat table by means of two cardboard platforms formed from corner-and-side protectors for a large canvas.

Description of the flow

The flow itself was a slow-moving viscous flow of differently pigmented fluid acrylics aided in flow through a one-to-one ratio of latex paint additive: Floetrol, and an acrylic copolymer pouring medium/paint-extender, GAC 800. A small amount of Silicone lubricant oil was used to create pockets of different colors.

Floetrol and GAC 800?

The combination of Floetrol and GAC 800 help to keep the pour smooth and even. Floetrol is made of a latex polymer, which serves to make for a smooth medium. It is traditionally used on interior and exterior house-painting because it reduces the appearance of brush strokes. GAC 800 helps to prevent “crazing”. Crazing is the appearance of cracks and channels in a dried acrylic piece. It serves as an “extender”. Acrylic, as it dries, loses its volume and flow and can create cracks between pigments of different densities. GAC helps even the density and flow of the acrylic so that it dries smoothly.

Silicone Oil?

As it was explained to me by the artist, silicone lubricant has a low surface tension and lower density than the surrounding mediums, and thus flows upwards towards the surface more readily than the higher-tension acrylic, This results the apparition of ‘cells’ within the paint layers that reveal some of the flow beneath. The lubricant is transparent, and thus the flow beneath is visibly preserved and different from the more opaque acrylic layers surrounding it. This visual contrast is often sought after in the acrylic pour community. The silicone is often added last in a “dirty pour”. A dirty pour is the term for a painting created from layers of paint, GAC, and floetrol that have been layered in a cup and upended onto a primed panel or canvas. Because the layers of medium are upended, the layer added last will be on the bottom of the pour and, if it is of a lower density will flow through the thicker medium to the top to create bubbles and cells.

Lighting and Camera:

I used mostly natural lighting in a sunny studio with white walls and some overhead fluorescent lighting diffused behind translucent ceiling panels.

I used a Canon EOS Rebel S11 with a 50mm prime lens outfitted with a neutral density filter (unnecessary for a successful repetition).

Technique

The field of view was larger than the final film. It was originally roughly eighteen inches wide by ten inches tall (16:9) filmed at f/1.8, filmed roughly 18” to 2’ away from the pour, I increased the scale in premiere pro by 30%, 40% and 80% for different shots. I used a digital camera shooting at 23.976 frames/second at 1080p. I used Premiere pro to edit together the images because it’s powerful and I know it fairly well at this point. I

did no color treatment, but I did at some points put two videos on the same shot next to each-other to emulate instructional videos and to make the video shorter. I used the song "Violet" from the creative commons website by artist Podington Bear. I used an upbeat song to contrast with the slow physics and to make jump-cuts between the different shots more understandable.

Conclusion

This image reveals the beauty of pouring acrylic, and how these artists use the physics of flows to create beautiful pieces of art. I liked the final video, though I would have loved to get some directly overhead shots. I did not have access to two cameras and I wanted to capture the flow of the medium over the edge. I wish I knew more about the density of the different pigments and how that affects the flow. I also wish I had more specific ratios of the pigments, but I was given access to an artist at work upon agreeing to not require absolute measurements. If I had access to a scale I would have weighed the bottles before and after addition, but felt the expense was not justified for a singular instance. I want to keep exploring acrylic flows with different additives, and see what other additives do to the medium!

References:

1. B'laster Silicone Lubricant data sheet
<http://blastercorp.com/images/sds/Silicone-Lubricant-EN-OSHA-GHS-SDS-2016-11-30.pdf>
2. Flood Brand Floetrol Data Sheet
https://buyat.ppg.com/rep_pafpainttools_files/Flood/tdb/FB_FLD6_USEN_021116.pdf
3. GAC 800 Pouring medium
https://www.goldenpaints.com/technicalinfo_gac800/
4. Understanding the Techniques of Pouring Acrylics - Just Paint Magazine published by Golden Artist Colors, Inc.
<http://www.justpaint.org/understanding-the-techniques-of-pouring-acrylics/>