

date: .. / .. / .....

time:

experiment nr: 1

E K A M

### aiming to do:

Learn the basic properties of the material by simply starting to use it without any pre-acquired knowledge aside from looking through the safety indicators.

### doing on the spot / steps taken:

Expanding foam is known to contribute to the body developing a type of cancer, or escalating a pre-existing cancer, so that was a not-so-pleasant surprise. Luckily I had ordered the correct protective mask, so using that I simply started spraying the foam onto a piece of scrap paper.

The instructions said that the container had to be shaken up in order to “activate” the expanding properties of the material which made me think about the state of the “inactive” material.

- I sprayed some material after shaking it for only a little and let it rest;
- I sprayed some material after shaking it for around 20 seconds and let it rest;
- I sprayed some material after shaking it for the indicated one minute and let that rest.

The material in the first 2 stages just looked like some weird goop, almost like a viscous coral sponge. It did not do anything other than return to its liquid form after bubbling away the trapped gas. At this point I had also noticed that the “nozzle” that came with the pressurised container was pretty lame when it came to the application of the material as there was no way of fully stopping the material from flowing after the initial press.

The last test - the one where I shook it up for the required amount of time - went pretty well though the material that came out seemed a bit inconsistent, almost like there were little chunks of another substance which did not mix well inbetween the parts that did look okay.

Now I had to wait a day for it all to cure. The indicators said that the material had to sit in normal temperatures, but I couldn't/didn't want to bring it into my home, so I left it outside which, if it wasn't -15 degrees outside, would have probably escalated the process of curing a bit.

### samples:

date: .. / .. / ....  
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experiment nr: 1

# T O E L F E R



## what did I do:

Mess with the instructions of the material to see what the alternative states of the material are when not shaking it up, apply the material in its different states to see the difference, allow it to cure in negative degrees to see what results that would yield, all in order to add the alternative states of the material into my arsenal if it so happens that I need these different states in the future.

## what did I find out:

I found out that when directions aren't being followed, the material comes out wrong, obviously, but also that the viscous property of the not-shaken-up material hardens after a week or so, and albeit it isn't really usable or that easily applicable, it could work if I were to need to solidify the dripping of the material in the future.

Also, the sponge-like texture inside of the object once its done expanding and has finished curing resembles a normal sponge-cake, and glistens nicely when pointed at the sun. It is also pretty sturdy, though warmth and a little pressure seems to leave indentations that do not spring back in the way a sponge-cake would.

## next steps:

- 1: Spray some basic shapes and see how those expand, and whether temperature affects the final size of the cured foam.
- 2: Experiment with colouring the foam naturally, because I can't buy any paints at the moment, and spray paint seems like its cheating.
- 3:
- 4:
- 5:

## what sources do I use to inform my next steps:

(author, title of source, publisher, publication date)

date: .. / .. / ....  
time:  
experiment nr: 2 & 3

E K A M

aiming to do:

Moving forward with getting to know the material by spraying basic shapes, observing the rate at which it expands, looking into ways to colour the foam.

doing on the spot / steps taken:

While spraying some shapes, I didn't have anything specific in mind, and so I ended up with just moving my arm around the scrap paper, taking into account the size of the material once its done expanding.

I sprayed:

- donut shapes to observe whether the material has more difficulty expanding outwards rather than inwards;
- a snake shape because that was the first thing that popped into my head;
- a blob, and then after a couple minutes another blob on top to see whether I can build the material up without it collapsing;
- random shapes that I thought I could sacrifice for other mini tests in the future in order to observe the inside of the material once it has cured, and to find a way to colour it.

After I was done spraying these shapes, I let them rest in the sun, with the idea that this might speed up the curing. This was also when I had to wait another couple of weeks in order for extra materials to arrive due to the virus slowing down the shipping in Germany.

To my surprise though, this seemed to yield interesting results, as during these two weeks, the cold front had gone away and with that came temperatures of around +20 degrees, and a lot of sun. I noticed the material starting to take on a hue due to the sun bleaching the surface. I decided I would try to let it capture as much sun as possible in hopes to see the complete gradient of the sun bleaching the surface of the material.

samples:



date: .. / .. / ....  
time:  
experiment nr: 2 & 3

T C E L F E E R

what did I do:

Got more comfortable with just spraying the material on the scrap paper, without expectation but with the focus on the space needed for the material to expand.

Sprayed different shapes to use for future tests as well as to observe the outcome and make deductions from that.

what did I find out:

- The sun bleaches the material very easily and, throughout a couple weeks, the surface of the material shifted from bright blue to almost a yellow with the help of the sun, leaving a trace of the gradient on the surface of the material.

- The bleaching only affects the surface and hardly continues toward the centre of the material so I don't know how helpful that is, really.

- The material shrinks ever so slightly after expanding to the maximum, as I observed the hole of the donut getting smaller, but then the entire shape "deflated" almost like a balloon that lost a bit of air.

- the surface is very uneven which is a bummer because I was hoping I could work with an even surface. Shaking the cannister up for long periods of time does not eliminate the bumps despite the depiction on the cannisters showing an even surface. Maybe there's some trick that I don't know.

next steps:

1: Create more shapes, analyse those inside and out

2: Try to manipulate the shapes in some way? Cut them up, glue them together, file them down?

3:

4:

5:

what sources do I use to inform my next steps:

(author, title of source, publisher, publication date)

date: .. / .. / .....  
time:  
experiment nr: 4

E K A M

aiming to do:

Try different ways of using the foam, by combining materials to see how one interacts with the other?  
A look at the rest of the objects after they had been out in the sun for longer.  
Figure out how to use the bleached colour as a colour to apply onto future objects?

doing on the spot / steps taken:

Looked at the other shapes that I made earlier, specifically how they expanded in warmer temperatures, and see how the bleaching process changes based on the amount of time the objects had spent in the sun.

I also sprayed some more material in some packaging paper that arrived with a parcel to see how the expanding foam would envelop the packaging paper, this was also left in the sun to accelerate the curing process.

I used the smaller bits of the previous test runs and filed them down in an attempt to “harvest” what little of the coloured surface I could get, though I’m not sure what I could do with these shavings. I also overestimated the bleaching in the sense that it was only really bleached on the surface and not below the surface, which would have been helpful if I were to use them as powder to colour the surfaces of other objects.

I did end up with a lot of shavings, some bleached, some regular, for later use. I think this might be useful if I wanted to highlight the difference in texture, as the surface is shiny and glossy whereas the foam itself is pretty matte.



date: .. / .. / ....  
time:  
experiment nr: 4

# T C E L F E E R

## what did I do:

Made material combinations in an attempt to see how the foam would envelop the other material (packing paper), filed down the smaller bits of foam that I made during the second experiment, tried to harvest the colour produced by the bleaching process.

## what did I find out:

Combining materials isn't really that exciting, though I didn't expect much from the start. Once the foam hardens its just there, not really able to change. This made me worry about the future of this project as I did not see a way I could shape the foam into something I wanted. The donut shape is slowly becoming the point of interest as I keep connecting the shape to the somewhat traditional act of making a donut when first learning 3D modelling software. This could be a start? Or maybe a hack on how to approach the donut-making step in a less conventional way?

Harvesting the colour wasn't that big of a success, but I do think the flakes that I filed down from the smaller objects could be of use in there future, I just don't know how yet.

That being said, I found comfort in the fact that I identified these different qualities and states that expanding foam can have.

## next steps:

- 1: Use the file to shape the objects I currently have into something else?
- 2: Think about the application in the field of graphic design even more. Elevate the idea of the donut when learning 3D modelling software?
- 3:
- 4:
- 5:

## what sources do I use to inform my next steps:

(author, title of source, publisher, publication date)

date: .. / .. / .....  
time:  
experiment nr: 5

aiming to do:

Filing the cured/solidified foam in an attempt to alter the shape  
Trying to figure out a direction for this project.

doing on the spot / steps taken:

By looking at the shapes that I created in the past test runs I arrived at a point where it all seemed to be too repetitive to seem interesting, so I went in with the file to create slightly more interesting compositions and to highlight the difference in the sun-bleached surface and the blue inside.

I also partially did this to get little bits of foam for possible next steps, though as with the previous test run - I didn't know what direction to go to with that.



date: .. / .. / .....  
time:  
experiment nr: 5

T O E L F E R

what did I do:

Generally just used the file in an attempt to find a direction to take this project, exposing the middle of the foam and putting that into contrast with the bleached surface.

what did I find out:

not much aside from that if you file the snake down it looks like a little bit of a 3D/VR/AR piece of art that you see on social media, in the sense that it could be imported into the digital space and combined with other layers of content.

next steps:

1:

2:

3:

4:

5:

what sources do I use to inform my next steps:

(author, title of source, publisher, publication date)