



## Flesh Phone Charger

Created by Ruiz Brothers

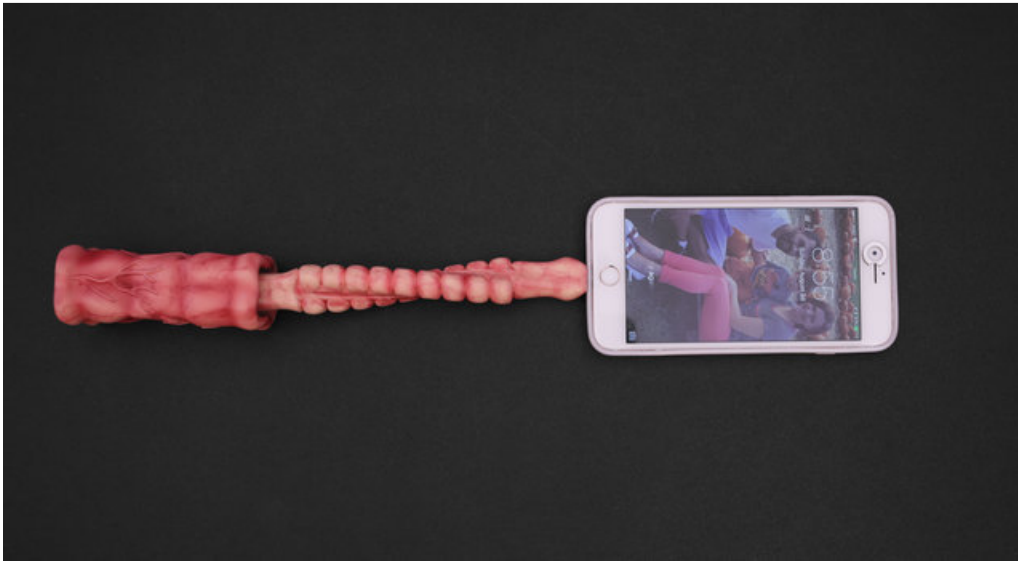


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## Overview



### Grotesque Phone Charger

This project was inspired by a [flesh sucking phone charger from Japan \(https://adafruit.it/raE\)](https://adafruit.it/raE). But instead of using traditional sculpting techniques and materials, we 3D printed them using Ninjabflex filament!

Inside these parts are a 2200mAh USB battery pack and charging cable, so this actually charges your Phone - without any of the actual sucking.

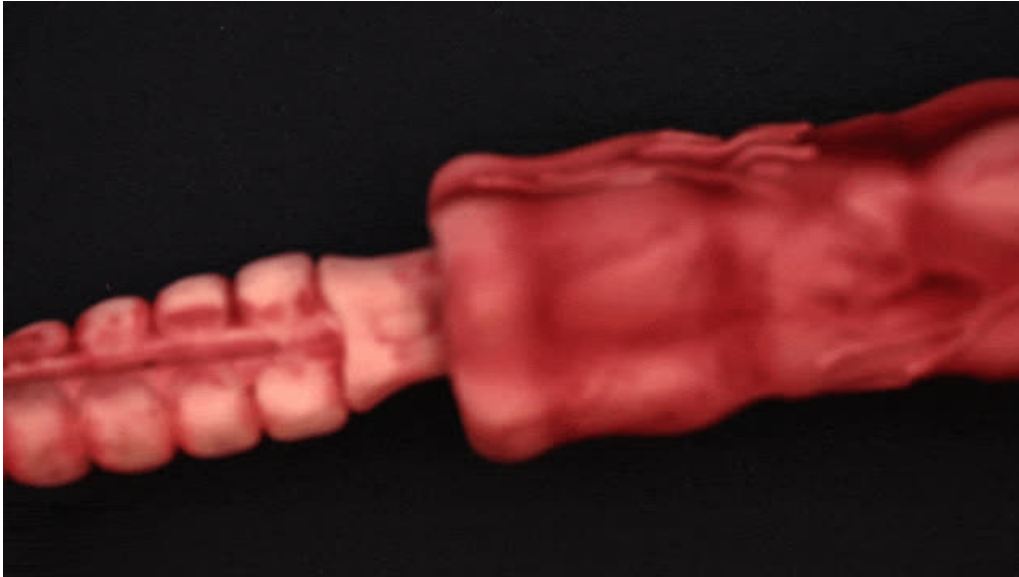
It's flexes without any issue and it's surprisingly durable!



### Airbrushed Paint Job

We used an airbrush to add colors and small details like the veins. The results turned out pretty gnarly and would totally make great props for film or for your next cosplay.

We 3D printed these intestine in a fleshy skin color with no infill to make them extra flexible.



## Strain Relief Cables

We really like how this actually has a useful application beside just looking gross. It also acts as a strain relief for the cables!



## Parts

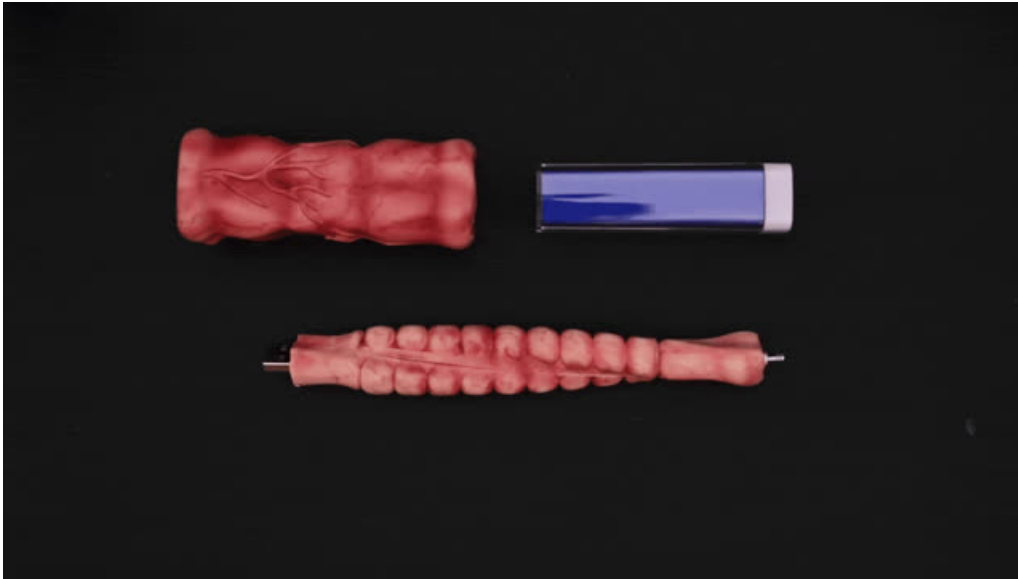
You need a battery pack, NinjaFlex and a 3D printer to make this project.

- [Battery Pack \(http://adafru.it/1959\)](http://adafru.it/1959)
- [Flesh color NinjaFlex Filament \(https://adafru.it/raF\)](https://adafru.it/raF)
  - [Caramel Candy \(http://adafru.it/2382\)](http://adafru.it/2382)
  - [Peach Smoothie \(http://adafru.it/2383\)](http://adafru.it/2383)
  - [Rose-Gold Blush \(http://adafru.it/2381\)](http://adafru.it/2381)

- [USB Charging cable \(http://adafru.it/1514\)](http://adafru.it/1514)

## Tools and Supplies

- [3D Printer \(https://adafru.it/doT\)](https://adafru.it/doT)
- Hobby Knife
- E6000
- Airbrush w/ Waterbased Acrylic Paint
- Paper Towels



<https://adafru.it/rbf>

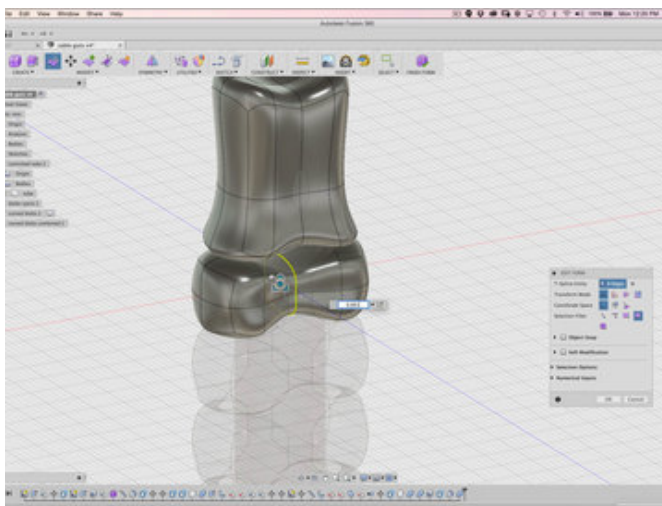
<https://adafru.it/rbf>



<https://adafru.it/raG>

<https://adafru.it/raG>

cable-guts.stl	240c extruder 40mm/s print speed 120mm/s travel speed	Make sure the bed isn't leveled too tight or NinjaFlex will easy buckle.
bat-tumor.stl	0.4mm Nozzle .48mm Extrusion width	We're using NinjaFlex 85A so print at a slower speed with hotter extruder temperature.



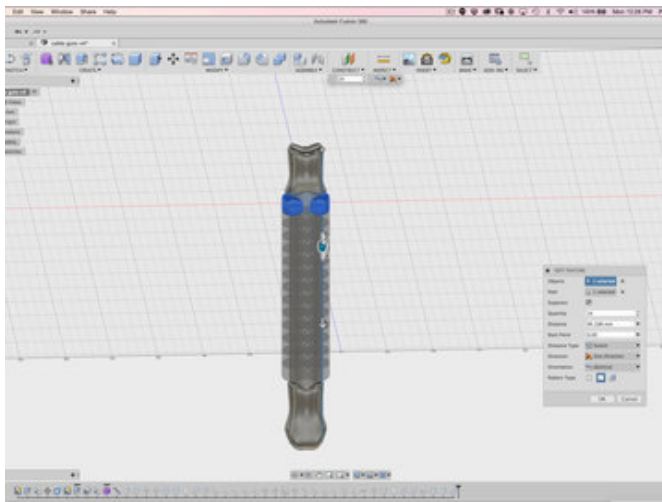
Design files are free to download and completely editable inside of Fusion360.

## Adjusting the Form

The sections are modeled inside the sculpting environment, making it easy to modify the look of the shapes by deforming the geometry.

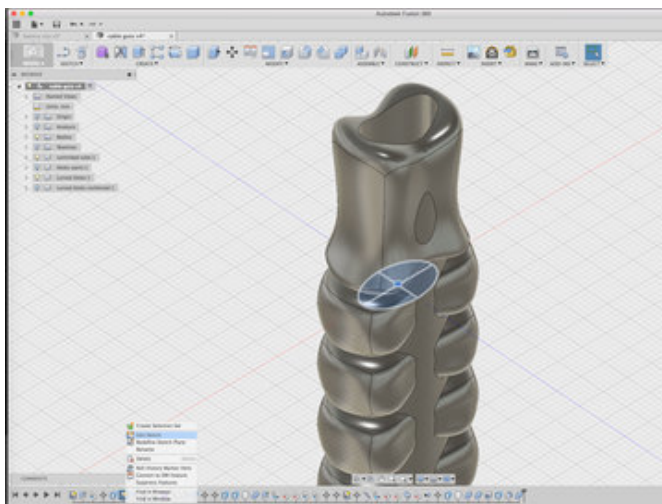
## Editing Pattern

You can adjust the length of the pattern by adding or subtracting how many features are duplicated in the pattern feature.



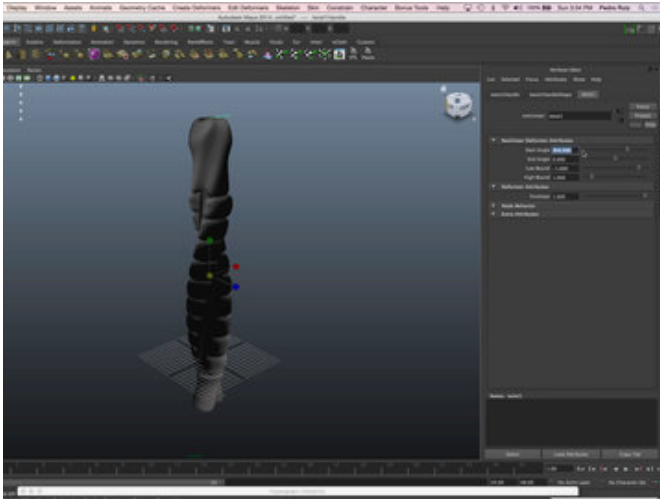
## Customizing Hole

The hole for the USB cable is controlled by changing the size of the sketch.



## Adjust Twist

To give the intestine a nice twisty shape, we brought the model inside of Maya and added a non-linear deformer twist. You can play the the twist until it fits the look your going for.

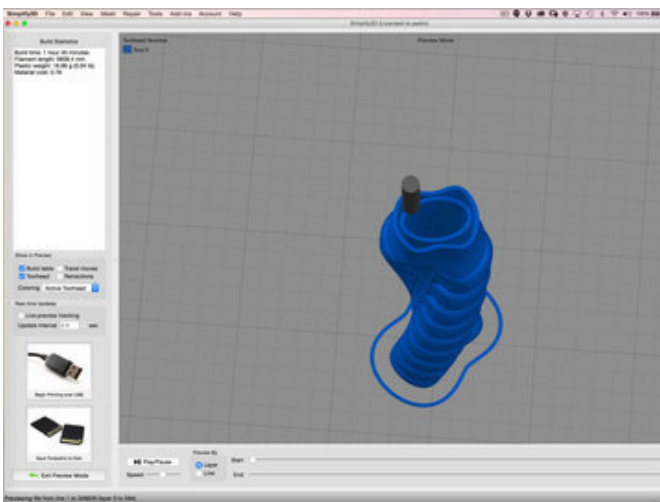
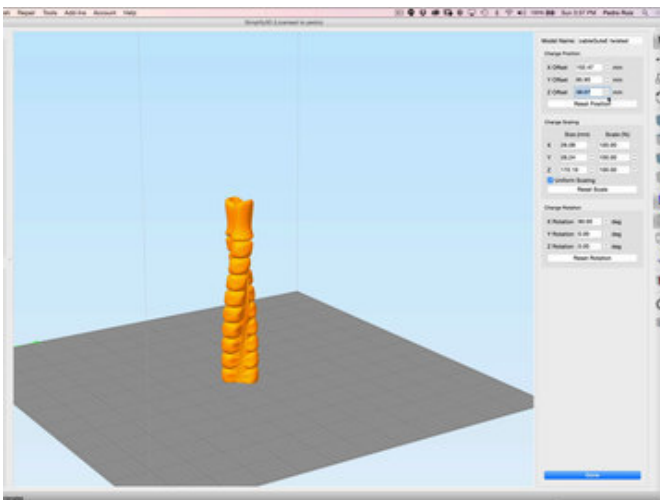


### Adjust Size

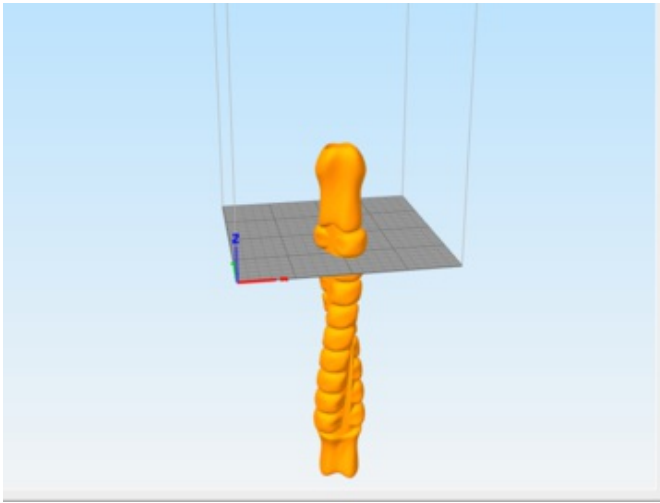
We used Simplify 3D cut the bottom off the model by lowering it below the bed. This gives the model a big enough base to stick to the bed.

### Adjust Slice

Check the tool path before printing to make sure we're only using 2 shells with 0 % infill for maximum flexibility.





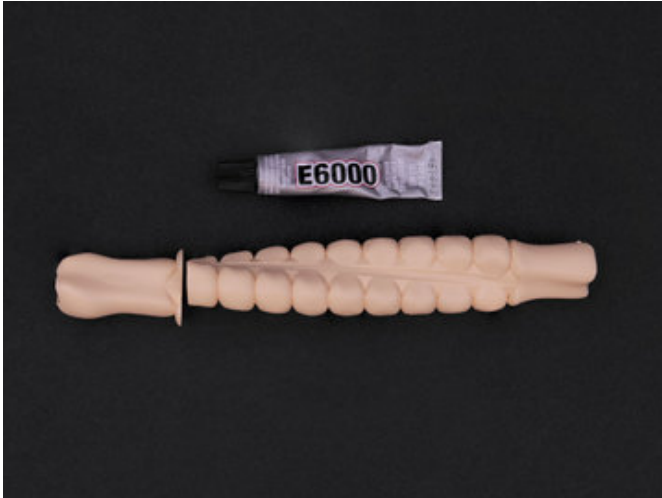


### Print The Tip

Rotate the **cable-guts.stl** part on the X axis and position the Z offset so the tip of the part can be printed.

## Assemble

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### Glue Parts

The tip that was cut off for printing is glued back together using E6000. Apply a generous amount on one side and stick the two pieces together. Allow the parts to dry for about 4 hours.

After the parts dry we can move on to finishing.





### Remove Excess

Wait until the glue is fully dry before cutting off the excess glue. Use a hobby blade to carefully remove the glue from the sides.



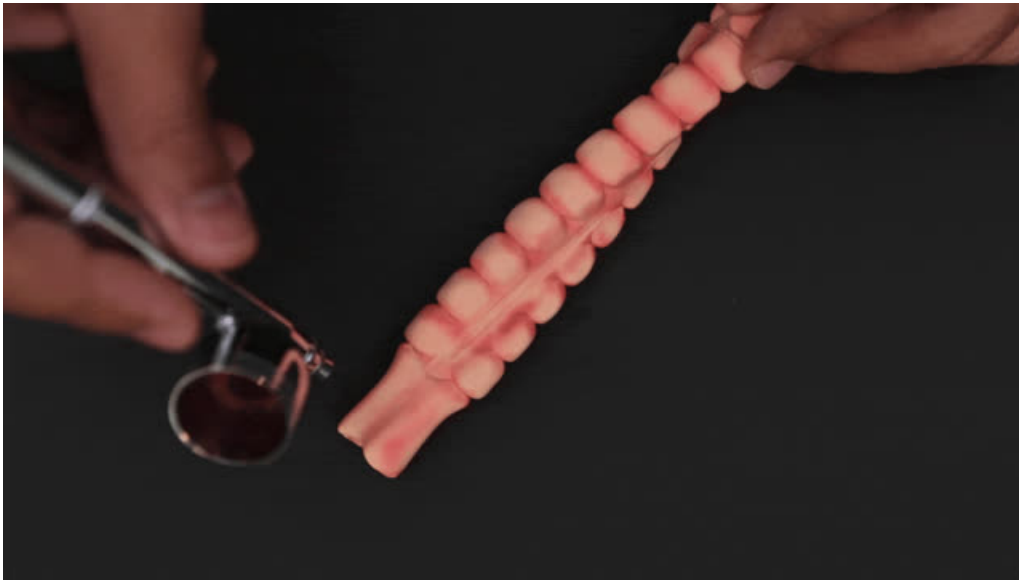
### Mix Colors

Airbrushing sets really well on NinjaFlex while allowing it to twist and bend without it chipping off.

We got the dark bloody look by mixing a couple drops of red and a tiny bit of black to give the parts a bruised look. You can use a couple drops of water to help mix the colors.

This was our first time airbrushing, so we practiced getting a feel for it before we started. We practiced on failed prints and on paper to get used to spraying and to figure out how to achieve the look we were going for.



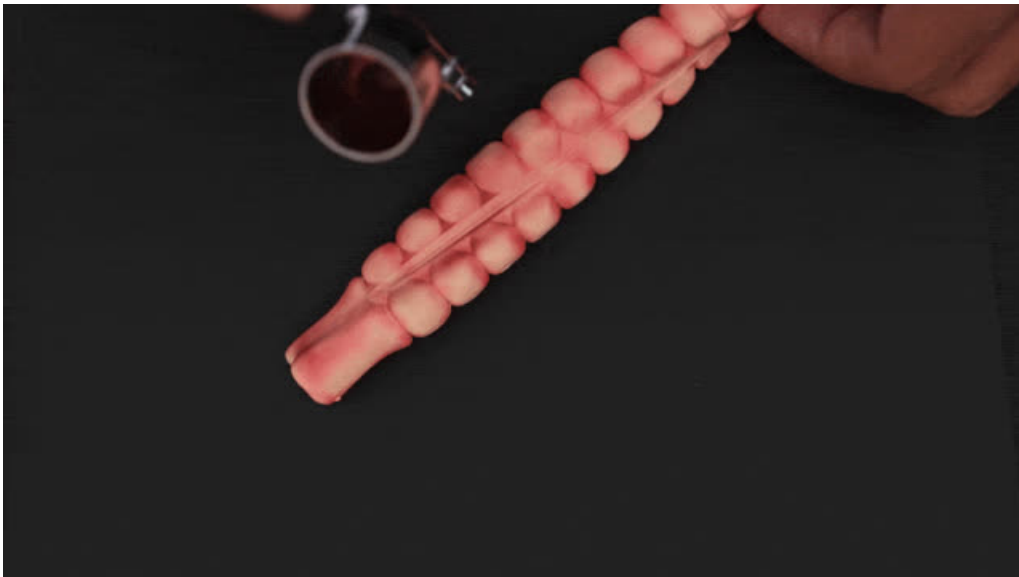


## Airbrush

We're really just adding a couple shades to the creases on the intestine and then adding vein details.

Start with a couple of really light coats and build your way up. Even a couple of really light coats gives parts a dramatic look when compare to one without.

Shade along the bulges and leave a couple of the spots untouched to give it a nice highlight.



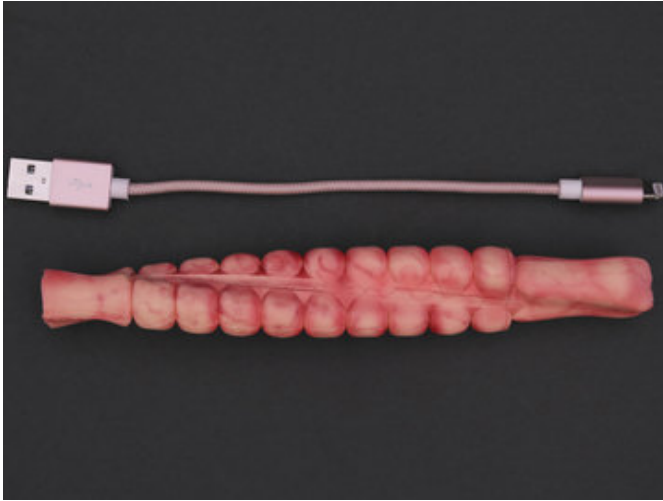
## Fixing mistakes

If you accidentally spray too much, you can use a damp paper towel to lightly wipe away excess paint.



## Vein detail

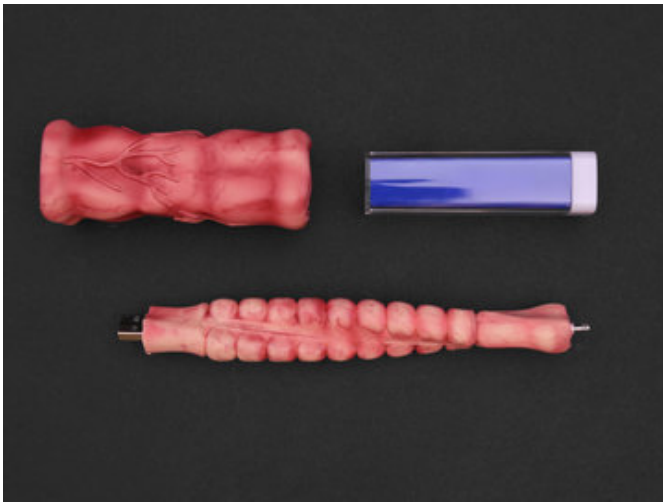
Once you have all of the layers coated we can move on to adding the vein details. Practice with the distance you'll need to spray to get those thin lines and then practice on a prototype part before trying it on the final part.



### Assemble cable and battery

After your happy with the look, you can add your charging cable through the part. The USB port should have a snug fit.

This actually has a useful application beside looking gross. It acts as a strain relief on the end of cables!



The material is virtually indestructible, which is why we really like using NinjaFlex filament, especially for mobile phone cases.

That's it for this one. If you have any suggestions for future projects, just let us know!