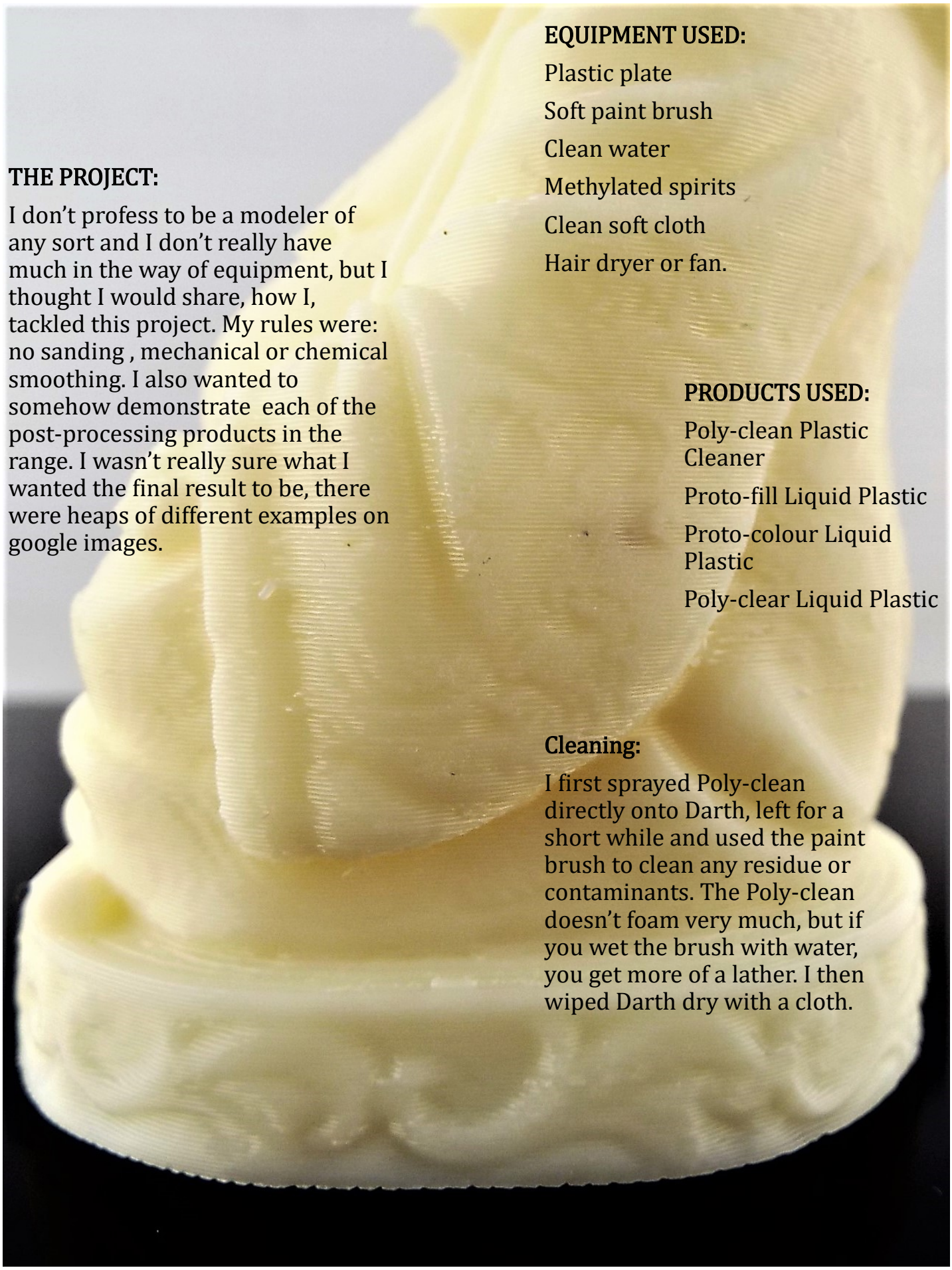
My, step-by-step experience,
post-processing a thingiverse Darth Vader Buddha without any sanding or acetone.

Before

After



THE PROJECT:

I don't profess to be a modeler of any sort and I don't really have much in the way of equipment, but I thought I would share, how I, tackled this project. My rules were: no sanding , mechanical or chemical smoothing. I also wanted to somehow demonstrate each of the post-processing products in the range. I wasn't really sure what I wanted the final result to be, there were heaps of different examples on google images.

EQUIPMENT USED:

Plastic plate

Soft paint brush

Clean water

Methylated spirits

Clean soft cloth

Hair dryer or fan.

PRODUCTS USED:

Poly-clean Plastic Cleaner

Proto-fill Liquid Plastic

Proto-colour Liquid Plastic

Poly-clear Liquid Plastic

Cleaning:

I first sprayed Poly-clean directly onto Darth, left for a short while and used the paint brush to clean any residue or contaminants. The Poly-clean doesn't foam very much, but if you wet the brush with water, you get more of a lather. I then wiped Darth dry with a cloth.

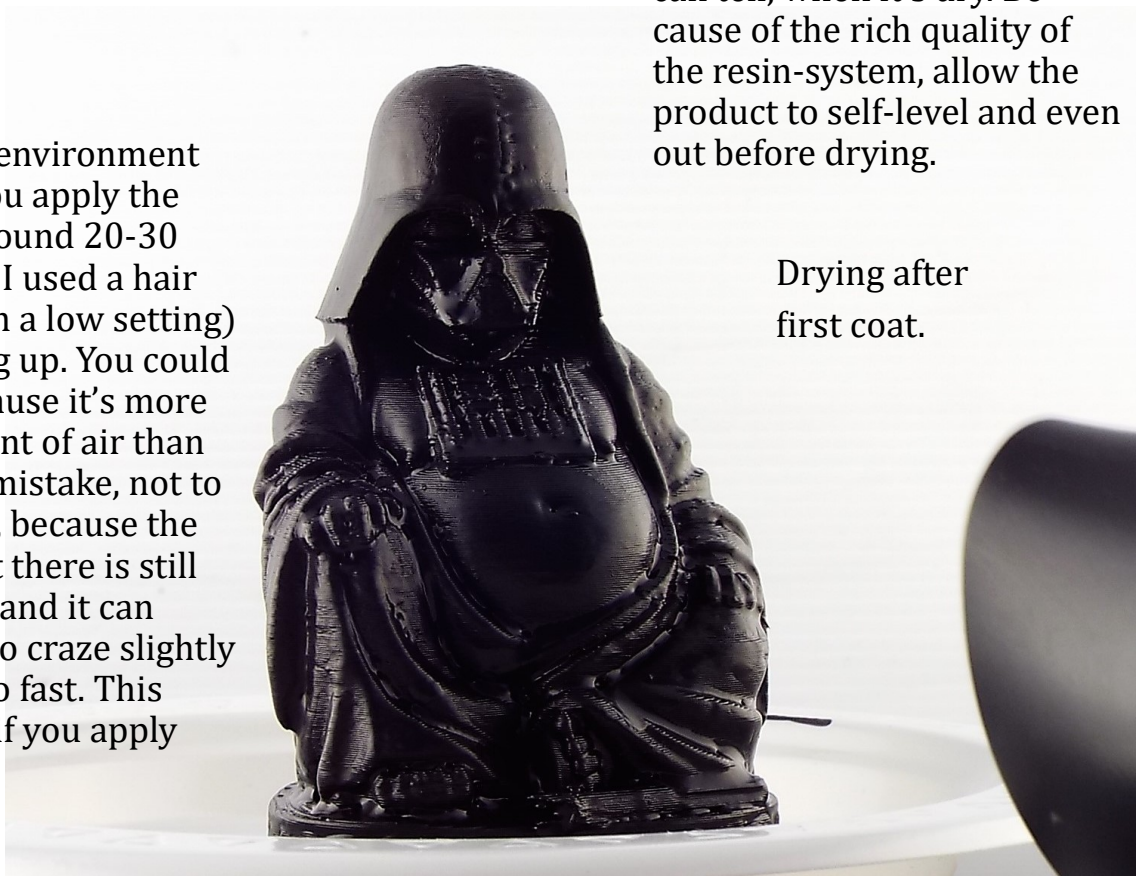
First coat.

METHOD:

I decided to use the Jet black - Ultra matte finish Proto-fill. Make sure that you stir the contents thoroughly before you start, because the matting agents tend to settle on the bottom. This doesn't seem to be such an issue with the white version. The product can be sprayed if you have the equipment. Use a disposable plastic plate to place your model on, because they are made from a type of plastic, which the Proto-fill won't stick to. Some take-out containers and lids are also suitable. I brushed the first coat of Proto-fill, in a horizontal direction or in the direction of the grooves. It goes on like a liquid plastic and is shiny when it's wet. This is how you can tell, when it's dry. Because of the rich quality of the resin-system, allow the product to self-level and even out before drying.

DRYING:

Depending on the environment and how thickly you apply the coating, it takes around 20-30 minutes to air dry. I used a hair dryer (only ever on a low setting) to speed the drying up. You could also use a fan, because it's more about the movement of air than heat. I learned by mistake, not to use too much heat, because the top layer dries, but there is still liquid underneath and it can cause the coating to craze slightly if you try to dry too fast. This won't be an issue if you apply thin coats.



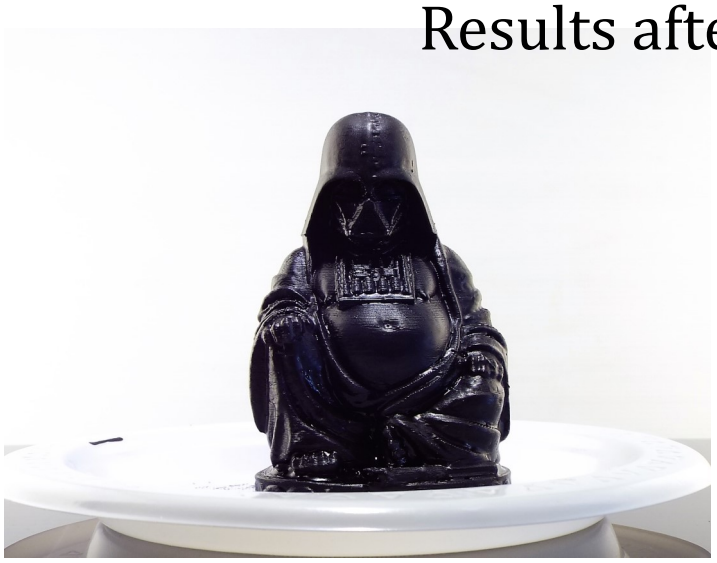
Drying after first coat.

Once the coating is touch-dry, by using a brush or cloth dipped in methylated spirits to re-smooth the coating. Never sand the coating at this stage, because you may tear the coating. This smoothing technique will also fix any runs or drips. I had a few of these in spots where I was a bit heavy-handed with the application. Being water based, there is virtually no smell when applying or after drying, which should be great for students or people who don't have dedicated post-processing areas. If you spill any product on a surface, such as a table, just use water or methylated spirits to remove it, or you can wait for the product to dry, and then peel it off. As the Proto-fill dries, it reduces by around 25% and becomes a matte finish. Two coats seems to be sufficient to fill the print lines. Some areas such as the top of Darth's helmet needed some more to get a perfect finish. Although the product is viscous, it is still a very thin coating, and none of the intricate detail at the base and Dart's coat, is lost. Even after, just one coat, the matte finish makes the model appear less "plasticky" and more like a molded object. It's a good practice to address any runs or bubbles, before you apply the next coat.

"ADJUSTING" THE COATING:

Use the methylated spirits on a cloth or your paint brush to soften and "re-distribute" the product and even out areas which may have been over-filled. After a few coats, there is no need to apply more product, instead re-distribute the product from where the is too much, to spots which need more coverage. This technique is almost like being able to pause time and resume when you're ready. Making fine adjustment is like photo editing, you can add detail in or remove detail out. When you use practices like sanding or vapour smoothing, there's no going back.

Results after first coat.



Results after second and final coat.

Application of second coat.

Second coat applied and ready to dry.

I applied the second coating against the direction of the print lines. This technique seems to work for me, but I'll leave that up to you.

Once the Proto-fill was dry to touch, I decided to colour Darth with Proto-coat Solid gold - Metallic. The product is a pure liquid plastic resin system as the medium and contains actual metal oxide paste. The Proto-colour product is not formulated to fill, only to colour and protect. Make sure you shake the bottle well, before and occasionally during use, as the metal oxide paste tends to separate, this is evidence of quality, because the product contains pure liquid plastic resin and pigment, or in the case of the metallic colours-actual metal oxide pastes. Even on a black background, only one coat was required. You'll find the coverage of the metallic, impressive and smooth to use. You can actually see the metal paste "fizzle" when you brush the gold on. The Proto-fill can be diluted by up to 20% with water, if you are using spray equipment. Runs and drips that have dried, can be rectified with methylated spirits. I used the hair-dryer to speed up the drying time. the bottle, it's not necessary and it create air bubbles.

This was a thin film of Proto-colour that I coated on a plastic paint and then peeled after it was dry, to demonstrate that the Proto-fill and Proto-colour are both complex films, not some sort of conventional paint or putty filler.

Finally I brushed on a coating of the poly-clear, which is a high-gloss liquid plastic, to seal Darth and prevent the metallic oxide paste from tarnishing in the future. Because it is water-based, the product tends to foam, so it is important <u>not</u> to shake the bottle before use and let the contents settle before use.

Finished