

Agenda

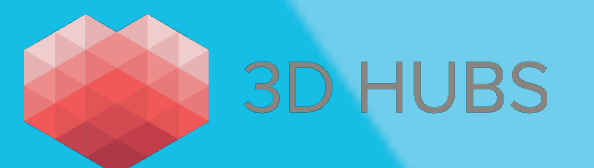
7:00 Arrive & check-in

7:30 Presentation

7:45 Socializing & Drinks

9:00 - 9:15 Check-out

Proto-pasta



THE WORLD'S LARGEST 3D PRINT NETWORK



3D HUBS

“3D Hubs tapped into a

Forbes

“3D printing on

FASTCOMPANY

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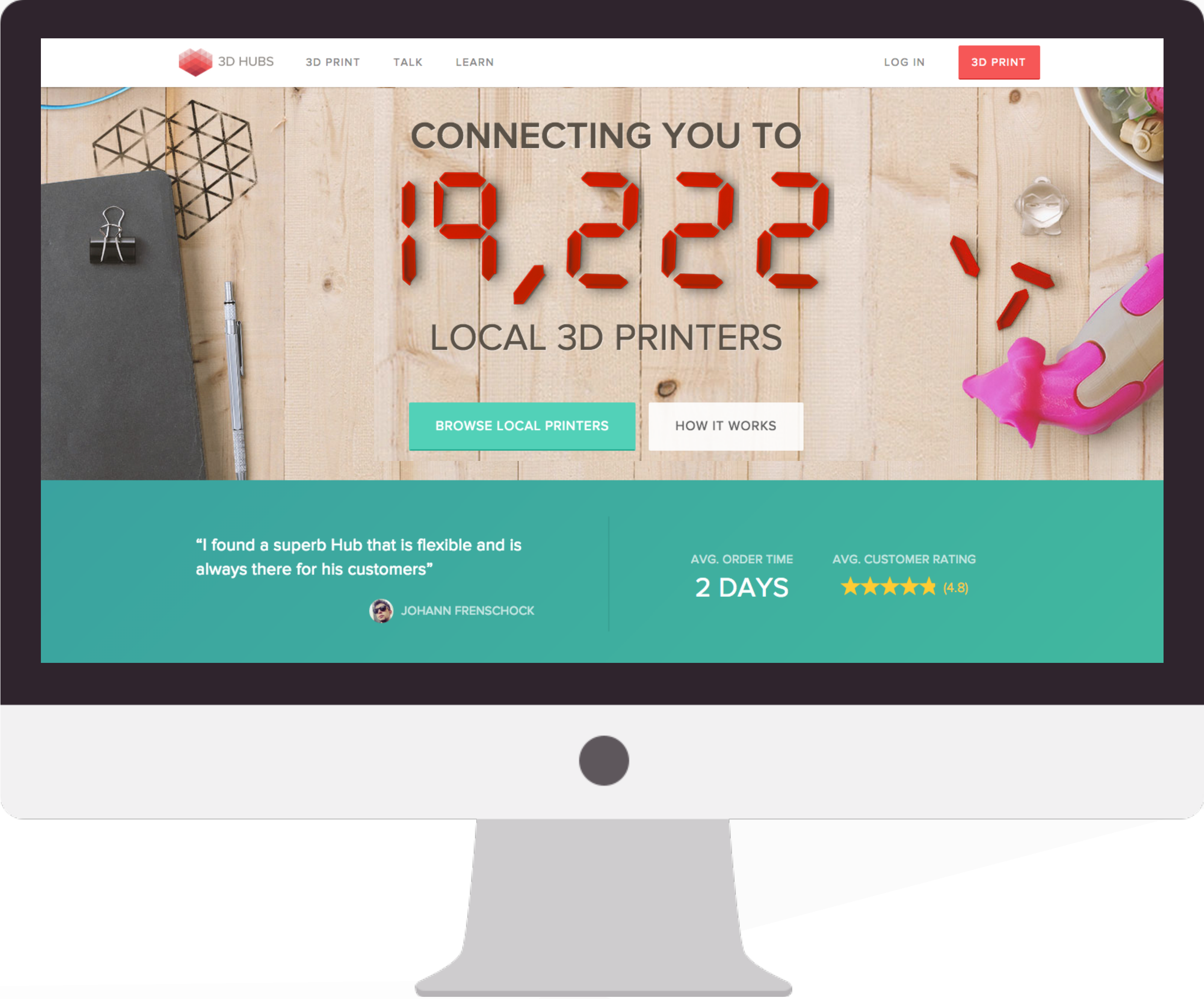
Upload Design



Select Printer



Local Production



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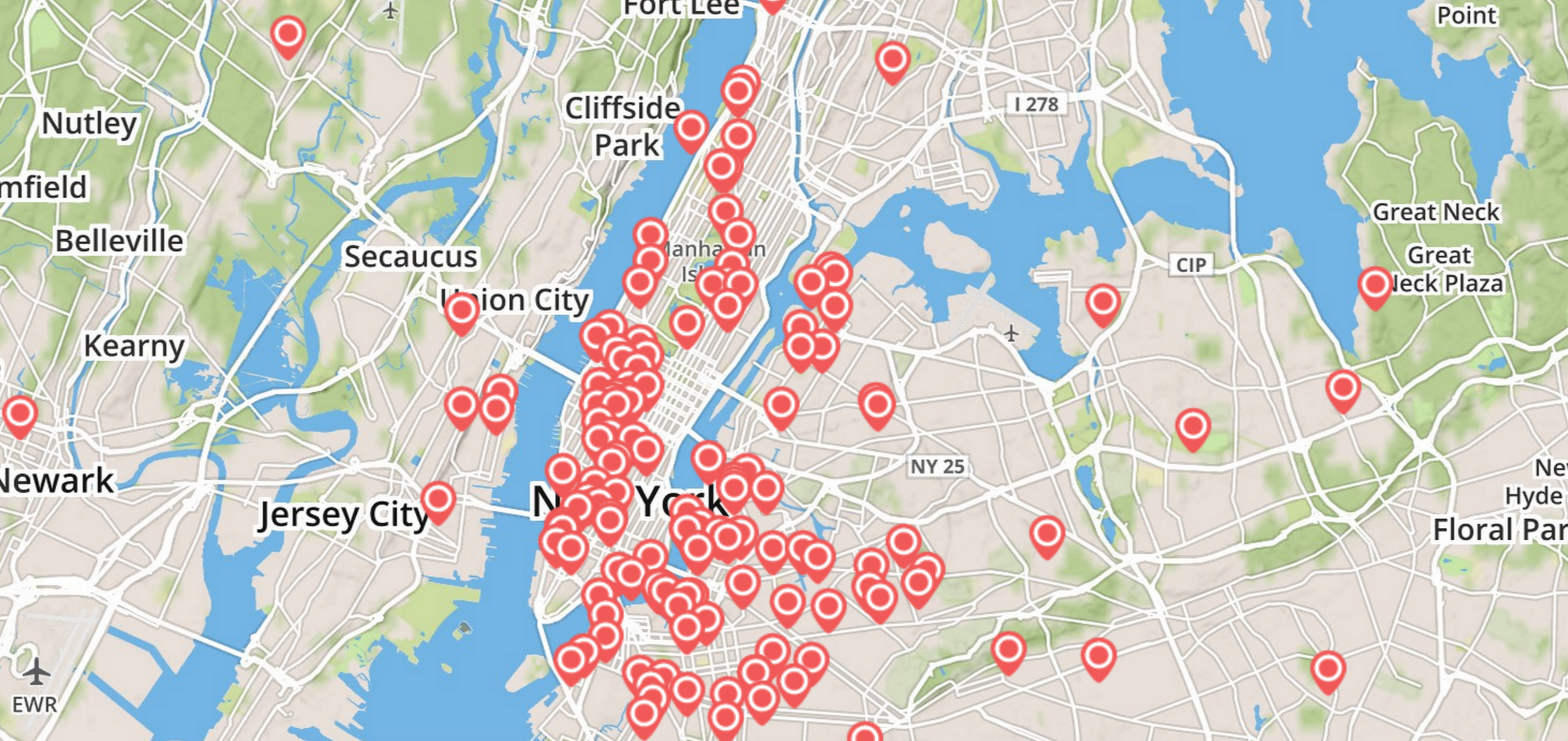


19K+ PRINTING LOCATIONS IN 160 COUNTRIES

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260 HUBS IN NEW YORK

maps.3dhubs.com

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ProtoPasta Talk


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3
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Connect LED strips with conductive filament

Hi, Does anyone know, if its possible to connect pieces of LED strips with conductive filament ? Dennis



StudioK

7 days ago

7 comments (7 new)

[/ProtoPasta](#)
[/Filament](#)
[/Arduino](#)

▲
33
▼



New Hub Perks live!

Hello fellow Hubs, Cool news coming your way :) Today we announce no less than 5 new, highly discounted, exclusive Hub perks on 3D Hubs!



Filemon

15 days ago

23 comments (17 new)

[/3D Hubs News](#)
[/ProtoPasta](#)
[/AstroPrint](#)
[/BuildTak](#)
[/ColorFabb](#)
[/Filabot](#)
[/How To Hub](#)
[/MadeSolid](#)

ProtoPasta Talk

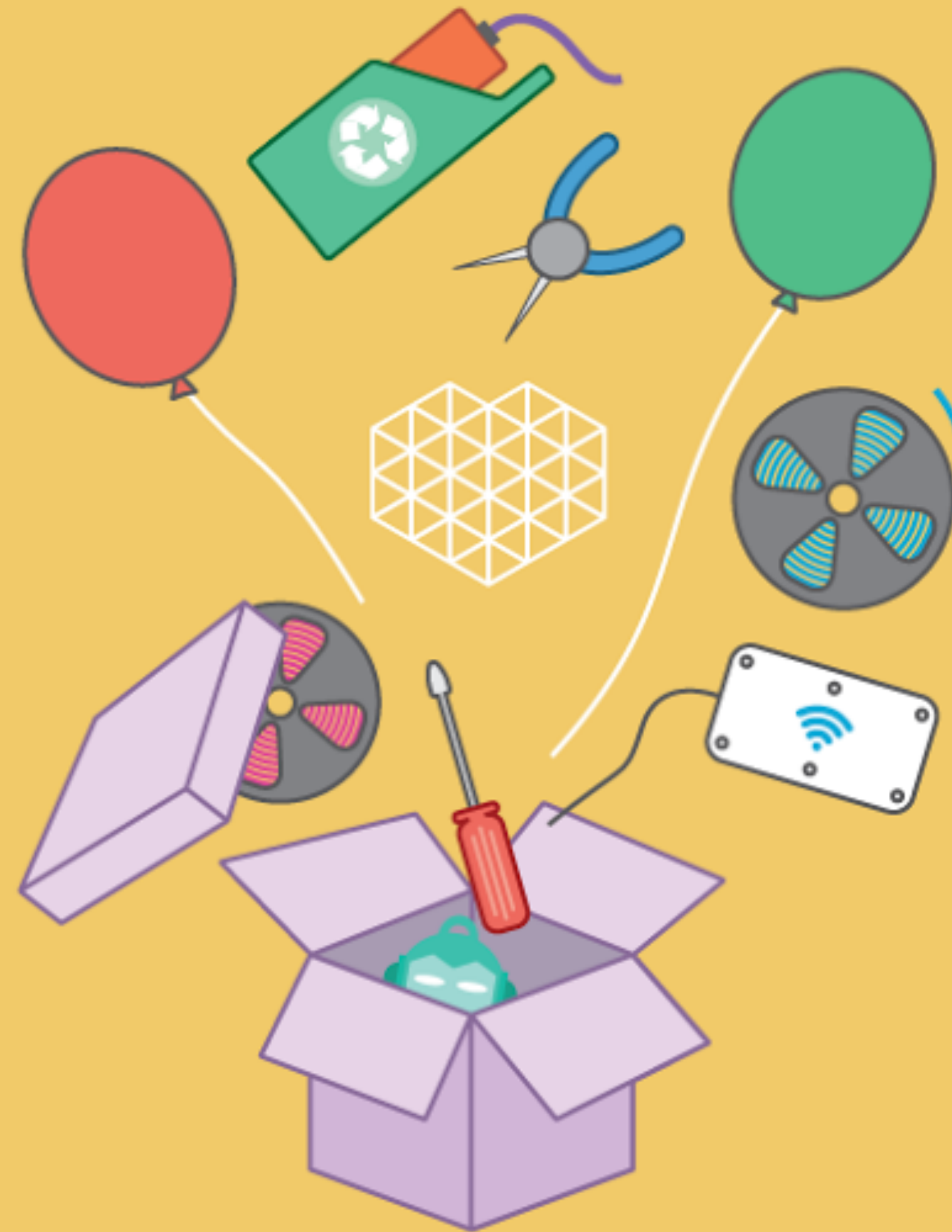
3 followers


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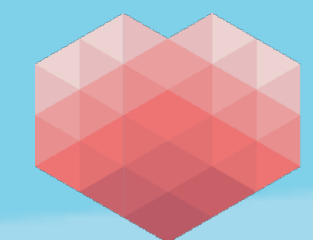
About ProtoPasta

Recognizing the need for high-performing and widely accessible materials for personal 3D printers, in 2013 ProtoPlant created Proto-pasta, a line of exotic 3D printer filaments specially engineered for performance and printability on small, FFF-style 3D printers. Each material was publicly tested and developed, resulting in a line of high performing, high quality, exotic 3D printer filament unlike any other.

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HUB PERKS

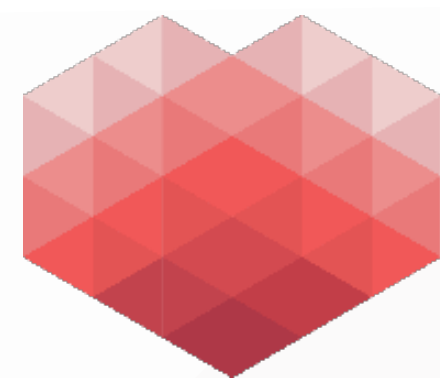


3D HUBS

FILAMENT WORKSHOP

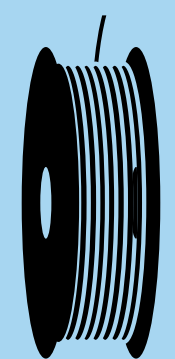
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3D PRINTING
INDUSTRY

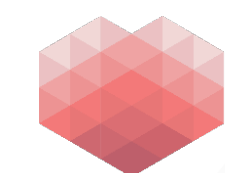


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THE STORY



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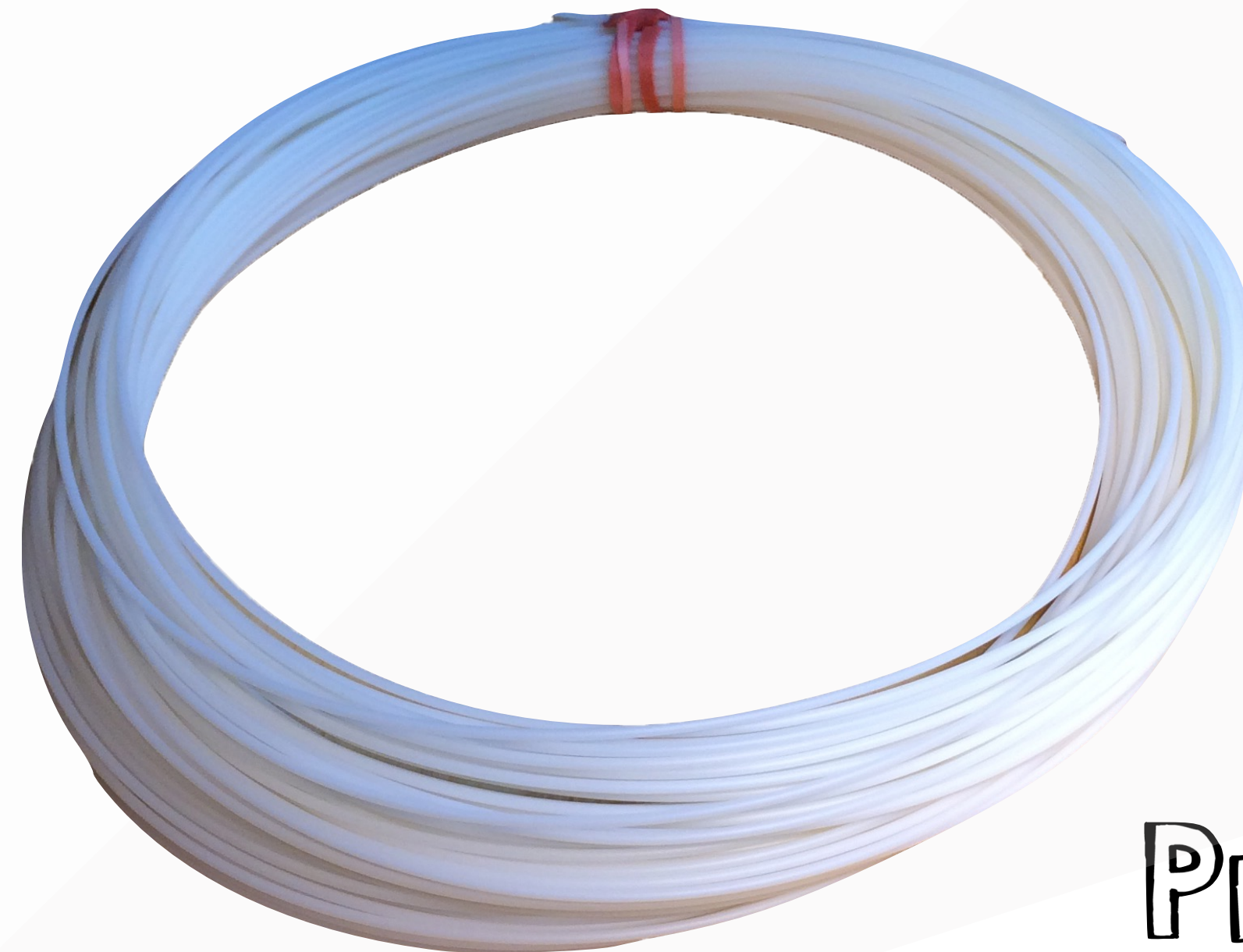


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Original Proto-pasta Materials

PC-ABS Alloy

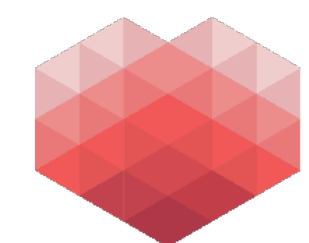


High Temp PLA
(discontinued)

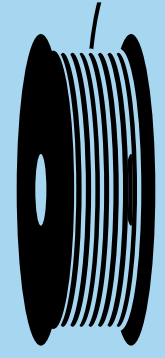
Carbon Fiber PLA



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Next Generation Materials

Conductive PLA



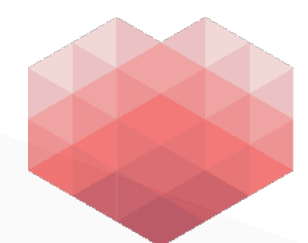
Magnetic Iron PLA



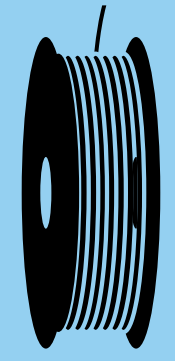
Stainless Steel PLA



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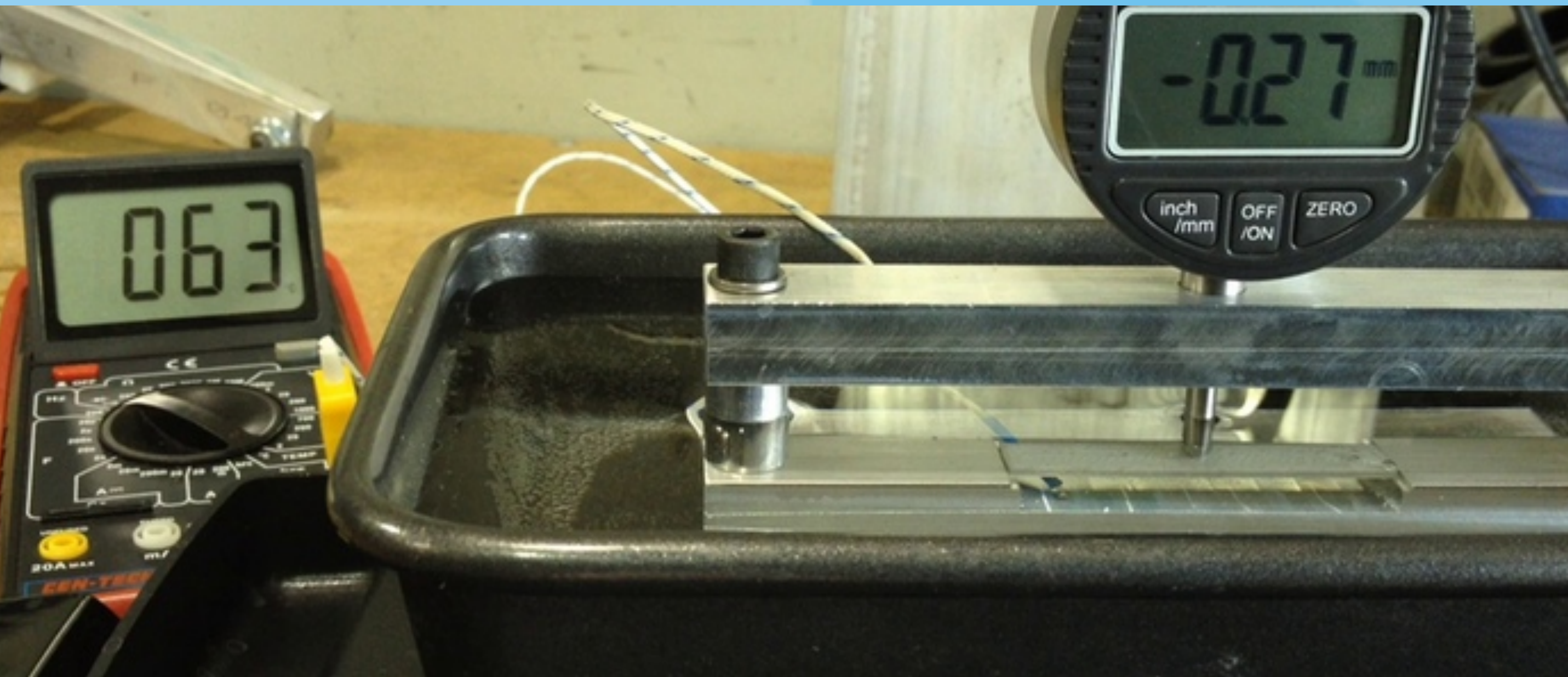


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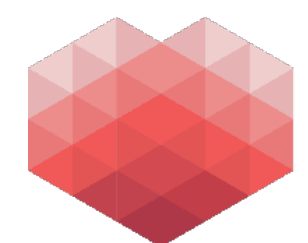


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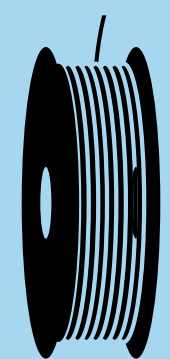
Mechanical Testing



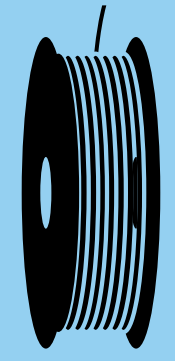
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Material	HDT °C	Impact J/m	Stiffness MPa	Flex Strength MPa
High Temp PLA	88	118	3135	57
4043D PLA	54	100	4565	110
4043D PLA + CF	54	53	6560	96
ABS	85	125	2241	43
ABS-PC	135	591	3096	83



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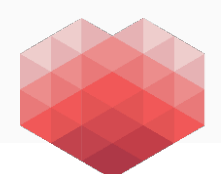
SAMPLE PACK

CARBON FIBER PLA

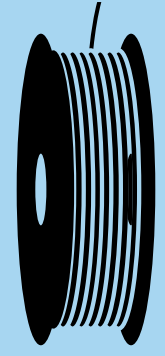
STAINLESS STEEL PLA



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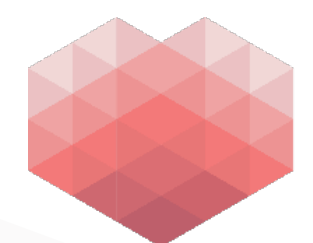


FILAMENT WORKSHOP

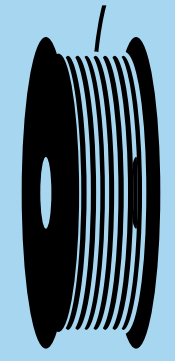
CARBON FIBER PLA



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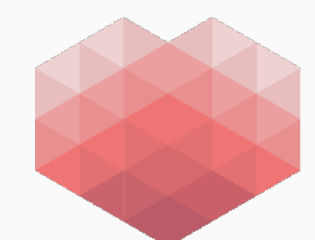


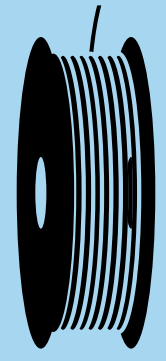
Pros

- Easy to use (similar to PLA)
- Low Warp/Shrinkage - accurate
- Supports are easily removed
- Matte Black surface (good to photograph)

Cons

- Abrasive = accelerate wear for soft nozzles
- More brittle & fragile than PLA (handle with care)

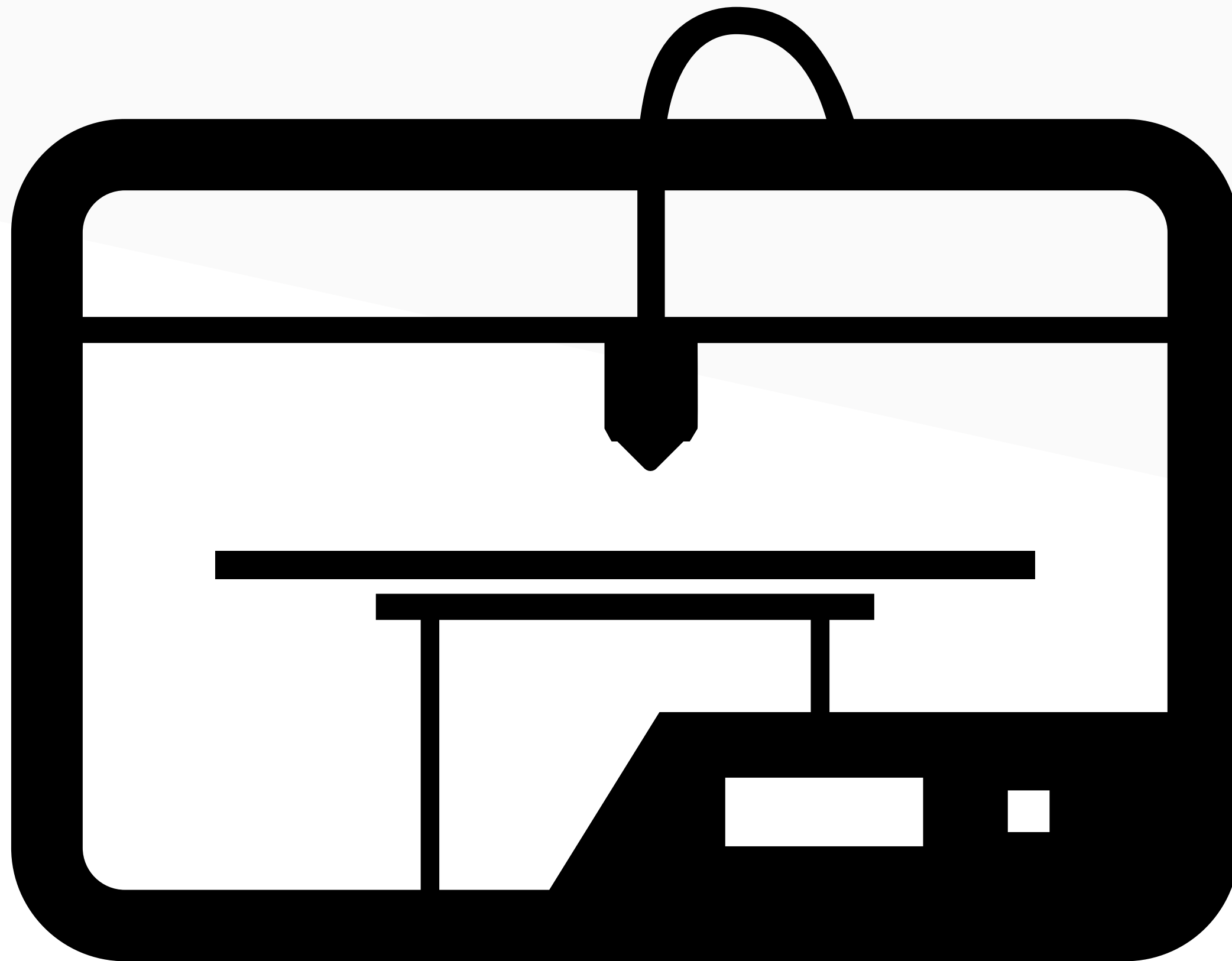




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CARBON FIBER PLA

Print Settings



Temp: Start with PLA

+/- 190°C -210°C NOT hotter than 240° C

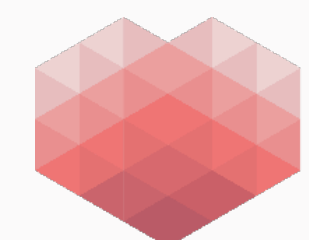
Nozzle: 0.5mm < is better

Printing Speed: PLA or slower

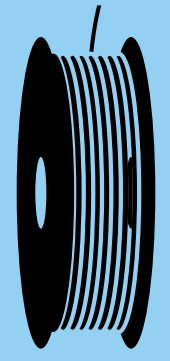
Bed Temp (not required): up to 60° C

It's brittle so don't force it - it will break

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3D HUBS



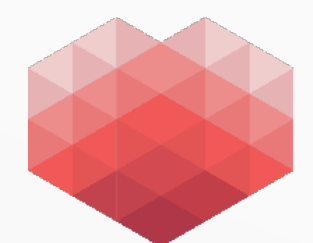
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CARBON FIBER PLA

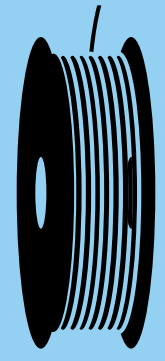
Applications



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3D HUBS



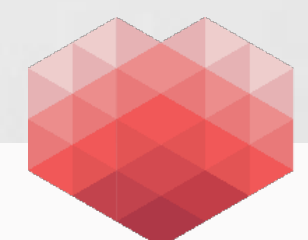
FILAMENT WORKSHOP

CARBON FIBER PLA

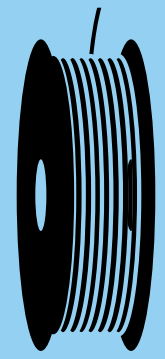
Applications



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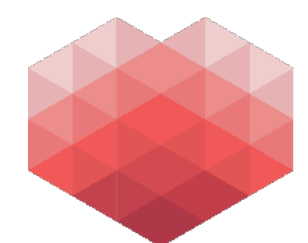


FILAMENT WORKSHOP

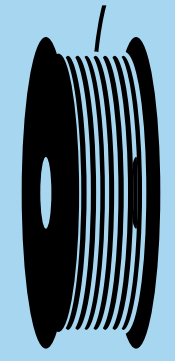
Next Generation Materials
STAINLESS STEEL PLA



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3D HUBS

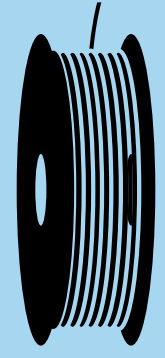


Pros

- Easy to use (similar to PLA)
- Metal weight with density similar to Aluminum)
- Hard, polishable, wear-resistant surface
- Finishes like metal for cast, brushed, or polished look

Cons

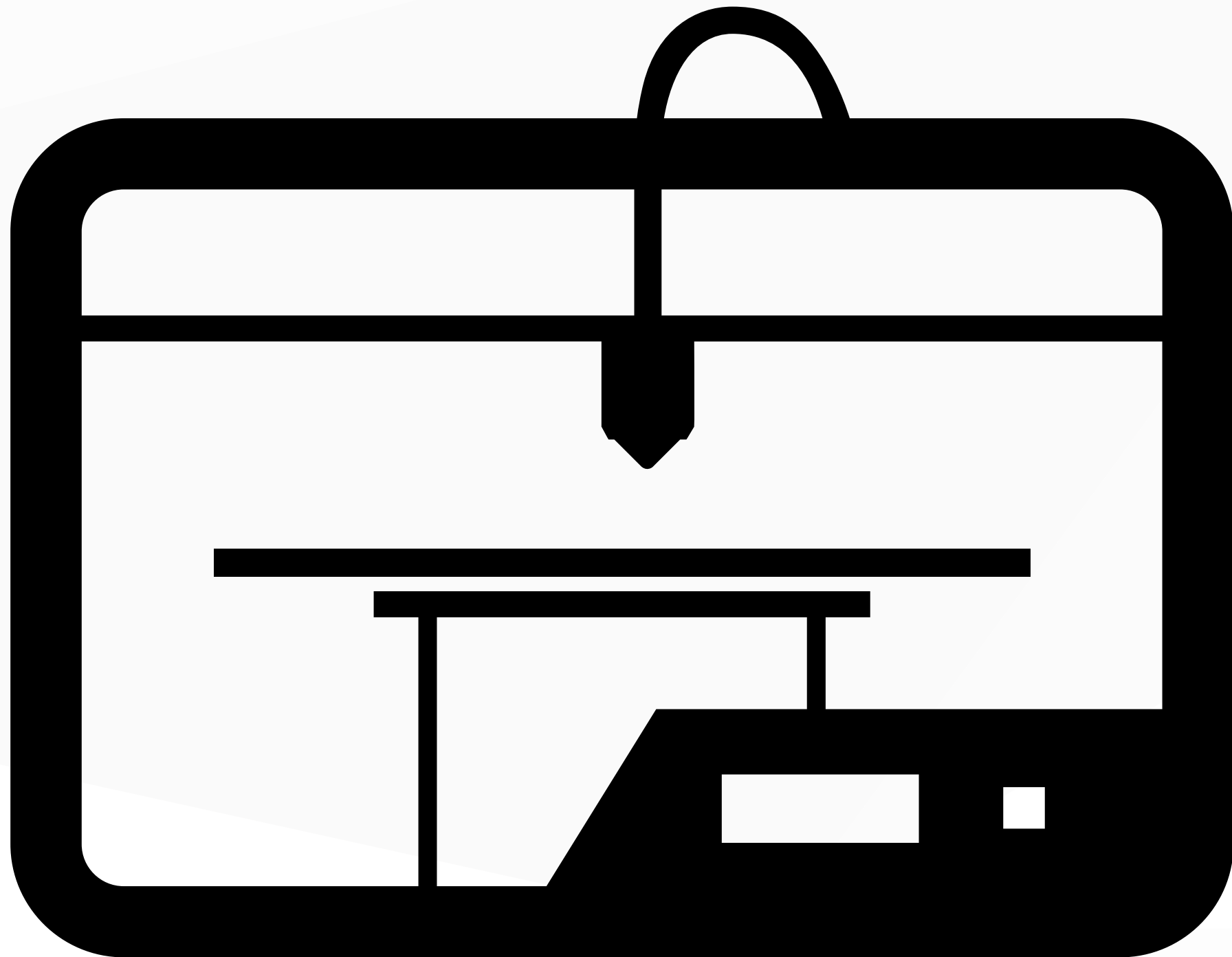
- More brittle than PLA
- Abrasive = accelerate wear for soft nozzles
- Need to polish intricate detail
- **NOT** replacement for Metal Parts



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STAINLESS STEEL PLA

Print Settings



Temp: Start with PLA +/- 190°C -210°C (NOT > 240° C)

Experiencing short extrusion:

1: Increase Temperature (NOT >240)

2: Increase flow rate

Hear clicking? You've increased it to much

Nozzle: 0.5mm < is better

Printing Speed: PLA or slower

Bed Temp (not required): up to 60° C

FILAMENT WORKSHOP

STAINLESS STEEL PLA Applications



FILAMENT WORKSHOP

STAINLESS STEEL PLA Applications



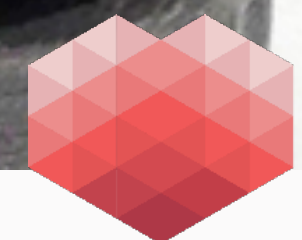
Proto-pasta  3D HUBS

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STAINLESS STEEL PLA Applications



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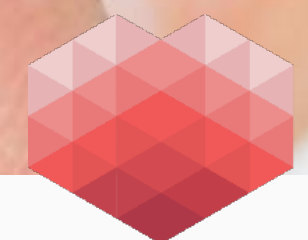
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STAINLESS STEEL PLA Applications



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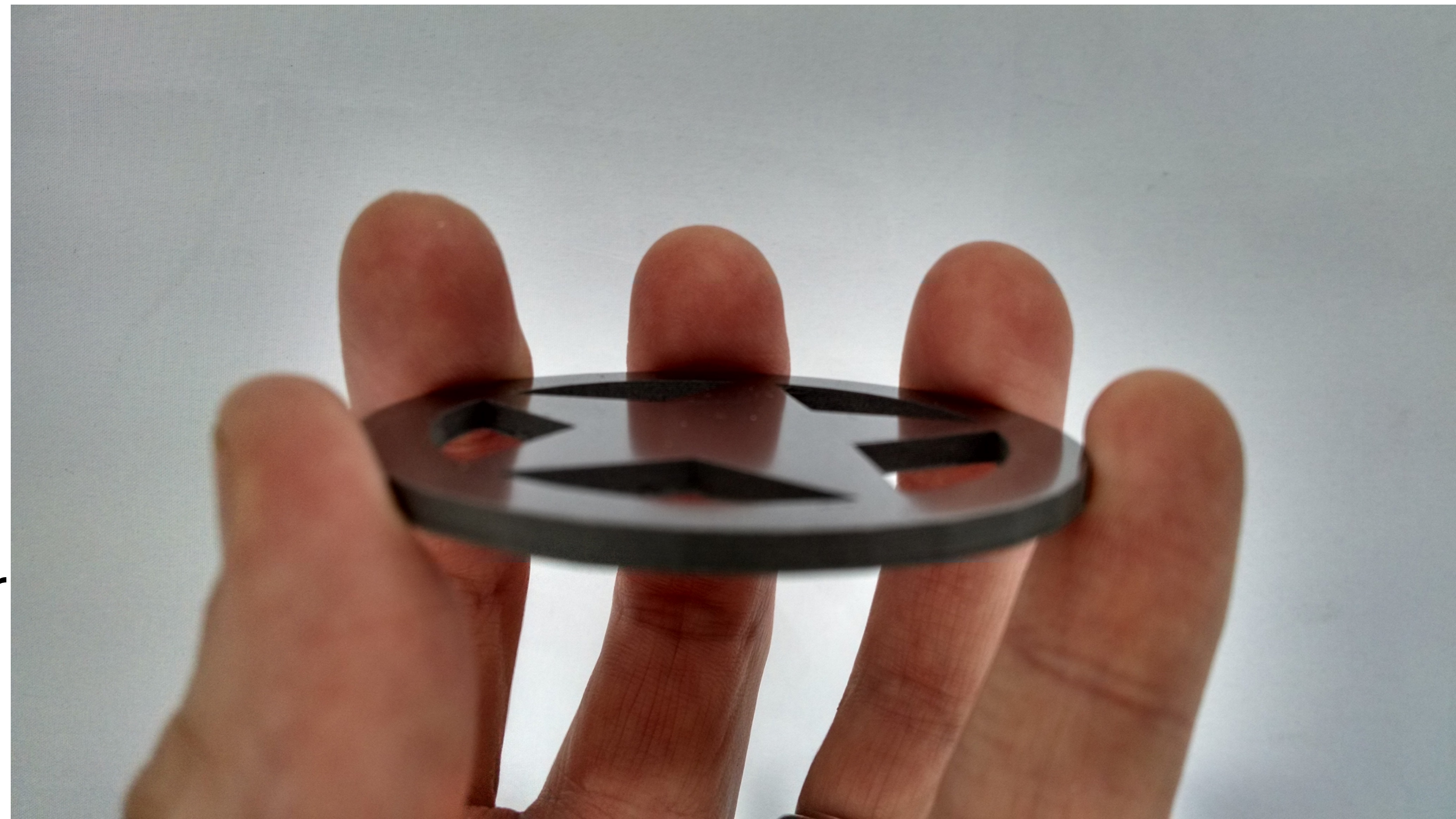
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STAINLESS STEEL PLA

Your first print

- Design with large flat surface or gentle contours
- Thick walls or 100% fill when slicing
- Brittle so handle carefully
- Play with settings, BUT temp not higher than 240°C
- Clicking? Lower flow rate

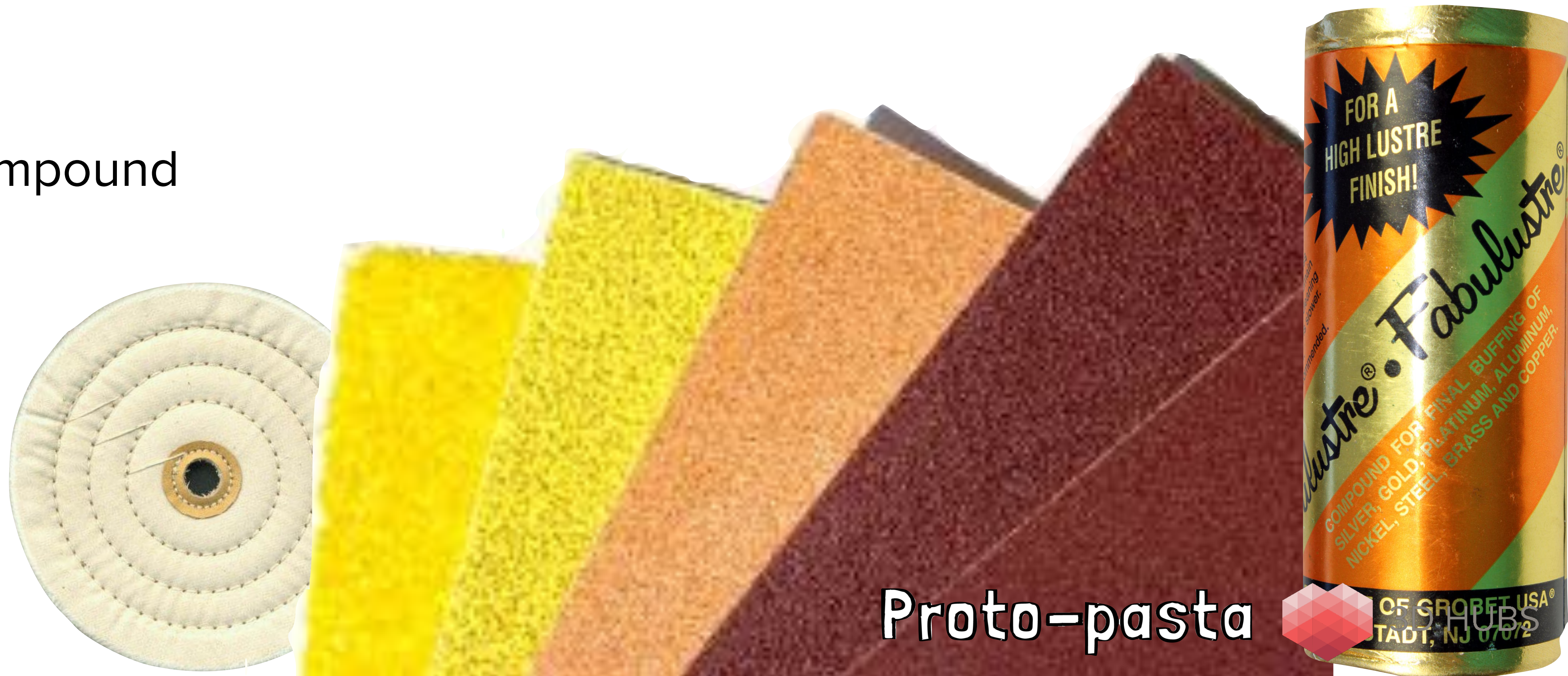


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STAINLESS STEEL PLA Polishing prints

MATERIALS

- Sandpaper
- Cloth wheel
- Polishing compound



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OF GROBET USA®
STADI, NJ 07072

METHOD

- 100 to 2000
- Gentle touch
- Directional Sanding to remove previous scratches
- Gentle polishing
- Burned Surface? Just sand again



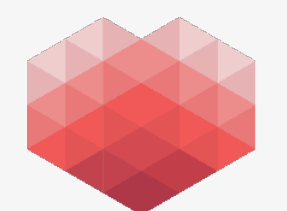
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STAINLESS STEEL PLA

Stages of polishing



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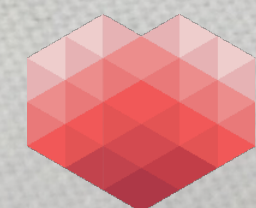
FILAMENT WORKSHOP

STAINLESS STEEL PLA

Stages of polishing prints



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RESOURCES

CARBON FIBER PLA

Density	1.3 g/cm ³ (1300 kg/m ³)
Advised Printing Temp.	190°C - 210°C (not higher than 240°C)
Advised Heated Bed	Not Necessary
Recommended Nozzle	.5mm nozzle & direct-drive spring loaded pinch-roll style extrusion head



STAINLESS STEEL PLA

Density	2.4 g/cm ³ (2400 kg/m ³)
Advised Printing Temp.	195 - 220° C
Advised Heated Bed	50° C (not required)
Recommended Nozzle	.5mm nozzle & direct-drive spring loaded pinch-roll style extrusion head



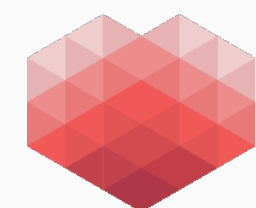
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FILAMENT WORKSHOP

notes

- Flyer: print settings & properties
- www.proto-pasta.com
- TALK www.3dhubs.com/talk

Proto-pasta



3D HUBS

Share your prints on TALK



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3D PRINT 1

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Black CTC 3D Printer Nozzle Style? Thread Size?

I want to upgrade my nozzles to either stainless steel nozzles or wear resistant brass nozzles. What style is the nozzle? MK8? MK10? I was looking at these nozzles at proto-pasta: <http://www.proto-pasta.com/collections/retail/products/wear-resistant-brass-nozzles>



Matt_Vasquez

6 days ago

2 comments (2 new)

/CTC LTD

/ProtoPasta

▲
3
▼

accelerated nozzle wear.

Hi, What does accelerated nozzle wear mean ? I've read this on the website of proto-pasta in the product details of the Stainless steel pla **This filament is more abrasive than standard PLA. Prolonged use may result in accelerated nozzle



StudioK

22 days ago

4 comments (4 new)

/ProtoPasta

/Filament

ProtoPasta Talk

4 followers

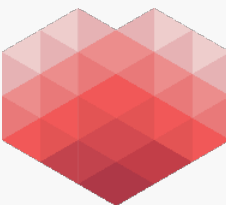


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About ProtoPasta

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Prints Like Plastic, Polishes Like Metal!

Marvin looks great no matter what material he is printed in, but he is particularly stylish in Stainless Steel. Part PLA, part Steel, [Proto-pasta Stainless Steel](#) (SSPLA) turns your affordable PLA-compatible printer into a jewelry, costume, prop, figurine, robot-making factory. Workable with familiar metal-working techniques, Proto-pasta Stainless Steel PLA can left as-printed for a cast aesthetic and brushed or polished for a bright metallic look. Compliment the ageless elegance of SSPLA with [Magnetic Iron](#) (FEPLA) for a previously unacheiveable rusty patina. Creatives unite!



AlexDick

6 months ago

/Filament

/ProtoPasta



REPLY



[@Daewootech](#) We hear your "boos" and haven't forgotten about our 2.85mm users. We have prototyped some 3mm, just a bit more testing before we make it available. Stay tuned...



AlexDick

6 months ago

Reply



cool i signed up for updates, down to sample one of everything if you can do a sample pack

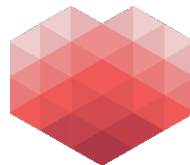


Daewootech

6 months ago

Reply

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WHERE TO GET MORE

Proto-pasta

Proto-pasta is known for their exotic Filaments, they include Conductive, Magnetic, Carbon Fiber and Stainless Steel.

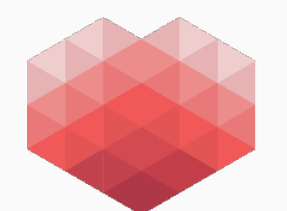
10%

FILAMENT DISCOUNT

Hub Perks

Level	Discount
1 - Rookie (1 order completed)	10%
2 - Starter (5 orders completed)	15%
3 - Intermediate (25 orders completed)	20%
4 - Professional (125 orders completed)	25%

Proto-pasta



3D HUBS

Thanks for joining us!

@Proto_pasta

@3DHubs_US

#3DHubsEvents