



## Proto-pasta - 2.85mm Diameter - Magnetic Rustable Iron Filament - 500g

PRODUCT ID: 3753

There are multiple versions of this item. Please select one from the options below:

Proto-pasta - 2.85mm 0.5kg - Magnetic Rustable Iron -- discontinued

DISCONTINUED

DESCRIPTION

TECHNICAL DETAILS



## DESCRIPTION

Pici up this filament today! It'd be Fusilli not to buy this filament! We can't tagliatelle you enough about this filament. Are these puns Spinali-ng out of control?

Sorry! We had to get that out of our system. Proto-pasta's fun packaging makes us hungry for Italian food. If you're hankering for unusual and unique material filaments, we've got a new spool of noodles for you!

This **Proto-pasta 2.85mm Diameter 500g Filament in Magnetic & Rustable Iron** opens up a new world of 3D-printed fun *with* electronics!

Proto-pasta Conductive PLA is an FFF/FDM filament, so now you can print circuit assemblies with [touch or light sensors](#) or [LEDs](#) to your gamut of 3D printed creations!

Since this filament behaves similarly to iron, it's actually [ferromagnetic](#), as opposed to magnetic. This means that magnets will stick to items printed with this filament, but 3D printed projects **will not** behave as magnets.

This filament behaves similarly to iron - even to the point of rusting - making it a fantastic choice for costumes and props, so you can achieve that beautiful, aged appearance.

And, of course, even though it has the word "Pasta" in the name, it's *not* for eating.

This filament performs best when extruded between **185°C and 215°C**.

[Check out Proto-pasta's helpful tips for rusting methods!](#)

[If you're looking for more information on the different types of 3D printing material, here's a great tutorial on our Learn System!](#)





## TECHNICAL DETAILS

### Resistivity:

- Volume resistivity of molded resin (not 3D Printed): **15 ohm-cm**
- Volume resistivity of 3D printed parts along layers (x/y): **30 ohm-cm**
- Volume resistivity of 3D printed parts against layers (z): **115 ohm-cm**
- Resistance of a 10cm length of 2.85mm filament: **600ohm**

**Bed Temp** (if available, is not required): **50°C**

**Hot End Temp:** **215 – 230°C** (Proto-pasta runs it on the hotter side to encourage layer adhesion)

### Performance:

- Strength: Fair strength. More flexible than PLA, but less layer adhesion
- Stiffness: Low, semi-flexible
- Heat Resistance: Similar to PLA, use below 50°C
- Layer Adhesion: Fair layer adhesion. Not as good as normal PLA
- Flexibility: Filament is quite flexible but will break if bent repeatedly (particularly 2.85mm). Printed parts are rigid if more than a mm or two thick. Thin sections are somewhat flexible but fail along layer lines if flexed more than a few times.
- Failure Mode: If flexed to breakage, failure will be along layer lines.
- Warping: Very low warping
- Dual-Head compatibility: Compatible with (sticks to) PLA in dual material prints

Proto-pasta Conductive PLA is a compound of Natureworks 4043D PLA, a dispersant and conductive carbon black. In filament form, it is very flexible, and is compatible with any PLA printing printer.

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