



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

PRODUCT ID: 3753

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 Spirali-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

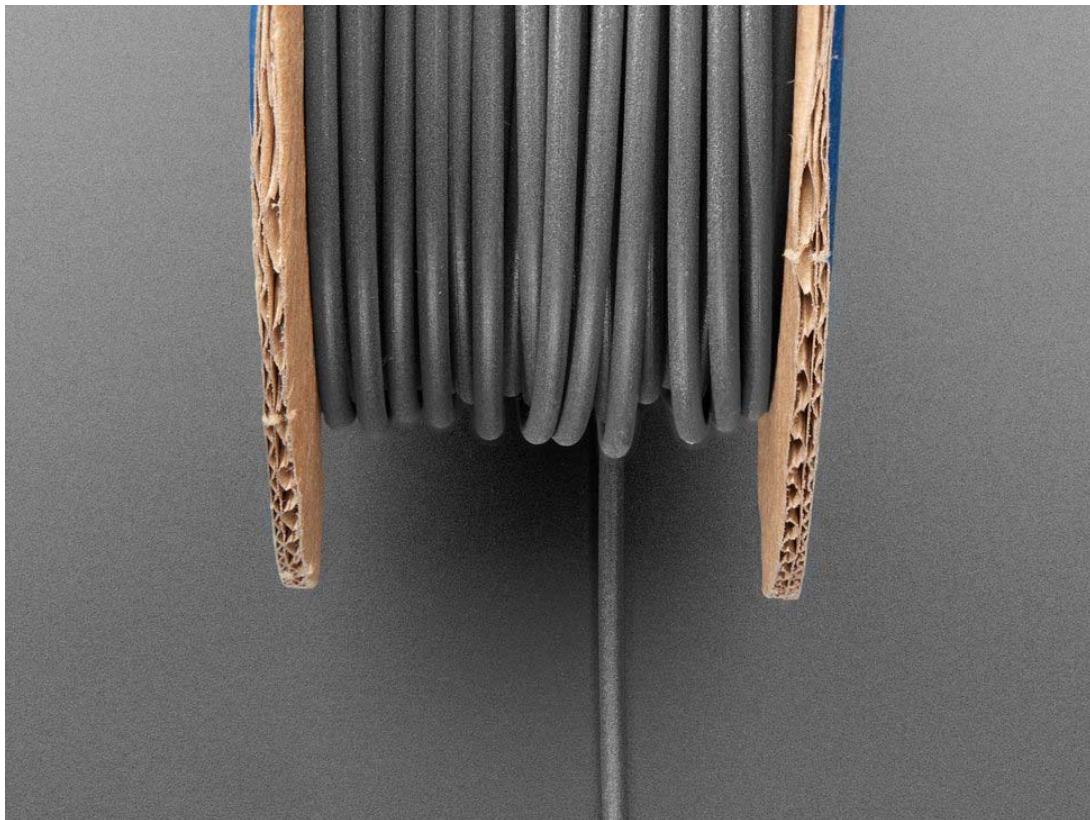
Hot End Temp: 215 – 230°C (Proto-pasta runs it on the hotter side to encourage layer adhesion)

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.



<https://www.adafruit.com/product/3753> 3-12-18