

# Datasheet

## RS Pro MT-COPPER

### RS Stock No: 1254347

MT-COPPER our 80% copper filled filament which is easy to print, sand & polish. With MT-COPPER you can create the most beautiful objects with real METAL characteristics, such as a 3 x higher weight than PLA a METAL feel & touch and thermo-conductivity. Due to the high percentage of fillers MT-COPPER has virtually no shrinkage. A special lubricant increases the flow and prevents MT-COPPER from adhering to the nozzle. Finally all of the above combined with the correct hardness results in a filament that can be printed on almost every type of FDM 3D printer available on the market with retraction enabled on nozzles  $\geq 0.35$  mm.

#### Features:

- Approx. 80% copper content
- PLA-based, 3 times heavier
- Metal feel & "cold" touch
- Excellent printability on both direct & Bowden style 3D printers
- Processing additive added for easy & reliable printing
- Quick & easy polishing and other post-processing
- Possibility to print with retraction
- Works on nozzles  $\geq 0.35$  mm



Printed

Sanded and Polished

Patinated

## Dimensions

Size	Ø tolerance	roundness
1,75mm	±0,05mm	≥ 95%
2,85mm	±0,10mm	≥ 95%

## Physical properties

Description	Test method	Typical value
Specific gravity	ISO 1183	3,41 g/cc
MFI	-	n.a.
Yield stress (50mm/min)	ISO 527	18,3 MPa
Strain at break (50mm/min)	ISO 527	4,5%
Tensile (E) modulus (1mm/min)	ISO 527	4210 Mpa
Impact strength, Izod Unnotched 23°C	ISO 180/A	9,3 KJ/m <sup>2</sup>

## Thermal Properties

Description	Test method	Typical value
printing temp.	DF	195-220 °C
melting temp.	ISO 294	195°C ±10°C
vicat softening temp.	ISO 306	±65°C

### Additional info:

**MT-COPPER** can be printed without a heated bed, but if you do have a heated bed the recommended temperature is ±35-60°C. Storage: Cool and dry (15-25°C) and away from UV light. This enhances the shelf life significantly.

**MT-COPPER** can be used on all common desktop FDM or FFF technology 3D printers.

\* Please consider the use of a hardened steel nozzle when printing with MT-COPPER

The copper powder inside makes the filament abrasive and will result in fast wear of regular brass nozzles.

- Please have a look at the Printing, post-processing & other info document for further tips & tricks