

# PrintaMent METAL

## DATASHEET

### Description

METAL is our 80% bronze filled filament which is easy to print, sand & polish. With this filament you can create the most beautiful objects with real METAL characteristics, such as a 3 x higher weight than standard PLA, a METAL feel & touch and thermo-conductivity. A special lubricant increases the flow and prevents the filament to adhere to the nozzle. Finally all 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. please consider to use a hardened nozzle

### Features

- Approx. 80% bronze 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

### Colors

Bronze - Copper

### Additional Info

METAL filament can be printed without a heated bed, but if you do have a heated bed the recommended temperature is  $\pm 35$ -

60°C. Storage: Cool and dry (15-25°C) and away from UV light. This enhances the shelf life significantly.

### Technical Data

#### Dimensions

| Size                        | Tolerance           | Roundness |
|-----------------------------|---------------------|-----------|
| $\varnothing 1,75\text{mm}$ | $\pm 0,05\text{mm}$ | >95%      |
| $\varnothing 2,85\text{mm}$ | $\pm 0,10\text{mm}$ | >95%      |

#### Physical Properties (Bronze)

| Description                          | Typical Value |
|--------------------------------------|---------------|
| Specific gravity                     | 3,39 g/cc     |
| Yield stress (50mm/min)              | 18,3 MPa      |
| Strain at break (50mm/min)           | 8,00%         |
| Tensile (E) modulus (1mm/min)        | 3990 Mpa      |
| Impact strength, Izod unnotched 23°C | 11,3 KJ/m2    |

#### Physical Properties (Copper)

| Description                          | Typical Value |
|--------------------------------------|---------------|
| Specific gravity                     | 3,41 g/cc     |
| Yield stress (50mm/min)              | 18,3 MPa      |
| Strain at break (50mm/min)           | 4,5%          |
| E-modulus (1mm/min)                  | 4210 Mpa      |
| Impact strength, Izod unnotched 23°C | 9,3 KJ/m2     |

#### Thermal Properties

| Size                  | Roundness      |
|-----------------------|----------------|
| Printing temp.        | 195-220°C      |
| Melting temp.         | 195 $\pm$ 10°C |
| Heat Deflection Temp. | $\pm 65$ °C    |