

## MT-BRONZE @df

MT-BRONZE @df is our 80% bronze filled filament which is easy to print, sand & polish. With MT-BRONZE @df you can create the most beautiful objects with real METAL characteristics, such as a 3 x higher weight than PLA @df, a METAL feel & touch and thermo-conductivity. Due to the high percentage of fillers MT-BRONZE @df has virtually no shrinkage. A special lubricant increases the flow and prevents MT-BRONZE @df 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.

### 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



Printed

Sanded & Polished

Patinated

### MT @df range:

MT-BRONZE @df is available from stock in its natural bronze colour. For other METALS have a look at our website.



### Packaging:

MT-BRONZE @df is available in nearly any type of packaging and labelling. Keep in mind the high density of the product to select the preferred amount per reel. Ask our team to help you customizing your product.

### Additional info:

MT-BRONZE @df can be printed without a heated bed, but if you do have a heated bed the recommended temperature is  $\pm 35-60^{\circ}\text{C}$ . Storage: Cool and dry ( $15-25^{\circ}\text{C}$ ) and away from UV light. This enhances the shelf life significantly.

MT-BRONZE @df 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-BRONZE @df.

The bronze 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.

### Dimensions

| Size   | $\varnothing$ tolerance | roundness   |
|--------|-------------------------|-------------|
| 1,75mm | $\pm 0,05\text{mm}$     | $\geq 95\%$ |
| 2,85mm | $\pm 0,10\text{mm}$     | $\geq 95\%$ |

### Physical properties

| Description  | Testmethod | Typical value          |
|--|------------|------------------------|
| Specific gravity                                     | ISO 1183   | 3,39 g/cc              |
| MFI  | -          | n.a.                   |
| Yield stress (50mm/min)                              | ISO 527    | 18,3 MPa               |
| Strain at break (50mm/min)                           | ISO 527    | 8,0%                   |
| Tensile (E) modulus (1mm/min)                        | ISO 527    | 3990 Mpa               |
| Impact strength, Izod unnotched $23^{\circ}\text{C}$ | ISO 180/A  | 11,3 KJ/m <sup>2</sup> |

### Thermal Properties

| Description           | Testmethod | Typical value                                 |
|-----------------------|------------|---|
| printing temp.        | DF         | 195-220 $^{\circ}\text{C}$                    |
| mellting temp.        | ISO 294    | 195 $^{\circ}\text{C} \pm 10^{\circ}\text{C}$ |
| vicat softening temp. | ISO 306    | $\pm 65^{\circ}\text{C}$                      |