

Printing, post-processing & other info

Printing:

The MT @df range of filaments, such as MT-COPPER @df and MT-BRONZE @df are quite easy to print on any type of hot-end with any 0.35 or 0.4 mm nozzle although we do recommend a spring loaded extruder with a (hardened) stainless steel nozzle. The high percentage of metal makes the filament abrasive which will result in quick nozzle degradation with regular messing nozzles.

Through extensive testing we can report that retraction does not have to be disabled. it is recommended to first do some tests to check whether your tension settings are perfect when your 3D printer does not have a spring loaded extruder.

Testing shows excellent results on any Direct, Bowden or Hybrid type extruder / hot-end combination.



Post-Processing:



Post-processing the MT @df range is quite an easy process though manual labour is required when you do not have access to an so called “rock tumbler” which gives the best polished results.

Step 1: A 3D printed Buddha with 90% infill and 0.15 layers

Step 2: This photo shows the Buddha after a quick brushing with a soft messing brush.

Step 3: Photo 3 displays the Buddha after sanding with 600 grid sandpaper and water*

Step 4: During this step of the process we took a Dremel with a polish wheel together with metal polish which results in a shiny metal object. Depending on how much time and effort is put in step 3 & 4 you will have even better results.

Step 5: This step of the process is optional although many people love to have a patina on their printed object for aesthetical reasons**

* Do not worry about the white haze after sanding. This is a byproduct from our included process aid which will be gone after polishing

** A blog post in the future will focus on how to achieve different patina's.

Important information:

MT-COPPER @df and MT-BRONZE @df are filled with 80% metal powder which results in Abrasiveness to your nozzle. We have found that this should not give any problems during printing though it is recommended to use specialized “hardened” (stainless steel) nozzles as these do not wear as quick as common brass nozzles.

In the photo on the right you can see the wear of a standard Dremel 3D printer nozzle after printing non-stop for 22.5 hours.



If you decide to print with a regular nozzle we recommend that you change to a new nozzle in between prints to avoid disappointing print quality or defects in your printed object.