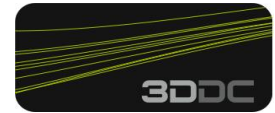


Metalise it...

Our Services:



1.) Improve YOUR part

Metalise it...

...technical



- ⇒ Enhance mechanical properties
- ⇒ Improve part geometry
- ⇒ Rapid manufacturing applications
- ⇒ Achieve fully functional RP models

or a combination

...decorative



- ⇒ Design applications
- ⇒ Precious metals
- ⇒ Different appearance

"Technical and shiny Nickel coatings offer the most cost-effective solution"

2.) Base material

Suitable materials*
for our Metalise it... process

* Please feel free to ask for
any other material

...Rapid Prototyping (RP)

- ⇒ SLA
- ⇒ SLS
- ⇒ FDM
- ⇒ Epoxy tooling board
- ⇒ vacuum casting
- ⇒ Objet

not approved yet ⇒ Alumide

...Plastics

- ⇒ ABS
- ⇒ ABS/PC
- ⇒ PEEK
- ⇒ PVC
- ⇒ Acrylic
- ⇒ PE

...Engineering materials

- ⇒ Carbon fibre
- ⇒ Tufnol

...Metals

- ⇒ Brass
 - ⇒ Aluminium*
- * needs to be approved

⇒ plating of other materials on request - we offer free trials for Your material !

3.) Get your model ready for the plating process:

3DDC will work with you to meet your expectations of the Metalise it ... process. Achieving the right surface finish on the part to be plated is vital. Any imperfections become more noticeable after metalisation. It is very important for us to give you the full understanding on the required surface finish of the delivered part.



a.) Offset your parts

Ensure that the CAD model is offset by the correct amount before producing the parts on the RP machine.

- Offset ? → *example*: plating 0.1mm → build Offset = **0.1mm**

b.) Preparation

Based on your expectation for the surface quality after metalisation we would recommend/advise the following:

SLS / FDM

- surface quality ⇒ High gloss polished surfaces finish not feasible (adequate additive layer must be applied - approval from 3DDC required)



SLA / Vacuum castings / Objet / tooling board

- uncured resin ⇒ Blistering of metal layer
 rough / improper finish ⇒ Imperfection will be magnified by metal layer



- technical application → finish part with **240/320 grade sandpaper**
 decorative application → finish part with **400/600 grade sandpaper**

surface quality of provided parts:

microholes / imperfections



expected finish after metalisation:

imperfections will be magnified after metalisation



Rough finish / build layer



layer structure will be highlighted after metalisation

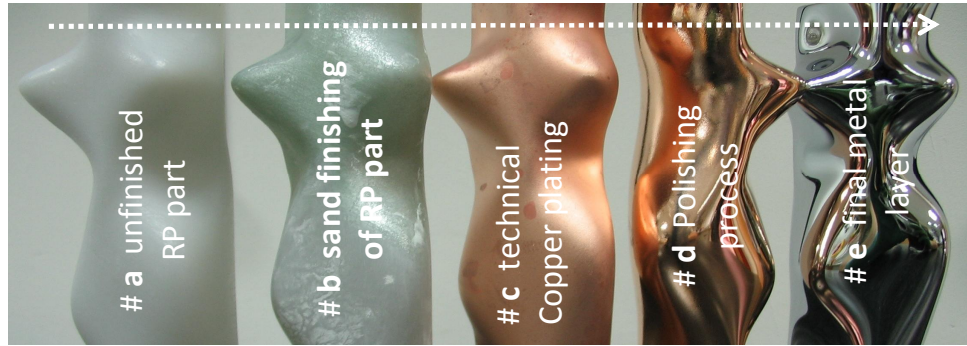


c.) Repair required ?

If rework on **small** defects is necessary then we would recommend use of the following:

<input type="checkbox"/> repair	→ Loctite 480 / Pattex Stabilit (Henkel®)
<input type="checkbox"/> not recommended	Other additive layers (primer, filler,...) would have to be approved upfront by 3DDC Ltd. Please feel free to contact us.

4.) The process steps for a high gloss polished finish



1. step:

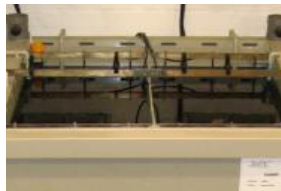
Chemical etching of Your RP part / plastic



process : Electroless process

2. step:

Technical Copper plating



process : Electroplating

2+. step:

The technical Copper must be polished for high gloss metal finishes



process : hand labour

3. step:

Final metal layer will be applied

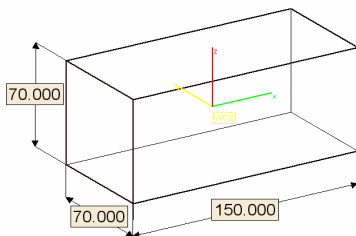


process : Electroplating

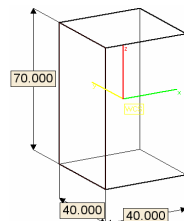
5.) Limitations

Remark: Maximum length of parts could be up to **1.50m** (oversize)

In general the process is limited by production set up. **But please consult 3DDC for special part sizes / geometries.**



plating process limitation:
150x70x70cm



black Nickel:
40x40x70cm

6.) Our Metalise it... plating options

Technical metal finishes :

Technical coatings are not designed for decorative purposes

oversize: → #2 **technical NICKEL**

options: (standard / #2.2 brushed / #2.4 shiny)

width: 400mm → #5 **Black technical NICKEL**

options: (standard / #5.4 black shiny)

Decorative metal finishes :

oversize: → #1 **COPPER**

options: (#1.1 high gloss / #1.2 brushed / #1.3 satin)

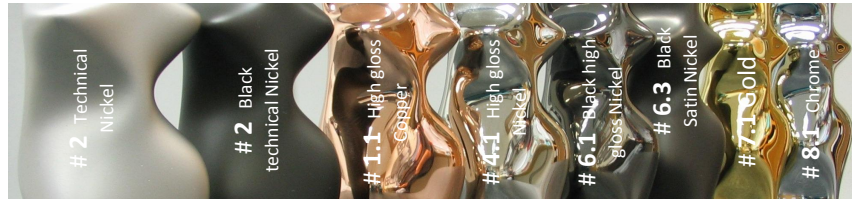
Size limit:

→ #4 **High gloss NICKEL**

options: (#4.1 high gloss / #4.2 brushed / #4.3 satin)

width: 400mm → #6 **Black high gloss NICKEL**

options: (#6.1 black high gloss / #6.3 satin)



→ Please contact 3DDC Ltd. for special plating as precious metals / finishing requirements!

on request: → Precious metal finishes (#7.1 Gold, #8.1 Chrome,...)

surface options: → #.1 **high gloss** polished / #.4 **shiny** (glossy, unpolished) / #.2 **brushed** / #.3 **satin**

*Every imperfection in the RP part, casting or machined parts will be visible / magnified by the metal layer.



HIGH GLOSS:
Requested areas would be high gloss polished.



SHINY:
Part **won't** be polished. Surface quality based on the master model. Glossy appearance of final metal layer.

7.) Precondition to start YOUR job

- request for quotation / questions ?
- Plating finish / thickness ?
- Purchase Order / Job-confirmation ?
- correct CAD data (MGX, STL, IGES) ?
- Delivery date / address ?

→ 3ddc@3ddc.eu

Please don't hesitate to contact us for further questions or visit our webpage
www.3ddc.eu

Confidential

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