

MATERIALS COMPARISON - Design guidelines

Metals



A brand of BASF - We create chemistry

	MATERIAL	LAYER THICKNESS	MINIMUM WALL THICKNESS	MAX SIZE (mm)	MIN SIZE (mm)	MAGNETIC PROPERTIES	MINIMUM VISIBLE DETAIL	MINIMUM CLEARANCE	MIN SIZE OF TEXT	ENGRAVING	EMBOSSING	ENLARGEMENT RATIO	INTERLOCKING PARTS	ASSEMBLY	HOLLOWING	ENCLOSED PARTS
FDM	Ultrafuse® 316L	150µm	1 mm	80x80x80mm	-	Yes	-	0.6 mm		0.40 mm – 1 mm	0.60 mm – 1 mm	-	Not recommended	No	-	Not recommended
DMLS / SLM	Aluminum AlSi7Mg0.6	150 µm	1 mm	220 x 220 x 250	-	No	1 mm	0.2 mm	1 mm	1 mm	1 mm	1:1	No	No	No	No
	Titanium 6Al-4V	30 µm	1 mm	220 x 220 x 250	-	No	1 mm	0.2 mm	1 mm	1 mm	1 mm	1:1	Not recommended	No	No	Not recommended
	Stainless Steel 316L	40 µm	1 mm	325 x 250 x 250	-	No	1 mm	0.2 mm	1 mm	1 mm	1 mm	1:1	Not recommended	No	No	Not recommended
Binder Jetting	Steel/ Bronze 420SS/BR	100 µm	1.1 mm to 3.2 mm	Unpolished: 400 x 250 x 250 Unpolished plated: 177.8 x 177.8 x 177.8 Polished: 152.4 x 152.4 x 152.4	Unpolished: 0.3 x 1.27 x 0.8 Polished: 15 x 15 x 15	Yes	0.8 mm	0.5 mm	0.76 mm	0.76 mm	0.76 mm	1:1	No	No	No	No
	Stainless Steel 316	100 µm	1.1 mm to 3.2 mm	120 x 50 x 50	Polished: 15 x 15 x 15	Yes	0.8 mm	0.5 mm	0.76 mm	0.76 mm	0.76 mm	1:1	No	No	No	No
Wax Casting	Bronze	25 µm	0.8 mm	120 x 88 x 88	-	No	0.4 mm	0.3 mm	Width: 0.5 mm Height 1.5 mm	0.4 mm	0.5 mm	1:1	No	No	No	No
	Brass	25 µm	0.8 mm	120 x 88 x 88	0.6 x 2.4 x 2.4	No	0.4 mm	0.3 mm	Width: 0.5 mm Height 1.5 mm	0.4 mm	0.5 mm	1:1	No	No	No	No
	Sterling Silver	25 µm	0.8 mm	60 x 80 x 100	2.4 x 2.4 x 0.8	No	0.4 mm	0.3 mm	Width: 0.5 mm Height 1.5 mm	0.4 mm	0.5 mm	1:1	No	No	No	No

All materials available at: sculpteo.com