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3D printing material table of contents

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'///. NYLON RUSH *available finish: flat



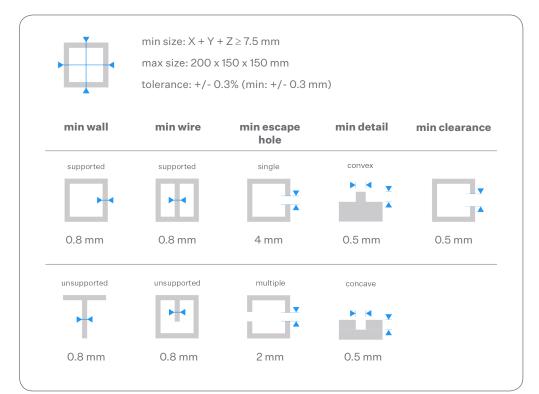
052 marshmallow

prints in	price	resolution	texture	technology	
5	\$ \$\$\$	medium high	semi-smooth	sls	

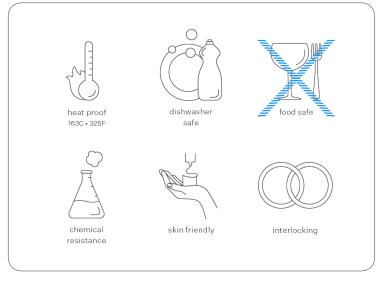
· common print types:

 ${\it accessories+decor, jewelry, sculptures, mechanical parts, prototypes, prosthetics}$

material composition:



pros	cons
high detail	• visible print layers
strong + durable	flexibility depends on
can be flexible	thickness
prints thin + hollow	• susceptible to warping
can be dyed + sanded	low impact resistance
available rush	• no complex geometry



'///. NYLON SUPER *available finish: semi-gloss









054 charcoal

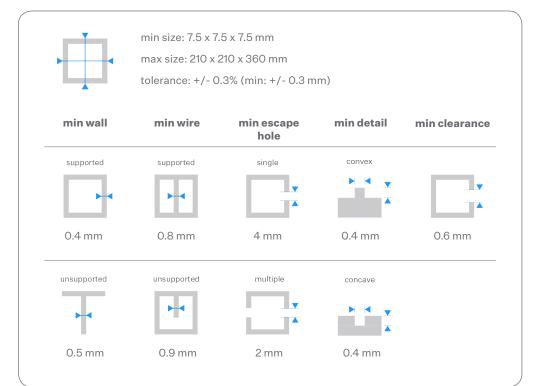
color may vary

prints in	price	resolution	texture	technology	
15	\$\$\$\$	medium high	smooth	sls	

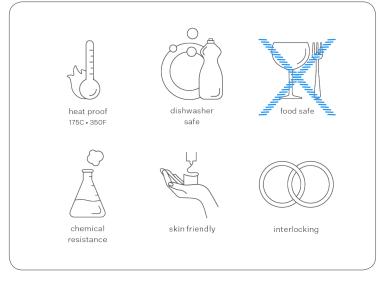
· common print types:

accessories + decor, jewelry, sculptures, mechanical parts, prototypes, prosthetics

material composition:



pros	cons
 strong + durable + rigid prints thin + hollow functional 	visible print layers susceptible to warping potential distortion of sharp edges (3mm fillet recommended)



'///. NYLON STANDARD *available finishes: matte

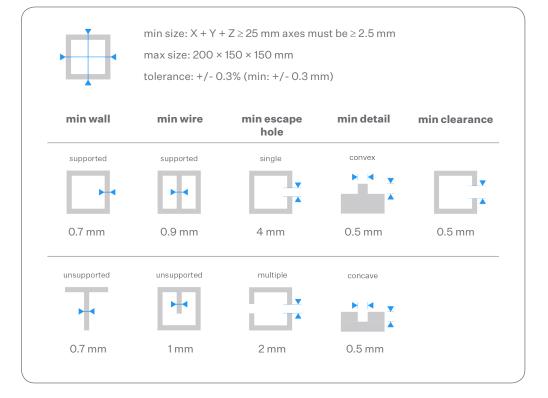


(prints in	price	resolution	texture	technology	`
	12	\$ \$\$\$	medium high	semi smooth	sls	

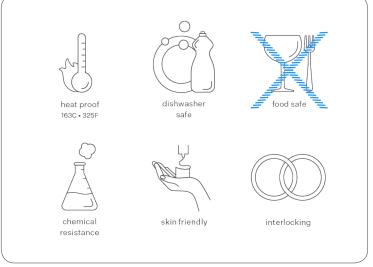
common print types:

accessories + decor, jewelry, sculptures, mechanical parts, prototypes, prosthetics

material composition:



pros	cons
• high detail	• visible print layers
• strong + durable	 flexibility depends on
• can be flexible	thickness
• prints thin + hollow	 susceptible to warping
• can be dyed + sandpapered	• low impact resistance
	• scratchable
	all colors may wear
	•white may yellow with time



'///. NYLON PREMIUM *available finish: semi-gloss

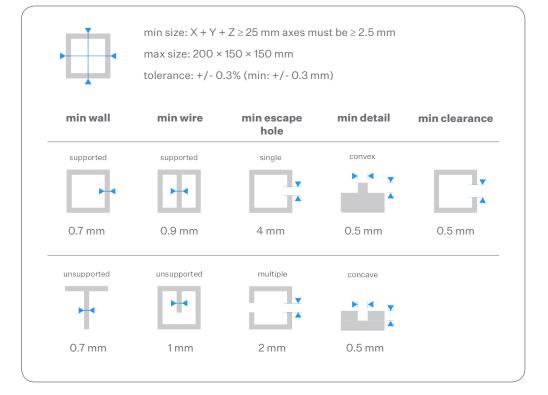


prints in	price	resolution	texture	technology
12	\$ \$\$\$	medium high	smooth	sls

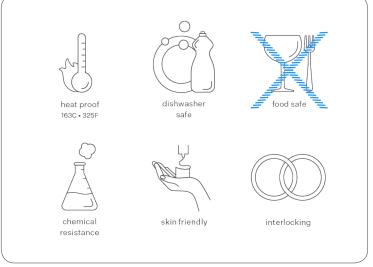
common print types:

accessories + decor, jewelry, sculptures, mechanical parts, prototypes, prosthetics

material composition:



pros	cons
• high detail	visible print layers
• strong + durable	flexibility depends on
• can be flexible	thickness
• prints thin + hollow	• susceptible to warping
• can be dyed + sandpapered	low impact resistance
• scratch resistant	• all colors (except white)
	may wear



'///. NYLON LARGE *available finish: flat



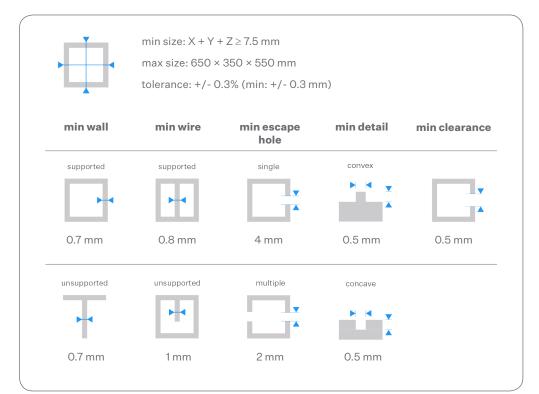
073 chalk

prints in	price	resolution	texture	technology
12	\$ \$\$\$	medium high	semi-smooth	sls

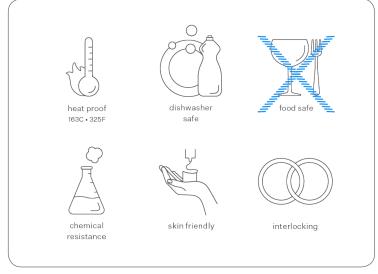
· common print types:

 ${\it accessories+decor, jewelry, sculptures, mechanical parts, prototypes, prosthetics}$

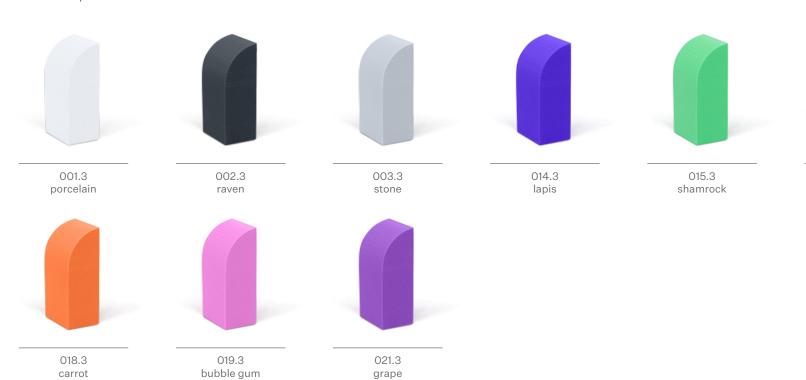
material composition:



pros	cons
• high detail	• visible print layers
• strong + durable	flexibility depends on
• can be flexible	thickness
• prints thin + hollow	• susceptible to warping
• can be dyed + sandpapered	low impact resistance
• prints large	



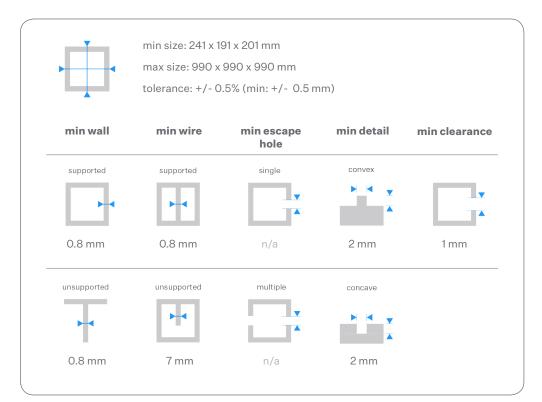
*///. PLA LOWRES *available finish: satin



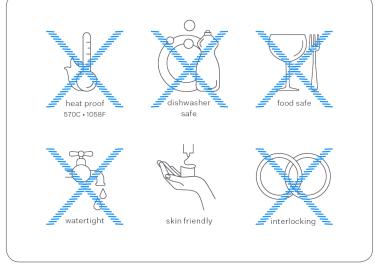
/	prints in	price	resolution	texture	technology	
I	8	\$ \$\$\$	low	semi-smooth	fdm	

· common print types: accessories + decor, furniture, sculptures, prototypes, packaging material composition:

bioplastic/polylactic acid



pros	cons
good detail	• visible print layers
can be finished +	• texture variation
post processed +	 color variation
painted	• support material scaring
bio plastic	drooping may occur
prints large	



017.3

lemon

'///. PLA HIGHRES *available finish: satin



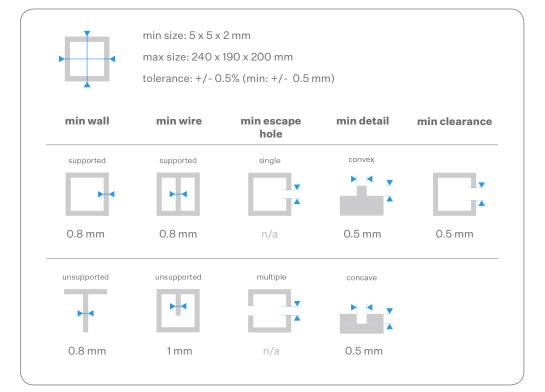
prints in	price	resolution	texture	technology	
8	\$ \$\$\$	medium	semi-smooth	fdm	

· common print types:

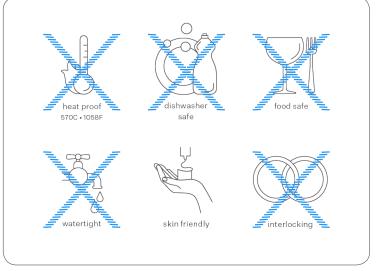
accessories + decor, furniture, sculptures, prototypes, packaging

material composition:

bioplastic/polylactic acid



good detail	visible print layers
can be finished +	• texture variation
post processed +	 color variation
painted	• support material scaring
bio plastic	droopage may occur
prints small	



'//. RESIN POLYJET *available finish: matte





• prints clear-ish • clear is never %100

• slightly tinted

clear



041 snow



042 cloud



043 pigeon



044 midnight rubber

- flexible: shore hardness < 70
- flexibility relates to thickness



045 clear rubber

- flexible: shore hardness < 70
- flexibility relates to thickness
- translucent
- translucency relates to thickness

prints in	price	resolution	texture	technology
8	\$\$\$\$	high	smooth	polyjet

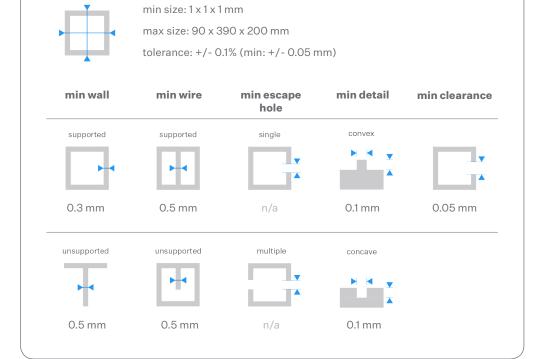
· common print types:

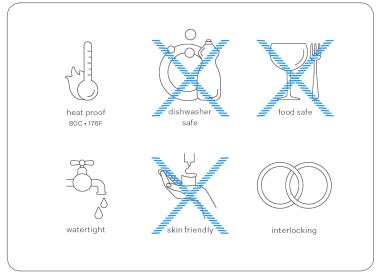
production parts, scale models, small sculptures, miniatures, prototypes

material composition:

plastic/acrylic

pros	cons
• high quality	• delicate (thin areas only)
• high detail	not good for hollow object
• prints small	
• no support marks	





'//. RESIN MATERIAL JETTING *available finishes: matte + flat



077 glass matte finish

• extreme-detail

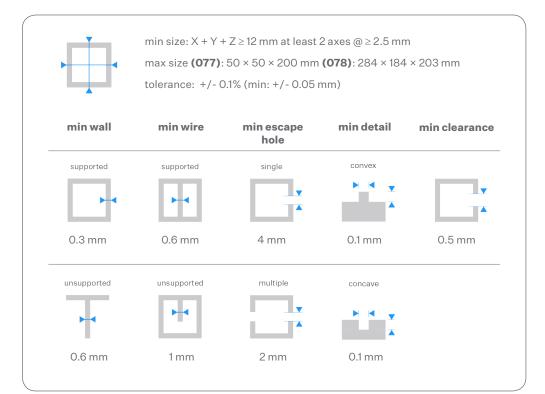


078 glass flat finish

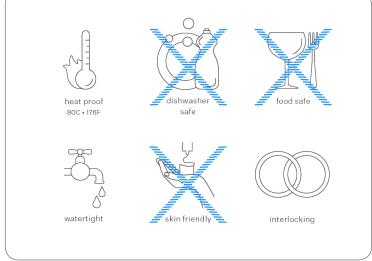
• high-detail

prints in	price	resolution	texture	technology
12	\$\$\$\$	xtra high (077) -	smooth (078) -	material jetting
		high (078)	smoother (077)	

· common print types: scale models, small sculptures, prototypes, molds material composition: plastic/acrylic



pros	cons
• high quality	• delicate
• can be translucent	• translucency depends on
• can be finished +	thickness
post processed +	• uneven color
painted	 yellowing of color over time
• prints thin + hollow	• poor UV resistance
	• non-functional



'///. RESIN SLA *available finish: semi-gloss



150 milk

- ABS alternative
- rigid + functional + shatter resistant



151 leather

- ABS alternative
- rigid + functional + shatter resistant



152 shark

- ABS alternative
- rigid + functional + shatter resistant



153 clear

- polycarbonate alternative
- prints clear
- low impact
- resistance
- clearness fades with sun exposure



154 flex

- polypropylene alternative
- durable + flexible shore hardness<70A
- flexibility relates to thickness



155 high temp

- ceramic-like
- very rigid
- heat resistant
- thermal stability
- good for thin wallslow impact
- resistance

/	prints in	price	resolution	texture	technology	· ·
	5	\$\$ \$\$	high	smooth	sla	

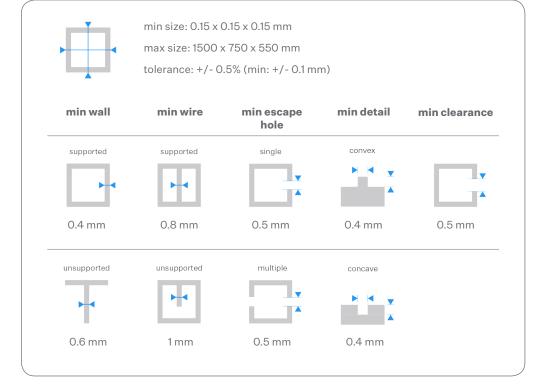
· common print types:

scale models, production parts, prototypes, molds

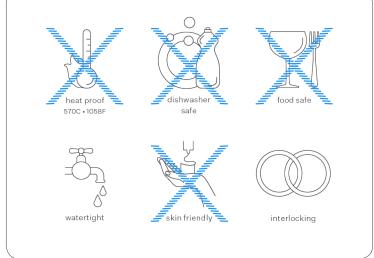
· material composition:

plastic/acrylic

pros	cons
smooth	sla



pros	cons
high detail	delicate (thin areas only)
• prints large	support material scaring
• available rush	
• prints thin + hollow	



'// SANDSTONE *available finishes: gloss + coated



140 jpeg gloss finish

- prints multi-colored
- print color varies from file color



jpeg coated finish

• prints multi-colored

• print color varies

from file color

141



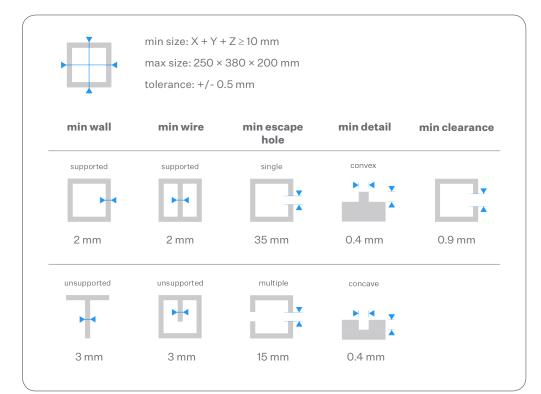
142 sand gloss finish



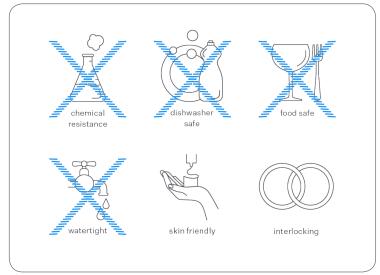
143 sand coated finish

prints in	price	resolution	texture	technology
8	\$\$\$\$	medium high	semi-smooth (141 + 143) smooth (140 + 142)	color jet printing

· common print types: small sculptures, scale models, figurines material composition: gypsum



pros	cons
• high-detail	visible print layers
• UV + moisture resistant	• delicate
• decorative	• low-strength
	color may vary from file
	color may vary print to print



*available finish: unpolished



080 industrial

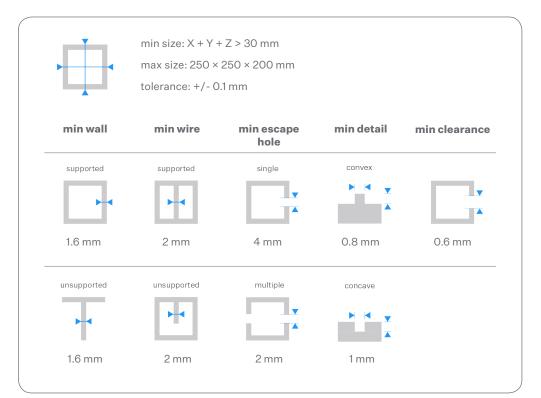
prints in	price	resolution	texture	technology
17	\$\$\$\$	medium	uneven	dmls

· common print types:

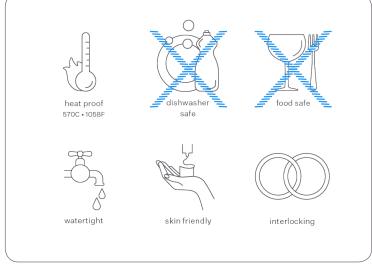
accessories + decor, tools, mechanical, structural, small sculptures

material composition:

AlSi 10mg + 10 Si + 0.5% Mg



pros	cons
• durable	visible print layers
• strong	• texture variation
• corrosion resistant	• support removal impossible
• electrical + thermal	in hard to reach areas
conductivity	• no filigree details
• functional	
• light-weight	



**III. BRASS STANDARD **available finishes: polished + brushed



104 chalice polished finish



109 chalice brushed finish

• polished finish = loss of detail

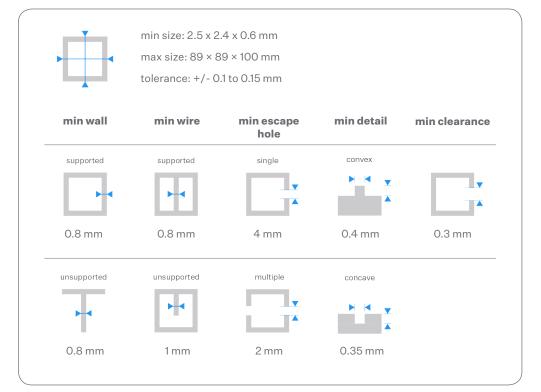
prints in	price	resolution	texture	technology
12	\$\$\$\$	medium low	semi-smooth (109) smooth (104)	casted

· common print types:

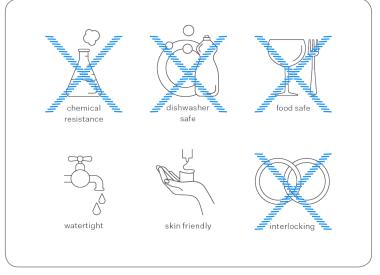
accessories + decor, jewelry, small parts, small sculptures

material composition:

80% Cu + 17% Zn + 5% Tn



pros	cons
• high-quality	• shrinkage (≤2.5%)
• good-detail	• casting = no deep details
• polishable	• green discoloration on skin
	• tarnishable



'///. BRASS INTERLOCKING *available finishes: brushed + polished



110 chalice brushed finish



111 chalice polished finish

• polished finish = loss of detail

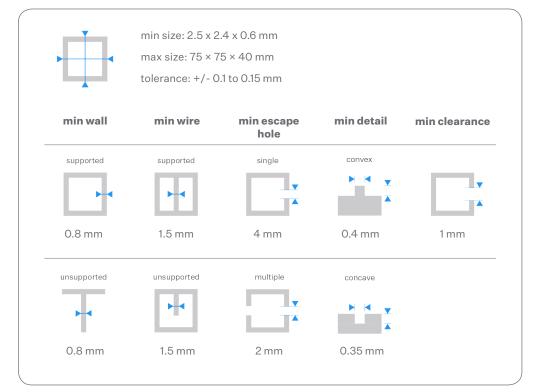
prints in	price	resolution	texture	technology
12	\$\$\$\$	medium low	semi-smooth (110) smooth (111)	casted

· common print types:

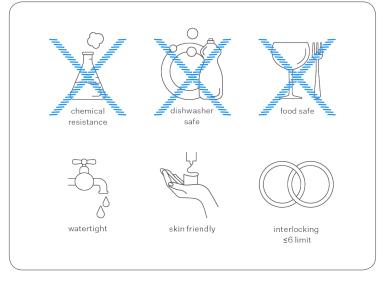
accessories + decor, jewelry, small parts, small sculptures, chains

material composition:

80% Cu + 17% Zn + 5% Tn



pros	cons
• high-quality	• shrinkage (≤2.5%)
• good-detail	• casting = no deep details
• polishable	• green discoloration on skir
	• tarnishable



'// BRASS GOLD PLATED *available finish: polished







106 14k rose gold



107 18k gold



108 rhodium

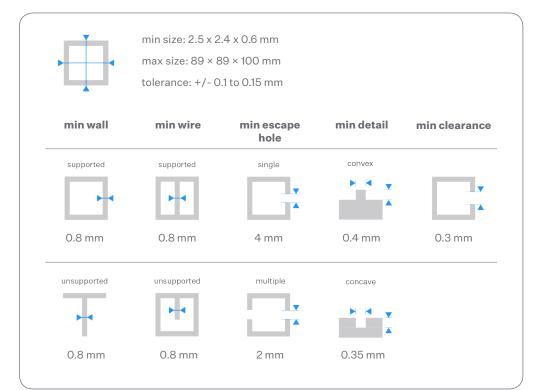
prints in	price	resolution	texture	technology	
12	\$\$\$\$	medium low	smooth	casted	

· common print types:

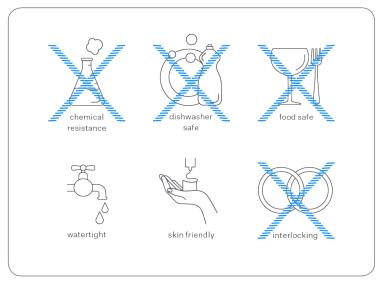
jewelry, small parts, small sculptures

material composition:

14k & 18k electroplated onto brass



pros	cons
• high-quality	• shrinkage (≤2.5%)
• good-detail	• polished finish = loss of
• alternative to solid metal	detail
	• casting = no deep details
	• green discoloration on skin
	• tarnishable
	• scratchable
	plating may wear



*available finishes: polished + brushed







116 sunshine brushed finish

• polished finish = loss of detail

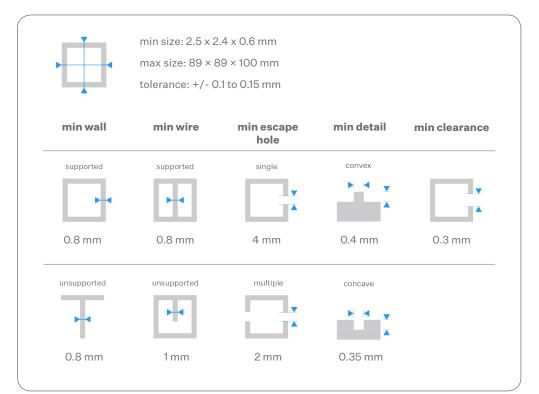
prints in	price	resolution	texture	technology	
12	\$\$\$\$	medium low	semi-smooth (116) smooth (115)	casted	

· common print types:

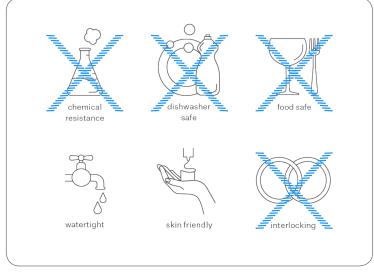
accessories + decor, jewelry, small parts, small sculptures

material composition:

90% Cu + 10% Tn



pros	cons
• high-quality	• shrinkage (≤2.5%)
• good-detail	• casting = no deep details
• polishable	green discoloration on skir
	• tarnishable
	I



*** **TITE *** **available finishes: polished + brushed







118 sunshine brushed finish

• polished finish = loss of detail

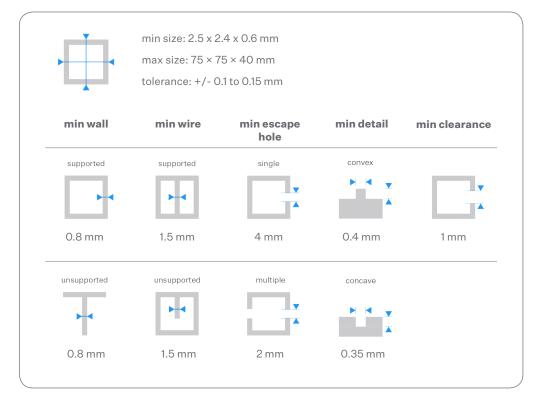
prints in	price	resolution	texture	technology	
12	\$\$\$\$	medium low	semi-smooth (118) smooth (117)	casted	

· common print types:

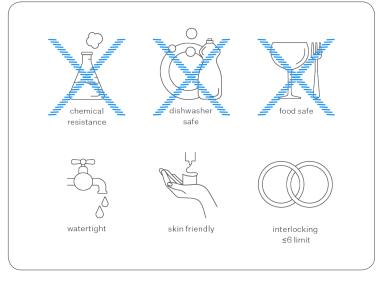
accessories + decor, jewelry, small parts, small sculptures, chains

material composition:

90% Cu + 10% Tn



• high-quality	• shrinkage (≤2.5%)
• good-detail	• casting = no deep details
• polishable	green discoloration on skir
	• tarnishable



'///. GOLD *available finishes: polished



120 14k gold

• 58% Au + 31% Cu + 10% Ag + 1% Zn



121 14k rose gold

• 58% Au + 40% Cu + 1% Ag + 1% Zn



122 14k white gold

• 58% Au + 24% Cu + 9% Ag + 9% Ni



123 18k gold

• 75% Au + 10% Cu + 15% Ag

prints in	price	resolution	texture	technology
15	\$\$\$\$	medium low	smooth	casted

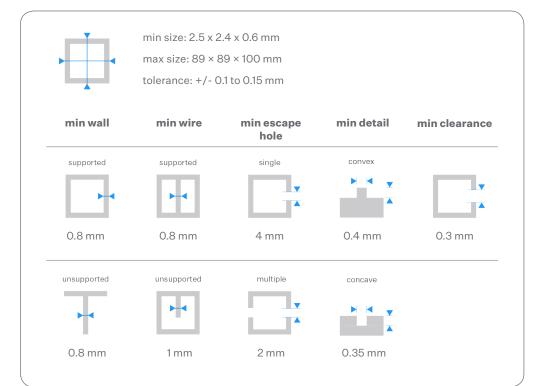
· common print types:

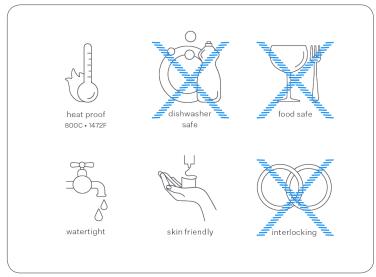
jewelry, small parts, small sculptures

material composition:

see above

pros	cons
high-qualitygood-detailelectrical conductivity	 shrinkage (≤ 2.5%) polished finish = loss of detail casting = no deep details





'//. PLATINUM *available finishes: polished



125 rolex

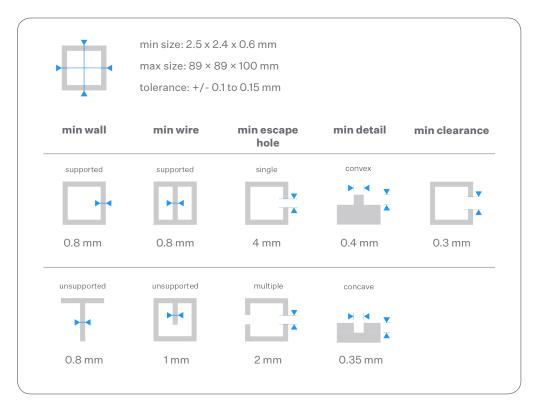
prints in	price	resolution	texture	technology
16	\$\$\$\$	medium low	smooth	casted

· common print types:

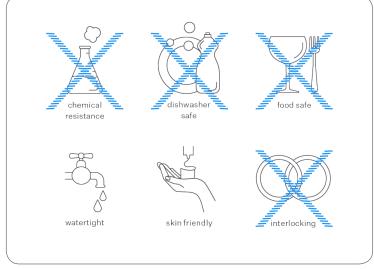
jewelry, small parts, small sculptures

material composition:

95% Pt + %5 Ru



pros	cons
• high-end	• shrinkage (≤ 2.5%)
• good-detail	• polished finish = loss of
electrical conductivity	detail
	• casting = no deep details



'///. SILVER STANDARD *available finishes: polished + hd polished + brushed



095 tinsel polished finish

• polished finish = loss of detail



096 disco hd polished finish

• polished finish = loss of detail



097 chainmail brushed finish

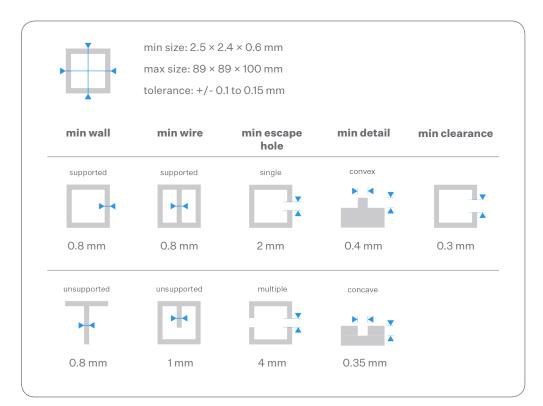
prints in	price	resolution	texture	technology
15	\$\$\$\$	medium low	semi-smooth (097) smooth (095 + 096)	casted

· common print types:

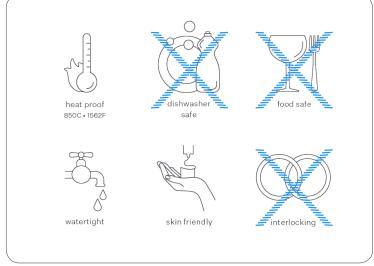
accessories + decor, jewelry, small parts, small sculptures

material composition:

92.5% Ag



pros	cons
• high-quality	• shrinkage (≤2.5%)
• good-detail	• casting = no deep details
• polishable	green discoloration on skin
electrical conductivity	• tarnishable
	• scratchable
	I



'///. SILVER INTERLOCKING *available finishes: brushed + hd polished + polished



099 chainmail brushed finish



101 disco hd polished finish

• polished finish = loss of detail



102 tinsel polished finish

• polished finish = loss of detail

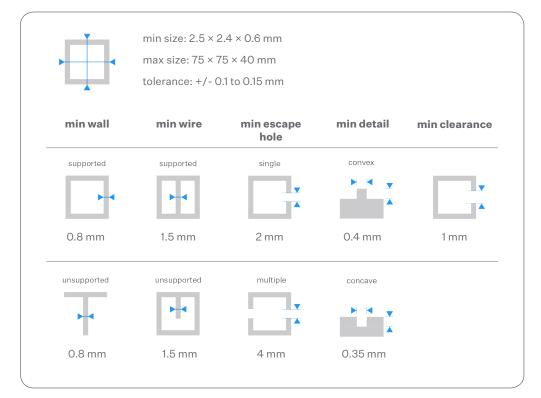
prints in	price	resolution	texture	technology
15	\$\$\$\$	medium low	semi-smooth (099) smooth (101 + 102)	casted

common print types:

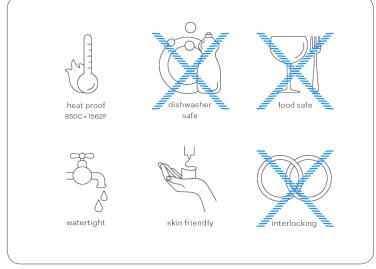
accessories + decor, jewelry, small parts, small sculptures, chains

material composition:

92.5% Ag



pros	cons
• high-quality	• shrinkage (≤2.5%)
• good-detail	• casting = no deep details
• polishable	green discoloration on skin
• electrical conductivity	• tarnishable
	• scratchable
	I



**available finishes: unpolished + polished



084 nickel unpolished finish

• scratchable



091 nickel polished finish

• polished finish = loss of detail



087 24k gold unpolished finish

• scratchable



090 24k gold polished finish

• polished finish = loss of detail

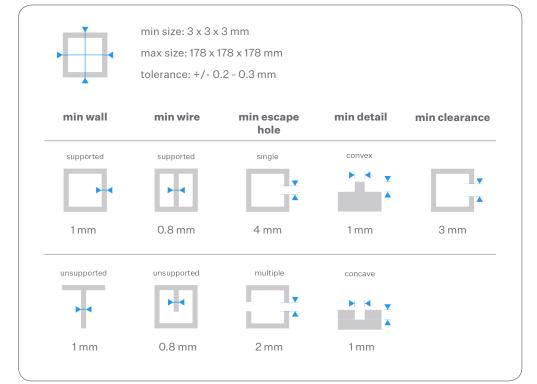
prints in	price	resolution	texture	technology
13	\$\$ \$\$	medium high	uneven (084 +087) smooth (090 +091)	binder jet

· common print types:

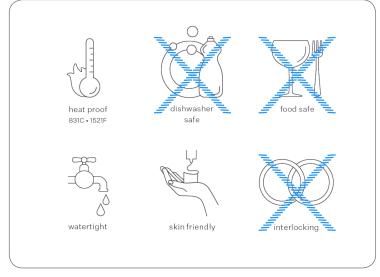
accessories + decor, simple tools, small sculptures

material composition:

60% steel (iron base metal) + 40% bronze



pros	cons
• strong	• shrinkage (≤ 5%)
• affordable	visible print layers
• finished look	• non-load bearing
	• infiltration process = 1 small
	(≈ 5 mm) + smoother mark
	on object
	color variation
	• tarnishable
	plating may wear



'///. STEEL STANDARD available finishes: unpolished + polished



085 silver unpolished finish



086 silver polished finish

• polished finish = loss of detail



088 bronze unpolished finish



089 bronze polished finish

• polished finish = loss of detail



092 shadow unpolished finish



093 shadow polished finish

• polished finish = loss of detail

prints in	price	resolution	texture	technology
13	\$\$ \$\$	medium high	uneven (092+085+088) smooth (093+086+098)	binder jet

· common print types:

accessories + decor, simple tools, small sculptures

material composition:

60% steel (iron base metal) + 40% bronze

	min size: 3 x 3 x max size: 762 x 3 tolerance: +/- 0	393 x 393 mm		
min wall	min wire	min escape hole	min detail	min clearance
supported	supported	single	convex	
	>	V A		A
1 mm	0.8 mm	4 mm	1 mm	3 mm
unsupported	unsupported	multiple	concave	
	1	Y	M Y	
1 mm	0.8 mm	2 mm	1 mm	

pros	cons
• strong	• shrinkage (≤5%)
• affordable	 visible print layers
• finished look	 non-load bearing
• prints large	• infiltration process = 1 small
	(≈ 5 mm) + smoother mark
	on object
	• color variation
	• tarnishable

