MSLA-Modeling – Dental (MMD-Roo1DN)

Check

- Vat and LCD screen are clean
- Shake well before pouring, 60 sec
- Vat & platform are tighten properly
- Do Not overfill vat

Recommended Setting Parameters

Setting recommendation Chart MSLA Dental & MSLA Gray

Recommended Setting Farameters							
				Exposure			
		Normal	Bottom	Time (sec)			
	Layer	Exposure	(Burn-In)	for Bottom			
Printer	Thickness	Time (sec)	Layers	(Burn-In)			
Photon	50 µm	10	8	45			
Photon	100 µm	15	10	50			
Photon S	50 µm	5	8	40			
Photon S	100 µm	8	10	45			
Shuffle	50 µm	10	8	40			
Shuffle	100 µm	15	10	45			
Shuffle XL	50 µm	8	8	40			
Shuffle XL	100 µm	12	10	45			
Sonic	50 µm	2.5	8	30			
Sonic	100 µm	4	10	30			
Sonic Mini	50 µm	4	6	30			
Sonic Mini	100 µm	6	6	30			

Each printer is unique, light intensity varies from printer to printer eventhough they are the same model and make. Please adjust normol exposure time from our recommended setting ± 3 (± 0.5 for sonic) second for your printer and print geometry.

For size calibration, download the stl file: <u>https://www.thingiverse.com/thing:1586206</u>

Setting Example: AnyCubic Photon:

Photon Workshop V2	2.1.19.RC1		
Layer Thickness(mm):	0.05		
Normal Exposure Time(s):	5		
Off Time(s):	5		
Bottom Exposure Time(s):	40		
Bottom layers:	8		
Z Lift Distance(mm):	4.00 >		
Z Lift Speed(mm/s):	◀ 1.00 ▶		
Z Retract Speed(mm/s):	◀ 3.00 ▶		

For Phrozen Shuffle:

Burn-in Layers 👔			
Number of Layers	R D	Layer Thickness µm 🥐	R D
10		50.000000	
Wait After Print Second	R D	Lift After Print Millimeter ?	R D
0.500000		6.000000	
Cure Time Second	RD	Wait Before Print Second	RD
40.000000		1.000000	
Wait After Lift Second	R D		
0.500000			

Normal Layers			
Layer Thickness 🛛 🖛 💡 🤫	R D	Cure Time Second	RD
50.000000		10.000000	
Lift After Print Millimeter ?	R D	Wait After Lift Second	R D
4.000000		0.500000	
Wait Before Print Second	RD	Wait After Print Second	R D
1.000000		0.500000	

Washing

Submerge print in clean IPA for up to 5 minutes, gently shake-off / blow-off excess IPA, set print in a shaded airy place to dry before curing. (extended period in IPA causes deformation)

Dried print might be a little tacky to touch

Curing

Post-curing required for optimal material performance: Light wavelength: 405 nm Total light energy per unit area required on the print: **162.000 mJ/cm²**

Example:

Light power on the print = 40mW/cm^2 , (higher power per unit area shortens curing time) 162,000 mJ / 30 mW / 60 sec = 90 minutes of curing time.

Controlled curing chamber temperature between: $30 \sim 40^{\circ}$ C / $86 \sim 104^{\circ}$ F

Storage

Don't keep resin in the vat for more than **2 days**. Filter out all debris in the case of fail print.

Note: Slight pigment settlement is normal. Gentally mix remaining resin in resin vat with soft wiper for color evenness.

Design Concept Series