APPLYLABWORK PRINTING TIPS

MSLA-Modeling – Dental (MMD-R001DN)

Check

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

Setting recommendation Chart

| | | | | Exposure |
|-------------------|-----------------|------------|-----------|------------|
| | | Normal | Bottom | Time (sec) |
| | | Exposure | (Burn-In) | for Bottom |
| Printer | Layer 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 |
| Mono X | 50 μm | 1.5 | 3 | 30 |
| Mono X | 100 μm | 2.4 | 3 | 30 |
| 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 |
| Sonic Mighty 4K | 50 μm | 3 | 10 | 30 |
| Sonic Mighty 4K | 100 μm | 5 | 10 | 30 |
| Sonic Mega 8K | 50 μm | 3.8 | 8 | 35 |
| Sonic Mega 8K | 100 μm | 5.4 | 8 | 40 |
| Transform Fast | 50 μm | 3.2 | 10 | 60 |
| Transform Fast | 100 μm | 4.5 | 10 | 60 |
| Elegoo Mars 2 Pro | 50 μm | 2.8 | 5 | 25 |
| Elegoo Mars 2 Pro | 100 mm | 3.8 | 5 | 30 |
| Elegoo Mars 3 | 50 μm | 2.8 | 5 | 25 |
| Elegoo Mars 3 | 100 μm | 3.8 | 5 | 30 |

Detail setting of various printers, please refer to ALW <u>LCD/LED Settings Worksheet</u>. 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 monochrome LCD) second for your printer and print geometry.

For size calibration, please download <u>XYZ</u> caalibration cube stl file.

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.

Form commond curing chambers, the recommended setting is following:

| Post Curing | Temperature | Time | |
|-----------------|-------------|-------|--|
| Chamber | (°C) | (min) | |
| FormCure | 60 | 30 | |
| (FormLabs) | 00 | 30 | |
| ProCure | 30 | 15 | |
| (Sprintray) | 30 | 13 | |
| Phrozen cure XL | | 45 | |
| (Phrozen) | | 43 | |
| Mercury x Cure | | 30 | |
| (Elegoo) | | 30 | |

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.