## APPLYLABWORK PRINTING TIPS

# **MSLA Expert Gray**

(MPT-EX001GY)

#### Check

- Tank and LCD screen are clean
- Shake well (60 sec) before pouring
- Tank and platform are tightened properly

#### **Exposure Setting Recommendation Chart**

Printer	Layer Thickness (µm)	Bottom (Burn-In) Layers	Normal Layer Exposure Time (s)	Bottom Layer Exposure Time (s)	Rest Time After Retract (s)	Lifting Distance (mm)	Lifting Speed (mm/min)	Retract Speed (mm/min)
Shuffle	50	6	10	40	6	5	60	150
	100	6	15	40	6	5	60	150
Shuffle XL	50	6	9	40	6	8	60	150
	100	6	13	40	6	8	60	150
Sonic	50	6	2.5	25	6	5	60	150
	100	6	4.5	25	6	5	60	150
Sonic Mini	50	6	4	25	6	5	60	150
	100	6	6	25	6	5	60	150
Sonic Mighty	50	6	3.5	25	8	8	60	150
4K	100	6	5	25	8	8	60	150
Sonic Mighty	50	6	3.4	25	8	8	60	150
8K	100	6	4.8	25	8	8	60	150
Elegoo Mars2	50	6	2.5	25	6	5	60	150
Pro	100	6	4	25	6	5	60	150
Elegoo Mars3	50	6	3	25	6	5	60	150
Ultra 4K	100	6	4	25	6	5	60	150
Elegoo Staurn S	50	6	3.9	25	8	8	60	150
	100	6	4.6	25	8	8	60	150
Anycubic	50	6	2.2	25	8	8	1 (mm/s)	2.5 (mm/s)
Photon MonoX	100	6	3	25	8	8	1 (mm/s)	2.5 (mm/s)

Each printer is unique, light intensity varies from printer to printer, even within same model and make. Please adjust normal exposure time from above recommended settings  $\pm$  2 ( $\pm$  0.2 ~ 0.5 for Mono LCD printer) for optimal results.

Sizing calibration, stl file: <a href="https://www.thingiverse.com/thing:1586206">https://www.thingiverse.com/thing:1586206</a>

# Washing

Submerge print in clean **IPA** (95+% concentration) for up to **5 minutes**, gently shake-off/blow-off excess IPA, set prints in shaded, airy place to dry before post-curing. Extended time in IPA causes deformation.

# Prototype Engineering Series

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#### **Post Curing**

Curing Chamber	Temperature (°C)	Time (min)	
Formcure (Formlabs)	60	30	
Phrozen cure XL (Phrozen)	-	30	
Mercury x Cure (Elegoo)	-	30	

For optimal material performance, 405 nm light of total energy per unit area required: 9000 mJ/cm<sup>2</sup>.

Example: light power or curing chamber:  $5 \text{ mW/cm}^2$  (higher power per unit area shortens curing time), 9000 (mJ) / 5 (mW) / 60 (sec) = 30 mins of curing time.

## **Storage**

- Keep resin in shaded environment; temperature between 15°C and 26°C
- NOT accessible to children
- Filter used resin before storage
- To extand tank life, limit prolong storing resin in tank

**Notes:** Slight pigment settlement is normal. Gently mix remaining resin in resin tank with soft wiper for color evenness. Ensure there are no pigment settled on the resin tank bottom before start printing.

In the case of failed/incomplete print, filter used resin to ensure there are no debris in the reisn before next print.