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Technical Data Sheet 2023

M5 Series Resin

10K Standard Plus Resin

Hi-Speed Standard Resin

Standard Pro Resin

10K Washable Resin

Plant Base Soybean Standard Resin

Plant Base Soybean ABS-like Resin

JAMG HE ®

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Printing Setting

<table>
<tr><th>Model No.</th><th>Layer height (mm)</th><th>Bottom exposure time(s)</th><th>Layer exposure time(s)</th><th>Bottom Lift Distance (mm)</th><th>Lifting Distance (mm)</th><th>Bottom Lift Speed (mm/min)</th><th>Lifting Speed (mm/min)</th><th>Retract Speed (mm/min)</th><th>Rest time after retract</th></tr>
<tr><td>M5 Series Resin</td><td rowspan="6">0.05</td><td>20-30</td><td>2.5--3.5</td><td rowspan="7">6</td><td rowspan="7">6</td><td rowspan="7">60</td><td rowspan="7">80</td><td rowspan="7">150</td><td rowspan="7">2--3</td></tr>
<tr><td>10K Standard Plus Resin</td><td rowspan="4">25-35</td><td rowspan="2">2.5--3.5

Orange red: 3--4</td></tr>
<tr><td>10K Washable Resin</td></tr>
<tr><td>Plant Base Soybean Low odor Resin</td></tr>
<tr><td>Plant Base Soybean ABS-like Resin</td><td rowspan="2">2.5--4.5</td></tr>
<tr><td>Standard Pro Resin</td></tr>
<tr><td>Hi-Speed Standard Resin</td><td>0.1</td><td>15-20</td><td>2--2.5</td></tr>
</table>

Above settings are tested on ELEGOO MARS 3 (6.6'' monochrome LCD screen,light intensity 3500~4500μw/㎠), they should be adjusted according to different 3d printers and printing model structure， most settings can be keep as the printers' default firstly.

1. Bottom layer count = Bottom layer thickness/ Layer height+1， e.g. Bottom height 0.4mm, layer height 50um, the bottom layer count= 0.4mm/0.05mm+1=9 layers.
2. The exposure time should be adjusted according to printer light energy, layer thickness and model structure. If the layer height less than 0.05mm, we suggest the exposure time of each layer will be deducted about 0.5s.
3. If light power of printer is getting weak and cause failure, don't forget to add exposure time.
4. When printing with ordinary FEP/NFEP film, the recommended lifting distance as below:
Less than 7'' screen size, lifting distance: 6mm； 7-10” screen size, lifting distance: 8-10mm
10.1” screen size, lifting distance: 11mm； 13.3” screen size, lifting distance: 14mm
15” screen size, lifting distance: 15mm
While printing with fast printing film, lifting distance can be decrease 30-50%. e.g. lifting speed was 80 (mm/min) at regular film, you can adjust to 40-60(mm/min) when using fast printing film.

Notice:
1. Shake the resin well before use.
2. Please increase lifting distance 20-30% when print with Elastic Resin and Flexible Resin .

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Technical Specification

M5 Series Resin & 10K Standard Plus Resin & Standard Pro Resin & Hi-Speed Standard Resin

	M5 Series Resin	10K Standard Plus Resin	Standard Pro Resin	Hi-Speed Standard Resin	Test Standard
Tensile strength (MPa):	45.40±10%	37.88 ±10%	42.77±10%	42.77±10%	ASTM D638
Tensile modulus (MPa):	687.73±10%	615.49 ±10%	518.35±10%	518.35±10%	ASTM D638
Elongation at yield point(%)	6.09±10%	3.09 ±10%	6.38±10%	5.38±10%	ASTM D638
Flexural modulus (MPa):	1570.52±10%	1699.7 ±10%	1284.19±10%	1284.19±10%	ASTM D790
Flexural strength (MPa):	49.80±10%	57.91 ±10%	47.48±10%	47.48±10%	ASTM D790
Notched impact strength (J/m):	42±10%	72 ±10%	101.04±10%	101.04±10%	ASTM D256
Maximum pulling force (N):	1888.76±10%	1575.93±10%	1779.51±10%	1779.51±10%	ASTM D638
Maximum force point of deformation (mm)	4.33±10%	3.62 ±10%	7.61±10%	7.61±10%	ASTM D638
Elongation at break (%):	7.67±10%	6.41 ±10%	15.26±10%	9.26±10%	ASTM D638
Hardness (Shore D):	84~88D	80~88 D	80~86D	80~86D	ASTM D2240
Viscosity (MPa.S):	200~400	250-400	200~400	50~100	GB/T 4472
Density (g/cm³):	1.05~1.25	1.05-1.25	1.05~1.25	1.05~1.25g	GB/T 22235

10K Washable Resin & Plant Based Standard Resin & Plant Based ABS-like Resin

	10K Washable Resin	Plant Based Standard Resin	Plant Based ABS-like Resin	Test Standard
Tensile strength (MPa):	31.44 ±10%	32.43 ±10%	27.46 ±10%	ASTM D638
Tensile modulus (MPa):	471.03 ±10%	424.97 ±10%	328.5 ±10%	ASTM D638
Elongation at yield point(%)	6.32 ±10%	5.54 ±10%	5.57 ±10%	ASTM D638
Flexural modulus (MPa):	1091.45 ±10%	768.67 ±10%	531.27 ±10%	ASTM D790
Flexural strength (MPa):	40.82 ±10%	29.82 ±10%	20.27 ±10%	ASTM D790
Notched impact strength (J/m):	50 ±10%	40.03 ±10%	58 ±10%	ASTM D256
Maximum pulling force (N):	1308.20±10%	1349.40±10%	1142.47 ±10%	ASTM D638
Maximum force point of deformation (mm)	4.33 ±10%	9.86 ±10%	12.33 ±10%	ASTM D638
Elongation at break (%):	7.65 ±10%	17.48 ±10%	21.8 ±10%	ASTM D638
Hardness (Shore D):	80-85 D	80-88 D	78-86 D	ASTM D2240
Viscosity (MPa.S):	70-175	200-450	200-400	GB/T 4472
Density (g/cm³):	1.05-1.25	1.05-1.25	1.05-1.25	GB/T 22235

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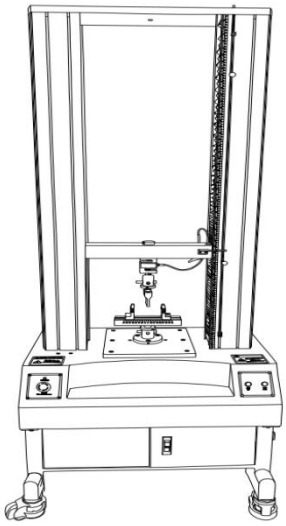
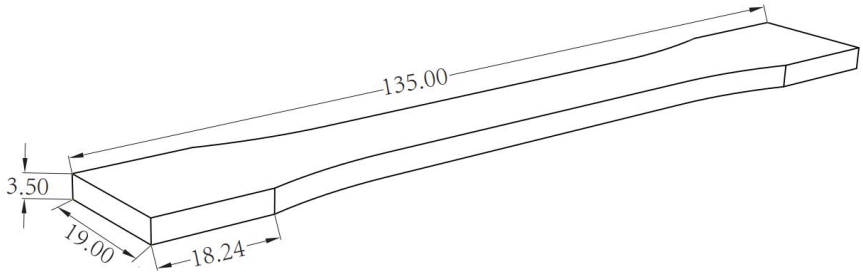
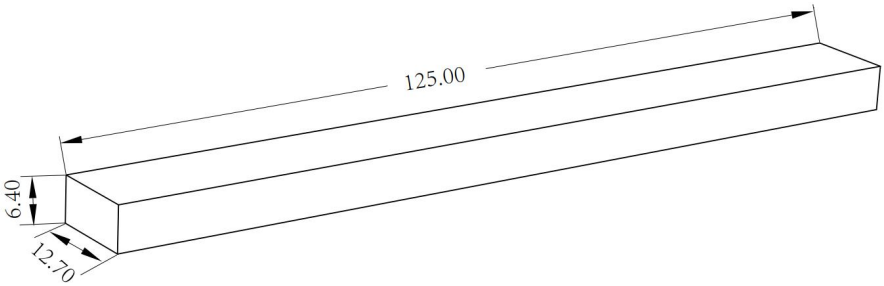
Introduction of Testing Machine & Testing Environment

Computer-controlled Servo Tensile Testing Machine



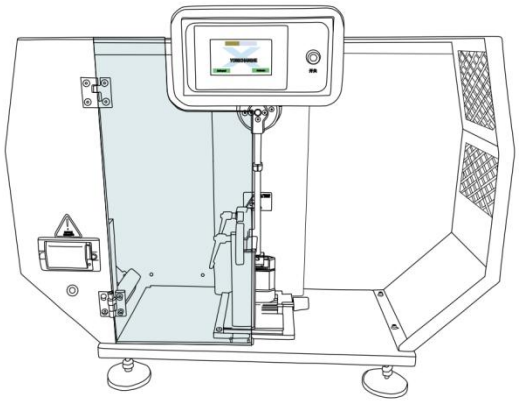


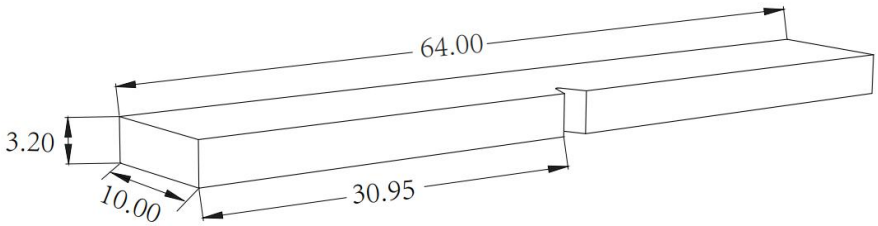
Tensile test specimen ASTM D638



Flexural test specimen ASTM D790

Digital IZOD Impact Tester





Impact test specimen ASTM D256

Testing Environment

Temperature: 23±2℃
Relative Humidity: 50%RH±5%RH
Standard For Testing Splines: ASTM

Post Curing Box: 405nm UV, 200mw/cm²
Put the test strip in water and post cured for 1 minute on both sides.

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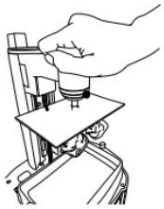
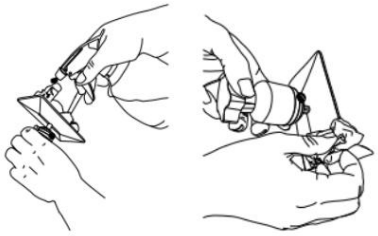
Cleaning and Post-curing



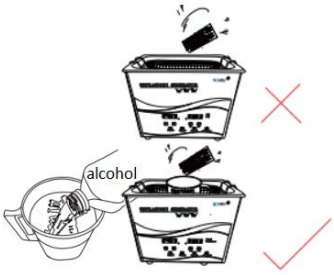
1. Take off the printing platform from the printer.



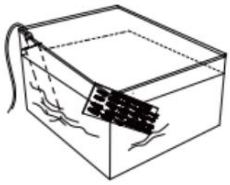
2. Spray isopropanol (alcohol> 95%) to clean away residue resin on the prints, wipe off the resin with tissue on the plateform.

3. Spray alcohol again, dry it with air gun, repeat a few times till there's no resin on surface.

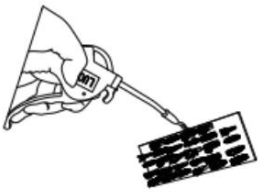
4. Carefully take off the prints from platform with scraper.



5. Soak the prints in alcohol in container, clean for 1-2min by ultrasonic machine.



If no ultrasonic cleaner, try to use an ultrasonic rod to clean for 2-3min.



6. Take out the prints and dry immediately with an air gun or a blower.

7. Suggest post curing in water, curing time 30-60s depends on the light power of the curing box (curing both sides). **Repeat step 6.**

Notice: For water washable resin, just cleaning with water by ultrasonic machine, don't forget to dry them in and out after post curing.

Caution

1. Wash hand and face thoroughly after handing.
2. Wear protective gloves / mask/protective clothing when using resin.
3. Contact eyes may cause irritation, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice immediately if necessary.
4. Waste water/waste shall be disposed of in accordance with local environmental regulations.

Storage

1. Please seal the product and store it in a dry, well-ventilated room with no corrosive gas.
2. Stored at 25~30℃ environment.
3. Keep away from heat source, keep away from moisture and avoid sun exposure.
4. Shelf life 18 months.

23th-May, 2023