

# ePLA-Magic

## Technical Data Sheet

The creative inspiration for the ePLA-Magical dual-color series comes from the galaxy ravaged by the stars, with the dark night as the background and adorned with sparkling starlight. The interplay between the two elements sparks infinite imagination and bestows a dreamlike and splendid appearance on the model. Simultaneously, the product is modified based on PLA material, combining the easy printing characteristics of PLA.

|                        |  |  |
|------------------------|--|--|
| <b>Material Status</b> | <b>Mass Production</b>   |  |
| Characteristics        | <ul style="list-style-type: none"> <li>• Dreamlike dual color</li> <li>• Tough and not easily brittle</li> </ul> | <ul style="list-style-type: none"> <li>• Excellent printability</li> </ul> |
| Applications           | <ul style="list-style-type: none"> <li>• Cultural Creativity</li> </ul>  | <ul style="list-style-type: none"> <li>• Animation Industry</li> </ul>     |
| Form                   | <ul style="list-style-type: none"> <li>• Filament</li> </ul>   |  |
| Processing method      | <ul style="list-style-type: none"> <li>• 3D Print, FDM Print</li> </ul>  |  |

|                                      | testing method | Typical value |                   |
|--------------------------------------|----------------|---------------|-------------------|
| <b>Physical Properties</b>           |                |               |                   |
| Density                              | GB/T 1033      | 1.21          | g/cm <sup>3</sup> |
| <b>Mechanical Properties</b>         |                |               |                   |
| Tensile Strength                     | GB/T 1040      | 34.18         | MPa               |
| Elongation at Break                  | GB/T 1040      | 4.25          | %                 |
| Flexural Strength                    | GB/T 9341      | 112           | MPa               |
| Flexural Modulus                     | GB/T 9341      | 3459          | MPa               |
| IZOD Impact Strength                 | GB/T 1843      | 2.05          | kJ/m <sup>2</sup> |
| <b>Thermal Properties</b>            |                |               |                   |
| Heat distortion Temperature          | GB/T 1634      | 52.3          | °C                |
| Continuous Service Temperature       | IEC 60216      | N/A           |                   |
| Maximum (short term) Use Temperature |                | N/A           |                   |
| <b>Electrical Properties</b>         |                |               |                   |
| Insulation Resistance                | DIN IEC 60167  | N/A           |                   |
| Surface Resistance                   | DIN IEC 60093  | N/A           |                   |

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### Recommended printing parameters

|                            |              |
|----------------------------|--------------|
| Extruder Temperature       | 190- 220°C   |
| Build Platform Temperature | 45-60°C      |
| Fan Speed                  | 100%         |
| Printing Speed             | 40 - 300mm/s |

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2. Printing conditions may vary with different nozzle diameters

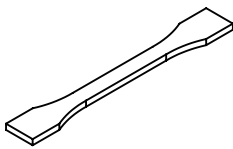
### Drying Recommendations

N/A

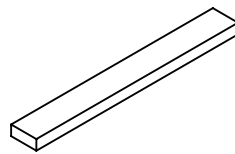
### Precautions:

Reducing overhang angle structure in the model or the speed in printing to keep the cooling.

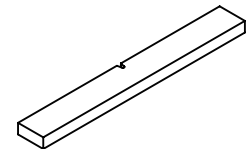
### Mechanical Properties



Tensile testing specimen GB/T 1040



Flexural testing specimen GB/T 9341



Impact testing specimen GB/T 1043

The physical properties, mechanical properties, thermal properties, and electrical properties of the line are obtained based on the injection molding spline test.

### Print test condition:

|                            |         |
|----------------------------|---------|
| Extruder Temperature       | 220°C   |
| Build Platform Temperature | 45°C    |
| Outline/Perimeter Shells   | 2       |
| Top/Bottom Layers          | 3       |
| Infill Percentage          | 100%    |
| Fan speed                  | 100%    |
| Printing speed             | 130mm/s |

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2.

### Notice

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