

# PETG

| FEATURES  | APPLICATIONS   |
|---|--|
| Good impact strength and toughness<br>Multiple colors | 3D Printing<br>Ornaments, toys, decorations, figurines, lamps and lanterns |

| Properties                  | ASTM       | Test Condition | S.I. Units        | Typical Values |
|-----------------------------|------------|----------------|-------------------|----------------|
| <b>Mechanical</b>           |            |                |                   |                |
| Tensile Strength            | ASTM D638  | 50mm/min       | MPa               | 61.4           |
| Young's Modulus             | ASTM D638  | 1mm/min        | MPa               | 2990           |
| Elongation at break         | ASTM D638  | 50mm/min       | %                 | 5.3            |
| Flexural Strength           | ASTM D790  | 2mm/min        | MPa               | 74.8           |
| Flexural Modulus            | ASTM D790  | 2mm/min        | MPa               | 1686           |
| IZOD Impact Notched         | ASTM D256  | 3.2mm, 23°C    | J/m               | 35             |
| <b>Thermal</b>              |            |                |                   |                |
| Heat Deflection (HDT)       | ASTM D648  | 0.45MPa        | °C                | 63             |
| Glass Transition(Tg)        | ASTM D7426 | 10°C/min       | °C                | 65.5           |
| Melting Point               | ASTM D7426 | 10°C/min       | °C                | 128            |
| @5%Decomposition Temp.      | ASTM E2402 | 20°C/min       | °C                | ≥423           |
| Vicat Softening Temp.       | ASTM D1525 | 5kg,50°C/h     | °C                | 68             |
| Mold Shrinkage              | ASTM D955  | 23°C           | %                 | 0.1-0.5        |
| Coefficient of Thermal Exp. | ASTM E831  |                | μm(m°C)           | 51             |
| <b>Others</b>               |            |                |                   |                |
| Melt Flow Rate              | ASTM D1238 | 210°C/2.16kg   | g/10min           | 14             |
| Density                     | ASTM D792  | 23°C           | g/cm <sup>3</sup> | 1.3            |
| Volume Resistivity          | ASTM D257  | -              | ohm-cm            | 1.0E+15        |
| Dielectric Constant         | ASTM D150  | 1kHz           |                   | 2.6            |
| Flammability                | UL94       | 1.5mm          | Class             | HB             |
| <b>Chemical Resistant</b>   |            |                |                   |                |
| Item                        |            |                | Class             |                |
| Weak Acid (pH3-6)           |            |                | Good              |                |
| Strong Acid (pH<3)          |            |                | Poor              |                |
| Weak Bases pH (8-10)        |            |                | Good              |                |
| Strong Bases (pH >10)       |            |                | Poor              |                |
| Deionized Water             |            |                | Good              |                |
| Alcohol                     |            |                | Good              |                |
| Ketone                      |            |                | Poor              |                |
| Petroleum Fuels             |            |                | Good              |                |
| Ester                       |            |                | Good              |                |

Grade Classification: excellent, good, fair, poor

[1] The properties of the colouring compounds may differ from the above values.

[2] Typical values are laboratory average data and are provided for reference only. They are not to be considered as product standards.

## Recommended Printing Parameters

| Parameters               |  | Range               |             |
|--------------------------|--|---------------------|-------------|
| Nozzle Print Temp.       |  | 230-240°C           |             |
| Zonal Temperature        |  | 230-240°C           | 50- 100mm/s |
|                          |  | 240-260°C           | 100-200mm/s |
| Print Platform Temp.     |  | 60-70°C             |             |
| Print Platform Material  |  | Soft Magnetic Sheet |             |
| Print Platform Treatment |  | No Requirements     |             |
| Cool Fan                 |  | 100%                |             |
| Raft Distance            |  | 0.4-0.6             |             |
| Retraction Distance      |  | 5mm                 |             |
| Retraction Speed         |  | 50mm/s              |             |
| Room Temp.               |  | Room Temperature    |             |
| Support Material         |  | PVA                 |             |
| Drying Temp.             |  | 50°C                |             |

The above values are for printer reference only, and can be adjusted according to different models, different models and product requirements.

### Safety and Handling Precautions

A Material Safety Data Sheet (SDS) for this product is available from your local Sunlu office. The SDS provides customers with information on material handling, safety and disposal, as well as the requirements of applicable local health and safety regulations. The following are general precautions and apply only to the resins supplied. The various additives and processing aids used in plastics moulding and other materials used in secondary processes have their own safety requirements and must be understood separately.

This product has extremely low toxicity, and under normal conditions of use, there are no particular issues with inhalation, eye contact, or skin contact. However, care must be taken when handling, storing, using or disposing of these resins. Workplace should be kept clean to avoid dust accumulation. Contact with molten resins during processing operations should be minimized. Plastic resin products generate dust and gases during the manufacturing process. Dust generated during operations such as sawing, filing and sanding of printed parts may irritate the eyes and upper respiratory tract. In dusty manufacturing environments, it is recommended that operators use respirators or masks approved

by the appropriate authorities.

The print processing area should be well ventilated as required by proper operating procedures. When plastics are processed above the melting temperature, fumes containing decomposing substances are released and may be irritating. In most cases, good general ventilation equipment is sufficient. Local extract ventilation should be used when necessary.

When there is a risk of eye injury from airborne particles during work, protective goggles should be worn. If necessary, wear insulated gloves for protection when handling the resin.

The product may yellow under the action of ultraviolet light, so it should be stored away from direct sunlight.

Users are advised to investigate the final use of their product beforehand to ensure the correct use of Sunlu products. To prevent misuse or incorrect use of Sunlu products, it is advisable to contact the Sunlu R&D department or the marketing department.

Note: Due to variations in usage conditions and applicable laws by location and time, customers are responsible for determining whether the products and product information in this document are suitable for their use. Customers should ensure that their workspaces and handling methods comply with applicable laws and other government regulations. Sunlu assumes no responsibility or liability for the information in this document and does not provide any warranties. All implied warranties of merchantability or fitness for a particular purpose under this document are hereby expressly excluded.