

## Product technical instructions

Product brand: Piocreat\_TPU3D\_0009

Material No.: D3301040001

Revision date: 2022-3-29

Version: V2.0

### Product Description

Piocreat\_TPU is a polyester TPU 3D printing particle. The appearance of the product is transparent, translucent or colored particles. The product does not contain plasticizers and has excellent mechanical properties, elasticity and wear resistance.

### Application

3D printing consumables.

### Main performance table

| Project                      | Test standards | Unit              | Test value |
|------------------------------|----------------|-------------------|------------|
| Hardness                     | ASTM D 2240    | Shore A           | 95         |
| Density                      | ASTM D 792     | g/cm <sup>3</sup> | 1.21       |
| 100% elongation strength     | ASTM D 412     | MPa               | 14         |
| 300% elongation strength     | ASTM D 412     | MPa               | 23         |
| Tensile Strength             | ASTM D 412     | MPa               | 32         |
| Elongation at break          | ASTM D 412     | %                 | 600        |
| Moisture                     | ASTM D 6890    | %                 | 0.5        |
| Glass transition temperature | ASTM D 3418    | °C                | -32        |

Note: The above values are typical, please contact your sales representative for batch-specific details.

### Recommended processing conditions

Print directly

|    | Heating zone 1 | Heating zone 2 | Heating zone 3 | Heating zone 4 | Nozzle |
|----|----------------|----------------|----------------|----------------|--------|
| °C | 180            | 185            | 190            | 195            | 195    |

Bottom plate temperature: room temperature ~50°C

## Extrusion processing

|    | Feeding area | Heating zone 1 | Heating zone 2 | Heating zone 3 | Heating zone 4 | Flange | Mouth mold |
|----|--------------|----------------|----------------|----------------|----------------|--------|------------|
| °C | 185          | 190            | 195            | 200            | 205            | 210    | 205        |

Note: The above processing parameters are for customer reference only. Customers need to adjust the corresponding processing parameters according to specific equipment to obtain the best process conditions and product quality.

## Drying precautions

TPU 3D printing particles should be stored dry and airtight when not in use, ensuring that the moisture content is less than 0.5% when used for printing. Before use again after opening the package, they need to be dried in an oven at 80°C~100°C for 4~6 hours before use.

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The indicators and data given in this information are based on our existing technical knowledge and practical experience and are for reference only. Specific guarantee indicators shall be subject to the provisions of the quality guarantee or supply contract. Users are responsible for testing the products purchased from our company to verify whether they are suitable for their intended processes and purposes and to achieve the intended purpose. The further application and processing of our products is beyond our control and therefore our liability for the products supplied is limited to that part delivered by us and used by you. We are not responsible for any indirect losses caused by using our company's products as raw materials for production. The technical support and customer service center of our company's marketing department is willing to provide you with product consultation and application technical services. Welcome to contact us by email or phone.

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