

## Material Information



### TPU White

#### Introduction

TPU White is compatible with 3DSPRO's SLS 3D printing. SLS 3D printed TPU uses a laser to sinter powdered TPU material, which is then fused layer by layer to create a flexible and durable part.

#### Advantages

SLS 3D printed TPU white parts have excellent flexibility, high impact resistance and good elongation properties, making them ideal for applications requiring durable and resilient components.

#### Disadvantages

Grainy surface, may require additional post-processing processes to achieve desired colors.

#### Tolerance

±300µm or 0.3%

#### Recommendation

Ideal for producing soft grip systems, flexible tubing, protective gear, and non-marring tooling.

Material Specifications		
Density	ASTM D1505	1.21 g/cm <sup>3</sup>
Melting Point	DSC	165°C
Tensile Strength	ASTM D638	20MPa
Tensile Elongation at Break	ASTM D638	> 350%
Shore Hardness	ASTM D2240	85-90A
Grain Size	ASTM D328	65 µm

#### Attention

Products printed with powdered material come with grainy surfaces. If you have a specific requirement for surface finishing, we offer 3D Plus™ service,

which includes a variety of post-processing services, including vibratory smoothing and vapor smoothing, to achieve a smooth surface finish.

## Applications

3DSPRO finds people using SLS TPU white to make functional parts and prototypes in the following industries and applications.

### *Sport and Leisure:*

Custom shoe soles, hoses, and orthopedic models that require flexibility and durability.

### *Vibration Damping:*

Brackets and mounts in machinery that need to absorb kinetic energy and reduce vibrations.

### *Protective Casings:*

Tough outer covers for electronic devices, such as phone cases, need to withstand impacts.

### *Comfort Applications:*

Ergonomic products like bike seats and custom-fit wearables that distribute pressure evenly.

### *Strain Reliefs and Cable Sleeves:*

Custom-designed components to protect cables and connectors from stress and damage.

### *Flexible Pipes:*

Prototypes or final parts for pipes that need to maintain flexibility and avoid twisting or squashing.

### *Hinged Parts:*

Living hinge designs for durable and flexible hinges in various products.

### *Gaskets:*

Custom gaskets that require precise fit and flexibility.