

## TECHNICAL DATA SHEET

### Description

PP3D is a medium fluidity polypropylene with an excellent impact resistance, specially designed for 3D printing FDM Technology for its excellent processability.

### Applications

PP3D is specifically indicated for 3D Printing Filament in which the main requirement is high mechanical strength together with excellent processability and stability of the constructed part, such as:

- Automotive: prototypes, aesthetic parts, specific tools or tools, etc.
- Aerospace: prototypes.
- Technical components: toys, textiles, footwear, jewelry, leisure, etc.

Recommended melt temperature range from 190°C to 250°C. Processing conditions should be optimised for each production line.

The properties mentioned herein are exclusively related to pure grade PP3D, not in conjunction with any other additives or fillers.

PP3D complies with the European Directives regarding materials intended for contact with foodstuffs. The product mentioned herein is not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications. For further information, please contact with us.

### Storage

PP3D should be stored in a dry atmosphere, on a paved, drained and not flooded area, at temperatures under 60°C and protected from UV radiation. Storage under inappropriate conditions could initiate degradation processes or undesired migration of additives included in its formulation which may have a negative influence on the processability and properties of the transformed product.

PROPERTIES	VALUE	UNIT	MÉTHOD
<b>General</b>			
Melt flow rate (230°C / 2,16 kg)	20	g/10min	ISO 1133
Density at 23°C	905	kg/m <sup>3</sup>	ISO 1183
<b>Mechanical</b>			
Flexural modulus of elasticity	800	MPa	ISO 178
Charpy impact strength (23°C, notched)	60	kJ/m <sup>2</sup>	ISO 179
Charpy impact strength (-20°C, notched)	10	kJ/m <sup>2</sup>	ISO 179
Izod impact strength (23°C, notched)	50	kJ/m <sup>2</sup>	ISO 179
<b>Thermal</b>			
HDT B 0,45MPa	61	°C	ISO 75-2
<b>Printing properties</b>		<b>Recommended</b>	
Printing temperatures	235°C		
Printing speed	40 mm/s		
Hot-bed temperature	40°C with primer		
Optimal layer height	0.2 mm		
Minimal nozzle diameter	0.4 - 0.6 mm		
Retraction parameters in direct drive (DD)	3.2 mm		
Retraction parameters in bowden type (BT)	6 mm		
Retraction speed in direct drive (DD)	40 mm/s		
Retraction speed in bowden type (BT)	25 mm/s		
Travelling speed	150 mm/s		
Outer perimeters	25 mm/s		
Inner perimeters	30 mm/s		
Layer fan regular	0%		
Layer fan in layer below 15 sec	80%		
First layer adhesion brim depending on the part dimensions	5-10 mm		
Brass nozzle recommended			

### Instructions to use 3D primer for PP filament

Follow the instructions below for using the 3D primer with the PP filament:

- 1° Open the primer bottle and apply it in the printing area.
- 2° Wait about **5 min** before print to let the primer dry.
- 3° Set bed temp to **40°C** (not more temperature if not the part will warp).
- 4° When the part is finished, heat up the bed up to **85°C** to release the printed part.