

Technical data sheet (PLA)

Biopolymer Polylactic Acid

Description

Eolas Prints PLA Premium filament is high quality 3D printing filament that exhibits faster crystallization rates and can develop improved heat resistance in 3D printed parts. This grade of PLA demonstrates the best performance in formulated systems designed to improve toughness or heat resistance. This filament has excellent 3D printing characteristics, such as precise details, good adhesion to build plates, and less warping.

It is suitable to produce food packaging in accordance with the criteria of Regulation (EU) No. 10/2011 and compatible with EN 1343 models.

Material Properties

Density	1.24 g/cm ³ ISO 1183-1
Chemical Name	Polylactic Acid

Print Settings

Nozzle temperature	195 – 220°C
Bed temperature	0 – 50°C
Active cooling fan	100%

Mechanical Properties

Tensile strength	51 MPa	ISO 527-1
Young's modulus	3.7 GPa	ISO 527-1
Tensile elongation @ break	≤ 6%	ISO 527-1
Charpy Impact Resistance of Notched 23°C	≤ 5 kJ/m ²	ISO 179-1eA

Thermal Properties

HDT B	60°C
Vicat	80°C

Filament Specification

Diameter	1.75 mm & 2.85 mm
Tolerance	± 0.05

Storage & Handling

During storage, the product may acquire humidity if exposed to fresh air. The humidity it absorbs depends on the temperature, humidity, and time of exposure. Therefore, it should be stored in its packaging in a cool place and kept at temperatures below 50°C. No special restrictions on storage with other products.

Expiration Date (Shelf Life)

If stored correctly and in its original packaging, the product can be used up until 24 months after opening. If the product is stored in a package that has been exposed to humidity during an extended amount of time, it could deteriorate and lose its mechanical and physical properties, even after drying.

Security

This product is not classified as dangerous according to the CE Regulation No 1272/2008, and therefore is not subject to special transport regulations. This product does not melt at room temperature.

Suitable for food contact	Yes (EU) 10/2011
Suitable for Toys	Yes
Suitable for packaging	Yes

****Disclaimer:** The product and technical information provided in this datasheet is correct to the best of our knowledge. The information given is provided as a guidance for good use, handling and processing and is not to be considered as a quality specification. The information only relates to the specific product and the material properties.