Technical data sheet (PLA Antibacterial)

Biopolymer Polylactic Acid

Description
Eolas Prints PLA Antibacterial Filament represents a breakthrough in protective 3D printing materials, engineered with advanced antimicrobial technology that provides comprehensive surface protection against harmful microorganisms. This innovative filament delivers validated protection while maintaining environmental safety and long-term effectiveness. ISO 22196:2011 certification.

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
Antibacterial activity – E. coli & S. aureus	> 99.98% & 99.46%

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	ASTME2092: 88 - 90 °C (66 psi - 0.45 MPa)
Vicat	N/A

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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 store in its packaging in a cool place and keep 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 loose 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
ISO 22196:2011 certification	Yes

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