

Technical data sheet (INGEO 870)

INGEO 870

Description

Ingeo 870 is a grade developed for the manufacture of monofilaments for 3D printers. Designed to offer better heat resistance and high impact resistance, this formulated grade achieves thermal and mechanical properties like ABS, while offering an alternative to styrene-based materials. Ingeo 870 filaments provide excellent 3D printing with features such as precise detail, good adhesion between layers and less deformation.

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	1.22 g/cm ³ ASTM D792
Chemical Name	Polylactic Acid

Print Settings

Nozzle temperature	190 – 230 °C
Bed temperature	0 – 70 °C
Active cooling fan	100%

Mechanical Properties

	XY Axis	YX Axis	ZX Axis	
Tensile strength	40 MPa	32 MPa	24 MPa	ASTM D368
Tensile modulus	2,865 MPa	2,447 MPa	2,447 MPa	ASTM D368
Flexural strength	73 MPa	49 MPa	46 MPa	ASTM D790
Notched Izod impact (amorphous)	160 J/m	21 J/m	109 J/m	ASTM D256
Notched Izod impact (Crystalline)	233 J/m	200 J/m	64 J/m	ASTM D256

Thermal Properties

HDT B	85°C
Maximum melting temperature	165 – 180°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	No
Suitable for Toys	No
Suitable for packaging	No

****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.