

SECTION 1 · IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name	PLA Filament · Poly(Lactic Acid) · 3D Printing
Chemical name	Poly(lactic acid) / Polylactide (PLA)
CAS No.	26100-51-6
EC No. (EINECS)	Polymer — exempt from REACH registration (Art. 2.9)
Physical form	Solid monofilament · Ø 1.75 mm · 1 kg spool

1.2 Relevant identified uses and uses advised against

Intended use	Plastic filament for 3D printing by fused deposition modelling (FDM/FFF). Creative and industrial use.
Uses advised against	Implantable medical devices, pharmaceutical applications, prolonged contact with hot food above 60°C.

1.3 Details of the supplier of the safety data sheet

Company	INNOVAPLASTIC TECH, S.L.
Address	Parque Empresarial Táctica · Calle Algepser, 24-6 · 46980 Paterna · Valencia · Spain
Telephone	+34 962 071 131
E-mail	support@astrafil.com
Website	www.astrafil.com

1.4 Emergency telephone number

Emergency 24h (Spain)	112
National Toxicology Institute	+34 91 562 04 20 (24h)
Company contact (Mon–Fri 08:30–17:30)	+34 962 071 131

SECTION 2 · HAZARDS IDENTIFICATION

WARNING: Solid pigmented filament. Odourless under normal conditions. Avoid dust formation. The product is not reactive under normal conditions of use, storage and transport. During 3D printing (>200°C), ultrafine vapours/particles may be generated: ensure adequate ventilation.

2.1 Classification of the substance or mixture (Regulation EC 1272/2008 — CLP)

Classification	NOT CLASSIFIED as hazardous (solid form)
Hazard pictograms	None
Signal word	No signal word
Hazard statements	None

2.2 Label elements

No hazard labelling required under Regulation (EC) No. 1272/2008 [CLP].

2.3 Other hazards

PBT/mPmB substances	The mixture does not contain substances classified as PBT or mPmB.
Endocrine disruptors	The mixture does not contain substances with endocrine-disrupting properties.

Risk under normal conditions	In its original form, the product presents no risks to health or the environment.
Risk during 3D printing	At melting temperatures (>200°C), organic vapours and ultrafine particles may be released. Ensure adequate local ventilation.

SECTION 3 · COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS No.	EC No.	Concentration	CLP Classification
Poly lactide (PLA) — Poly(lactic acid)	26100-51-6	Polymer	≥ 93%	Not classified
Additives and pigments (varies by colour)	Various	Various	≤ 7%	Not classified (EINECS verified)

SECTION 4 · FIRST AID MEASURES

Inhalation (fumes during printing)	Move the affected person to fresh air. Keep warm and at rest. If breathing is irregular or stops, perform artificial respiration. Seek medical attention.
Eye contact	Remove contact lenses if present. Rinse with plenty of cool water for ≥10 min. Do not rub. Seek medical attention if irritation persists.
Skin contact (filament)	No special measures required. In case of burn from molten material: cool with cold water. Do not remove adhered material. Seek medical attention.
Ingestion	Not applicable under normal conditions. If ingested: do not induce vomiting. Seek medical attention.
Symptoms and effects	In solid form, no relevant risks. During melting: possible irritation of the respiratory tract. Some symptoms may not be immediate.

SECTION 5 · FIRE-FIGHTING MEASURES

Flammability / Flash point	Not flammable under normal conditions. Decomposition temperature >300°C.
Suitable extinguishing media	Dry powder · CO ₂ · Alcohol-resistant foam · Water spray.
Unsuitable extinguishing media	Direct water jet. In presence of electrical voltage: do not use water or foam.
Special hazards	CO, CO ₂ and organic vapours may be released in case of fire. Exposure is harmful to health.
Protective equipment for firefighters	Thermal protective suit · Self-contained breathing apparatus (SCBA) · Gloves · Face shield · Boots.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions	Use appropriate PPE (see section 8). Avoid dust formation.
Environmental precautions	Product not classified as hazardous to the environment. Avoid spillage.
Containment and clean-up	Collect with inert absorbent materials (earth, sand, vermiculite). Place in closed containers for disposal in accordance with local regulations (see section 13).

SECTION 7 - HANDLING AND STORAGE

7.1 Safe handling	Ensure adequate ventilation, especially during 3D printing. No smoking, eating or drinking in the work area. Do not use pressure to empty containers.
7.2 Storage	Store between 5°C and 25°C in a dry, well-ventilated place away from heat sources and direct sunlight. Seal hermetically with desiccant after opening. Shelf life: 24 months in original sealed packaging.
7.3 Specific end use	3D printing by fused filament fabrication (FDM/FFF).

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

The product does NOT contain substances with established Occupational Exposure Limit Values (OELVs).

PPE	Normal conditions	During 3D printing
Respiratory protection	Not required	FFP2 mask if ventilation is insufficient
Hand protection	Not required	Gloves for handling hot material
Eye protection	Not required	Safety goggles CE cat. II (EN 166)
Skin protection	Not required	Standard work clothing
Ventilation	General ventilation sufficient	Local exhaust ventilation recommended

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid — monofilament
Colour	White / Black / Silver / Natural and colours
Odour	Odourless (at ambient temperature)
Density	1.24 g/cm³ · ASTM D792
Melting temperature	165 – 180°C · D3418
Glass transition temp (Tg)	55 – 60°C · ISO 11357
VICAT B (50N / 50°C·h)	59°C · ISO 306
HDT B (0.45 MPa)	60 – 90°C · ISO 75
Melt flow rate (MFR)	7 – 9 g/10 min · D1238 (210°C / 2.16 kg)
Solubility in water	Practically insoluble
Decomposition temperature	>300°C
Explosive limits	Not applicable (solid)

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	No reactivity hazards under normal conditions.
Chemical stability	Stable under recommended handling and storage conditions (see section 7).
Hazardous reactions	None under normal conditions of use.

Conditions to avoid	Excessive heat (>300°C), sparks, open flames, prolonged extreme humidity.
Incompatible materials	Strong oxidising agents, concentrated acids and alkalis.
Hazardous decomposition	No decomposition under intended use. Above 300°C: CO, CO \blacksquare , organic vapours from lactic acid.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute toxicity	No conclusive data for classification. No LD50 data available for the solid polymer.
Skin corrosion/irritation	Not classified. Repeated contact may cause dermatitis through removal of natural skin oils.
Serious eye damage	Not classified in solid form.
Sensitisation	Not classified. No known evidence of sensitisation.
Mutagenicity	Not classified. No genotoxicity data available.
Carcinogenicity	Not classified. Not listed by IARC, NTP or ACGIH.
Reproductive toxicity	Not classified.
STOT — single exposure	Not classified.
STOT — repeated exposure	Not classified.
Aspiration hazard	Not applicable (solid product).
Endocrine disruption	The product does not contain components with endocrine-disrupting properties (Reg. EU 2021/1689).

SECTION 12 - ECOLOGICAL INFORMATION

Aquatic toxicity	Not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Persistence/degradability	Biodegradable in industrial composting conditions (ISO 14855). Slow degradation in natural environment (>2 years).
Bioaccumulation	Low potential. Log Kow not applicable for high molecular weight polymer.
Mobility in soil	Minimal mobility in solid form. Do not discharge into drains, surface or groundwater.
PBT / mPmB assessment	Not classified as PBT or mPmB.
Environmental endocrine disruption	The product does not contain components with environmental endocrine-disrupting properties.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods	Do not discharge into drains or waterways. Dispose in accordance with applicable local/national regulations and Directive 2008/98/EC. Recommended EWC code: 07 02 99. PLA filament may be composted at certified industrial composting facilities (EN 13432).
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SECTION 14 - TRANSPORT INFORMATION

Regulation	Classification
ADR/RID (Road/Rail)	Not classified as dangerous goods
IMDG (Sea)	Not classified as dangerous goods
ICAO/IATA (Air)	Not classified as dangerous goods

SECTION 15 - REGULATORY INFORMATION

REACH (Reg. EC 1907/2006)	PLA: polymer exempt from registration under Art. 2(9). Not included in ECHA SVHC candidate list.
CLP (Reg. EC 1272/2008)	Not classified as hazardous. No hazard pictograms or H-statements applicable.
Reg. EU 2020/878 (SDS)	This safety data sheet has been prepared in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020.
GPSR (Reg. EU 2023/988)	Consumer product subject to the General Product Safety Regulation. Responsible person: INNOVAPLASTIC TECH, S.L.
Food contact	May be suitable for indirect food contact (Reg. EC 10/2011) depending on colour/pigment. Consult by colour reference.
Chemical safety assessment	No chemical safety assessment has been carried out for this mixture.

SECTION 16 - OTHER INFORMATION

Classification (Reg. EC 1272/2008)	Physical hazards: based on test data · Health hazards: calculation method · Environmental hazards: calculation method.
Key references	Reg. (EU) 2020/878 · Reg. (EC) 1907/2006 REACH · Reg. (EC) 1272/2008 CLP · http://eur-lex.europa.eu/ · http://echa.europa.eu/
Abbreviations	CAS: Chemical Abstracts Service · CLP: Classification Labelling Packaging · FDM: Fused Deposition Modelling · MFR: Melt Flow Rate · PBT: Persistent Bioaccumulative Toxic · PLA: Poly(lactic acid) · PPE: Personal Protective Equipment · REACH: Registration Evaluation Authorisation Chemicals · SDS: Safety Data Sheet · STOT: Specific Target Organ Toxicity.
Revision history	REV01 (22/05/2026): Initial issue in accordance with Reg. (EU) 2020/878. Technical data aligned with AS001-FT-PLA-Astrafil-2026. Regulatory update: removed non-EU/Spain references.

DISCLAIMER: The information contained in this Safety Data Sheet is based on current knowledge and applicable EU and Spanish legislation as of the date indicated. It has been prepared in good faith as guidance for the handling, use, processing, storage, transport, disposal and accidental release of the product. INNOVAPLASTIC TECH, S.L. accepts no liability for damages resulting from handling or contact with the described product. It is the user's responsibility to comply with all requirements established by applicable legislation.