

Polylactic acid

Safety Data Sheet

Complies with Regulation (EC) No. 1907/2006 (REACH) as amended by Regulation (EU) 2015/830 Date of issue:
27/06/2024 Version: 1.1

SECTION 1: Identification of the substance/mixture and the company/company

1.1. Product identifier

Product Shape : Filament
Name : Polylactic Acid Filament
CAS RN : 9051-89-2
Synonyms : PLA

1.2. Relevant identified use of the substance or mixture and use not recommended

1.2.1. Relevant Identified Uses

Use of the substance/mixture: 3D printing applications.

1.2.2. Recommended uses

This product cannot be implanted in humans.

1.3. Safety Data Sheet Provider Information

Lattice Medical
80, rue du Docteur Yersin
59120
LOOS - FRANCE
T +33 6 73 59 08 71
julien.payen@lattice-medical.com

1.4. Emergency number

Country	Organization/Society	Address	Emergency number	Comment
France	ORFILA	http://www.centres-antipoison.net	+33 (0)8 00 59 59 59	

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Uncategorized

Adverse physicochemical effects on human health and the environment

To the best of our knowledge, this product does not present any particular danger under normal conditions of use.

2.2. Labelling elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Labelling not applicable

2.3. Other hazards

This product does not meet the PBT or vPvB criteria in accordance with REACH.

SECTION 3: Composition/Component Information

3.1. Substances

Not applicable

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3.2 Blends

Preparation based on: Bio-based polylactic

SECTION 4: First aid

4.1. Description of first aid

Post-inhalation first aid	: After inhalation of decomposition products, transport the affected person to fresh air and keep him at rest. Consult a doctor. In case of problems after inhaling dust: take the person to fresh air and consult a doctor.
First aid after skin contact	: After contact with the melted product: Immediately cool the affected skin with cold water. To remove residue of solidified melt adhering to the skin, consult a physician. Burns caused by the melted product should be treated medically. After contact with the product or dust: wash the skin thoroughly with soap and water. If irritation persists, seek medical attention.
First aid after eye contact	: In case of contact with eyes, rinse immediately and thoroughly with water, including under the eyelids. If irritation occurs, consult a physician.
First aid after ingestion	: Rinse mouth and drink water. Seek medical attention if symptoms occur. Never induce vomiting or give anything orally if the injured person is unconscious or suffering from seizures.

4.2. Main symptoms and effects, acute and delayed

Symptoms/Effects : None known.

4.3. Indication of any immediate medical care and special treatment required

Symptomatic treatment.

SECTION 5 : Fire-fighting measures

5.1. Extinguishing means

Appropriate extinguishing means : Use a dry chemical agent, CO₂, water spray or alcohol foam

5.2. Specific hazards resulting from the substance or mixture

Hazardous decomposition products	: During combustion, irritating and toxic fumes can be released, including aldehydes, carbon monoxide (CO) and carbon dioxide (CO ₂). The formation of additional decomposition and oxidation products depends on the fire conditions. Do not inhale the fumes or smoke. Avoid dust formation. Fine dust dispersed in the air can ignite. Powders, dusts, chips, drilling, turning, or cutting waste can explode or burn explosively.
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5.3. Advice to firefighters

Firefighting instruction	: Cool containers exposed to heat with spray water. Contain and contain extinguishing fluids.
Fire protection	: Do not intervene without suitable protective equipment. Self-contained self-contained breathing apparatus. Full body protection.

SECTION 6: Measures to be taken in the event of accidental dispersal

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General measures : Ensure proper ventilation.

6.1.1. For non-rescuers

Emergency procedures	: Have the danger zone evacuated. Do not touch or walk on spilled product. Avoid contact with eyes, skin, or clothing. Prevent or limit the formation and dispersion of dust. To rule out any possible source of ignition.
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6.1.2. For first responders

Emergency procedures	: Do not intervene without suitable protective equipment. For more information, please contact: See Section 8: "Exposure Control-Personal Protection".
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6.2. Precautions for the protection of the environment

Contain and contain the spreading. Do not discharge into sewers and rivers.

6.3. Containment and Clean-up Methods and Equipment

For retention	: Prevent or limit the formation and dispersion of dust. Sweep or shovel the spilled product and place it in a suitable container for disposal.
Cleaning processes	: Wash the non-recoverable residue with plenty of water.
Other information	: Dispose of solid materials or residues at a licensed centre.

6.4. Reference to other headings

See section 13 for the disposal of waste resulting from cleaning.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Handle in accordance with good industrial hygiene and safety practices. Ensure adequate ventilation. Avoid any formation of dust. Avoid contact with skin, eyes, or clothing. Do not breathe in dust. Keep away from sources of ignition.
Hygiene measures	: Do not drink, eat or smoke in the workplace. Wash your hands after any handling.

7.2. Conditions for safe storage, including possible incompatibilities

Storage conditions	: Store tightly closed in a cool, dry place. Keep away from heat and sources of ignition. Residual monomer vapours can accumulate in the headspace of closed containers.
Incompatible materials	: Water, humidity.
Storage Temperature	: 10 – 40°C

7.3. Specific end-use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control Parameters

Exposure limits	None known
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8.2. Exposure controls

Hand protection:

Not required under normal conditions of employment. In case of splash hazard: Chemical-resistant gloves (according to the NF EN 374 or equivalent)

Eye protection:

Not required under normal conditions of employment. In case of splash hazard: Safety glasses with side protectors

Skin and body protection:

Wear appropriate long-sleeved protective clothing.

Respiratory protection:

Adequate ventilation. In case of vapor/dust formation, use an approved respirator for dust protection

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SECTION 9: Physical and chemical properties

9.1. Information on essential physical and chemical properties

Physical condition	: Solid
Appearance	: Filament
Color	: White
Smell	: Odorless.
Olfactory threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting Point	: None but the product gradually softens over a wide range of T°
Freezing point	: No data available
Boiling point	: No data available
Flash Point	: Not applicable
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Steam pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.3 – 1.4 g/cm ³
Solubility	: Insoluble
n-octanol/water partition coefficient (Log Pow)	: No data available
Viscosity, kinematics	: Not applicable
Viscosity, dynamics	: Not applicable
Explosive properties	: Not explosive.
Oxidizing properties	: Not applicable
Explosive limits	: Not applicable

9.2. Other information

Other properties : None

SECTION: Stability and responsiveness

10.1. Responsiveness

To the best of our knowledge, this product does not present any particular danger under normal conditions of use.

10.2. Chemical stability

Stable at normal ambient temperature and pressure. Dangerous polymerization does not occur.

10.3. Potential for Hazardous Reactions

No known reaction

10.4. Conditions to be avoided

Avoid moisture, heat, prolonged exposure to UV rays, and sources of ignition. Avoid prolonged exposure to heat above 230°C. Prolonged exposure to a temperature above 230 °C leads to degradation. Prevent dust from forming and powder from being dispersed into the air, which could create an explosion hazard.

Protect the product from moisture.

10.5. Incompatible materials

Powerful oxidizing agents.

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10.6. Hazardous decomposition products

Combustion can produce irritating and toxic fumes. Carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral/dermal/inhalation)	: Not ranked (Based on the available data, the classification criteria are not met)
Skin corrosion/skin irritation	: Not ranked (Based on the available data, the classification criteria are not met)
Severe eye damage/eye irritation	: Not ranked (Based on the available data, the classification criteria are not met)
Respiratory or skin sensitization	: Not ranked (Based on the available data, the classification criteria are not met)
Germ cell mutagenicity	: Not ranked (Based on the available data, the classification criteria are not met)
Carcinogenicity	: Not ranked (Based on the available data, the classification criteria are not met)
Reproductive toxicity	: Not ranked (Based on the available data, the classification criteria are not met)
Specific toxicity to specific target organs (single exhibition)	: Not ranked (Based on the available data, the classification criteria are not met)
Specific toxicity to specific target organs (repeated exposure)	: Not ranked (Based on the available data, the classification criteria are not met)
Aspiration Hazard	: Not ranked (Based on the available data, the classification criteria are not met)

SECTION 12: Ecological information

12.1. Toxicity

Hazards to the aquatic environment, short-term (acute)	: Not ranked (Based on the available data, the classification criteria are not met)
Hazards to the aquatic environment, long-term (chronic)	: Not ranked (Based on the available data, the classification criteria are not met)

12.2. Persistence and Degradability

This product is biodegradable.

12.3. Potential for bioaccumulation

Based on its consistency and insolubility in water, bioaccumulation is not expected.

12.4. Mobility in Soil

No further information available.

12.5. Results of PBT and vPvB assessments

This substance/mixture does not meet the PBT criteria of the REACH Annex XIII Regulation.

12.6. Other adverse effects

No additional information available

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SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of in accordance with applicable local regulations.

Recommendations for product/packaging processing : Do not reuse empty containers.

Additional information : The user's attention is drawn to the possible existence of specific Community, national or local laws, regulations and administrative provisions relating to disposal.

European Waste Catalogue Code (EDC) : 16 05 09 - Chemicals discarded other than those referred to in headings 16 05 06, 16 05 07 or 16 05 08

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SECTION 14: Transport information

In accordance with the requirements of ADR/RID/IMDG/IATA/AND

ADR	IMDG	IATA	DNA	RID
14.1. UN Number				
Unregulated	Unregulated	Unregulated	Unregulated	Unregulated
14.2. UN Proper Shipping Name				
Unregulated	Unregulated	Unregulated	Unregulated	Unregulated
14.3. Transport hazard class(es)				
Unregulated	Unregulated	Unregulated	Unregulated	Unregulated
14.4. Packing Group				
Unregulated	Unregulated	Unregulated	Unregulated	Unregulated
14.5. Ecological hazards				
Unregulated	Unregulated	Unregulated	Unregulated	Unregulated
14.6. Special precautions to be taken by the user				

Ground transportation

Unregulated

Shipping

Unregulated

Air transport

Unregulated

Inland waterway transport

Unregulated

Rail transport

Unregulated

14.7. Bulk transport in accordance with Annex II of the MARPOL Convention and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Substance- or mixture-specific safety, health and environmental regulations/legislation

15.1.1. EU regulations

The product is not subject to labeling requirements under EU regulations.

15.1.2. National guidelines

No additional information available

15.2. Chemical safety assessment

The product is not classified as hazardous. A Safety Data Sheet for this product is not legally required and is provided voluntarily for customer information.

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SECTION 16: Other information

Abbreviations and acronyms:	
DNA	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AQHI	Chemical Abstracts Service (division of the American Chemical Society)
CLP	Classification, Labelling and Packaging Regulations; Regulation (EC) No 1272/2008
ECHA	ECHA - European Chemicals Agency
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods Code
PBT	Persistent, bioaccumulative and toxic
REACH	Registration, evaluation, authorisation and restriction of chemicals. Regulation (EU) REACH No. 1907/2006
RID	International Regulations Concerning the Transport of Dangerous Goods by Rail
vPvB	Highly persistent and highly bioaccumulative

Data sources : ECHA - European Chemicals Agency. SDSs from suppliers.

EU SDS (ANNEX II REACH)

This information is based on our current knowledge and describes the product for health, safety and environmental purposes only. They should therefore not be interpreted as guaranteeing any specific property of the product.